



North Jetty

Environmental Services, LLC

October 5, 2017

VIA EMAIL: mike.bratcher@state.nm.us

Mike Bratcher
NMOCD District 2
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Re: Remediation Plan for Spill Remediation, Forehand 27 State # 4, Eddy County, New Mexico

Dear Mr. Bratcher:

North Jetty Environmental Services, LLC (North Jetty) appreciates the opportunity to provide this remediation plan for Caza Petroleum, Inc. (Caza), to remediate the Forehand 27 State #4 spill in Eddy County, New Mexico.

DELINEATION

On September 12, 2017, North Jetty field personnel delineated a produced water spill at the Caza Forehand 27 State #4 (Site) located at 32°16'40.66"N, 104°10'18.05"W in Eddy County, New Mexico. Caza reported an unknown quantity of produced water was lost at the Site and covering approximately 27,300 sq. ft. of the facility and state land. This was confirmed during the investigation and photo documentation was used to record the condition during the investigation. The delineation of the Site revealed impacted soil up to two (2') feet below ground surface (bgs). Table 1 presents the laboratory results from the delineation.

REMEDIATION PLAN

North Jetty proposes to excavate the impacted area with a backhoe to remove the impacted soil from 1.0 to 2.0 feet below ground surface (bgs), sample soil for cleanup confirmation, hauling impacted soil to disposal, and back fill excavation with clean soil. North Jetty will submit a final report to Caza and the New Mexico Oil Conservation Division (NMOCD) once the work is complete. It is expected to take five (5) days to excavate, sample, haul impacted soil, and back fill excavation. The soil samples will be placed in clean 4-ounce jars, sealed, labeled, chilled in an ice chest and delivered under chain of custody to Permian Basin Environmental Labs located in Midland, Texas. The laboratory will analyze the samples for BTEX by SW-8021, TPH by method SW-8015M, and chloride by method E300. All excavated areas during remediation will be

PO Box 52483 ♦ Midland, Texas 79710 ♦ Ph. (432) 897-4988 ♦ Fax (432) 897-4977

delineated for chlorides below 250 mg/kg vertically two (2) feet below excavation surface and horizontally by two hundred (200) feet from excavation walls. The sample results will take approximately two weeks on normal turnaround time and will dictate the soil disposal. This is expected to take five (5) days to complete with a final report to follow once all data is collected.

Equipment decontamination, sample collection, field documentation, sample custody, and laboratory analyses will be in general accordance with industry standards of practice and in conformance with applicable Federal and State regulations. All work will be performed under the supervision of a qualified environmental professional. All laboratory work will be performed under standard turn-around times and costs, unless otherwise directed.

AUTHORIZATION

If this plan is acceptable to you, please sign below as notice to proceed and return one copy of this plan intact to our office. We will proceed with the work upon receipt of proposal authorization. You may contact me at (325) 669-5735 (cell) to discuss any questions you may have.

Respectfully submitted,

North Jetty Environmental Services, LLC



Coty Woolf
President

North Jetty Environmental Services, LLC
325.669.5735 cell
432.897.4988 office
432.897.4977 fax
cotywoolf@icloud.com

AUTHORIZATION

If this plan is acceptable to you, please sign below as notice to proceed and return one copy of this proposal intact to our office. We will proceed with the work upon receipt of proposal authorization and executed consulting services agreement.

AGREED TO, THIS _____ DAY OF _____, 2017

BY (please print): _____

TITLE: _____

COMPANY: _____

SIGNATURE: _____

Table 1
Soil Samples Analytical Summary
Caza Petroleum, Forehand 27 State # 4
Eddie County, New Mexico

Boring	Depth Feet BGS	Date	Chloride mg/Kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylene mg/kg	GRO mg/Kg	DRO mg/Kg	Oil mg/Kg	Total TPH mg/Kg
RRAL:											
SB-1	0 - 2	9/12/2017	3,760	<0.00101	<0.00202	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3
	2 - 4	9/12/2017	8.07	--	--	--	--	--	--	--	--
	4 - 6	9/12/2017	--	--	--	--	--	--	--	--	--
	6 - 8	9/12/2017	--	--	--	--	--	--	--	--	--
SB-2	0 - 2	9/12/2017	656	<0.00110	<0.00220	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5
	2 - 4	9/12/2017	247	--	--	--	--	--	--	--	--
	4 - 6	9/12/2017	--	--	--	--	--	--	--	--	--
	6 - 8	9/12/2017	--	--	--	--	--	--	--	--	--
SB-3	0 - 2	9/12/2017	377	<0.00106	<0.00213	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6
	2 - 4	9/12/2017	10.5	--	--	--	--	--	--	--	--
	4 - 6	9/12/2017	--	--	--	--	--	--	--	--	--
	6 - 8	9/12/2017	--	--	--	--	--	--	--	--	--
SB-4	0 - 2	9/12/2017	3,170	<0.00103	<0.00206	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8
	2 - 4	9/12/2017	224.0	--	--	--	--	--	--	--	--
	4 - 6	9/12/2017	--	--	--	--	--	--	--	--	--
	6 - 8	9/12/2017	--	--	--	--	--	--	--	--	--
SB-5	0 - 2	9/12/2017	2,540	<0.00105	<0.00211	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3
	2 - 4	9/12/2017	224.0	--	--	--	--	<25.8	<25.8	<25.8	<25.8
	4 - 6	9/12/2017	--	--	--	--	--	--	--	--	--
	6 - 8	9/12/2017	--	--	--	--	--	--	--	--	--
SB-6	0 - 2	9/12/2017	556	<0.00110	<0.00220	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5
	2 - 4	9/12/2017	8.96	--	--	--	--	--	--	--	--
	4 - 6	9/12/2017	--	--	--	--	--	--	--	--	--
	6 - 8	9/12/2017	--	--	--	--	--	--	--	--	--
SB-7	0 - 2	9/12/2017	3,890	<0.00101	<0.00202	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3
	2 - 4	9/12/2017	21.0	--	--	--	--	--	--	--	--
	4 - 6	9/12/2017	--	--	--	--	--	--	--	--	--
	6 - 8	9/12/2017	--	--	--	--	--	--	--	--	--
SB-8	0 - 2	9/12/2017	282	<0.00106	<0.00213	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6
	2 - 4	9/12/2017	18.2	--	--	--	--	--	--	--	--
	4 - 6	9/12/2017	--	--	--	--	--	--	--	--	--
	6 - 8	9/12/2017	--	--	--	--	--	--	--	--	--

Notes: Analysis performed by Permian Basin Environmental Lab, Midland, Texas
Samples analyzed via EPA method SW-8015M (TPH) and SW-300 (chloride).
Depth measurements are in feet below ground surface (bgs).
All concentrations are in milligrams per kilogram (mg/Kg) equivalent to parts per million (ppm).



Google Earth