From: Jennifer Deal
To: Smith, Cory, EMNRD
Subject: [EXT] FW: [EXTERNAL] Hilcorp"s Kaufman No. 1 - Weekly Update for week of 4/20/20
Date: Tuesday, April 21, 2020 6:07:13 AM
Attachments: image001.png
Kaufman No. 1 (Fig 5_PSE).pdf
Kaufman No. 1 (Fig 6_groundwaterresults).pdf
Kaufman No. 1 (Fig 7_TPH).pdf

See update below. Let me know if you have any questions.

Thanks,

Jennifer Deal
Environmental Specialist
Hilcorp Energy – L48 West
jdeal@hilcorp.com
Office: (505) 324-5128
Cell: 505-801-6517

From: Jim Foster [mailto:jim@teamtimberwolf.com]
Sent: Monday, April 20, 2020 4:41 PM
To: Thomas, Leigh <l1thomas@blm.gov>
Cc: Abiodun Adeloye <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>; Jennifer Deal <jdeal@hilcorp.com>; Matthew Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; Michael Morse <michael@teamtimberwolf.com>
Subject: [EXTERNAL] Hilcorp's Kaufman No. 1 - Weekly Update for week of 4/20/20

All,

During the week of 4/6/20, Timberwolf conducted the second quarter groundwater monitoring at the Kaufman No. 1. Groundwater and surface water gauging data were used to create a potentiometric surface elevation (PSE) map (Figure 5, attached). The PSE map revealed that groundwater across the Site continues to flow west-southwest across the Site and turns southwest as groundwater approaches the La Plata River.

Groundwater samples were collected from the 6 monitor wells and submitted for laboratory analysis of BTEX and TPH. BTEX results are shown in the attached Figure 6; BTEX concentrations in groundwater samples were below laboratory detection limits and NMOCD regulatory criteria. TPH results are shown in the attached Figure 7; concentrations of TPH in all groundwater samples were below laboratory detection limits and applicable human health standards for groundwater ingestion.

Should you have any questions, please do not hesitate to contact me on my cell phone (below).

Thank you,

Jim Foster
President

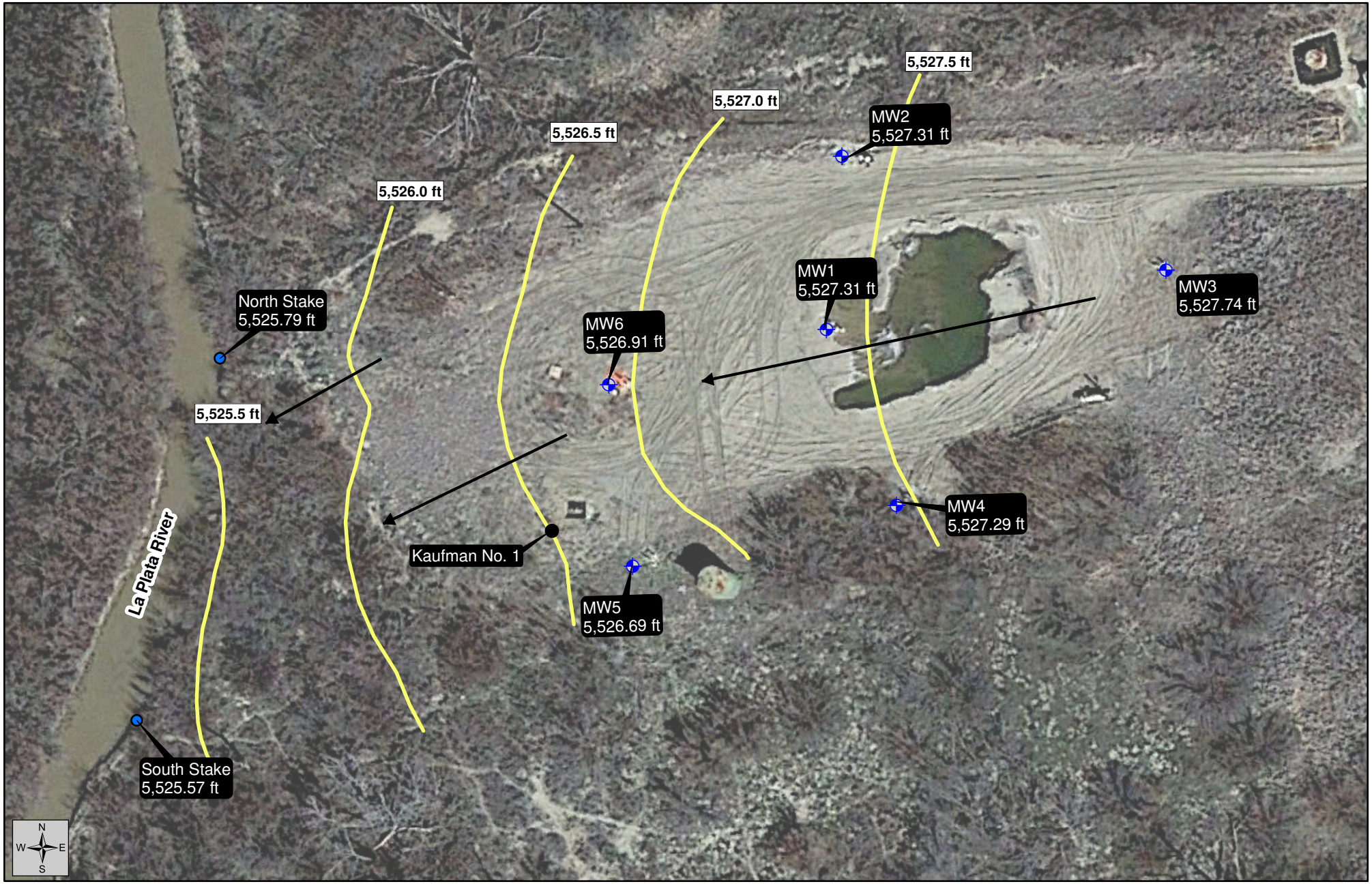

Figure 5
Potentiometric Surface Elevation Map

Status Report - 2nd Quarter Report (AP-0138)

Gauging Date:
April 9, 2020

TIMBERWOLF ENVIRONMENTAL

1:500

0 50 100 150 200 250 Feet

Created By:
Chris Perez
April 20, 2020
TE Project No.: HEC-180061

Kaufman No. 1 Release (SE1/4 NE1/4, Sec. 33, T31N, R13W)
Hilcorp Energy Company
San Juan County, New Mexico

Datum: NAD83
Imagery Source: Google Earth
Vector Source: TE

- Monitor Well
- Surveyed Stake
- Kaufman No. 1 Well Head
- Groundwater Gradient
- Direction of Flow

Sample ID	Date	Volatile Organic Compounds (mg/L)			
		B	T	E	X
MW1	04/09/20	< 0.001	< 0.001	< 0.001	< 0.0015
MW2	04/09/20	< 0.001	< 0.001	< 0.001	< 0.0015
MW3	04/09/20	< 0.001	< 0.001	< 0.001	< 0.0015
MW4	04/09/20	< 0.001	< 0.001	< 0.001	< 0.0015
MW5	04/09/20	< 0.001	< 0.001	< 0.001	< 0.0015
MW6	04/09/20	< 0.001	< 0.001	< 0.001	< 0.0015
Regulatory Criteria		0.01	0.75	0.75	0.62

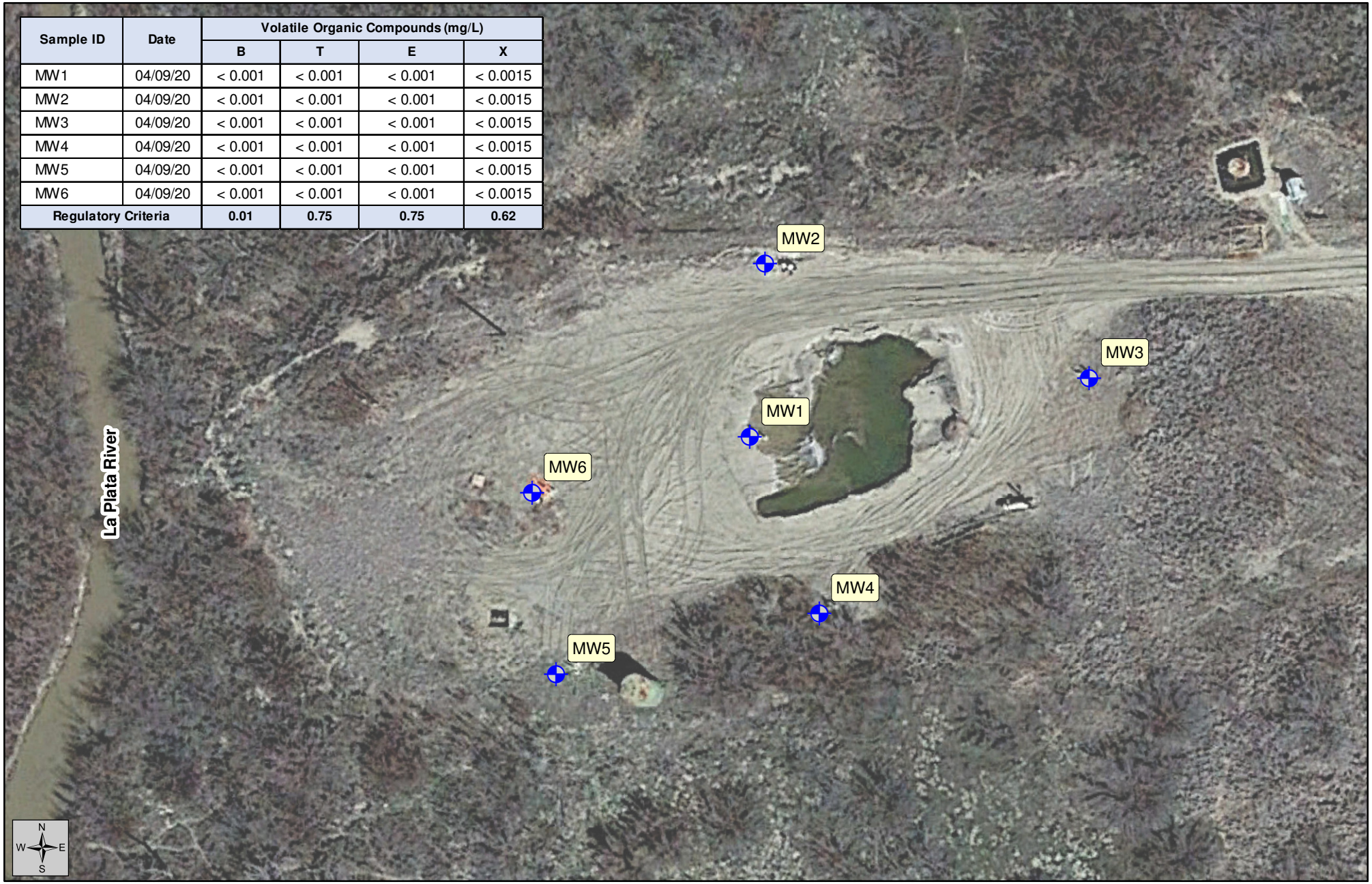

Figure 6
BTEX Results - 2Q20

Status Report - 2nd Quarter Report (AP-0138)

Sample Date:
April 9, 2020

TIMBERWOLF ENVIRONMENTAL

1:500

0 50 100 150 200 250 Feet

Created By:
Chris Perez
April 20, 2020
TE Project No.: HEC-180061

Kaufman No. 1 Release (SE1/4 NE1/4, Sec. 33, T31N, R13W)
Hilcorp Energy Company
San Juan County, New Mexico

Datum: NAD83
Imagery Source: Google Earth
Vector Source: TE

Monitor Well

Sample ID	Date	Total Petroleum Hydrocarbons (mg/L)			
		GRO	DRO	ORO	Total TPH
MW1	04/09/20	< 0.60	< 0.60	< 0.60	< 0.60
MW2	04/09/20	< 0.60	< 0.60	< 0.60	< 0.60
MW3	04/09/20	< 0.60	< 0.60	< 0.60	< 0.60
MW4	04/09/20	< 0.60	< 0.60	< 0.60	< 0.60
MW5	04/09/20	< 0.60	< 0.60	< 0.60	< 0.60
MW6	04/09/20	< 0.60	< 0.60	< 0.60	< 0.60
Regulatory Criteria		--	--	--	0.98

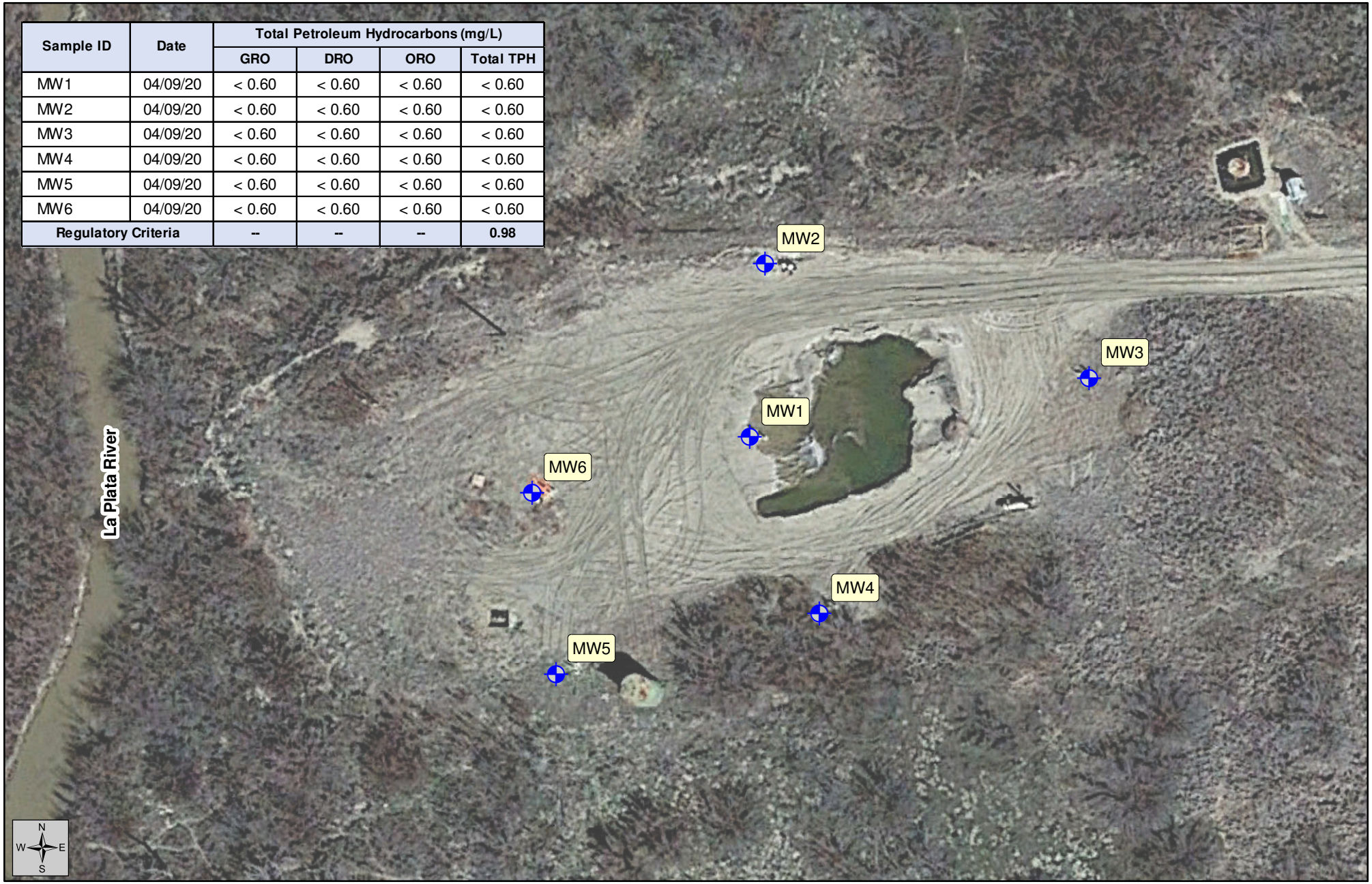

Figure 7
TPH Results - 2Q20

Status Report - 2nd Quarter Report (AP-0138)

Sample Date:
April 9, 2020

TIMBERWOLF ENVIRONMENTAL

1:500

0 50 100 150 200 250 Feet

Created By:
Chris Perez
April 20, 2020
TE Project No.: HEC-180061

Kaufman No. 1 Release (SE1/4 NE1/4, Sec. 33, T31N, R13W)
Hilcorp Energy Company
San Juan County, New Mexico

Datum: NAD83
Imagery Source: Google Earth
Vector Source: TE

Monitor Well

691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster
Sent: Thursday, March 5, 2020 10:45 AM
To: Thomas, Leigh <l1thomas@blm.gov>
Cc: Abiodun Adeloye <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>; Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; Michael Morse <michael@teamtimberwolf.com>
Subject: RE: Hilcorp's Kaufman No. 1 - Weekly Update for week of 2/24/20

All,

Analytical results of groundwater samples collected during the 1Q20 monitoring event revealed that:

1) constituents of BTEX were below OCD regulatory limits for all groundwater samples and
2) TPH concentrations were below the referenced human health criteria.

Analytical results are presented in the attached Figures 6 and 7.

Also, Timberwolf has retained the services of SME Environmental Consultants of Durango, CO to conduct surveys for the Southwestern willow flycatcher and Yellow-billed cuckoo as requested by the BLM. The survey will include 6 survey visits between 5/15/20 and 8/7/20. We will provide advance notice of the first survey event should BLM wish to have a representative on site.

Thank you,

Jim Foster
President
691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster

Sent: Saturday, January 18, 2020 6:51 PM
To: Thomas, Leigh <l1thomas@blm.gov>
Cc: Abiodun Adeloye <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>; Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; Michael Morse <michael@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 1/6/20 and 1/13/20

All,

As you know, for the week of 1/6/20 Timberwolf submitted the Stage 2 Abatement Plan to the OCD (hard and electronic copies were also submitted to the BLM).

For the week 1/13/20, Timberwolf conducted the first quarter 2020 groundwater monitoring. During the monitoring event, groundwater and La Plata River elevations were gauged and groundwater samples were collected for laboratory analysis. Groundwater and river elevations were used to create a potentiometric surface elevation (PSE) map. A copy of the PSE map is attached. The PSE map reveals groundwater moving across the Site from east to west, and turning west-southwest as groundwater approaches the river.

Please let me know if you have any questions.

Thank you,

Jim Foster
President
TIMBERWOLF ENVIRONMENTAL
691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster
Sent: Friday, December 20, 2019 11:21 AM
To: Thomas, Leigh <l1thomas@blm.gov>
Cc: Abiodun Adeloye <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>; Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; Michael Morse <michael@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 12/2/19, 12/9/19, and

All,

For the week of 12/2/19 no work was conducted.

For the week of 12/9/19, groundwater and river water elevations were gauged. The data was subtracted from the surveyed elevations from the corresponding tops of casing and steel stakes. This data was used to prepare a potentiometric surface elevation map (attached). The attached PSE map reveals groundwater flow across the site is from east to west and turns to a southwesterly direction as it approaches the river. The PSE map also indicates that groundwater is being discharged to the river.

For the week of 12/16/19, no work was conducted.

Wishing everyone a Merry Christmas and Happy New Year!

Jim Foster
President
TIMBERWOLF ENVIRONMENTAL
691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster
Sent: Tuesday, November 19, 2019 6:11 PM
To: Thomas, Leigh <l1thomas@blm.gov>
Cc: Abiodun Adeloye <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>; Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; Michael Morse <michael@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 11/11/19

All,

For the week of 11/11/19, excavation backfill and disposal of impacted soil continued and was completed on 11/12/19. A photographic log documenting soil mitigation activities is attached.

Thank you,

Jim Foster
President
TIMBERWOLF ENVIRONMENTAL
691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster
Sent: Tuesday, November 12, 2019 11:04 AM
To: Thomas, Leigh <l1thomas@blm.gov>
Cc: Abiodun Adeloye <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>; Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; Michael Morse <michael@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 11/4/19

All,

For the week 11/4/19, the following tasks were conducted at the Site:

- A pilot study was conducted to determine the radius of influence of a 2-inch well completed in the saturated zone. To monitor groundwater, 3 temporary Gauging Points (i.e., GP1, GP2, and GP3) were installed 25 ft, 40 ft and 50 ft from MW1, respectively.
  MW1 was connected to a vacuum truck. Prior to extracting water from MW1, elevations of groundwater were measured in each monitor well and the 3 gauging points. Groundwater elevations in the gauging points and MW4 were measure every 15 minutes as groundwater was extracted from MW1. The test continued until all groundwater elevation became static or stable. Once the test was terminated, groundwater elevations were monitored to demonstrate recharge and confirm that the observed drop in groundwater elevations were a direct influence from groundwater extraction from MW1. The pilot study revealed that the radius of influence in the saturated zone is 56 ft in the saturated zone; results are shown in the attached figure.
- Soil Abatement
  - Vadose zone abatement – soil exceeding the site-specific SPLP limit were excavated and transported to a commercial disposal facility
  - Ecological risk abatement – soil exceeding the ecological risk standards in the upper 2-ft horizon were excavated and transported to a commercial disposal facility
  - Samples were collected from the excavation sidewalls to determine if impacted soil had been sufficiently abated. (Note: prior sample collection and analysis of the excavation sidewalls revealed soils along the north and east sidewalls were below SPLP and ecological limits.) The area around ESA6 required additional excavation to mitigate ecological risk. Excavation boundary, confirmation sample locations, and laboratory results are provide in the attached figure.
  - Began excavation backfill
- Two steel stakes were driven into the east bank of the La Plata River to facilitate the hydrological assessment of groundwater and the river

This week: excavation backfill will continue and groundwater samples will be collected and analyzed for TPH.

Thank you,

Jim Foster

President

TIMBERWOLF ENVIRONMENTAL

691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Thomas, Leigh <l1thomas@blm.gov>
Sent: Friday, November 8, 2019 2:42 PM
To: Jim Foster <jim@teamtimberwolf.com>
Cc: Abiodun Adeloye <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>; Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; Michael Morse <michael@teamtimberwolf.com>
Subject: Re: [EXTERNAL] Hilcorp's Kaufman No. 1 - Weekly Update for week of 9/23/19, 9/30/19, and 10/7/19

Jim,

I think it would be best considering the area that the location is in that we get the hydrocarbons analyzed. Thank you and let me know if you have any questions.

Whitney Thomas
Physical Scientist
Farmington Field Office
6251 North College Boulevard
Suite A
Farmington, NM 87402
Office: 505-564-7680
Cell: 505-635-9796
email: l1thomas@blm.gov

On Thu, Nov 7, 2019 at 1:03 PM Jim Foster <jim@teamtimberwolf.com> wrote:

> The OCD has not established a regulatory limit for total petroleum hydrocarbons (TPH) in groundwater; therefore, we only had the samples analyzed for BTEX. Our previous groundwater investigation included the laboratory analysis of the entire volatile organic carbon list; the only constituent exceeding regulatory limits was benzene.
>
> If you would like the groundwater samples analyzed for TPH, I don't think Hilcorp would have an objection to that, just let me know.
>
> Thank you,
> Jim

From: Thomas, Leigh <l1thomas@blm.gov>
Sent: Thursday, November 7, 2019 12:54 PM
To: Jim Foster <jim@teamtimberwolf.com>
Cc: Abiodun Adeloye <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>; Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; Michael Morse <michael@teamtimberwolf.com>
Subject: Re: [EXTERNAL] Hilcorp's Kaufman No. 1 - Weekly Update for week of 9/23/19, 9/30/19, and 10/7/19

Jim,

What were the results for the hydrocarbon in the groundwater?

Whitney Thomas
Physical Scientist
Farmington Field Office
6251 North College Boulevard
Suite A
Farmington, NM 87402
Office: 505-564-7680
Cell: 505-635-9796
email: l1thomas@blm.gov

On Thu, Nov 7, 2019 at 10:22 AM Jim Foster <jim@teamtimberwolf.com> wrote:

> Whitney,
>
> Attached are two figures with results from the groundwater monitoring conducted during October 2019. Figure 8 is a potentiometric surface elevation (PSE) map which shows groundwater elevations across the Site and reveals groundwater flow to be towards the open excavation (i.e., former tank battery). Figure 9 shows the laboratory results of groundwater samples.
>
> Analytical results were below regulatory limits in all groundwater monitoring wells; the highest concentration of benzene was observed in MW5 at 0.0041 mg/L, which is below the OCD regulatory limit of 0.010 mg/L.
>
> Benzene concentrations in MW1 (situated immediately adjacent to the point of release) decreased from 0.074 mg/L in January 2019 to < 0.001 mg/L in October 2019. This is marked improvement is such a short period of time and consistent with the PSE map. The open excavation creates a regional depression as groundwater evaporates off the excavation. This depression in groundwater elevation causes groundwater in the area to flow towards the excavation. Benzene, a hydrophilic compound, is carried with water as groundwater flows towards the excavation and volatiles off as water is evaporated.

This week we are working at the Site conducting the following task:

- Mitigating soil which may pose a risk of leaching into groundwater
- Mitigating soil which may pose an ecological risk
- Collecting confirmation samples of sidewalls
- Conducting a pilot study to determine the radius of influence
- Installing stakes along the La Plata River to facilitate the hydrological study of groundwater along the river

Please let me know if you have any questions.

Thank you,

Jim Foster
President
TIMBERWOLF ENVIRONMENTAL
691 CR 233, Suite B-4
Durango, CO 81301
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Teamtimberwolf.com

From: Thomas, Leigh <l1thomas@blm.gov>
Sent: Thursday, November 7, 2019 8:47 AM
To: Jim Foster <jim@teamtimberwolf.com>
Cc: Abiodun Adeloye <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>; Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; Michael Morse <michael@teamtimberwolf.com>
Subject: Re: [EXTERNAL] Hilcorp's Kaufman No. 1 - Weekly Update for week of 9/23/19, 9/30/19, and 10/7/19

Jim,

Have you received the results from the groundwater monitoring events that you reported in the previous event?

Thank you

Whitney Thomas
Physical Scientist
Farmington Field Office

6251 North College Boulevard
Suite A
Farmington, NM 87402
Office: 505-564-7680
Cell: 505-635-9796
email: l1thomas@blm.gov

On Fri, Oct 18, 2019 at 1:28 PM Jim Foster <jim@teamtimberwolf.com> wrote:

> All,
>
> I was out of the office the week of 9/30/19. I apologize for falling behind on these updates.
>
> For the week of 9/23/19, no work was conducted.
>
> For the week of 9/30/19, a revised wetland report was completed. The report was revised to include additional soil data points and additional information as requested by Wyatt Medley with the USACE. Copies of the revised report were submitted to the BLM and USACE. After Wyatt Medley's review, he provided the following feedback by email: *I don't have any further comments on the delineation and I appreciate the effort that Timberwolf put into the document.*
>
> For the week of 10/7/19, a groundwater monitoring event was conducted. Groundwater samples were collected from each monitoring well; samples were submitted for laboratory analysis and should be reported in the next weekly update.
>
> A potentiometric surface map (PSE) was prepared to determine the direction of groundwater flow across the Site (attached). The attached PSE map reveals that groundwater is discharging to the excavation (i.e. former tank battery). The mechanism for discharge is evaporation; which should facilitate stabilizing the benzene plume (i.e., keeping it from moving off-site).
>
> Thank you,
>
> **Jim Foster**
> **President**
> TIMBERWOLF ENVIRONMENTAL
> 691 CR 233, Suite B-4
> Durango, CO 81301
> 970-516-8419 (O) 979-324-2139 (C)
> Teamtimberwolf.com
>
> ---
>
> **From:** Jim Foster
> **Sent:** Wednesday, September 25, 2019 6:10 PM

To: 'Thomas, Leigh' <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>; 'John Kendall' <j01kenda@blm.gov>
Cc: 'Jennifer Deal' <jdeal@hilcorp.com>; 'Matt Henderson' <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 9/9/19

All,

For the week of 9/16/19, no work was conducted at the Site.

Thank you,

Jim Foster
President
TIMBERWOLF ENVIRONMENTAL
691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster
Sent: Monday, September 16, 2019 5:09 PM
To: Thomas, Leigh <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>
Cc: Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 9/9/19

All,

For the week of 9/9/19, we submitted the required public notices for the Stage 1 Abatement Plan.

Thank you,

Jim Foster
President
TIMBERWOLF ENVIRONMENTAL
691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster
Sent: Wednesday, September 11, 2019 4:46 PM
To: 'Thomas, Leigh' <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>; 'John Kendall' <j01kenda@blm.gov>
Cc: 'Jennifer Deal' <jdeal@hilcorp.com>; 'Matt Henderson' <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 9/2/19

All,

For the week of 9/2/19, we submitted all required written notices to all surface owners within a one-mile radius of the Site.

Thank you,

Jim Foster
President
TIMBERWOLF ENVIRONMENTAL
691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster
Sent: Wednesday, September 4, 2019 4:05 PM
To: 'Thomas, Leigh' <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>; 'John Kendall' <j01kenda@blm.gov>
Cc: 'Jennifer Deal' <jdeal@hilcorp.com>; 'Matt Henderson' <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 8/26/19

All,

For the week of 8/26/19, we received notification from the OCD that our Stage 1 Abatement Plan as been administratively approved. The enables us to move forward with remedial activities scheduled for the Site.

Thank you,

Jim Foster
President

TIMBERWOLF ENVIRONMENTAL
691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster
Sent: Wednesday, August 28, 2019 3:42 PM
To: Thomas, Leigh <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>
Cc: Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 8/19/19

All,

For the week of 8/19/19, we met Wyatt Medley with the USACE on-site. In a previous meeting with Wyatt, he expressed his desire for a more detailed soil investigation to enable a more refined wetland delineation. To that end, we evaluated approximately 10 additional soil locations. The findings revealed a off-site wetland to the north that does not cross the fencing. This wetland was delineated to the south by installing additional soil locations (note: soil locations were not installed to the west, north or east because this is not an area of concern). The previously identified wetland east of the Site has a narrow band which extends between the southern edge of the well pad and an earthen berm. The attached figure shows all soil locations and the revised findings.

Timberwolf will prepare a revised wetland investigation report to include these findings.

Thank you,

Jim Foster
President

TIMBERWOLF ENVIRONMENTAL
691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster
Sent: Tuesday, August 20, 2019 10:16 AM
To: 'Thomas, Leigh' <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>; 'John Kendall' <j01kenda@blm.gov>
Cc: 'Jennifer Deal' <jdeal@hilcorp.com>; 'Matt Henderson' <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 8/12/19

All,

For the week of 8/12/19, no work was completed at the Site.

We have completed most tasks outlined in the Stage 1 abatement plan. At this point we are awaiting OCD approval for the Stage 1 public notice statement. I have emailed Cory Smith with the OCD 2 or 3 times and discussed the matter with him by phone. He is experiencing delays from Santa Fe.

Jim Foster
President
TIMBERWOLF ENVIRONMENTAL
691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster
Sent: Monday, August 12, 2019 5:18 PM
To: Thomas, Leigh <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>
Cc: Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 8/05/19

All,

For the week of 8/5/19, we completed the vadose zone study of the excavation area which yielded site-specific criteria for petroleum hydrocarbon constituents in soil. Based on the findings, additional excavation is required along the southern and western portions of the excavation. The attached figure shows the proposed excavation area.

Thank you,
Jim Foster
President

691 CR 233, Suite B-4
Durango, CO 81301
970-516-8419 (O) 979-324-2139 (C)
Teamtimberwolf.com

From: Jim Foster
Sent: Tuesday, August 6, 2019 7:38 PM
To: 'Thomas, Leigh' <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>; 'John Kendall' <j01kenda@blm.gov>
Cc: 'Jennifer Deal' <jdeal@hilcorp.com>; 'Matt Henderson' <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 7/29/19

All,

Sorry for the delayed weekly report. I was out of the office on Friday and was dealing with other matters yesterday and today.

For the week of 7/29/19, we have no additional activities to report. We received the results of the leachate study today, we will process that data to determine suitable soil criteria for the Site to prevent constituent migration into the groundwater. Based on that information additional excavation may be required. I expect to have that data available in the next weekly report.

Thank you,

Jim Foster
President

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From: Jim Foster
Sent: Monday, July 29, 2019 11:02 AM
To: Thomas, Leigh <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>
Cc: Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>; Clay Morris <clay@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 7/22/19

All,

Below is a summary of work conducted last week at the Kaufman No. 1.

Wetland Investigation
Timberwolf completed its report for the wetland investigation. A copy of the report was delivered to the BLM – Farmington Office and the USACE – Durango Office.

Ecological Risk Assessment (Section 6.4)
The ecological assessment (Section 6.4 of the Stage 1 abatement plan) was conducted to determine if soil at the Site pose a risk to the Southwestern willow flycatcher. Soil samples were collected from the upper 2 ft of the excavation base and sidewalls. The assessment revealed that soil in the western portion of the excavation exceeded the protective concentration limits (PCL) for the Southwestern willow flycatcher. To mitigate the ecological risk, soil will be excavated for off-site disposal Findings of the risk assessment and proposed excavation area are presented in the attached figure.

Potentiometric Surface Map
During the additional groundwater assessment (Section 5 of the Stage 1 abatement plan), potentiometric surface elevations were collected for groundwater in each monitor well. The attached potentiometric surface map reveals groundwater is moving towards the excavation.

Thank you,
Jim Foster
President
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From: Jim Foster
Sent: Friday, July 19, 2019 4:14 PM

To: Thomas, Leigh <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>
Cc: Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>; Clay Morris <clay@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 7/15/19

All,

Below is a summary of work conducted this week for the Kaufman No. 1.

Wetland Delineation
Timberwolf completed its Wetland Delineation report. The report was submitted to Hilcorp personnel on 7/18/19 for review. Upon their approval, copies will be submitted to the BLM and USACE.

Receptor Survey
Four sensitive features were identified within a one-quarter mile radius of the Site. These include: one wetland, the La Plata River, an unnamed tributary of the La Plata River, and an irrigation canal. Also, 19 water wells were identified within a one-mile radius of the Site; all wells are domestic supply wells. Figures depicting the location of sensitive features and water wells are attached. Also, within the attached document is a table that provides well location, well type, and depth (if available).

Thank you,

Jim Foster
President
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From: Jim Foster
Sent: Friday, July 12, 2019 2:28 PM
To: Thomas, Leigh <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>; John Kendall <j01kenda@blm.gov>
Cc: Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>; Clay Morris <clay@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 7/8/19

All,

Below is a summary of work conducted this week on the Kaufman No. 1.

Public Notice
A public notice was submitted to the OCD for review and approval on 7/10/19. Upon approval, the notice will be published in newspapers with local and statewide circulation. Additionally, a list of property owners within a one-mile radius has been compiled. These landowners will receive written notice of the Stage 1 abatement plan as required under 19.15.30 NMAC.

Ecological Risk Assessment
On 7/11/19, 5 soil samples were collected to assess the ecological risk to the Southwestern willow flycatcher. Each soil sample was collected from the edge of the open excavation from the 0 – 2 ft depth interval. Samples were submitted to Hall Environmental for chemical analysis of: GRO, DRO, MRO, and BTEX.

Vadose Zone Assessment
On 7/11/19, 13 soil samples were collected from the excavation base and sidewalls to assess the vadose zone. Sidewall samples were collected from the 2.5 – 3.5 ft depth interval. Samples were submitted to Hall Environmental for chemical analysis of: GRO, DRO, MRO, and BTEX. Once laboratory analysis is complete, additional analysis will be conducted using EPA method SW-846 Test Method 1312 (*Synthetic Precipitation Leaching Procedure*) to evaluate the leachability of soil within the vadose zone.

Receptor Survey
Review of public records revealed 18 domestic water supply wells within a 1-mile radius of the Site. The closest water well is approximately 0.22 miles north-northwest of the Site.
A one-quarter mile ground reconnaissance was conducted on 7/11/19. Note: land ownership west of the La Plata River is predominately private; therefore, ground reconnaissance west of the river was restricted.

Wetland Delineation Map
On 7/2/19, Timberwolf conducted a wetland investigation. The attached map depicts the bounds of the investigation and identified features. One wetland was observed east of the Site and 3 areas of hydric vegetation (non-wetland) are located north and south of the Site.

Thank you,

Jim Foster
President

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From: Jim Foster
Sent: Wednesday, July 3, 2019 5:39 PM
To: 'Thomas, Leigh' <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>
Cc: 'Jennifer Deal' <jdeal@hilcorp.com>; 'Matt Henderson' <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>; Clay Morris <clay@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update for week of 7/1/19

All,

Wetland Investigation

Per the Army Corp of Engineer's request, a wetland investigation was conducted at the Site on 7/2/19. The investigation area encompassed the same area of concern (AOC) as the archeological survey. The investigation revealed one wetland, located immediately east of the well pad. A map depicting the AOC and wetland boundary is being prepared and will be delivered as soon as available. The wetland investigation report is scheduled to be completed by 7/19/19.

Groundwater Analytical Results

Analytical results of a groundwater sample collected from the hydrologically upgradient monitor well MW3 revealed elevated salinity as previously identified from analysis of MW1 which is located immediately adjacent to the point of release. Total concentrations and relative percentages of TDS, chloride, and sulfate in MW1 and MW3 reveal a strong correlation in groundwater chemistry between the two samples. This suggests the elevated salinity observed is a native feature of the Site's groundwater. Analytical results for the two samples are presented in the table below. The full salinity chemistry will be presented in the Stage 2 Abatement Plan.

Constituent	MW1	MW3
TDS, mg/L	3130	2,750
Chloride, mg/L	130	120
Sulfate, mg/L	1,700	1,600

mg/L – milligrams per liter

Stage 1 Abatement Plan Status

The OCD appears to have deemed our Stage 1 Abatement Plan administratively complete. Therefore, a public notice will be issued within 15 days as required under 19.15.30.

Please let me know if you have any questions. Wishing everyone a good Independence Day!

Thank you,

Jim Foster
President
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From: Jim Foster
Sent: Friday, June 28, 2019 3:01 PM
To: Thomas, Leigh <l1thomas@blm.gov>; 'Abiodun Adeloye' <aadeloye@blm.gov>
Cc: Jennifer Deal <jdeal@hilcorp.com>; Matt Henderson <mhenderson@hilcorp.com>; Ryan Mersmann <ryan@teamtimberwolf.com>; James McNutt <james@teamtimberwolf.com>
Subject: Hilcorp's Kaufman No. 1 - Weekly Update

All,

Per the Stage 1 Abatement Plan, on June 20 and 21 Timberwolf conducted the following activities:

- Collected soil samples from the Site to horizontally delineate the historical hydrocarbon impacted soil observed at approximately 8-9' in samples collected from MW4, MW5, and MW6
- Collected soil samples from the perimeter of the excavation for the leachate study. Note: increased water level limited access to the excavation; therefore, no samples were collected from the excavation at this time
- Collected an upgradient groundwater sample to determine if salinity (i.e., TDS) observed in MW1 is a native feature of the Site's groundwater

All samples were submitted to Hall Environmental for laboratory analysis; Findings are presented below.

Horizontal Delineation of Historical Release

The attached figure shows locations of soil borings (i.e., SB1-SB5) installed to horizontally delineate the historical hydrocarbon impacted soil. No visible signs of hydrocarbon were observed, no appreciable PID readings were observed during field screening, and all samples collected were below regulatory limits. Soil boring locations and laboratory results are presented in the attached figure (leachatestudy).

Leachate Study Surrounding Excavation

Seven soil borings (i.e., SB6 – SB12) were installed surrounding the excavation to evaluate the vadose zone. Samples from 1 soil boring (i.e., SB11) exceeded the regulatory limit for TPH with a concentration of 280 mg/kg. Soil boring locations and laboratory results are presented in the attached figure (historical delineation). Additional investigation is scheduled along the excavation sidewalls and base.

Groundwater Sampling

Timberwolf collected a groundwater sample from MW3 to determine if TDS levels observed in MW1 were related to the release or are a native feature of the Site's groundwater. The sample was submitted to Hall Environmental; analysis is underway.

Please let me know if you have any questions.

Jim Foster
President

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