LT Environmental, Inc.
3300 North A Street, Building 1, #103
Midland, Texas 79705
T 432.704.5178 / F 432.704.5179

June 22, 2018

Ms. Olivia Yu
Environmental Specialist
New Mexico Oil Conservation Division I
1625 North French Drive
Hobbs, New Mexico 88240

RE: Closure Request
EK 30 BS2 Federal Com 1H
Remediation Permit Number 1RP-5019
Lea County, New Mexico

Dear Ms. Yu:

LT Environmental, Inc. (LTE), on behalf of McElvain Energy, Inc. (McElvain), is pleased to present the following letter report detailing excavation and confirmation soil sampling activities at the EK 30 BS2 Federal Com 1H (Site). The purpose of the excavation activities was to address impacts to soil in response to a release of approximately 25 barrels (bbls) of crude oil from the vapor recovery unit (VRU) on April 12, 2018. A third-party crude oil hauler shut a production valve on one of the crude oil storage tanks before manually gauging liquid levels. The valve was never reopened after gauging activity was completed and crude oil flooded the vapor recovery tower, then discharged through a relief valve on the VRU scrubber. The release collected on the production equipment within a lined secondary containment and misted offsite northwest of the well pad. This report documents McElvain's response to the release, including removal of free-standing liquids, washing of affected equipment, and excavation of impacted vegetation and soil. Based on the results of the confirmation sampling conducted after impacted soil was removed, McElvain is requesting no further action for this release event.

BACKGROUND

The Site is located in Section 30, Township 18 South, Range 34 East, in Lea County, New Mexico (Figure 1). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data, drilling logs, and known aquifer properties. The nearest permitted water well is CP-01584, located approximately 4,051 feet northwest of the Site with a total depth of 500 feet. Depth to water is not listed for CP-01584 in the New Mexico Office of the State Engineer's database; however, the well was drilled by McElvain, who owns the drilling log. The drilling log indicates the well was drilled to 500 feet bgs and no water was identified. The closest surface water to the Site is a stream located approximately 407 feet to the southeast of the Site. Based on these criteria, the NMOCD site ranking for remediation action level is a 10 and the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 1,000 mg/kg total petroleum

hydrocarbons (TPH). Based on standard practice in the region, a site-specific chloride action level of 600 mg/kg or within range (±10%) of background concentrations applies.

McElvain reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 dated April 12, 2018 (Attachment 2) and NMCOD assigned Remediation Permit Number (RP) 1RP-5019. Immediately following the release, McElvain recovered all standing liquids in the containment and pressure washed affected production equipment. A naturally occurring drainage ditch directly adjacent to the northwest side of the well pad containing pooled oil was flushed with freshwater. The resultant crude oil and wash water were recovered with a vacuum truck and disposed of in an off-site injection well. The 20-mil poly secondary containment liner was inspected for tears and puncture holes and no damaged was observed. A photographic log including pictures of the release and remediation actions is included in Attachment 1.

INTIAL EVALUATION

On April 17, 2018, and May 22, 2018, LTE collected discrete soil samples from the surface of the release footprint to approximately six inches bgs to conduct an initial evaluation of the extent of soil impact and plan for excavation. Samples were screened for volatile aromatic hydrocarbons using a photo-ionization detector (PID) equipped with a 10.6 electron volt lamp in accordance with the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases*, August 13, 1993 (Guidelines). PID results from the initial soil sampling events ranged from 17.3 parts per million (ppm) to 5,000 ppm. Additionally, initial soil samples were screened for chloride using Hach® chloride test strips, with the results ranging from 0.8 ppm to 49.8 ppm.

EXCAVATION ACTIVITIES

Based on the results of the initial PID soil screening results, McElvain excavated the footprint of the release with a skid-steer on May 30, 2018, to a depth ranging from 0.5 inches to 1.75 feet bgs. As soil was removed, LTE personnel conducted field screening of organic vapor concentrations with a PID to monitor removal of impacted soil and direct additional excavation. Excavation soil samples were not field tested for chloride based on the low concentrations observed in the initial soil samples and since the source of the release was crude oil. Once hydrocarbon field screening results indicated impacted soil had been removed, LTE collected confirmation surface samples. Chloride was analyzed in the confirmation samples.

LTE collected eight confirmation soil samples (SS-1 through SS-6, SS-9, and SS-10) from the excavated area no greater than 50 feet apart. No hydrocarbon odor or staining was observed in any of the soil samples. The soil samples were placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis, and immediately placed on ice. The samples were delivered at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories in Midland, Texas, for laboratory analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021B, total petroleum hydrocarbons (TPH)-gasoline range

organics (GRO), TPH-diesel range organics (DRO), and TPH-motor oil range organics (MRO) by EPA Method SW8015 Modified, and chloride by EPA Method 300.

The final excavation was approximately 6,177 square feet in area and ranged in depth from 0.5 feet bgs to 1.75 feet bgs. Approximately 105 cubic yards of impacted soil were removed from the excavation. All impacted soil was transported and properly disposed of at Lea Land, Inc., in Carlsbad, New Mexico. The excavation outline and confirmation soil sample locations are depicted on Figure 2.

Surface soil samples SS-7 and SS-8 were collected from the area to the north-northwest of the well pad and excavation where vegetation was observed to be impacted directly following the release, but no soil staining was observed (overspray area). When LTE collected the soil sample,s there was no evidence of stained vegetation or soil and no hydrocarbon odors were detected. Soil samples were field-screened for volatile aromatic hydrocarbons using a PID and in accordance with NMOCD Guidelines. The soil samples were collected and handled as previously described.

RESULTS

Laboratory analytical results for the 8 confirmation soil samples and 2 soil samples in the area where vegetation was impacted indicated benzene, toluene, and ethylbenzene concentrations were below laboratory detection limits. Total xylenes were detected in SS-1 and SS-2 at 0.00979 mg/kg and 0.00394 mg/kg, respectively. Laboratory analytical results for TPH indicated no concentrations exceeded the NMOCD remediation action level for the Site, with values ranging from less than the reporting limit of 14.9 mg/kg in samples SS-6 and SS-9 to 791 mg/kg in sample SS-1. Chloride concentrations ranged from less than the laboratory reporting limit of 4.96 mg/kg in soil samples SS-5 and SS-9 to 10.2 mg/kg in soil sample SS-2. Laboratory analytical results are presented on Figure 2 and in Table 1, and the complete laboratory analytical report is included as Attachment 3. Hydrocarbon field screening results and Geographic Positioning System (GPS) data for confirmation soil sample locations are also provided in Table 1.

CONCLUSIONS

Laboratory analytical results for confirmation soil samples collected within the release footprint indicate that concentrations of BTEX, TPH, and chloride do not exceed NMOCD site-specific remediation action levels. McElvain has successfully removed the impacted soil at the Site and requests no further action for this release. Upon approval of this request, McElvain will backfill the excavation with approved native top soil, recontour the former excavation to match the existing grade, and apply BLM seed mix #2 for revegetation.

If you have any questions or comments, please do not hesitate to contact Adrian Baker at (432) 887-1255 or abaker@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Tony Cooper, McElvain
Jim Amos, BLM
Shelly Tucker, BLM

Attachments:
Figure 1 Site Location Map
Figure 2 Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Photographic Log
Attachment 2 Initial/Final NMOCD Form C-141
Attachment 3 Laboratory Analytical Report

FIGURES

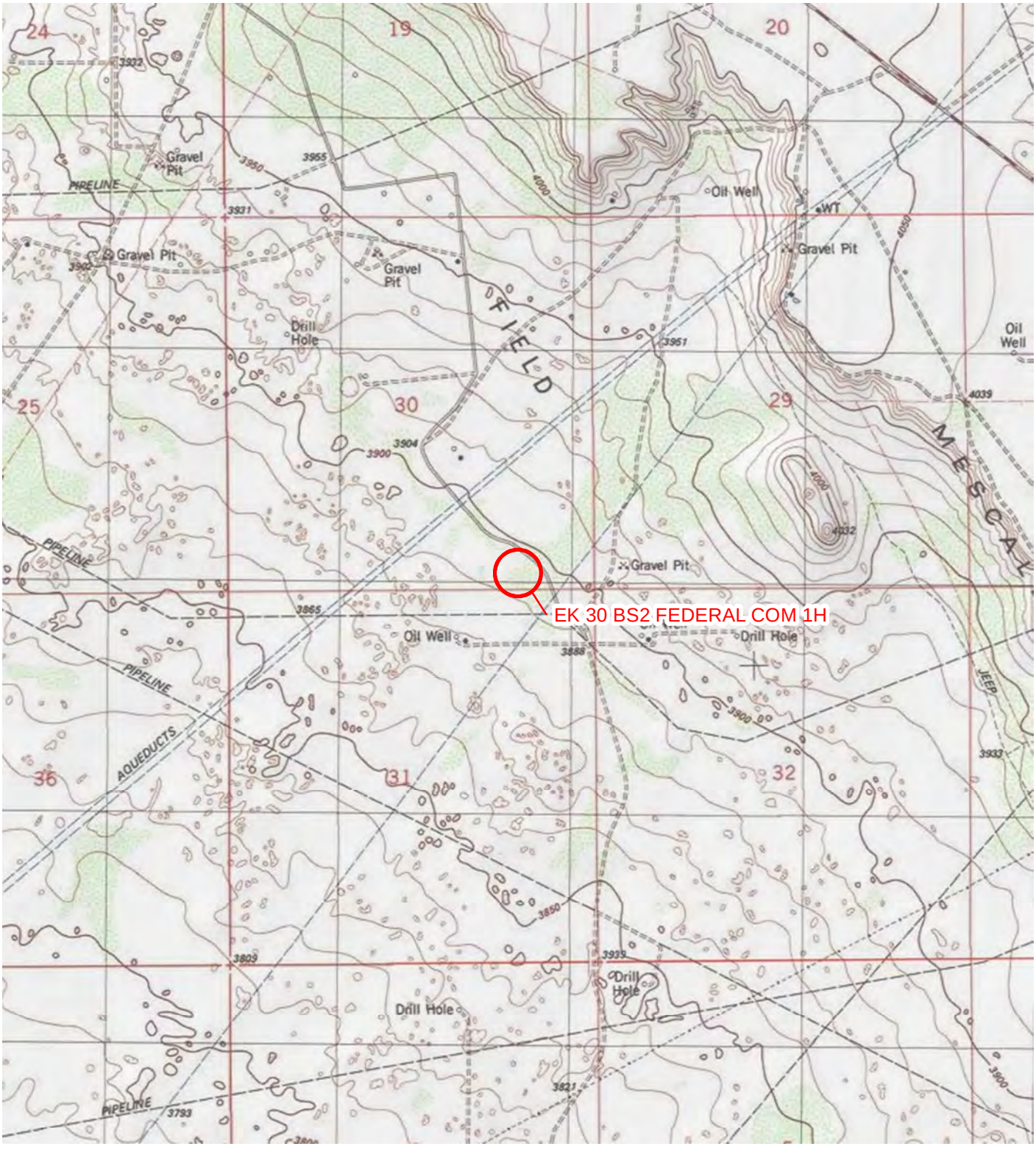

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

FIGURE 1
SITE LOCATION MAP
EK 30 BS2 FEDERAL COM 1H
UNIT P SEC 30 T18S R34E
LEA COUNTY, NEW MEXICO
MCELVAIN ENERGY, INC.

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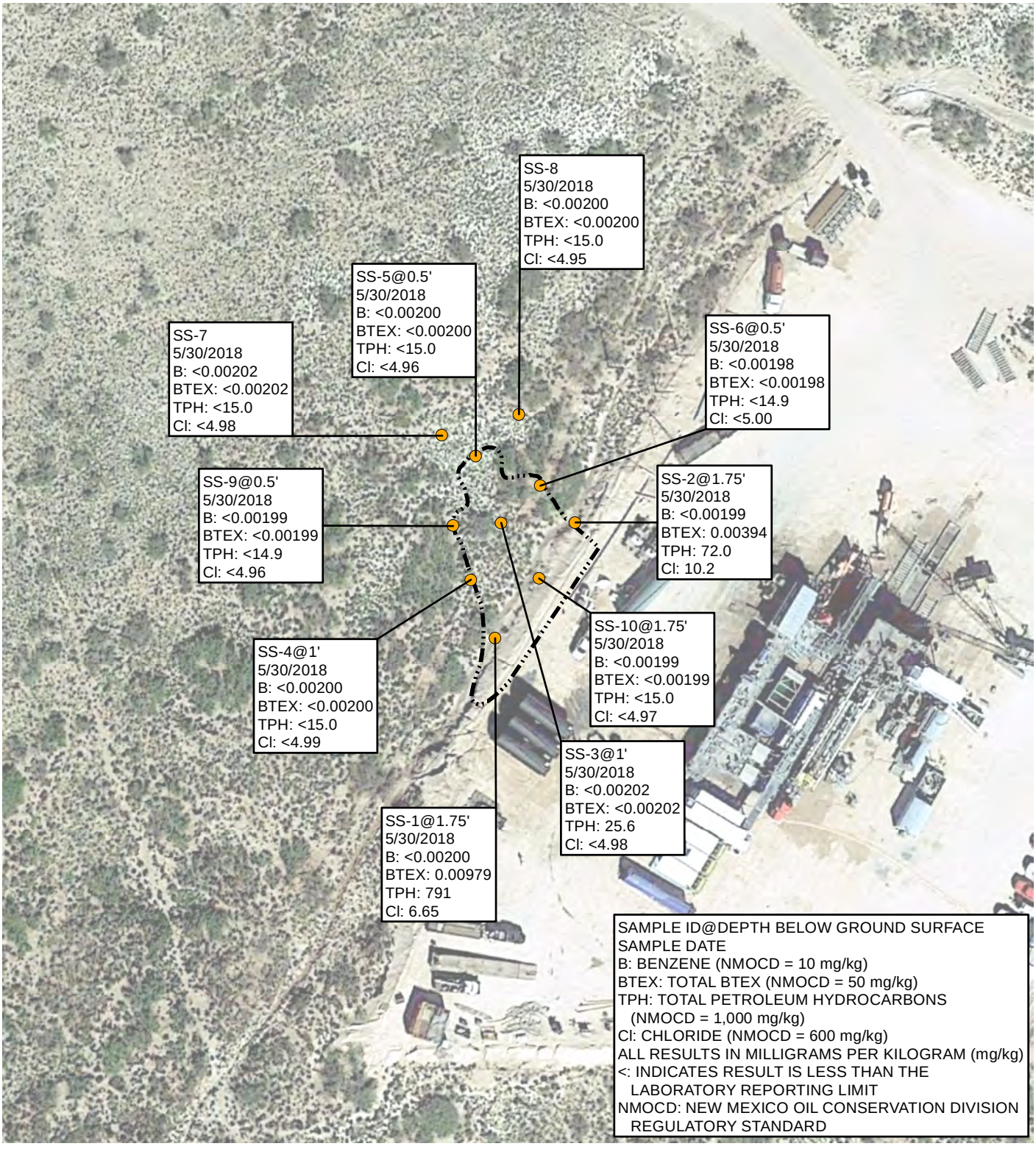


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

SOIL SAMPLE

EXCAVATED AREA

0 80 160

Feet

N

FIGURE 2
SOIL ANALYTICAL RESULTS
EK 30 BS2 FEDERAL COM 1H
UNIT P SEC 30 T18S R34E
LEA COUNTY, NEW MEXICO
MCELVAIN ENERGY, INC.

P:\McElvain\GIS\MXD\034918003_EK 30 BS2 FEDERAL COM 1H\034918003_FIG02_SOIL ANALYTICAL_2018.mxd

TABLE

TABLE 1
SOIL ANALYTICAL RESULTS
EK 30 BS2 FEDERAL COM 1H
REMEDIATION PERMIT NUMBER 1RP-5019
LEA COUNTY, NEW MEXICO
MCELVAIN ENERGY, INC.

Sample Name	Sample Location	Sample Date	Sample Depth (feet bgs)	PID Result (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 Gasoline Range Organics (mg/kg)	C10-C28 Diesel Range Organics (mg/kg)	C28-C40 Motor Oil Range Organics (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS-1	32.7118405638297, -103.594654740862	5/30/2018	0.5	267.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5./30/2018	1	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5./30/2018	1.75	3.8	<0.00200	<0.00200	<0.00200	0.00979	0.00979	22.4	742	26.6	791	6.65
SS-2	32.7120197803626, -103.594506335631	5./30/2018	0.5	232.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5./30/2018	1	95.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5./30/2018	1.75	6.6	<0.00199	<0.00199	<0.00199	0.00394	0.00394	<15.0	72.0	<15.0	72.0	10.2
SS-3	32.7120198595837, -103.594642811782	5./30/2018	surface	397.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5./30/2018	0.5	37.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5./30/2018	1	1.4	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	25.6	<15.0	25.6	<4.98
SS-4	32.7119316838222, -103.594698990849	5./30/2018	surface	23.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5/30/2018	0.5	16.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5./30/2018	1	1.5	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<4.99
SS-5	32.7121242061757, -103.594688534358	5./30/2018	surface	12.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5./30/2018	0.5	1.3	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<4.96
SS-6	32.7120780296671, -103.59456957665	5./30/2018	surface	21.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5./30/2018	0.5	1.5	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<5.00
SS-7	32.7121574595997, -103.594750231825	5./30/2018	surface	3.7	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<4.98
SS-8	32.712188683373, -103.594608243403	5./30/2018	surface	1.3	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<4.95
SS-9	32.7120163018491, -103.594731255098	5./30/2018	0.5	1.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<4.96
SS-10	32.711933065802, -103.594573106464	5./30/2018	0.5	305.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5./30/2018	1	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5./30/2018	1.75	2.1	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<4.97
NMOCD Remediation Action Level					10	NE	NE	NE	50	NE	NE	NE	1,000	600

Notes:
bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
mg/kg - milligrams per kilogram
NA - not analyzed
NE - not established
NMOCD - New Mexico Oil Conservation Division
PID -photo-ionization detector
ppm - parts per million
TPH - total petroleum hydrocarbons
< - indicates result is below laboratory detection limit

ATTACHMENT 1

PHOTOGRAPHIC LOG

Advancing Opportunity

PHOTOGRAPHIC LOG
EK 30 BS2 FEDERAL COM 1H
REMEDIATION NUMBER 1RP-5019

Photo # 1 — April 17, 2018 - Impacted soil and vegetation; view southwest.

Photo # 2 — April 17, 2018 - Impacted soil and vegetation; view northeast.

Photo # 3 — May 30, 2018 - Soil staining on the well pad; view southwest.

Photo # 4 — May 30, 2018 -View southwest after impacted soil was removed from well pad.

Photo # 5 — May 30, 2018 - View north-northwest showing excavation activities.

Photo # 6 — May 30, 2018 - View west-southwest showing excavation activities.

PHOTOGRAPHIC LOG
EK 30 BS2 FEDERAL COM 1H
REMEDIATION NUMBER 1RP-5019

Photo # 7 June 22, 2018 - View southwest showing the excavated area.

Photo # 8 June 22, 2018 - View west- southwest showing the excavated area.

Photo # 9 June 22, 2018 - View west - northwest showing the excavated area.

Photo # 10 June 22, 2018 - View northeast taken from the overspray area showing the excavated area.

ATTACHMENT 2

INITIAL/FINAL NMOCD FORM C-141

Advancing Opportunity

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

x ☐ Initial Report ☐ Final Report

Name of Company McElvain Energy Inc.	Contact; Tony Cooper
Address 1050 17th Street Ste. 2500, Denver Colorado, 80265	Telephone No. 303-501-0004
Facility Name EK 30 BS2 Federal Com 1H	Facility Type Oil and Gas Production

Surface Owner: DOI/BLM	Mineral Owner: Same	API No. 30-025-42701

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	30	18S	34E	175	SOUTH	860	EAST	LEA

Latitude 32.71194167 **Longitude** -103.59384444 NAD83

NATURE OF RELEASE

Type of Release CRUDE OIL	Volume of Release: 25 bbls	Volume Recovered 5-10 bbls
Source of Release Vapor Recovery Unit / PRV	Date and Hour of Occurrence 4/12/2018… 5:15am	Date and Hour of Discovery 4/12/2018… 6:50 am
Was Immediate Notice Given? x☐ Yes ☐ No ☐ Not Required	If YES, To Whom? Ms. Tucker/BLM/CFO, Ms. Lu, NMOCD Hobbs, Wayne Smith BLM/Lessee	
By Whom? Tony Cooper (BLM, OCD) Brian Odell (Mr. Smith)	Date and Hour 4/20/2018…. 9:00am-11:00am	
Was a Watercourse Reached? ☐ Yes x☐ No	If YES, Volume Impacting the Watercourse. NA	

RECEIVED
By Olivia Yu at 2:59 pm, Apr 13, 2018

If a Watercourse was Impacted, Describe Fully.*
NA

Describe Cause of Problem and Remedial Action Taken.*
A third party crude oil hauler shut a production valve on one of the crude oil storage tanks before manually gauging it. The valve was never reopened after the gauging activity was completed. Crude oil flooded the vapor recovery tower (VRT) sending oil to the vapor recovery unit (VRU). The exact source of the release was the 125# relief valve on the VRU fluid scrubber. Since the oil was released into the air the release coated the production equipment within the lined containment area as well as a small section of Federal land on the west side of the pad.

All free standing oil has been vacuumed up and properly disposed of at a SWD. Over the next several days the production equipment and storage tanks within the containment will be pressure washed and the fluids will be captured by vac truck and taken to a SWD. This facility is < 1 year old and the containment area is lined with a 20 mil poly liner. The liner is like new so no soil beneath the liner was impacted from this release.

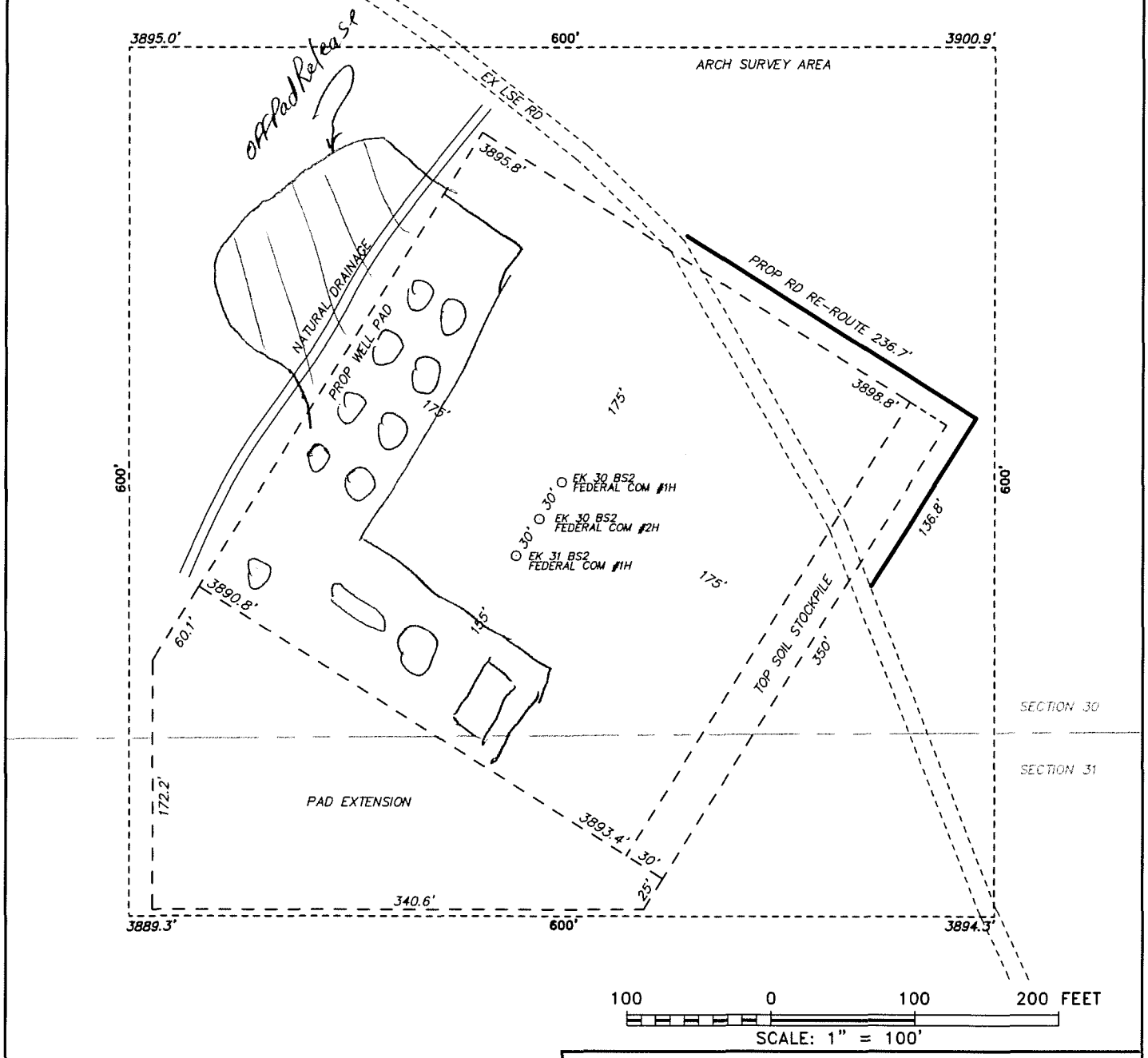
Describe Area Affected and Cleanup Action Taken.* The native vegetation on the west side of the pad boundary was misted with oil. The natural drainage ditch in that area had some areas of standing oil. That ditch was flushed with fresh water to remove as much residual crude oil as possible. The flush water was recovered by vac truck and taken to SWD. As per Ms. Tucker with the BLM/CFO, the vegetation that has been sprayed with oil will be mowed with a brush hog attachment. The entire affected area will then be sprayed with some type of microbial product such as Micro Blaze to accelerate the hydrocarbon degradation process. A third party environmental remediation company will be retained to perform the confirmation soil sampling after adequate time has passed allowing for the degradation of the soil in the affected area. When lab results for the soil are below NMOCD levels a C-141 along with a copy of the lab results of the confirmation soil sampling will be submitted to the NMOCD for approval and final closure of the release.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Tony Cooper	OIL CONSERVATION DIVISION
Printed Name: Tony Cooper	Approved by Environmental Specialist:
Title: Regulatory Mgr	Approval Date: 4/13/2018 Expiration Date:
E-mail Address: tonyc@mcelvain.com	Conditions of Approval: see attached directive Attached ☐
Date: 4-12-18 Phone: 3035010004	

1RP-5019 nOY1810354180 pOY1810355975

SECTION 30, TOWNSHIP 18 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



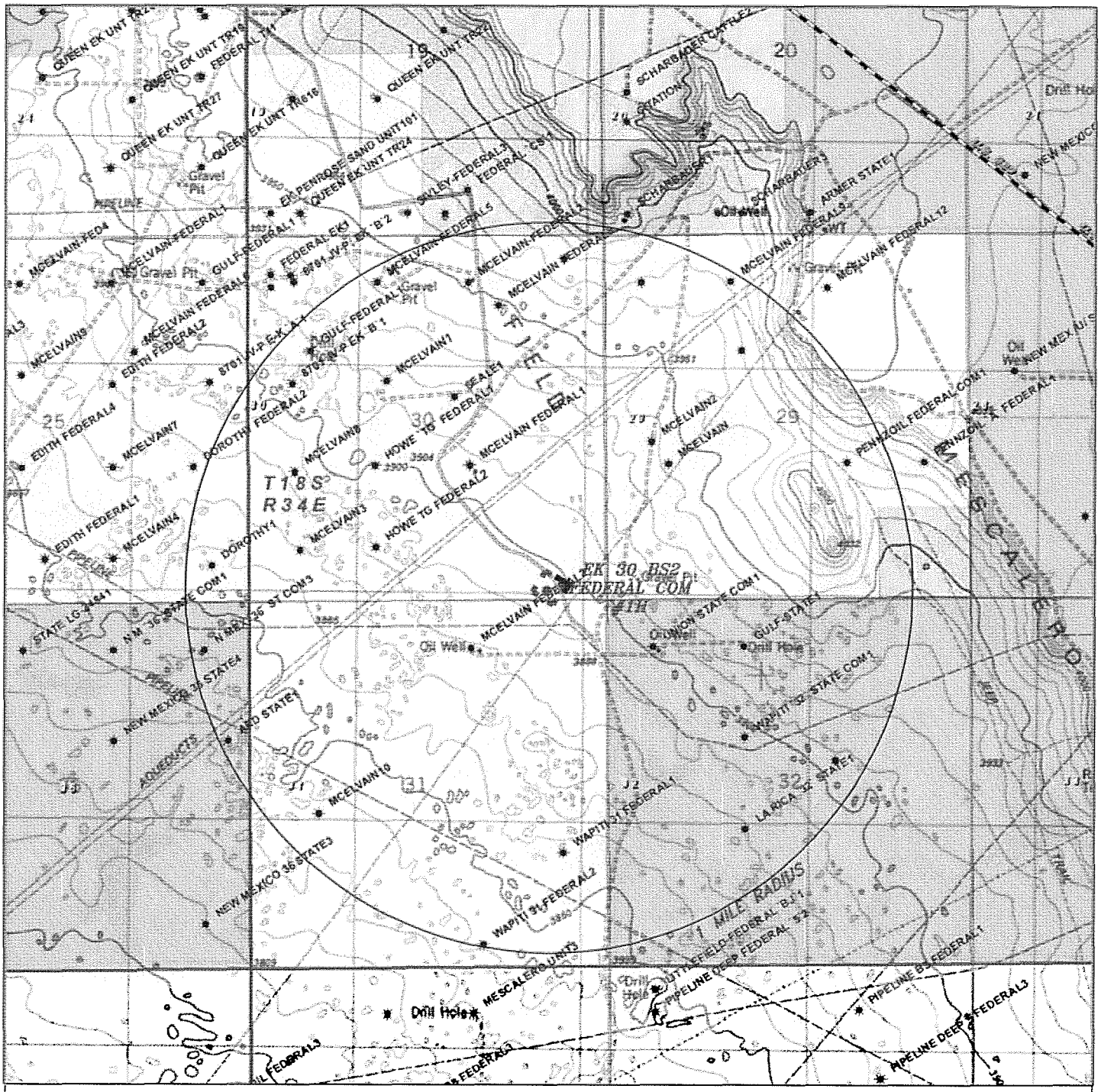
McELVAIN ENERGY, INC

REF: EK 30 BS2 FEDERAL COM 1H / WELL PAD TOPO

THE EK 30 BS2 FEDERAL COM 1H LOCATED 175' FROM THE SOUTH LINE AND 860' FROM THE EAST LINE OF SECTION 30, TOWNSHIP 18 SOUTH, RANGE 34 EAST. N.M.P.M., LEA COUNTY, NEW MEXICO.

basin surveys
focused on excellence in the oilfield
P.O. Box 1786 (575) 393-7316 - Office
1120 N. West County Rd. (575) 392-2206 - Fax
Hobbs, New Mexico 88241 basinsurveys.com

W.O. Number: 32344	Drawn By: J GOAD	Date: 6-15-2016	Survey Date: 6-10-2016	Sheet 1 of 1 Sheets



EK 30 BS2 FEDERAL COM 1H

Located 175' FSL and 860' FEL

Section 30, Township 18 South, Range 34 East,

N.M.P.M., Lea County, New Mexico.

basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

0' 1000' 2000' 3000' 4000'

SCALE: 1" = 2000'

W.O. Number: JG 32344

Survey Date: 6-10-2016

YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

N

McELVAIN ENERGY, INC

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _4/12/2018_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number _1RP-_5019_ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _5/13/2018_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

● Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

● Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

● Nominal detection limits for field and laboratory analyses must be provided.

● Composite sampling is not generally allowed.

● Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

●Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

● If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

● Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company McElvain Energy, Inc.	Contact: Tony Cooper
Address 1050 17th Street Ste. 2500, Denver Colorado, 80265	Telephone No: 303-501-0004
Facility Name: EK 30 BS2 Federal Com 1H	Facility Type: Exploration and Production

Surface Owner DOI/BLM	Mineral Owner: DOI/BLM	API No. 30-025-42701

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	30	18S	34E	175	South	860	East	Lea

Latitude 32.71194167 **Longitude** -103.59384444 NAD83

NATURE OF RELEASE

Type of Release Crude oil	Volume of Release 25 bbls	Volume Recovered 5-10 bbls
Source of Release: Vapor recovery unit / VRT	Date and Hour of Occurrence 4/12/2018... 5:15am	Date and Hour of Discovery 4/12/2018... 6:50 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Ms. Tucker/BLM/CFO, Ms. Lu, NMOCD Hobbs, Wayne Smith BLM/Lessee	
By Whom? Tony Cooper (BLM, OCD) Brian Odell (Mr. Smith)	Date and Hour: 4/20/2018.... 9:00am-11:00am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse: N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.* A third party crude oil hauler shut a production valve on one of the crude oil storage tanks before manually gauging it. The valve was never reopened after the gauging activity was completed. Crude oil flooded the vapor recovery tower (VRT) sending oil to the vapor recovery unit (VRU). The exact source of the release was the 125# relief valve on the VRU fluid scrubber. Since the oil was released into the air, the release coated the production equipment within the lined containment area and a small section of Federal land on the west side of the pad. All free-standing oil was recovered by vacuum truck and properly disposed of at a SWD. Production equipment and storage tanks within the containment were pressure washed and the fluids recovered by vacuum truck and disposed at a SWD. This facility is <1 year old and the containment area is lined with a 20 mil poly liner. The liner was examined after the release and is still like new, so no soil beneath the liner was impacted from this release.

Describe Area Affected and Cleanup Action Taken.* McElvain retained LT Environmental, Inc. (LTE), to oversee environmental remediation at the Site. Heavy equipment was used to remove off-site impacted soil and vegetation and on-site impacted well pad material. LTE collected excavation confirmation soil samples from the excavation and two samples from the overspray area on May 30, 2018. Laboratory analytical results from 10 confirmation samples indicate concentrations of BTEX, TPH, and chloride are below the NMOCD site-specific remediation action levels. McElvain request no further action at this site.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Tony Cooper	OIL CONSERVATION DIVISION	
Printed Name: Tony Cooper	Approved by Environmental Specialist:	
Title: Regulatory Coordinator	Approval Date:	Expiration Date:
E-mail Address: tonyc@mcelvain.com	Conditions of Approval:	Attached ☐
Date: 6-28-18 Phone: 303-501-0004		

ATTACHMENT 3

LABORATORY ANALYTICAL REPORT

Advancing Opportunity

Analytical Report 587888

for

LT Environmental, Inc.

Project Manager: Adrian Baker

EK 30 BS2 Federal Com 1H

034918003

08-JUN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

08-JUN-18

Project Manager: **Adrian Baker**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **587888**
EK 30 BS2 Federal Com 1H
Project Address: Hobbs NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 587888. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 587888 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 587888

LT Environmental, Inc., Arvada, CO

EK 30 BS2 Federal Com 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS-1	S	05-30-18 13:00	1.75 ft	587888-001
SS-2	S	05-30-18 13:05	1.75 ft	587888-002
SS-3	S	05-30-18 13:10	1 ft	587888-003
SS-4	S	05-30-18 13:15	1 ft	587888-004
SS-5	S	05-30-18 13:20	6 ft	587888-005
SS-6	S	05-30-18 13:25	6 ft	587888-006
SS-7	S	05-30-18 13:30	SURFACE N/A	587888-007
SS-8	S	05-30-18 13:35	SURFACE N/A	587888-008
SS-9	S	05-30-18 14:00	6 ft	587888-009
SS-10	S	05-30-18 14:05	1.75 ft	587888-010

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3052478 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3052795 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 587888

LT Environmental, Inc., Arvada, CO

Project Name: EK 30 BS2 Federal Com 1H

Project Id: 034918003
Contact: Adrian Baker
Project Location: Hobbs NM

Date Received in Lab: Fri Jun-01-18 01:15 pm
Report Date: 08-JUN-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	587888-001		587888-002		587888-003		587888-004		587888-005		587888-006	
	Field Id:	SS-1		SS-2		SS-3		SS-4		SS-5		SS-6	
	Depth:	1.75- ft		1.75- ft		1- ft		1- ft		6- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-30-18 13:00		May-30-18 13:05		May-30-18 13:10		May-30-18 13:15		May-30-18 13:20		May-30-18 13:25	
BTEX by EPA 8021B	***Extracted:***	Jun-07-18 12:00		Jun-07-18 12:00		Jun-07-18 12:00		Jun-07-18 12:00		Jun-05-18 17:00		Jun-05-18 17:00	
	Analyzed:	Jun-07-18 21:05		Jun-07-18 20:47		Jun-07-18 20:29		Jun-07-18 21:23		Jun-06-18 09:02		Jun-06-18 08:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
m,p-Xylenes		0.00462	0.00401	<0.00398	0.00398	<0.00403	0.00403	<0.00401	0.00401	<0.00399	0.00399	<0.00397	0.00397
o-Xylene		0.00517	0.00200	0.00394	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Total Xylenes		0.00979	0.00200	0.00394	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Total BTEX		0.00979	0.00200	0.00394	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Inorganic Anions by EPA 300	***Extracted:***	Jun-05-18 09:00		Jun-05-18 09:00		Jun-05-18 09:00		Jun-05-18 09:00		Jun-05-18 09:00		Jun-05-18 09:00	
	Analyzed:	Jun-05-18 10:24		Jun-05-18 11:18		Jun-05-18 11:24		Jun-05-18 11:29		Jun-05-18 11:34		Jun-05-18 11:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6.65	5.00	10.2	4.95	<4.98	4.98	<4.99	4.99	<4.96	4.96	<5.00	5.00
TPH by SW8015 Mod	***Extracted:***	Jun-02-18 09:00		Jun-02-18 09:00		Jun-02-18 09:00		Jun-02-18 09:00		Jun-02-18 09:00		Jun-02-18 09:00	
	Analyzed:	Jun-02-18 15:22		Jun-02-18 15:43		Jun-02-18 16:05		Jun-02-18 17:08		Jun-02-18 17:28		Jun-02-18 17:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		22.4	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		742	15.0	72.0	15.0	25.6	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Oil Range Hydrocarbons (ORO)		26.6	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total TPH		791	15.0	72.0	15.0	25.6	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 587888

LT Environmental, Inc., Arvada, CO

Project Name: EK 30 BS2 Federal Com 1H

Project Id: 034918003
Contact: Adrian Baker
Project Location: Hobbs NM

Date Received in Lab: Fri Jun-01-18 01:15 pm
Report Date: 08-JUN-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	587888-007		587888-008		587888-009		587888-010					
	Field Id:	SS-7		SS-8		SS-9		SS-10					
	Depth:	SURFACE- N/A		SURFACE- N/A		6- ft		1.75- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	May-30-18 13:30		May-30-18 13:35		May-30-18 14:00		May-30-18 14:05					
BTEX by EPA 8021B	***Extracted:***	Jun-05-18 17:00		Jun-05-18 17:00		Jun-05-18 17:00		Jun-05-18 17:00					
	Analyzed:	Jun-06-18 07:41		Jun-06-18 07:23		Jun-06-18 09:20		Jun-06-18 09:38					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199				
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199				
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199				
m,p-Xylenes		<0.00403	0.00403	<0.00401	0.00401	<0.00398	0.00398	<0.00398	0.00398				
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199				
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199				
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199				
Inorganic Anions by EPA 300	***Extracted:***	Jun-05-18 09:00		Jun-05-18 09:00		Jun-05-18 09:00		Jun-05-18 09:00					
	Analyzed:	Jun-05-18 11:45		Jun-05-18 12:01		Jun-05-18 12:07		Jun-05-18 12:23					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<4.98	4.98	<4.95	4.95	<4.96	4.96	<4.97	4.97				
TPH by SW8015 Mod	***Extracted:***	Jun-02-18 09:00		Jun-02-18 09:00		Jun-02-18 09:00		Jun-02-18 09:00					
	Analyzed:	Jun-02-18 18:10		Jun-02-18 18:31		Jun-02-18 18:52		Jun-02-18 19:13					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 587888

LT Environmental, Inc., Arvada, CO

EK 30 BS2 Federal Com 1H

Sample Id:	**SS-1**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-001	Date Collected:	05.30.18 13.00	Sample Depth:	1.75 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.05.18 09.00	Basis:	Wet Weight
Seq Number:	3052392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.65**	5.00	mg/kg	06.05.18 10.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.02.18 09.00	Basis:	Wet Weight
Seq Number:	3052155				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**22.4**	15.0	mg/kg	06.02.18 15.22		1
Diesel Range Organics (DRO)	C10C28DRO	**742**	15.0	mg/kg	06.02.18 15.22		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**26.6**	15.0	mg/kg	06.02.18 15.22		1
Total TPH	PHC635	**791**	15.0	mg/kg	06.02.18 15.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	06.02.18 15.22	
o-Terphenyl	84-15-1	101	%	70-135	06.02.18 15.22	

Certificate of Analytical Results 587888

LT Environmental, Inc., Arvada, CO

EK 30 BS2 Federal Com 1H

Sample Id:	**SS-1**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-001	Date Collected:	05.30.18 13.00	Sample Depth:	1.75 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.07.18 12.00	Basis:	Wet Weight
Seq Number:	3052795				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.07.18 21.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.07.18 21.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.07.18 21.05	U	1
m,p-Xylenes	179601-23-1	**0.00462**	0.00401	mg/kg	06.07.18 21.05		1
o-Xylene	95-47-6	**0.00517**	0.00200	mg/kg	06.07.18 21.05		1
Total Xylenes	1330-20-7	**0.00979**	0.00200	mg/kg	06.07.18 21.05		1
Total BTEX		**0.00979**	0.00200	mg/kg	06.07.18 21.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.07.18 21.05	
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.07.18 21.05	

LT Environmental, Inc., Arvada, CO

EK 30 BS2 Federal Com 1H

Sample Id:	**SS-2**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-002	Date Collected:	05.30.18 13.05	Sample Depth:	1.75 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.05.18 09.00	Basis:	Wet Weight
Seq Number:	3052392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.2**	4.95	mg/kg	06.05.18 11.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.02.18 09.00	Basis:	Wet Weight
Seq Number:	3052155				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.18 15.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	**72.0**	15.0	mg/kg	06.02.18 15.43		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.02.18 15.43	U	1
Total TPH	PHC635	**72.0**	15.0	mg/kg	06.02.18 15.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-135	06.02.18 15.43	
o-Terphenyl	84-15-1	71	%	70-135	06.02.18 15.43	

Certificate of Analytical Results 587888

LT Environmental, Inc., Arvada, CO

EK 30 BS2 Federal Com 1H

Sample Id:	**SS-2**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-002	Date Collected:	05.30.18 13.05	Sample Depth:	1.75 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.07.18 12.00	Basis:	Wet Weight
Seq Number:	3052795				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.07.18 20.47	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.07.18 20.47	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.07.18 20.47	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.07.18 20.47	U	1
o-Xylene	95-47-6	**0.00394**	0.00199	mg/kg	06.07.18 20.47		1
Total Xylenes	1330-20-7	**0.00394**	0.00199	mg/kg	06.07.18 20.47		1
Total BTEX		**0.00394**	0.00199	mg/kg	06.07.18 20.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	06.07.18 20.47	
1,4-Difluorobenzene	540-36-3	93	%	70-130	06.07.18 20.47	

LT Environmental, Inc., Arvada, CO

EK 30 BS2 Federal Com 1H

Sample Id:	**SS-3**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-003	Date Collected:	05.30.18 13.10	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.05.18 09.00	Basis:	Wet Weight
Seq Number:	3052392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	06.05.18 11.24	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.02.18 09.00	Basis:	Wet Weight
Seq Number:	3052155				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.18 16.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	**25.6**	15.0	mg/kg	06.02.18 16.05		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.02.18 16.05	U	1
Total TPH	PHC635	**25.6**	15.0	mg/kg	06.02.18 16.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	06.02.18 16.05	
o-Terphenyl	84-15-1	86	%	70-135	06.02.18 16.05	

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Sample Id:	**SS-3**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-003	Date Collected:	05.30.18 13.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.07.18 12.00	Basis:	Wet Weight
Seq Number:	3052795				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.07.18 20.29	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.07.18 20.29	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.07.18 20.29	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.07.18 20.29	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.07.18 20.29	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.07.18 20.29	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.07.18 20.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86	%	70-130	06.07.18 20.29	
4-Bromofluorobenzene	460-00-4	91	%	70-130	06.07.18 20.29	

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Sample Id:	**SS-4**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-004	Date Collected:	05.30.18 13.15	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.05.18 09.00	Basis:	Wet Weight
Seq Number:	3052392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	06.05.18 11.29	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.02.18 09.00	Basis:	Wet Weight
Seq Number:	3052155				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.18 17.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.18 17.08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.02.18 17.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.18 17.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	06.02.18 17.08	
o-Terphenyl	84-15-1	85	%	70-135	06.02.18 17.08	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS-4**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-004	Date Collected:	05.30.18 13.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.07.18 12.00	Basis:	Wet Weight
Seq Number:	3052795				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.07.18 21.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.07.18 21.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.07.18 21.23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.07.18 21.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.07.18 21.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.07.18 21.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.07.18 21.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	06.07.18 21.23	
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.07.18 21.23	

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Sample Id:	**SS-5**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-005	Date Collected:	05.30.18 13.20	Sample Depth:	6 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.05.18 09.00	Basis:	Wet Weight
Seq Number:	3052392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	06.05.18 11.34	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.02.18 09.00	Basis:	Wet Weight
Seq Number:	3052155				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.18 17.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.18 17.28	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.02.18 17.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.18 17.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	06.02.18 17.28	
o-Terphenyl	84-15-1	82	%	70-135	06.02.18 17.28	

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Sample Id:	**SS-5**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-005	Date Collected:	05.30.18 13.20	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.05.18 17.00	Basis:	Wet Weight
Seq Number:	3052478				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.06.18 09.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.06.18 09.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.06.18 09.02	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.06.18 09.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.06.18 09.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.06.18 09.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.06.18 09.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	06.06.18 09.02	
1,4-Difluorobenzene	540-36-3	92	%	70-130	06.06.18 09.02	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS-6**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-006	Date Collected:	05.30.18 13.25	Sample Depth:	6 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.05.18 09.00	Basis:	Wet Weight
Seq Number:	3052392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	06.05.18 11.40	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.02.18 09.00	Basis:	Wet Weight
Seq Number:	3052155				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.02.18 17.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.02.18 17.49	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	06.02.18 17.49	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.02.18 17.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	06.02.18 17.49	
o-Terphenyl	84-15-1	87	%	70-135	06.02.18 17.49	

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Sample Id:	**SS-6**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-006	Date Collected:	05.30.18 13.25	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.05.18 17.00	Basis:	Wet Weight
Seq Number:	3052478				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.06.18 08.44	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.06.18 08.44	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.06.18 08.44	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.06.18 08.44	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.06.18 08.44	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.06.18 08.44	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.06.18 08.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	06.06.18 08.44	
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.06.18 08.44	

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Sample Id:	**SS-7**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-007	Date Collected:	05.30.18 13.30	Sample Depth:	SURFACE N/A

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.05.18 09.00	Basis:	Wet Weight
Seq Number:	3052392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	06.05.18 11.45	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.02.18 09.00	Basis:	Wet Weight
Seq Number:	3052155				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.18 18.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.18 18.10	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.02.18 18.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.18 18.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	06.02.18 18.10	
o-Terphenyl	84-15-1	95	%	70-135	06.02.18 18.10	

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Sample Id:	**SS-7**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-007	Date Collected:	05.30.18 13.30	Sample Depth:	SURFACE N/A
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.05.18 17.00	Basis:	Wet Weight
Seq Number:	3052478				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.06.18 07.41	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.06.18 07.41	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.06.18 07.41	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.06.18 07.41	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.06.18 07.41	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.06.18 07.41	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.06.18 07.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	70-130	06.06.18 07.41	
4-Bromofluorobenzene	460-00-4	93	%	70-130	06.06.18 07.41	

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Sample Id:	**SS-8**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-008	Date Collected:	05.30.18 13.35	Sample Depth:	SURFACE N/A

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.05.18 09.00	Basis:	Wet Weight
Seq Number:	3052392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	06.05.18 12.01	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.02.18 09.00	Basis:	Wet Weight
Seq Number:	3052155				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.18 18.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.18 18.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.02.18 18.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.18 18.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.02.18 18.31	
o-Terphenyl	84-15-1	83	%	70-135	06.02.18 18.31	

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Sample Id:	**SS-8**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-008	Date Collected:	05.30.18 13.35	Sample Depth:	SURFACE N/A
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.05.18 17.00	Basis:	Wet Weight
Seq Number:	3052478				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.06.18 07.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.06.18 07.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.06.18 07.23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.06.18 07.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.06.18 07.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.06.18 07.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.06.18 07.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	120	%	70-130	06.06.18 07.23	
4-Bromofluorobenzene	460-00-4	97	%	70-130	06.06.18 07.23	

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Sample Id:	**SS-9**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-009	Date Collected:	05.30.18 14.00	Sample Depth:	6 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.05.18 09.00	Basis:	Wet Weight
Seq Number:	3052392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	06.05.18 12.07	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.02.18 09.00	Basis:	Wet Weight
Seq Number:	3052155				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.02.18 18.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.02.18 18.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	06.02.18 18.52	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.02.18 18.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	06.02.18 18.52	
o-Terphenyl	84-15-1	89	%	70-135	06.02.18 18.52	

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Sample Id:	**SS-9**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-009	Date Collected:	05.30.18 14.00	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.05.18 17.00	Basis:	Wet Weight
Seq Number:	3052478				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.06.18 09.20	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.06.18 09.20	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.06.18 09.20	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.06.18 09.20	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.06.18 09.20	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.06.18 09.20	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.06.18 09.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	06.06.18 09.20	
4-Bromofluorobenzene	460-00-4	120	%	70-130	06.06.18 09.20	

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Sample Id:	**SS-10**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-010	Date Collected:	05.30.18 14.05	Sample Depth:	1.75 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.05.18 09.00	Basis:	Wet Weight
Seq Number:	3052392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	06.05.18 12.23	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.02.18 09.00	Basis:	Wet Weight
Seq Number:	3052155				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.18 19.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.18 19.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.02.18 19.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.18 19.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	06.02.18 19.13	
o-Terphenyl	84-15-1	85	%	70-135	06.02.18 19.13	

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Sample Id:	**SS-10**	Matrix:	Soil	Date Received:	06.01.18 13.15
Lab Sample Id:	587888-010	Date Collected:	05.30.18 14.05	Sample Depth:	1.75 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.05.18 17.00	Basis:	Wet Weight
Seq Number:	3052478				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.06.18 09.38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.06.18 09.38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.06.18 09.38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.06.18 09.38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.06.18 09.38	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.06.18 09.38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.06.18 09.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.06.18 09.38	
4-Bromofluorobenzene	460-00-4	114	%	70-130	06.06.18 09.38	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 587888

LT Environmental, Inc.

EK 30 BS2 Federal Com 1H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3052392 Matrix: Solid Date Prep: 06.05.18
MB Sample Id: 7656003-1-BLK LCS Sample Id: 7656003-1-BKS LCSD Sample Id: 7656003-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	275	110	275	110	90-110	0	20	mg/kg	06.05.18 10:14	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3052392 Matrix: Soil Date Prep: 06.05.18
Parent Sample Id: 587888-001 MS Sample Id: 587888-001 S MSD Sample Id: 587888-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.65	250	266	104	271	106	90-110	2	20	mg/kg	06.05.18 10:30	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3052392 Matrix: Soil Date Prep: 06.05.18
Parent Sample Id: 587888-007 MS Sample Id: 587888-007 S MSD Sample Id: 587888-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.98	249	271	109	272	109	90-110	0	20	mg/kg	06.05.18 11:51	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3052155 Matrix: Solid Date Prep: 06.02.18
MB Sample Id: 7655906-1-BLK LCS Sample Id: 7655906-1-BKS LCSD Sample Id: 7655906-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	810	81	804	80	70-135	1	20	mg/kg	06.02.18 14:40	
Diesel Range Organics (DRO)	<15.0	1000	852	85	805	81	70-135	6	20	mg/kg	06.02.18 14:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		104		110		70-135	%	06.02.18 14:40
o-Terphenyl	100		100		94		70-135	%	06.02.18 14:40

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 587888

LT Environmental, Inc.

EK 30 BS2 Federal Com 1H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3052155 Matrix: Soil Date Prep: 06.02.18
Parent Sample Id: 587888-003 MS Sample Id: 587888-003 S MSD Sample Id: 587888-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	900	90	839	84	70-135	7	20	mg/kg	06.02.18 16:26	
Diesel Range Organics (DRO)	25.6	999	913	89	903	88	70-135	1	20	mg/kg	06.02.18 16:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		121		70-135	%	06.02.18 16:26
o-Terphenyl	85		92		70-135	%	06.02.18 16:26

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3052478 Matrix: Solid Date Prep: 06.05.18
MB Sample Id: 7656132-1-BLK LCS Sample Id: 7656132-1-BKS LCSD Sample Id: 7656132-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0896	89	0.0927	93	70-130	3	35	mg/kg	06.06.18 05:37	
Toluene	<0.00202	0.101	0.0939	93	0.0979	98	70-130	4	35	mg/kg	06.06.18 05:37	
Ethylbenzene	<0.00202	0.101	0.0917	91	0.0967	97	70-130	5	35	mg/kg	06.06.18 05:37	
m,p-Xylenes	<0.00403	0.202	0.190	94	0.199	100	70-130	5	35	mg/kg	06.06.18 05:37	
o-Xylene	<0.00202	0.101	0.0892	88	0.0944	94	70-130	6	35	mg/kg	06.06.18 05:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	81		93		95		70-130	%	06.06.18 05:37
4-Bromofluorobenzene	79		90		94		70-130	%	06.06.18 05:37

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3052795 Matrix: Solid Date Prep: 06.07.18
MB Sample Id: 7656286-1-BLK LCS Sample Id: 7656286-1-BKS LCSD Sample Id: 7656286-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0915	92	0.0903	91	70-130	1	35	mg/kg	06.07.18 18:04	
Toluene	<0.00200	0.100	0.0987	99	0.0948	95	70-130	4	35	mg/kg	06.07.18 18:04	
Ethylbenzene	<0.00200	0.100	0.0962	96	0.0946	95	70-130	2	35	mg/kg	06.07.18 18:04	
m,p-Xylenes	<0.00401	0.200	0.201	101	0.197	99	70-130	2	35	mg/kg	06.07.18 18:04	
o-Xylene	<0.00200	0.100	0.0943	94	0.0907	91	70-130	4	35	mg/kg	06.07.18 18:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		97		103		70-130	%	06.07.18 18:04
4-Bromofluorobenzene	97		100		102		70-130	%	06.07.18 18:04

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Final 1.000

QC Summary 587888

LT Environmental, Inc.

EK 30 BS2 Federal Com 1H

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3052478 Matrix: Soil Date Prep: 06.05.18

Parent Sample Id: 587888-008 MS Sample Id: 587888-008 S MSD Sample Id: 587888-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0884	88	0.0817	82	70-130	8	35	mg/kg	06.06.18 06:14	
Toluene	<0.00200	0.100	0.0943	94	0.0862	86	70-130	9	35	mg/kg	06.06.18 06:14	
Ethylbenzene	<0.00200	0.100	0.0916	92	0.0831	83	70-130	10	35	mg/kg	06.06.18 06:14	
m,p-Xylenes	<0.00401	0.200	0.189	95	0.171	86	70-130	10	35	mg/kg	06.06.18 06:14	
o-Xylene	<0.00200	0.100	0.0890	89	0.0807	81	70-130	10	35	mg/kg	06.06.18 06:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		95		70-130	%	06.06.18 06:14
4-Bromofluorobenzene	93		95		70-130	%	06.06.18 06:14

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3052795 Matrix: Soil Date Prep: 06.07.18

Parent Sample Id: 587962-001 MS Sample Id: 587962-001 S MSD Sample Id: 587962-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0530	53	0.0655	66	70-130	21	35	mg/kg	06.07.18 18:40	X
Toluene	<0.00201	0.100	0.0530	53	0.0685	69	70-130	26	35	mg/kg	06.07.18 18:40	X
Ethylbenzene	<0.00201	0.100	0.0516	52	0.0662	66	70-130	25	35	mg/kg	06.07.18 18:40	X
m,p-Xylenes	<0.00402	0.201	0.107	53	0.138	69	70-130	25	35	mg/kg	06.07.18 18:40	X
o-Xylene	<0.00201	0.100	0.0512	51	0.0662	66	70-130	26	35	mg/kg	06.07.18 18:40	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		95		70-130	%	06.07.18 18:40
4-Bromofluorobenzene	105		100		70-130	%	06.07.18 18:40

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

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Xenco Quote # | Xenco Job # 587808

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. / Permian Office
Company Address: 3300 North "A" St., Bldg 2, Unit 103, Midland, TX 79705
Email: Abaker@ltenv.com | Phone No: 432-704-5178
Project Contact: Adrian Baker
Samplers's Name: Daniel Thomas

Project Information

Project Name/Number:
Project Location:
Invoice To:
PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TPH	Chloride	Field Comments
1	SS-1	1.75'	5-30-18	1300	Soil	1								X	X	X	X	
2	SS-2	1.75'		1305														
3	SS-3	1'		1310														
4	SS-4	1'		1315														
5	~~SS05~~ SS-5	6"		1320														
6	SS-6	6"		1325														
7	SS-7	Surface		1330														
8	SS-8	Surface		1335														
9	SS-9	6"		1400														
10	SS-10	1.75'		1405														

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY Standard

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5-30-18 1710				
2					5/31 1530	
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
						✓ 1.3 R8 0.0

06/1/18 13:15

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/01/2018 01:15:00 PM

Work Order #: 587888

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 06/01/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/01/2018
Jessica Kramer