NM1 - ___39_____

APPROVED BACKGROUND SAMPLING PLAN

__March 3, 2015___

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

David Catanach, Division Director
Oil Conservation Division

March 3, 2015

Ms. Monte Carol Madera
Pitchfork Landfarm, LLC
524 Antelope Road
Jal, New Mexico 88525

Re: Background Demonstration Sampling and Analysis Plan Review
Pitchfork Landfarm, LLC
Permit NM1-039
Location: NE/4, NW/4, NE/4 Section 5, Township 24 South, Range 34 East, NMPM
Lea County, New Mexico

Dear Ms. Madera:

The Oil Conservation Division (OCD) has reviewed Pitchfork Landfarm, LLC's (Pitchfork) Background Demonstration Sampling and Analysis Plan, dated February 26, 2015 and received by OCD on March 2, 2015, which proposes a sampling plan to re-establish a new facility background and PQLs in order to compare to the vadose zone monitoring results to determine if a released had occurred and if follow-up actions are required to be completed and to pursue closure of the facility.

Based on the information provided in the request, the proposed Background Demonstration Sampling and Analysis Plan is hereby approved with the following understandings and conditions:

1. Pitchfork shall comply with all applicable requirements of the Oil and Gas Act (Chapter 70, Article 2 NMSA 1978), and all conditions specified in this approval and shall operate in accordance with the February 26, 2015 submittal; and

2. Pitchfork shall obtain written approval from OCD prior to implementing any changes to the February 26, 2015 Background Demonstration Sampling and Analysis Plan.

Please be advised that approval of this request does not relieve Pitchfork of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve Pitchfork of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact me at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Brad A. Jones
Environmental Engineer

BAJ/baj

Cc: OCD District I Office, Hobbs
Bruce McKenzie, Enviro Clean Services, LLC, Tulsa, OK 74136

PITCHFORK LANDFARM, LLC
Bert & Montie Carol Madera
524 Antelope Road
Jal, New Mexico 88252
575-390-2861/575-441-8945

February 26, 2015

Mr. Brad Jones
Environmental Engineer
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Background Demonstration Sampling and Analysis Plan
Pitchfork Landfarm, LLC
Lea County, New Mexico
Permit Number: NM1-039

Dear Mr. Jones:

Please find enclosed one (1) copy of the ***Background Demonstration Sampling and Analysis Plan*** (Plan) for the Pitchfork Landfarm, LLC (Pitchfork) site located in the NE/4, NW/4, NE/4 of Section 5, Township 24 South, Range 34 East NMPM in Lea County, New Mexico. Pitchfork has read the Plan and concurs with the proposed activities. Upon your approval, Enviro Clean Services, LLC, on behalf of Pitchfork, will implement the work scope presented in the Plan.

Sincerely,
Pitchfork Landfarm, LLC

Monte Carol Madera
Agent

Enclosure: Background Demonstration Sampling and Analysis Plan (1 copy)

ENVIRO CLEAN SERVICES, LLC

RECEIVED OCD
2015 FEB 25 P 4 7:47
2015 MAR -2 A 11:

February 26, 2015

Mr. Brad Jones
Environmental Engineer
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Background Demonstration Sampling and Analysis Plan
Pitchfork Landfarm, LLC
Lea County, New Mexico
Permit Number: NM1-039

Dear Mr. Jones:

Enviro Clean Services, LLC (Enviro Clean), on behalf of our client Pitchfork Landfarm, LLC (Pitchfork), is pleased to submit to the New Mexico Oil Conservation Division (NMOCD) the following work plan to conduct Background Demonstration Sampling and Analysis at the Pitchfork landfarm site (Site) located in the NE/4, NW/4, NE/4 of Section 5, Township 24 South, Range 34 East NMPM in Lea County, New Mexico. The Site location and topographic features are shown on attached **Figure 1**.

You may recall that Enviro Clean contacted you to discuss the regulatory needs of the Site. During our telephone conversations, it was discussed that the demonstration of the background concentrations of constituents of concern in the Site soils conducted in 2003 was inadequate to complete the operational monitoring requirements and to pursue closure of the Site. It was determined that Pitchfork needed to collect and analyze additional background soil samples.

Enviro Clean will identify two locations upgradient of the Site that do not appear to have been previously disturbed. The proposed background soil sample locations are shown on attached **Figure 2**. At these locations Enviro Clean will install two soil borings to a depth of approximately 3 feet below the native ground surface utilizing a decontaminated hand-auger. Soil samples will be collected from each of these soil borings from the depth interval 2.0 to 3.0 feet bgl. Upon completion of soil boring/sampling activities the soil borings will be plugged with hydrated bentonite chips.

7060 South Yale Avenue, Suite 603 ▪ Tulsa, Oklahoma ▪ 918.794.7828 ▪ fax 918.794.7836
www.EnviroCleanPS.com

The soil samples collected from the background soil borings will be placed directly into laboratory prepared sample containers, labeled as to source and contents, placed on ice for preservation, placed under chain-of-custody control and shipped via overnight courier to the analytical laboratory (ALS Environmental Laboratory, Houston, Texas). The proposed background soil samples will be analyzed for total petroleum hydrocarbons (TPH) (Method 8015 B); benzene, toluene, ethylbenzene and total xylenes (BTEX) (Method 8260); chlorides (EPA Method 300) and constituents listed in Subsections A and B of 20.6.2.3103 NMAC. A copy of Subsections A and B of 20.6.2.3103 NMAC is provided in **Attachment A**. The proposed analytical laboratory Reporting Limits (RL) and Practical Quantitation Limits (PQL) are summarized in attached **Table 1**. As can be seen on **Table 1**, the laboratory analytical RL and PQL are equivalent.

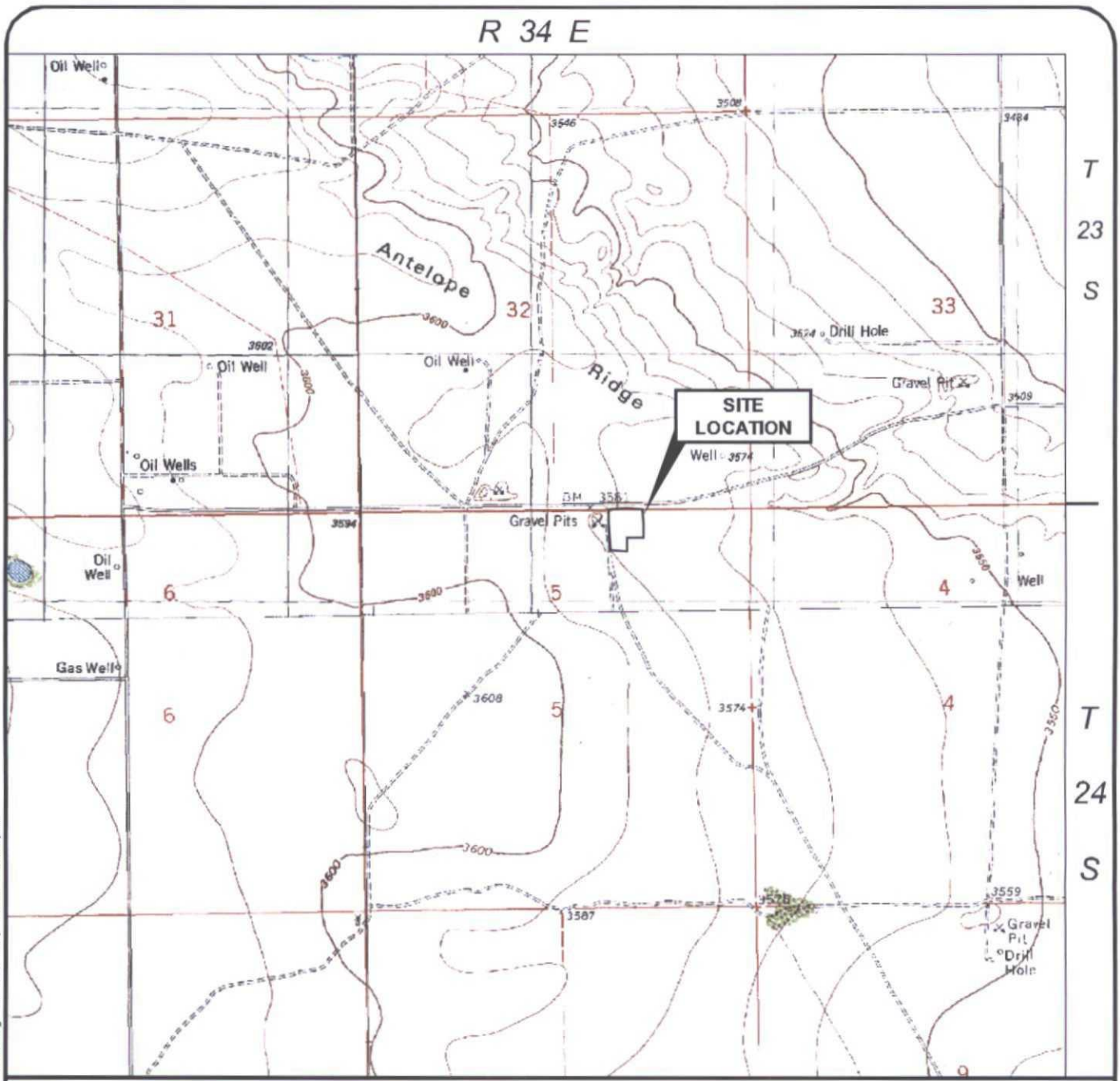
Upon completion of the field sampling activities and receipt of the laboratory analytical data, Enviro Clean will prepare a brief report for submittal to the NMOCD that will describe the field sampling activities conducted and present summary of the laboratory analytical results and the RL/PQL utilized by the analytical laboratory. Pursuant to 19.15.36.15.E Pitchfork will compare the analytical results of future vadose zone monitoring samples to the higher of the RL/PQL or the background soil concentration(s) to determine if a potential release has occurred at the Site.

If you have any questions regarding the proposed activities, please do not hesitate to contact me at (918) 906-6780.

Sincerely,
Enviro Clean Services, LLC

Bruce E. McKenzie, P.G.
Senior Project Manager

Attachments: Figure 1 - Site Location and Topographic Features
Figure 2 - Proposed Background Soil Sample Locations
Table 1 - Summary of Laboratory Reporting Limits
Attachment A - Subsections A and B of 20.6.2.3103 NMAC



SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLES
BELL LAKE, NEW MEXICO 1973
SAN SIMON SINK, NEW MEXICO 1984
TIP TOP WELLS, NEW MEXICO 1984 AND
WOODLEY FLAT, NEW MEXICO 1973

SCALE
0 1/2 1 MILE

NEW MEXICO

N

CLIENT: PITCHFORK LANDFARM, LLC	FIGURE TITLE: *SITE LOCATION AND TOPOGRAPHIC FEATURES*
LOCATION: NE/4 NW/4 NE/4, SECTION 5, T24S, R34E LEA COUNTY, NEW MEXICO	DOCUMENT TITLE: BACKGROUND DEMONSTRATION SAMPLING AND ANALYSIS PLAN

ENVIRO CLEAN SERVICES, LLC

Enviro Clean Services, LLC
7060 South Yale Avenue, Suite 603
Tulsa, Oklahoma 74136
918.794.7828
www.EnviroCleanPS.com

		DESIGNED BY	BEM
DATE	2/10/2015	APPROVED BY	BEM
SCALE	AS SHOWN	DRAWN BY	SKG
PROJECT NUMBER		FIGURE NUMBER	
PITHLAND01		1	

D:\Projects\Pitchfork\PITHLAND01\04_CAD\20150218_F01_TOPO.dwg on Feb 19, 2015 - 12:15pm

SOURCE: AERIAL PHOTOGRAPH DATED FEBRUARY 13, 2014 - GOOGLE EARTH PRO SCREEN CAPTURE

LEGEND

- PROPOSED SAMPLE LOCATION
- LANDFARM BOUNDARY

N

100 0 100 200

SCALE FEET

CLIENT: PITCHFORK LANDFARM, LLC	FIGURE TITLE: ***PROPOSED BACKGROUND SOIL SAMPLE LOCATIONS***
LOCATION: NW/4 NE/4 SECTION 5, NM T24S R34E LEA COUNTY, NEW MEXICO	DOCUMENT TITLE: BACKGROUND DEMONSTRATION SAMPLING AND ANALYSIS PLAN

ENVIRO CLEAN SERVICES, LLC

Enviro Clean Services, LLC
7060 South Yale Ave, Suite 603
Tulsa, Oklahoma 74136
918.794.7828
www.EnviroCleanPS.com

		DESIGNED BY	BEM
DATE	2/18/2015	APPROVED BY	BEM
SCALE	1"=200'	DRAWN BY	SKG
PROJECT NUMBER		FIGURE NUMBER	
PITHLAND01		2	

D:\Projects\Pitchfork\PITHLAND01\04_CAD\20150218_PitchforkLandfarm_SITE.dwg on Feb 19, 2015 - 12:17pm

Table 1 : Summary of Laboratory Reporting Limits
Pitchfork Landfarm, LLC
Lea County, New Mexico

Analyses	Method	RL mg/kg	PQL mg/kg	MDL mg/kg
Select VOCs:				
Benzene	8260B	0.00500	0.005	0.000500
Toluene	8260B	0.00500	0.005	0.000600
Carbon Tetrachloride	8260B	0.00500	0.005	0.000600
1,2-Dichloroethane	8260B	0.00500	0.005	0.000600
1,1-Dichloroethene	8260B	0.00500	0.005	0.000500
1,1,2,2-Tetrachloroethene	8260B	0.00500	0.005	0.00080
1,1,2-Trichloroethene	8260B	0.00500	0.005	0.00050
Ethylbenzene	8260B	0.00500	0.005	0.000700
Xylenes (Total)	8260B	0.01000	0.01	0.002400
Methylene Chloride	8260B	0.0100	0.01	0.001000
Chloroform	8260B	0.00500	0.005	0.000500
1,1-Dichloroethane	8260B	0.00500	0.005	0.000500
Ethylene Dibromide	8260B	0.005	0.005	0.000500
1,1,1-Trichloroethane	8260B	0.00500	0.005	0.000500
1,1,2-Trichloroethane	8260B	0.00500	0.005	0.000500
1,1,2,2-Tetrachloroethane	8260B	0.00500	0.005	0.000800
Vinyl Chloride	8260B	0.00200	0.002	0.00080
PAH:				
Includes Total Naphthalenes plus Monomethylnaphthalenes (2)	8270D	0.0033	0.0033	0.00100
Benzo(a)pyrene	8270D	0.0033	0.0033	0.00060
Select Metals:				
Arsenic	6010B	0.50	0.5	0.100
Barium	6010B	0.50	0.5	0.08
Cadmium	6010B	0.50	0.5	0.050
Chromium	6010B	0.50	0.5	0.090
Lead	6010B	0.50	0.5	0.050
Mercury (Total)	7471B	0.003325	0.003325	0.000470
Selenium	6010B	0.50	0.5	0.18
Silver	6010B	0.50	0.5	0.080
Copper	6010B	0.50	0.5	0.10
Iron	6010B	50.0	50	10.0
Manganese	*6010B*	*0.50*	*0.5*	*0.10*
Zinc	6010B	0.5	0.5	0.25
Total Petroleum Hydrocarbons:				
TPH	8015B	3.40	3.4	0.50
Miscellaneous:				
Chloride	9056A	5.0	5	2.00
Cyanide	9012B	2.00	2	0.600
Fluoride	9056A	1.00	1	0.300
Nitrate as N	9056A	1.00	1	0.300
Uranium	6020A	0.50000	0.5	0.500000
Ra-226 & Ra-228 (4)	RA-06-RC	---	---	---
PCBs (3)	8082A	0.0167	0.0167	0.0167
Phenols	9066	2.50	2.5	1.00
Sulfate	9056A	5.0	5.0	2.00

Notes:

1. RLs, PQLs, MDLs presented are provided by ALS Environmental Laboratory in Houston, Texas.
2. Total Naphthalenes: Reported highest limits. Individual compound limits will vary.
3. PCBs: Reported highest Aroclor limits. Individual Aroclors limits will vary.
4. Radium 226 & 228: Subcontracted to ALS Ft. Collins, CO laboratory. Samples are reported with MDC (Minimum Detected Concentration). MDC's are will vary by sample.

ATTACHMENT A
SUBSECTIONS A AND B OF 20.6.2.3103 NMAC

A. Human Health Standards-Ground water shall meet the standards of Subsection A and B of this section unless otherwise provided. If more than one water contaminant affecting human health is present, the toxic pollutant criteria as set forth in the definition of toxic pollutant in Section 20.6.2.1101 NMAC for the combination of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant shall apply, whichever is more stringent. Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.

(1) Arsenic (As).....0.1 mg/l
(2) Barium (Ba).....1.0 mg/l
(3) Cadmium (Cd).....0.01 mg/l
(4) Chromium (Cr).....0.05 mg/l
(5) Cyanide (CN).....0.2 mg/l
(6) Fluoride (F).....1.6 mg/l
(7) Lead (Pb).....0.05 mg/l
(8) Total Mercury (Hg).....0.002 mg/l
(9) Nitrate (NO_3 as N).....10.0 mg/l
(10) Selenium (Se).....0.05 mg/l
(11) Silver (Ag).....0.05 mg/l
(12) Uranium (U).....0.03 mg/l
(13) Radioactivity: Combined Radium-226 & Radium-228.....30 pCi/l
(14) Benzene.....0.01 mg/l
(15) Polychlorinated biphenyls (PCB's).....0.001 mg/l
(16) Toluene.....0.75 mg/l
(17) Carbon Tetrachloride.....0.01 mg/l
(18) 1,2-dichloroethane (EDC).....0.01 mg/l
(19) 1,1-dichloroethylene (1,1-DCE).....0.005 mg/l
(20) 1,1,2,2-tetrachloroethylene (PCE).....0.02 mg/l
(21) 1,1,2-trichloroethylene (TCE).....0.1 mg/l
(22) ethylbenzene.....0.75 mg/l
(23) total xylenes.....0.62 mg/l
(24) methylene chloride.....0.1 mg/l
(25) chloroform.....0.1 mg/l
(26) 1,1-dichloroethane.....0.025 mg/l
(27) ethylene dibromide (EDB).....0.0001 mg/l
(28) 1,1,1-trichloroethane.....0.06 mg/l
(29) 1,1,2-trichloroethane.....0.01 mg/l
(30) 1,1,2,2-tetrachloroethane.....0.01 mg/l
(31) vinyl chloride.....0.001 mg/l
(32) PAHs: total naphthalene plus monomethylnaphthalenes.....0.03 mg/l
(33) benzo-a-pyrene.....0.0007 mg/l

B. Other Standards for Domestic Water Supply

(1) Chloride (Cl).....250.0 mg/l
(2) Copper (Cu).....1.0 mg/l
(3) Iron (Fe).....1.0 mg/l
(4) Manganese (Mn).....0.2 mg/l
(6) Phenols.....0.005 mg/l
(7) Sulfate (SO_4).....600.0 mg/l
(8) Total Dissolved Solids (TDS).....1000.0 mg/l
(9) Zinc (Zn).....10.0 mg/l
(10) pH.....between 6 and 9

C. Standards for Irrigation Use - Ground water shall meet the standards of Subsection A, B, and C of this section unless otherwise provided.

(1) Aluminum (Al).....5.0 mg/l
(2) Boron (B).....0.75 mg/l
(3) Cobalt (Co).....0.05 mg/l
(4) Molybdenum (Mo).....1.0 mg/l
(5) Nickel (Ni).....0.2 mg/l

[2-18-77, 1-29-82, 11-17-83, 3-3-86, 12-1-95; 20.6.2.3103 NMAC - Rn, 20 NMAC 6.2.III.3103, 1-15-01; A, 9-26-04]

[Note: For purposes of application of the amended numeric uranium standard to past and current water discharges (as of 9-26-04), the new standard will not become effective until June 1, 2007. For any new water discharges, the uranium standard is effective 9-26-04.]