

Dena

From: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Sent: Tuesday, April 18, 2017 4:31 PM
To: Dena Vandenberg
Cc: 'Kevin Ware'; 'Prefontaine, Aaron'; Phillip Sanders; 'Nevin Bannister'; james@kjenvironmental.com
Subject: RE: Addendum to Remediation Plan- Case Nos. 4497 & 4498

Aloha all,

Thank you for the addendum.

Based upon the discussion and the documentation provided, the OCD approved the remediation plan.

Please keep us informed and let me know if you have further questions.

Mahalo

-Doc

Tomáš 'Doc' Oberding PhD
Hydrologist, Adv-District 1
Oil Conservation Division, EMNRD
(505) 476-3403
E-Mail: tomas.oberding@state.nm.us

一期一会

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: Dena Vandenberg [mailto:dena@kjenvironmental.com]
Sent: Monday, April 17, 2017 3:53 PM
To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Cc: 'Kevin Ware' <kevin@kjenvironmental.com>; 'Prefontaine, Aaron' <Aaron.Prefontaine@yorkrsg.com>; Phillip Sanders <psanders@oilfieldwaterlogistics.com>; 'Nevin Bannister' <nbannister@oilfieldwaterlogistics.com>; james@kjenvironmental.com
Subject: Addendum to Remediation Plan- Case Nos. 4497 & 4498

Good afternoon, Doc!

Attached is the Addendum to the Remediation Plan for OWL (Case Nos. 4497 & 4498). Please let me know if you have any questions. Thank you!



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ENVIRONMENTAL & CIVIL ENGINEERING
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April 14, 2017

Tomás 'Doc' Oberding, PhD
Hydrologist, Adv-District 1
Oil Conservation Division, EMNRD

Phone: (505) 476-3403

E-Mail: tomas.oberding@state.nm.us

RE: Addendum to Remediation Plan – Oilfield Water Logistics (OWL) Produced Water Pipeline Release (Spill Delineation Report & Remediation Plan - Case Nos. 1RP 4497 & 1RP 4498)

KJ Environmental Management, Inc. (KJE) is pleased to submit the following Addendum to the Spill Delineation Report & Remediation Plan - Case Nos. 4497 & 4498, to summarize the plan of action discussed on our conference call on April 12, 2017.

Per your verbal authorization over our conference call on April 12, 2017, OWL has begun excavation of the soil in the areas where chlorides exceed 600 ppm up to a depth of four (4) feet. The affected soil is being placed on poly liner, and OWL is laying 20 mil poly sheeting in the 4-foot deep excavation to block the wicking-up of Chlorides. Trench anchors will be used to secure the poly sheeting.

No excavation will be completed of the soil located above, beneath, between, and extending ten (10) feet horizontally from the extents of the pipelines, in order to maintain structural stability of the pipelines in the spill areas.

OWL will blend the affected soil with clean native soil by either skid steer or pug mill, and KJE will collect one sample for every 20 cubic yards of blended soil to demonstrate the effectiveness of the remediation. Each sample will be field-screened with a Horiba D-73 Portable Multiparameter Chloride Meter, for chloride content. Every 10th sample will be submitted for laboratory analysis. KJE will submit to NMOCD field meter readings for the first ten (10) soil samples sent for laboratory analysis, to confirm the accuracy of the meter. After that time, NMOCD will evaluate the meter readings and the laboratory analytical results to determine the appropriateness for lessening the required frequency of sampling.

The field screening and laboratory sampling will be completed to ensure compliance with landfarm standards per Title 19, Chapter 15, Part 36.15, for landfarms where groundwater is 100 feet or more below the lowest elevation at which the operator will place oilfield waste, which states that Chloride levels may not exceed 1,000 mg/kg.

OWL will return the blended soil to the poly-lined excavation. Any additional blended soil will be used for berm construction at OWL's nearby SWD facilities.

Disturbed areas outside of the easement will be reseeded with BLM mix to reestablish growth; however, due to vegetative growth restrictions imposed by the pipeline owners, the pipeline easement will not be seeded.

April 14, 2017

Should you have any questions regarding this Amendment, please do not hesitate to contact us at your first convenience.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dena M. Vandenberg".

Dena M. Vandenberg, REM, LEED AP
Director of Environmental Services

Dena

From: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Sent: Tuesday, April 25, 2017 11:24 AM
To: Dena Vandenberg
Subject: RE: Update & Deviations

Aloha Dena,

The OCD tentatively concurs with the overhead line issue.
Please keep me informed and thank you for utilizing a common titration.
Mahalo
-Doc

Tomáš 'Doc' Oberding PhD
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Oil Conservation Division, EMNRD
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From: Dena Vandenberg [mailto:dena@kjenvironmental.com]
Sent: Thursday, April 20, 2017 3:18 PM
To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Cc: psanders@oilfieldwaterlogistics.com; james@kjenvironmental.com
Subject: Update & Deviations

Good afternoon, Doc!

OWL has not yet received the meter we plan to use for field screening, and we won't have it for approximately one week. I wanted to give you a heads up that we plan to use the field titration method you sent us until we receive the meter.

Also, a portion of the area intended to be remediated is beneath powerlines. For safety concerns related to arching of electricity, the excavator will need to stay 20 feet away from the powerlines. Please confirm that this is acceptable.
Thank you!



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Dena

From: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Sent: Wednesday, April 26, 2017 10:58 AM
To: Dena Vandenberg
Cc: psanders@oilfieldwaterlogistics.com; james@kjenvironmental.com
Subject: RE: Update & Deviations

Aloha Dena et al,

After review the OCD does not approve the 20' exclusion zone around the powerlines. There are options that are viable for excavation in that area.

Please consider road graders and careful use of the backhoes.

Please keep us informed.

Mahalo

-Doc

Tomáš 'Doc' Oberding PhD
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Sent: Thursday, April 20, 2017 3:18 PM
To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Cc: psanders@oilfieldwaterlogistics.com; james@kjenvironmental.com
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Also, a portion of the area intended to be remediated is beneath powerlines. For safety concerns related to arching of electricity, the excavator will need to stay 20 feet away from the powerlines. Please confirm that this is acceptable. Thank you!

Dena

From: Dena Vandenberg <dena@kjenvironmental.com>
Sent: Friday, April 28, 2017 12:25 PM
To: Tomas.Oberding@state.nm.us
Cc: kevin@kjenvironmental.com; psanders@oilfieldwaterlogistics.com
Subject: Field screening

Good morning, Doc!

There is an area of soil with exceedances within 0-4 feet identified during the initial investigation that is now field screening at less than 1,000ppm. This area is up-gradient from the spill area with significant overburden, which would make excavation impractical. Would it be acceptable to the state if we resample the area to essentially re-delineate the extents of the affected soil? We would collect soil samples at one-foot intervals to a depth of 4 feet along a line which extends approximately 10-15 feet southeast of the power lines, at horizontal intervals of 100' along the impact area. All samples will be field screened using the titration method, and each sample at a depth of 4' will be sent for laboratory analysis. Please let me know if we can proceed with this plan. Thank you!



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Dena

From: Dena Vandenberg <dena@kjenvironmental.com>
Sent: Thursday, May 4, 2017 3:52 PM
To: tomas.oberding@state.nm.us
Cc: Phillip Sanders (psanders@oilfieldwaterlogistics.com); Kevin Ware (kevin@kjenvironmental.com); Aaron.Prefontaine@yorkrsg.com
Subject: Follow up & update
Attachments: Rpt_WO_551956_ver_1_000.pdf

Good afternoon, Doc!

Any news regarding approval of the plan in my previous email?

To provide an update-

The northern section of Spill No. 2 has been excavated and lined with poly. The soil has been blended as necessary, field tested using the titration method, and 1 in every 10 samples sent to the lab for analysis. The results we have gotten back so far are attached for your review. We are about to start replacing the cleared soil in the lined trenches. Please let me know if you have any questions. Thanks!



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Dena

From: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Sent: Monday, May 8, 2017 9:23 AM
To: Dena Vandenberg
Subject: RE: Field screening

Dena,
Real quick, the screening form last time was a lab sample correct?

We would need confirmation from the lab that the field screen is accurate.
Also if the original screening was correct and is now 'clean' that indicates vertical migration of ~CI hence we need to further delineate to account for the ~CI that are no longer present in that area.
Cheers
-Doc

PS- Thank you for the patience, personal issue isn't going away for years (thankfully), but I am learning to better handle it. 😊

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From: Dena Vandenberg [mailto:dena@kjenvironmental.com]
Sent: Friday, April 28, 2017 11:25 AM
To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Cc: kevin@kjenvironmental.com; psanders@oilfieldwaterlogistics.com
Subject: Field screening

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Dena

From: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Sent: Wednesday, May 24, 2017 12:57 PM
To: Dena Vandenberg
Subject: RE: Follow up

No worries 😊

Tomáš 'Doc' Oberding PhD
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Oil Conservation Division, EMNRD
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From: Dena Vandenberg [mailto:dena@kjenvironmental.com]
Sent: Monday, May 22, 2017 8:02 AM
To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Cc: 'Phillip Sanders' <psanders@oilfieldwaterlogistics.com>; 'Kevin Ware' <kevin@kjenvironmental.com>; Aaron.Prefontaine@yorkrsg.com
Subject: RE: Follow up

Thank you, Doc! We will get those sent over. I appreciate your help!



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From: Oberding, Tomas, EMNRD [mailto:Tomas.Oberding@state.nm.us]
Sent: Friday, May 19, 2017 12:42 PM
To: Dena Vandenberg <dena@kjenvironmental.com>
Cc: 'Phillip Sanders' <psanders@oilfieldwaterlogistics.com>; 'Kevin Ware' <kevin@kjenvironmental.com>; Aaron.Prefontaine@yorkrsg.com
Subject: RE: Follow up

Aloha Dena et al,

Thank you for the update. This does sound like positive turn of events. Please send in the lab sample results to confirm. The OCD agrees that once the lab samples confirm this idea that modified corrective action as described is applicable.

Mahalo

-Doc

Tomás 'Doc' Oberding PhD
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From: Dena Vandenberg [<mailto:dena@kjenvironmental.com>]
Sent: Wednesday, May 17, 2017 1:46 PM
To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Cc: 'Phillip Sanders' <psanders@oilfieldwaterlogistics.com>; 'Kevin Ware' <kevin@kjenvironmental.com>;
Aaron.Prefontaine@yorkrsg.com
Subject: RE: Follow up

Good afternoon, Doc!

On the attached map, you'll see samples 34-39 (in green boxes), which are just northwest of the powerlines indicated with the yellow dashed line, which exceeded the action limit. Then you'll see samples 41-46 & 33 (in white boxes), southeast of the powerlines, which are all below action limits. The driller would not sample any closer in to the powerlines than the locations of 41-46 & 33 at the time of delineation because there is a significant increase in elevation southeast of the powerlines. We collected samples TSS1-TSS6 (in blue circles) via excavator, in a line 15' southeast of the powerlines at one-foot intervals for field screening, and at a depth of 4' for laboratory sampling, to evaluate whether there were any impacts on the up-gradient side of that significant elevation change. The results indicated no impact in excess of the action limits. We believe that there was never any impact southeast of that elevation change at the powerlines; however, we didn't have the data until now to demonstrate that, due to drilling rig sampling limitations; so we were assuming the soil to be impacted to the next closest clean samples (41-46 & 33). Since we now have the additional data, we would like to leave the soil in-place southeast of the elevation change at the powerlines. I attached pictures for your reference. Thanks!



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From: Oberding, Tomas, EMNRD [<mailto:Tomas.Oberding@state.nm.us>]
Sent: Wednesday, May 17, 2017 9:24 AM
To: Dena Vandenberg <dena@kjenvironmental.com>
Cc: 'Phillip Sanders' <psanders@oilfieldwaterlogistics.com>; 'Kevin Ware' <kevin@kjenvironmental.com>;
Aaron.Prefontaine@yorkrsg.com
Subject: RE: Follow up

Sorry for the confusion. There may be some email issues. I will investigate further.

Thank you in advance for the updated map.

Mahalo

-Doc

Tomáš 'Doc' Oberding PhD

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From: Dena Vandenberg [<mailto:dena@kjenvironmental.com>]

Sent: Wednesday, May 17, 2017 8:19 AM

To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>

Cc: 'Phillip Sanders' <psanders@oilfieldwaterlogistics.com>; 'Kevin Ware' <kevin@kjenvironmental.com>;

Aaron.Prefontaine@yorkrsg.com

Subject: RE: Follow up

I think there is some confusion about this. We are preparing a map to try to illustrate what we are discussing. We will have it to you by the end of the day. Thanks!



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From: Oberding, Tomas, EMNRD [<mailto:Tomas.Oberding@state.nm.us>]

Sent: Wednesday, May 17, 2017 9:08 AM

To: Dena Vandenberg <dena@kjenvironmental.com>

Cc: Phillip Sanders <psanders@oilfieldwaterlogistics.com>; Kevin Ware <kevin@kjenvironmental.com>;

Aaron.Prefontaine@yorkrsg.com

Subject: RE: Follow up

Aloha Dena et al,

Thank you for the patience. In order to account for the discrepancy between the original sampling and the new results which indicate downward movement the OCD needs to have further delineation occur. This delineation will identify the exact distances moved and help predict further mobility of the contamination in the areas of concern.

Mahalo

-Doc

Tomáš 'Doc' Oberding PhD

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From: Dena Vandenberg [<mailto:dena@kjenvironmental.com>]
Sent: Tuesday, May 16, 2017 10:10 AM
To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Cc: Phillip Sanders <psanders@oilfieldwaterlogistics.com>; Kevin Ware <kevin@kjenvironmental.com>;
Aaron.Prefontaine@yorkrsg.com
Subject: RE: Follow up

Good morning, Doc!

We are coming to a point in the remediation where we will need to have an answer on this request very soon in order to maintain efficiency. Please give me a call as soon as you can. Thanks!



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From: Oberding, Tomas, EMNRD [<mailto:Tomas.Oberding@state.nm.us>]
Sent: Thursday, May 11, 2017 11:25 AM
To: Dena Vandenberg <dena@kjenvironmental.com>
Subject: RE: Follow up

Aloha Dena,
Just got it and have it 3rd down the list.
Cheers!

Tomáš 'Doc' Oberding PhD
Hydrologist, Adv-District 1
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From: Dena Vandenberg [<mailto:dena@kjenvironmental.com>]
Sent: Thursday, May 11, 2017 10:24 AM

To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>

Cc: Kevin Ware <kevin@kjenvironmental.com>; Phillip Sanders <psanders@oilfieldwaterlogistics.com>

Subject: Follow up

Good morning, Doc!

I wanted to follow up with you regarding my previous email. If you have any additional questions, I am happy to respond to them. Please give me a call when you have a chance to discuss. Thanks!



DENA M. VANDENBERG, REM, LEED AP

Director of Environmental Services

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