

### NEW MEXICO ENVIRONMENT DEPARTMENT

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### Certified Mail - Return Receipt Requested

February 14, 2017

Mr. Keith Fronk Fronk Oil 900 E Industrial Rd. Booker, TX 79005

RE:

Tanker Spill into the Cimarron River and Associated Clean-Up near Cimarron, New Mexico

Dear Mr. Fronk:

At approximately 11:30am on December 27, 2016, a Fronk Oil tanker truck carrying unleaded gas was involved in an accident near mile marker 290 on Highway 64, approximately 5 miles east of Eagle Nest, which caused a release of approximately 1100 gallons of diesel fuel (from the saddle tanks) and unleaded gas to the Cimarron River.

The tanker was uprighted, unloaded and transported off-site by midnight on December 27. Initial estimates indicated that 50-100 gallons of diesel fuel was released from the saddle tanks but no fuel had been released from the tanker. You dispatched your contractor, D&H United Fueling Solutions, from Albuquerque to address the cleanup, and their first team arrived on site around 9:00 pm on December 27. On the morning of Wednesday, December 28, 2016, the initial contractor emergency response team from Albuquerque requested assistance from their El Paso office. The El Paso team arrived at approximately 4:00 pm on Wednesday, December 28, 2016, at which time they learned that an estimated 1100 gallons of fuel (consisting of both diesel and gasoline) had been released into the river.

The New Mexico Environment Department's Hazardous Waste Bureau (HWB) and Surface Water Quality Bureau (SWQB) responded and arrived at the site at 8:30am on December 29, 2016. At that time D&H had installed absorbent pads to trap the fuel and limit its dispersion downstream. SWQB collected water quality samples at six discrete locations along the Cimarron River, observed the response and cleanup actions from D&H, and coordinated with other agency responders on site.

SWQB submitted the samples to the Scientific Laboratory Division (SLD) in Albuquerque that evening for analysis of Volatile Organic Compounds (VOCs), Semi-volatile Organic Compounds (SVOCs), Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Residual Range Organics (RRO). There were several dead fish observed in the immediate area; however, surveillance further downstream did not detect any evidence of fuel. Representatives from NM Department of Game and Fish (NMDGF) also indicated that there was an effect on the macroinvertebrate community (i.e., no organisms of this type were observed in the river).

Cleanup efforts continued through the weekend and into the following week. The contractor brought additional staff to the site to break up the ice and remove it from the river with an excavator. A vacuum truck arrived on site the morning of December 30, 2016 and was used to remove approximately 4200 gallons of oil and water. Absorbents and pads were deployed to remove additional fuel. Some soil was removed from the crash site and drums of absorbents and contaminated ice were staged to be removed from the site on January 3, 2017. Fronk Oil was advised to obtain an emergency Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers (USACE) in order to allow the contractor to excavate material and create a pad to allow the vacuum truck to access the river.

HWB staff returned to the site on January 3, 2017 and observed minor yellowing of the ice near the end of the release, but did not observe any free product. The contractor agreed to conduct sampling at six sites on the river, however because the contractor did not have adequate sampling bottles, only volatile organic compounds (VOCs) and diesel range organics (DRO) were collected. Water quality samples were obtained from the following sites: upstream of the crash site, crash site, upstream of the Highway 64 culverts, approximately 500 feet downstream of the crash site at the pond, and just downstream of the beaver dam. NMED advised the contractor to leave all absorbent booms in place to collect any remaining fuel pending review of the water quality data.

On January 3, 2017 SWQB received all priority results from SLD for the samples collected on December 29. Results from Sites 1 (upstream of crash), and 4 – 6 (further downstream) were clean of VOCs and SVOCs. There was also no GRO, DRO, nor RRO present at these sites. As for Sites 2 and 3, Cimarron River 100 feet downstream of spill and Cimarron River 500 feet downstream of spill, the profile was distinctly BTEX (benzene, toluene, ethylbenzene, and xylenes) plus various alkylbenzenes, as well as naphthalene, and GRO and DRO. D&H's water quality results from samples taken on January 3 also indicated detectable levels of hydrocarbons (BTEX and DRO) present downstream of the crash site near the Highway 64 bridge and beaver dam/pond, although levels were considerably lower than those measured on December 29.

SWQB staff returned to the site on January 4, 2017 accompanied by USACE staff and determined that a significant diesel impact remained. Staff encountered a strong diesel odor, several dead trout, and contamination beneath the substrate. Additionally, staff noted residual trash, spilled engine oil in the snow, and residual metal and fiberglass material presumably from the crash itself.

Also on January 4, 2017, the New Mexico Department of Game and Fish (NMDGF) Fisheries Management Division was on site to assess the extent of the fish kill on the Cimarron River. It appears that the fuel spill caused an entire fish and bug kill down to the beaver dam, approximately 600 feet downstream of the crash site. NMDGF staff estimated a fish kill of approximately 300-400 on this date. However, NMDGF staff did find live fish and aquatic invertebrates from the Clear Creek confluence (about 2.5 miles below the spill site) upstream to the beaver pond at the Horseshoe Mine Fishing Access parking lot (about ¼ miles below the spill site). A distinctive diesel odor was noted in locations near the Perryville Fishing Area located about 2 miles below of the spill site, but fish and invertebrates were alive and healthy. It was also noted that most of the river was completely frozen from Perryville to the spill site.

Based on the analytical results and also on staff observations, SWQB sampled the Cimarron River again on January 11, 2017 and submitted the samples for analysis of VOCs, SVOCs, GRO, DRO, and RRO. Results indicated non-detects (clean) for all sites except the location 500 feet below the spill. At this site BTEX, various alkylbenzenes, naphthalene, GRO and DRO were detected, however concentrations were less than those measured on January 3 and generally an order of magnitude lower than samples from December 29 indicating that cleanup efforts have been effective although not complete.

SWQB staff visited the crash site again with the contractor on January 17, 2017. The contractor had replaced the absorbent booms in the river, but SWQB staff still observed a strong sheen and strong petroleum odors. There was a very heavy odor of petroleum approximately 100 to 500 feet downstream of the crash site (downstream of the Highway 64 bridge), the water below the ice had a thick petroleum slippery feel and even more odor, and a petroleum sheen could be seen in several places. Due to these observations, NMED indicated to the contractor that additional measures needed to be taken immediately by Fronk Oil to continue addressing the spill including placing double booms to provide more opportunity to catch any remaining fuel, placing socks in between booms for added protection, and collecting additional soil and water samples at locations that are consistent with the "problem" area near the beaver dam/pond. Removal of contaminated ice was also discussed.

Analytical results from soil samples taken on January 20 indicated high levels of hydrocarbons (DRO) present at sites SB2 (6000 mg/kg) and SB3 (25,000 mg/kg) demonstrating the need to further excavate and remove contaminated soil (and ice) at the crash site and along the Cimarron River. D&H did not collect water quality samples on January 20 as we had requested.

The contractor and SWQB staff returned to the site on Wednesday, January 25, 2017 to check on booms, take pictures, and evaluate the situation. There was a fresh 6 inches or more of snow on the ground making observations difficult. The booms appeared to be capturing any remaining fuel and bacterial activity (breaking down fuel) was evident in visible portions of the river.

The purpose of this continuing investigation is to evaluate whether violations of state statute at 20.6.2.2201 NMAC (i.e., discharge of refuse into a watercourse) occurred as a result of this spill.

#### New Mexico Surface Water Quality Standards and Surface Water Protection Regulations

Surface water quality standards and protection regulations in the New Mexico Administrative Code (NMAC) adopted pursuant to the Water Quality Act [Chapter 74, Article 6 New Mexico Statutes Annotated (NMSA) 1978] include:

Ground and Surface Water Protection Section 20.6.2 NMAC, as amended <a href="mailto:ftp://ftp.nmenv.state.nm.us/www/WQCC/Regulations/20.6.2NMAC-IntegratedApril2011.pdf">ftp://ftp.nmenv.state.nm.us/www/WQCC/Regulations/20.6.2NMAC-IntegratedApril2011.pdf</a>

20.6.2.1203.A NMAC (Notification of Discharge - Removal) states: With respect to any discharge from any facility of oil or other water contaminant, in such quantity as many with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property...notifications and corrective actions are required...

NMED guidance, emergency and non-emergency 24-hour numbers, regulations and reporting forms are available at <a href="http://www.nmenv.state.nm.us/gwb/nmed-gwqb-Notificationofspillsandunauthori.htm">http://www.nmenv.state.nm.us/gwb/nmed-gwqb-Notificationofspillsandunauthori.htm</a>. Excerpts from 20.6.2 NMAC are enclosed.

The Cimarron River (at the crash site) is a perennial classified water of the state subject to 20.6.4.309 NMAC with the designated uses of domestic water supply, irrigation, high quality coldwater aquatic life, livestock watering, wildlife habitat, and primary contact; and public water supply on the Cimarron River upstream from Cimarron. The NMDGF also recognizes this stretch of the river as a "Special Trout Water."

**Inspection Findings** 

Please see the attached photographs, sampling summary and maps detailing SWQB's sampling effort.

NMED considers the spilling of diesel and gasoline into the Cimarron River as a discharge requiring reporting and removal by the owner or operator in accordance with 20.6.2.1203 NMAC.

NMAC 20.6.2.1203 requires both verbal and written notification to the NMED when discharges of this type occur. Pursuant to Section 20.6.2.1203 NMAC, you must submit the following information in writing:

- (a) The name, address and telephone number of the person or persons in charge of these operations, as well as that of the manager, owner, and/or operator of the facility;
- (b) The name and address of the facility;
- (c) The date, time, location and duration of the discharge;
- (d) The source and cause of discharge;
- (e) A description of the discharge, including its chemical composition;
- (f) The estimated volume of the discharge, and;
- (g) Any actions taken to mitigate immediate damage from the discharge.

### The SWQB requires that Fronk Oil continue to clean up the spill site and downstream waters by doing the following:

- Obtain CWA Section 404 (Dredge and Fill) permit from the USACE as soon as possible.
- Leave all double booms and socks in place. Check every two (2) weeks, replacing as needed.
- Remove contaminated soil and ice from the crash site and along the Cimarron River.
- Absorbent pads and skimmers must be used to collect accumulated hydrocarbon material behind the booms.
- Collect the following samples on a biweekly basis for analysis of DRO, GRO, and BTEX:
  - (1) Soil samples "SB2" and "SB3"; right and left stream bank along pond area (500 feet downstream of crash site and downstream of bridge).
  - (2) Water samples 500 feet downstream of crash site near beaver pond/dam. Report these results to NMED on an expedited basis (within 7 days of sampling).
- Continue cleanup efforts until there are no detectable concentrations of hydrocarbons in the water or soil, in coordination and with the approval of the NMED-SWQB.

SWQB anticipates that this will be an ongoing cleanup effort due to the nature of the spill, the observed downstream contamination, and the winter weather including freeze/thaw cycles. SWQB also requests that once this is complete, that you submit a description of how the spill was cleaned up, and how proper operation and maintenance activities, including spill response procedures, will be conducted in the future to avoid such discharges. Please provide this information to me in written form at the following address within 30 days of receipt of this letter:

Point Source Regulation Section Surface Water Quality Bureau New Mexico Environment Department PO Box 5469 1190 St. Francis Dr. Santa Fe, NM 87502

If you have any questions, please feel free to contact me by telephone at (505) 827-2798 or by e-mail at <a href="mailto:sarah.holcomb@state.nm.us">sarah.holcomb@state.nm.us</a>. Thank you for your attention to this matter.

Sincerely,

Sarah Holcomb

Acting Program Manager, Point Source Regulation Section

cc:

NMED, District II Office, Santa Fe (via email) Raquel Douglas, USEPA (6EN-WM) (via email) Ray Vasquez, D&H United LLC (via email) Tim Butler, Fronk Oil (via email) Eric Frey, NMDGF (via email)

Deanna Cummings, USACE (via email)
Stephen Connolly, NMED HWB (via email)
Janine Kraemer, NMED HWB (via email)

April Riggs, New Mexico Livestock Board (via email)

APPENDIX A: NMED Sampling Results from 12-29-2016 & 1-11-2017

Station Name	Analyte Name	12/29/16 Conc (μg/L)	01/11/17 Conc (μg/L)	EPA Method
CIMARRON 100' BELOW SPILL	Benzene	1.7	ND	8260B
CIMARRON 100' BELOW SPILL	n-Butylbenzene	3.2	ND	8260B
CIMARRON 100' BELOW SPILL	sec-Butylbenzene	0.38	ND	8260B
CIMARRON 100' BELOW SPILL	Ethylbenzene	6.9	ND	8260B
CIMARRON 100' BELOW SPILL	Isopropylbenzene	0.75	ND	8260B
CIMARRON 100' BELOW SPILL	Naphthalene	3.5	ND	8260B
CIMARRON 100' BELOW SPILL	Propylbenzene	2.7	ND	8260B
CIMARRON 100' BELOW SPILL	Toluene	20	ND	8260B
CIMARRON 100' BELOW SPILL	1,2,4-Trimethylbenzene	19	ND	8260B
CIMARRON 100' BELOW SPILL	1,3,5-Trimethylbenzene	, 5.4	ND	8260B
CIMARRON 100' BELOW SPILL	ortho-Xylene	12	ND	8260B
CIMARRON 100' BELOW SPILL	para- & meta-Xylenes	27	ND	8260B
CIMARRON 100' BELOW SPILL	Total Xylenes	40	ND	8260B
CIMARRON 100' BELOW SPILL	Gasoline range organics	3100	ND	8260B
CIMARRON 100' BELOW SPILL	Diesel range organics	8100	ND	8260B
CIMARRON 100' BELOW SPILL	bis(2-Ethylhexyl) phthalate	1.2	ND	8270D
CIMARRON 100' BELOW SPILL	Naphthalene	3.5	ND	8270D
CIMARRON 100' BELOW SPILL	Diesel range organics	2400	ND	8270D
CIMARRON 500' BELOW SPILL	Benzene	10	0.98	8260B
CIMARRON 500' BELOW SPILL	n-Butylbenzene	8.1	1.5	8260B
CIMARRON 500' BELOW SPILL	sec-Butylbenzene	1.8	0.25	8260B
CIMARRON 500' BELOW SPILL	Ethylbenzene	18	1	8260B
CIMARRON 500' BELOW SPILL	Isopropylbenzene	2.4	0.2	8260B
CIMARRON 500' BELOW SPILL	4-Isopropyltoluene	1.2	0.35	8260B
CIMARRON 500' BELOW SPILL	Naphthalene	3.6	0.61	8260B
CIMARRON 500' BELOW SPILL	Propylbenzene	7.1	0.58	8260B
CIMARRON 500' BELOW SPILL	Toluene	65	2.6	8260B
CIMARRON 500' BELOW SPILL	1,2,4-Trimethylbenzene	45	4.7	8260B
CIMARRON 500' BELOW SPILL	1,3,5-Trimethylbenzene	13	1.3	8260B
CIMARRON 500' BELOW SPILL	ortho-Xylene	28	1.9	8260B
CIMARRON 500' BELOW SPILL	para- & meta-Xylenes	67	4.2	8260B
CIMARRON 500' BELOW SPILL	Total Xylenes	95	6	8260B
CIMARRON 500' BELOW SPILL	Gasoline range organics	810	160	8260B
CIMARRON 500' BELOW SPILL	Diesel range organics	1900	440	8260B
CIMARRON 500' BELOW SPILL	Naphthalene	2.4	ND	8270D
CIMARRON 500' BELOW SPILL	Diesel range organics	470	160	8270D

Only analytes with detectable concentrations are presented. BTEX, GRO, and DRO concentrations are bolded.

EPA Method 8260B - VOCs + GRO/DRO

EPA Method 8270D - Base Neutral SVOCs + DRO/RRO

Note that the DRO range values in the VOC analysis and the SVOC analysis differ somewhat. This is in part due to slightly different carbon ranges that VOC testing and SVOC testing can target. Diesel range organics fall into both analyses. Additionally, VOC and SVOC extraction produces yield different recoveries of the hydrocarbon components.

### **APPENDIX B** – D&H (VOC analysis) Results from 1-1-2017 Results are reported in concentrations of ug/L

Analyte Name	W01 upstream of spill	W-02 crash site	W-03 upstream of Hwy 64	W-04 downstream of Hwy 64	W-05 at beaver pond	W-06 downstream of beaver dam
GRO	ND	No results	370	200	200	120
DRO	ND	above	14,000	1,500	2,600	ND
Benzene	ND	MDL	1.2	1.4	ND	2.0
Toluene	3.2	of the last the	10	9.0	ND	11
Ethylbenzene	ND		4.1	2.8	ND	2.2
1,2,4-Trimethylbenzene	ND		33	14	22	4.9
1,3,5-Trimethylbenzene	ND		8.6	3.7	5.5	1.2
n-Propylbenzene	ND		3.0	ND	ND	ND
Total Xylenes	ND		29	19	9.2	14

<sup>&</sup>quot;ND" = not detected

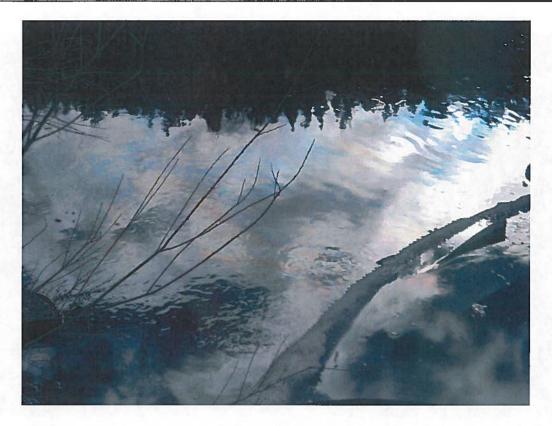
Photographer: Chuck Dentino	Date: 12-29-16	Time: Unknown
City/County: Cimarron/Colfax Co		

Location: In Cimarron River below culverts and above 500' downstream of spill sampling location.

Subject: Fuel spilled onto existing ice the day after the initial accident.



Photographer: Barbara Cooney	Date: 1-17-17	Time: Unknown		
City/County: Cimarron/Colfax Co	artic money I was to			
Location: Downstream of 500' below spill location.				
Subject: Petroleum sheen on the river surface.				



Photographer: Sarah Holcomb	Date: 1-25-17	Time: Unknown		
City/County: Cimarron/Colfax County				
Location: Below the culverts along Hwy 64 in Cimarron Canyon.				
Subject: Fuel is entrained in the ice present below the culverts running underneath the highway.				



Photographer: Sarah Holcomb	Date: 1-25-17	Time: Unknown		
City/County: Cimarron/Colfax C	the specific of the September 19			
Location: In the Cimarron River at the crash site.				
Subject: Evidence of bacterial activity breaking down the available hydrocarbons in the water column.				



Photographer: Daniel Valenta	Date: 2-9-17	Time: Unknown
City/County: Cimarron/Colfax County		

Location: In the Cimarron River below the highway culverts.

Subject: A sheen on the water is still evident as fuel entrained in the ice is being released during melting events.



