NM3 - ___2

GENERAL CORRESPONDENCE YEAR(S):

2009 - Present

Jones, Brad A., EMNRD

From:	Sam Roberts <sroberts@gwdc.com></sroberts@gwdc.com>
Sent:	Wednesday, June 27, 2012 3:04 PM
То:	Jones, Brad A., EMNRD
Subject:	Great Western Drilling Company-Decker #5 Land Farm

Brad,

We have noted the discrepancy you mentioned concerning sample depths in the final closure report for this land farm and plan to re submit at a later date.

Also, please note that my previous email incorrectly referred to a land fill instead of a land farm.

Sam Roberts Great Western Drilling Company

Jones, Brad A., EMNRD

From:	Sam Roberts <sroberts@gwdc.com></sroberts@gwdc.com>
Sent:	Wednesday, June 27, 2012 2:39 PM
То:	Jones, Brad A., EMNRD
Subject:	Great Western Drilling Company-Decker #5 Landfill

Brad,

We have noted the discrepancy you mentioned concerning sample depths in the final closure report for this landfill and plan to resubmit at a later date.

Sam Roberts Great Western Drilling Company



RECEIVED OCD

GREAT WESTERN DRILLING COMPANY Post Office Box 1659 • Midland, Texas 79702 • 432/682-5241

June 20, 2012 State of New Mexico Energy Minerals and Natural resources Oil Conservation Division 1220 South St. Francis Drive Santa Fe, NM 87505

Gentlemen:

Please find attached a small landfarm final closure report for your approval.

Your consideration is appreciated.

Sincerely,

Sam Rahto

Sam Roberts Area Engineer

	0
District J 1625 N. French Dr., Hobbs, NM-88240 District II 1301 W. Grand Avenue, Attestia, NM-88240 VE DEnergy Minerals and Natural Reso	Durces Deckee #5
District III 1000 Rio Brazos Road 2005 III 87212 PM 12 04 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505	Form C-137 EZ Revised August 3, 2009 Submit 1 Copy to Santa Fe Office
REGISTRATION/ FINAL CLOSURE REPORT FOR Section 7 of 19.15.36 NMAC defines a small landfarm as a centralized landfarm of two acres or less in a single lift of eight inches or less, remains active for a maximum of three years from petroleum hydrocarbon-contaminated soils (excluding drill cuttings) that are exempt or non-has active small landfarm per governmental section at ar	SMALL LANDFARM less that has a total capacity of 2000 cubic yards or the date of its registration and that receives only zardous waste. The operator shall operate only one by time. Estimate 1000 jacs.
GENERAL INFORMATION	sed intiolog
1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill 1. Image: Small Landfarm Registration Image: Small Landfarm Fill	nal Closure Report* 3 C/C 10/24/04
2. Operator: GREAT WESTERN DRILLING COMPANY	
Address: 700 W. Lowsiand ST., MIDLAND, TX 79701	
Contact Person: SAM ROBERTS Phone	(432) 682 - 5241
3 Location: \underline{SE} 14 \underline{SE} 14 Section $\underline{7}$ Township $\underline{32}$	Range 11 W
REGISTRATION	
1. As operator, are you the surface estate owner of the proposed site? Statement that demonstrates a written agreement is established with the surface estate ow proposed small landfarm.	No If no, please attach a certification oner authorizing the use of the site for the
 Will the proposed small landfarm comply with the siting requirements of Subsection Yes No 	ns A and B of 19.15.36.13 NMAC?
A. Depth to ground water.	· .
 No small landfarm shall be located where ground water is less than 50 feet belo operator will place oil field waste. No surface wate management facility shall be located. 	ow the lowest elevation at which the
 within 200 feet of a watercourse, lakebed, sinkhole or playa lake; 	
• within an existing wellhead protection area or 100-year floodplain;	
 within, or within 500 feet of, a wetland; within the area overlying a subsurface mine; 	· · · · · · · · · · · · · · · · · · ·
 within 500 feet from the nearest permanent residence, school, hospital, instituti- initial application; or 	on or church in existence at the time of
 within an unstable area, unless the operator demonstrates that engineering meas surface waste management facility design to ensure that the surface waste mana compromised. 	ures have been incorporated into the gement facility's integrity will not be
3. Attach a plat and topographic map showing the small landfarm's location in relation section, township and range); highways or roads giving access to the small landfarm site; wells and springs; oil and gas wells or other production facilities; and inhabited buildings	to governmental surveys (quarter-quarter watercourses; fresh water sources, including within one mile of the site's perimeter.
Based on the information provided with this submittal, registration of a small landfarm ca with the following understandings and conditions:	an only be granted if the operator complies
The operator shall operate only one active small landfarm per governmental see	tion at any time. No small landfarm shall
be located more than one mile from the operator's nearest oil or gas well or other product	tion facility.
 The operator shall accept only exempt or non-hazardous wastes consisting of so result of accidental releases from production operations, that are predominantly containing contain free liquids, would pass the paint filter test and where testing shows chloride condi- tion of the production operation. 	als (excluding drill cuttings) generated as a ated by petroleum hydrocarbons, do not centrations are 500 mg/kg or below.
 The operator shall berm the landfarm to prevent rainwater run-on and run-off. The operator shall post a sign at the site readable from a distance of 50 feet and registration number; location by unit letter, section, township and range; expiration date; number 	listing the operator's name; small landfarm and an emergency contact telephone
• The operator shall spread and disk contaminated soils in a single eight inch or lo	ess lift within 72 hours of receipt. The
operator shall conduct treatment zone monitoring to ensure that the TPH concentration, a 8015M or EPA method 418.1 or other EPA method approved by the division, does not ex	s determined by EPA SW-846 method seed 2500 mg/kg; and that the chloride

concentration, as determined by EPA method 300-1, does not exceed 500 mg/kg. The operator shall treat soils by disking at least once a month and by watering and adding bioremediation enhancing materials when needed

• The operator shall maintain records reflecting the generator, the location of origin, the volume and type of oil field waste, the date of acceptance and the hauling company for each load of oil field waste received. The division shall post on its website each small landfarm's location, operator and registration date. In addition, the operator shall maintain records of the small landfarm s remediation activities in a form readily accessible for division inspection. The operator shall maintain all records for five years following the small landfarm's closure.

• The operator shall submit a final closure report on a form C-137 EZ, together with photographs of the closed site, to the environmental bureau in the division's Santa Fe office.

CERTIFICATION

I hereby certify that the information submitted with this registration is true, accurate and complete to the best of my knowledge and behalf and agree to the understandings and conditions of this registration.

Name: Sam Roberts	Title: Arca Englacer
Signature: A. R.L.ts	Date: 10/19/09
E-mail Address: 500 ber 45@gwdc.com	
OCD REGISTRATION: Approved Date: 11/19/09	_ Denied. Date:
Comments	
OCD Representative Signature	\leq
Title: Enimetal Engineer	OCD Registration Number: <u>MM-3-002</u>
FINAL CLOSURE REPORT	
 date? X Yes No (Please provide laboratory analytical benzenc, as determined by EPA SW-846 method 8021 B or 8 Total BTEX, as determined by EPA SW-846 method 8021 B. TPH, as determined by EPA SW-846 method 418.1 or other I mg/kg; the GRO and DRO combined fraction, as determined chlorides, as determined by EPA method 300.1, shall not excel f yes, were the additional closure requirements listed below satisfies The operator shall re-vegetate soils remediated to the closure Paragraph (6) of Subsection A of 19.15.36.18 NMAC. W √/ If the operator returns remediated soils to the original site, or in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC. W of the operator shall remove berms on the small landfarm and b The operator shall clean up the site and collect one vadose zoo treatment zone, or in an area where liquids may have collected collected and analyzed using the methods specified above for 11 no. were the landfarmed soils that have not or cannot be remediated removed to a division-approved surface waste management facility, (6) of Subsection A of 19.15.36.18 NMAC and re-vegetated?	results) 260B, shall not exceed 0.2 mg/kg; or 8260B, shall not exceed 50 mg/kg; EPA method approved by the division, shall not exceed 2500 by EPA SW-846 method 8015M, shall not exceed 500 mg/kg; and eed 500 mg/kg. ed? \mathbf{X} Yes \mathbf{x} No (Please provide photos). performance standards if left in place in accordance with $\mathbf{z}_{\mathbf{x}}$ is $\mathbf{z}_{\mathbf{x}}$. with division permission, recycles them, re-vegetate the cell filled tion A of 19.15.36.18 NMAC; suildings, fences, roads and equipment; and ne soil sample from three to five feet below the middle of the d due to rainfall events; the vadose zone soil sample shall be TPH, BTEX and chlorides. ted to the closure performance standards within three years and the cell filled in with native soil to the standards in Paragraph Yes \mathbf{x} No (Please provide photos)
CERTIFICATION I hereby certify that the information submitted with this final closur	e report is true, accurate and complete to the best of my knowledg
Name: Jan Kober J	Title: 1000 Engineer
Signature: tam Rebuts	Date: <u>6/19/12</u>
E-mail Address: Shoberts @ gurde. Com	
OCD CLOSURE REVIEW: Closure Approved. Date:	Closure Denied. Date:
Comments:	
OCD Representative Signature:	
Title:	OCD Registration Number:

			•	<u>}</u>	
District J 4625 N. French Dr., Hob District II 1301 W. Grand Avenue,	NM 88240 - VEDEn	State of New M ergy Minerals and Nati	exico iral Resources	Deckee =	#5
District III 1000 Rio Brazos Road District IV 1220 S. St. Francis Dr., S	109° 1111 87212 РМ 12 04 Santu Fe, NM 87505	Oil Conservation I 1220 South St. Fra Santa Fe, NM 8	Division ncis Dr. 7505	For Revised Submit 1 Copy to Sa	m C-137 EZ Augusi 3, 2009 inta Fe Office
RE Section 7 of 19.15.36 N less in a single lift o petroleum hydrocarbo GENERAL INFORM	GISTRATION/ FINAL (NMAC defines a small landfarm as of eight inches or less, remains activ in-contaminated soils (excluding dri active small la MATION	CLOSURE REPOR a centralized landfarm of tw e for a maximum of three y ill cuttings) that are exempt ndfarm per governmental se	T FOR SMAI o acres of less that ears from the date c or non-hazardous w ction at any time.	L LANDFARM has a total capacity of 2000 of f its registration and that rec aste. The operator shall oper ES Rimete 10	cubic vards or cives only rate only one 00 / 25
1. 🔀 Sma	II Landfarm Registration	Small Lan (*Must be submitted wi	dfarm Final Closi thin three years fre	ire Report* m the registration date)	- 70/74/0
2. Operator: GREE	IT WESTERN DRILLIN	G COMPANY	·····	· · · · · · · · · · · · · · · · · · ·	
Address: 700	W. LOUSIANA ST., M	LIDLAND, TK 79	701		
Contact Person: _	SAM ROBERTS		Phone: (432)	682 - 524/	
3. Location: SE	/4/4 Section	n <u>7</u> Towns	hip <u>32 A</u>	Range 11 W	-
REGISTRATION	,	***************************************	******		
 2. will the proposed s X Yes No A. Depth to ground No small he operator within 200 within 200 within an e within, or v within the a 	small landfarm comply with the d water. andfarm shall be located where gr ill place oil field waste. te management facility shall be lo feet of a watercourse, lakebed, si xisting wellhead protection area o within 500 feet of, a wetland; area overlying a subsurface mine:	siting requirements of Si round water is less than 50 peated: nkhole or playa lake; or 100-year floodplain;	ibsections A and	s of 19.15.36.13 NMAC?	· · · · ·
 within 500 initial appli within an un surface was compromise 	feet from the nearest permanent r cation; or nstable area, unless the operator c the management facility design to ed.	esidence, school, hospital, demonstrates that engineer ensure that the surface wa	institution or chur ng méasures have ste management fa	ch in existence at the time been incorporated into the cility's integrity will not be	of e
Attach a plat and top ection, township and ran cells and springs; oil and	oographic map showing the sma nge); highways or roads giving d gas wells or other production	II landfarm's location in access to the small landfa facilities; and inhabited b	relation to govern irm site; watercou uildings within or	mental surveys (quarter-c rses; fresh water sources, we mile of the site's perim	juarter including æter.
ased on the information ith the following under	i provided with this submittal, r standings and conditions:	egistration of a small lan	lfarm can only be	granted if the operator co	omplies
 The operator be located more than The operator result of accidental recontain free liquids, w The operator The operator The operator 	r shall operate only one active sm one mile from the operator's near r shall accept only exempt or non leases from production operation yould pass the paint filter test and r shall berm the landfarm to preve r shall post a sign at the site reade	hall landfarm per governm rest oil or gas well or other hazardous wastes consist s, that are predominantly of where testing shows chilo ent rainwater run-on and ru tobe from a distance of 50	ental section at any production facilit ing of soils (exclud ontaminated by pe- ide concentrations m-off. Feet and listing the	time. No small landfarm / ing drill cuttings) generate troleum hydrocarbons, do are 500 mg/kg or below, operator's name; small lan	shall d as a not dfarm
• The operator operator shall conduct 8015M or EPA metho	shall spread and disk contamina t treatment zone monitoring to en d 418.1 or other EPA method ap	ted soils in a single eight i sure that the TPH concent proved by the division, do	ni une; and an em - nch or less lift with ration, as determin es not exceed 2500	in 72 hours of receipt. The ed by EPA SW-846 methor mg/kg; and that the chlori	e d de

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concentration, as determined by EPA method 300.1, does not exceed 500 mg/kg. The operator shall treat soils by disking at least once a month and by watering and adding bioremediation enhancing materials when needed.

The operator shall maintain records reflecting the generator, the location of origin, the volume and type of oil field waster the date of acceptance and the hauling company for each load of oil field waste received. The division shall post on its website each small landfarm's location, operator and registration date. In addition, the operator shall maintain records of the small landfarm's remediation activities in a form readily accessible for division inspection. The operator shall maintain all records for five years

• The operator shall submit a final closure report on a form C-137 EZ, together with photographs of the closed site, to the following the small landfarm's closure environmental bureau in the division's Santa Fe office.

I hereby certify that the information submitted with this registration is true, accurate and complete to the best of my knowledge and belief and agree to the understandings and conditions of this registration. Acen Englace

Name Sam Roserts	Title:
the Puts	Date:
Signature:	
E-mail Address: <u>Srober YS@gwdc.com</u>	
OCD REGISTRATION: Approved Date: 11/19/09	_ Denied. Date:
Comments:	
OCD Representative Signature	5
Title: Enminelal Engineer	OCD Registration Million
	· · · · · · · · · · · · · · · · · · ·

Were the landfarmed soils able to achieve the closure performance standards, listed below, within three years from the registration date? Yes No (Please provide laboratory analytical results)

benzene, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 0.2 mg/kg;

Total BTEX, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 50 mg/kg;

TPH, as determined by EPA SW-846 method 418.1 or other EPA method approved by the division, shall not exceed 2500 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, shall not exceed 500 mg/kg; and chlorides, as determined by EPA method 300.1, shall not exceed 500 mg/kg.

If yes, were the additional closure requirements listed below satisfied? 🗌 Yes 🔲 No. (Please provide photos) The operator shall re-vegetate soils remediated to the closure performance standards if left in place in accordance with

- If the operator returns remediated soils to the original site, or with division permission, recycles them, re-vegetate the cell filled
- in with native soil to the standards in Paragraph (6) of Subsection A of 19:15-36.18 NMAC;
- The operator shall remove berms on the small landfarm and buildings, fences, roads and equipment; and
- The operator shall clean up the site and collect one vadose zone soil sample from three to five feet below the middle of the treatment zone, or in an area where liquids may have collected due to rainfall events; the vadose zone soil sample shall be

collected and analyzed using the methods specified above for TPH, BTEX and chlorides. If no, were the landfarmed soils that have not or cannot be remediated to the closure performance standards within three years removed to a division-approved surface waste management facility, and the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC and ire-vegetated? Yes . No (Please provide photos)

Thereby certify that the information submitted with this final closure report is true, accurate and complete to the best of my knowledge and belief.

		Ť	ile:
Name:		 (i)	ate
Signature:			
E-mail Address:			
OCD CLOSURE REVIEW: Closure A	pproved. Date :		
Comments:			
OCD Representative Signature:		0	CD Registration Numbe





ENGINEERING & PRODUCTION CORP. 2009 NOV 16 PM 1 56

Percelara Engineening Cansuling Leave Managemens Constact Parimity 7416 East Mon Farmnigton; New Mexico 8740; (505) 327-4892+ Fax, (505) 327-963a

November 12, 2009

Mr. Brad Jones NMOCD 1220 South St. Francis Dr. Santa Fe, NM 87505

Re: Great Western Drilling Small Landfarm Application

Dear Mr. Jones,

Please replace/add the attached pages to the previously submitted Small Landfarm application for Great Western Drilling on the Decker #5 location. I believe I have made all of your suggested changes, but if not, please call me at (505) 327-4892.

Sincerely,

Paul C. Tho

Paul C. Thompson, P.E.





ENGINEERING & PRODUCTION CORP.

Petroleum, Engineering, Consulting Loaso Managenting Contract Primeing 7415 East Mill Farmington, New Mexico 87402 (505) 127-4092 - Fast (505) 327-9831

November 12, 2009

Registration for a Small Landfarm Great Western Drilling Company SE/4 Section 7, T32N, R11W San Juan County, NM

Surface Owner Approval

An agreement with the surface owner authorizing approval of the site for a landfarm is attached.

Depth to Ground Water

According to the NM State Engineer's iWaters Database (please see attached listing), the closest fresh water well is one mile southwest of the proposed landfarm in NE Section 19, T32N, R11W. Depth the groundwater in this well is 155'. This location is at a similar elevation and with similar topography as the proposed landfarm site.

Siting Requirements

As can be seen on the attached topo map and aerial photograph, there are no watercourses, lakes, sinkholes, or playa lakes within 200 feet of the proposed landfarm nor is it within 500' of a wetland. There are no permanent residences, schools, hospitals, churches, or other institutional building within 500' of the proposed landfarm. The land farm will not be in a "wellhead protection area".

According to the attached FEMA Flood Map the proposed location is not in the 100 year floodplain.

The attached EMNRD Mining and Mineral Division mining map, indicates that there are no mines in the vicinity of the proposed landfarm.

The area of the proposed landfarm is relatively flat and is not in an unstable area.



Landfarm Operations

This will be Great Western Drilling Company's only landfarm. The landfarm will be bermed to prevent rain water run-on and run-off.

Only non-hazardous wastes (soil contaminated with hydrocarbons) will be accepted and the facility. No drill cuttings will be allowed at this site. The contaminated soil will not contain free liquids and will pass the paint filter test. Chlorides concentrations will be 500 mg/kg or below.

A sign will be posted at the facility indicating the landfarm's location, expiration date, and emergency contact numbers.

The contaminated soils will be spread to a thickness not to exceed 8 inches and will be disked once a month and will treat by watering and adding bioremediation materials as necessary.

Great Western Drilling will maintain records showing the origin, date, and hauling company for each load of contaminated soil delivered to the landfarm. The remediation activities will also be recorded and be available for NMOCD inspection. A Closure Report on Form C-137 EZ, along with photographs of the closed site will be submitted to the environmental bureau in the OCD's Santa Fe office.

Taul C. Thomas

Paul C. Thompson, P.E. Agent for Great Western Drilling Company







FROM COREAT DESTERN DRILLING FARM FRAME CO. 1300 227 14.45

305 333 0800

New, 10 SPER 100 MEAN F2

p.Z

Kenzo Decker 141 CR, 2300 Azrec, N.M. 87410

Mr. Decker,

Great Western Drilling Co. is requesting permission to have a Landfarm/Biopile on your last. The location of the farm is Unit P. Section 7, Township 32 N, Range 11 W. The location mentilis J.E. Decker #5. The farm will be maintained as outlined by the Oil Conservation Division, 1000 Rio Brazos Road, Aztec, N.M.

I <u>NEW MARY</u> <u>Dec Kes</u> give Great Western Drilling Co. permission to go abrae with the aboye stated Landfarm/Biopile.

Signature

7/04 Dine

NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT • • • .

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firm C 102 Supersydes C-128 Effective 14-65

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Great Western Dril	ling Company	<u> </u>	County	
Init Letter Section	Township	Linite Li		
P	<u>32N</u>	<u> 11k</u>	<u> San Jus</u>	<u></u>
ctual Footage Location of Well	li-			The second s
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Yes No	li answer is yes,	type of consolice		
If answer is "no;" I this form if necessar No allowable will be forced-pooling, or oth	ist the owners and tre ry.) assigned to the well terwise) or until a non-	until all interests l standard unit, elim	nave been consolidated inating such interests,	by communitization, unitization has been approved by the Commis
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			7/ <i>5</i> 0-2 7/258	Position Company Date I hereby certify that the well location shown on this plat was plotted from fiel notes of actual surveys made by me under my supervision, and that the sam is true and correct to the best of m knowledge and belief.
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SCALE: 1"=1000'	5087.28		77. <u>50</u> . 7.1258	Position Company Date I hereby certify that the well location shown on this plat was plotted from fiel notes of actual surveys made by me under my supervision, and that the sam is true and correct to the best of m knowledge and belief. Date Surveyed March 11, 1978 Registered Professional Engineer
SCALE: 1"=1000'	5087.28		7/ <i>5</i> 0-2 7/2588	Position Company Date I hereby certify that the well location shown on this plat was plotted from fiel mates of actual surveys made by me under my supervision, and that the sam is true and correct to the best of m knowledge and belief. Date Surveyed March 11, 1978 Registered Professional Engineer in Land Surveyed ()
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New Mexico Office of the State Engineer Water Column/Average Depth to Water

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	Sub			Q	Q	Q	. ·			,	•		· ·	Depth	Depth	Water
POD Number	basin Us	e Count	у	64	16	4	Se	c Tw	s Rng	1	х	X Y	Distance	Well	WaterC	olumn
SJ 01360	ST	K SJ			2	2	19	a [/] 32⊧	V 11W	ł	230954	4096508*	2154	180	(155)	- 25
SJ 03865 CLOSEST	Ner ST	k sj		2	3	4	20) / 32N	11W		232217	4095306	3608	200		
SJ 00055	INC) SJ				2	25	.32N	l 12Ŵ		229105	4094796	4257	504		
SJ 03583	DO	N SJ		1.	1	1	23	32N	12W		226477	4096872	4761	167	60	107
SJ 00020	NO	t sj				3	29	32N	11W		231467	409387 7 *	4819	588		
SJ 00021	NO	r sj				3	23	32N	11W		236177	4095304*	6263	585		,
SJ 00026	IND	SJ				2	33	32N	1 1W		233717	4092955*	6368	321		
SJ 02163	DON	1 SJ ·	4	1 4	1 .	4	21	30N	12W		224688	4096488	6571	31	15	16
SJ 01327	STK	SJ	3		2	2	23	32N	11W		237092	4096187*	6677	90	50	40
SJ 01106	NOD	I SJ		4		3	35	32N	12W		226851	4092240*	7586	180	115	65
SJ 00017	IND	SJ			2	2 2	24	32N	11W		238546	4096052*	8088	105	•	
SJ 03738 POD1	DOM	SJ	3	1	2	ŧ (01	31N	12W		228612	4090866*	8121	115	50	65
SJ 03022	DOM	SJ	2	3	4	r C)1	31N	12W		228764	4090661*	8278	490	250.	240
SJ 03134	DOM	SJ	-2	3	4	0)1	31N	12W		228764	4090661*	8278	80	20	60
SJ 02099	DOM	SJ		4	4	0	11	31N	12W		229006	4090568*	8310	95		
SJ 02034	DOM	SJ	• .	3	4	0)1	31N	12W		228665	4090562*	8399	· 85	55	30 -
SJ 03488	DOM	SJ	2	3	3	0	1	31N	12W		228084	4090678*	8462	150		
SJ 01649	DOM	SJ	4	· 3	4	0	1	31N	12W -	. 2	228764	4090461"	8471	220	161	59
SJ 03660	DOM	SJ	4	3	4	0	1	31N	12W	2	228764	4090461 •	8471	7.0	. 42	28
SJ 01660	DOM	SJ	3	3	4	0	1	31N	12W	2	228564	4090461	8524	320	275	45
SJ 01213	MON	SJ	4	3	2	18	8	32N	12W	2	221160	4098002*	9751	640	20	620
SJ 01212	MON	SJ	3.	1	4	18	8	32N	12W	2	20946	4097615*	9996	43	5.	38
SJ 03429	DOM	SJ	3	1	3	20	Ċ)	32N .	10W	.2	40675	4095316*	10341	103	54	49
SJ 01356	DOM	SJ		3	3	31	1	32N	10W	2	39013	4091829*	10614	65	50	15
SJ 03858 POD1	STK	SJ	3	2	4	18	34 :	31N	11W	2	30326	4087706	10969	295	85)	210
SJ 03857 POD1	STK	SJ :	3	2	1	14		31N ·	11W	2	36033	4088283	11582	220	60	160
SJ 01977	DOM	SJ		3	2	06	; ;	31N -	10W	2	39768 4	4091024*	11711	93	33	60
SJ 01958	DOM	SJ			2	06	5 3	31N 1	IOW	2	39969 4	4091225*	11736	103	83	20
SJ 03308	DOM	SJ 3	3	4	2	06		31N 1	IOW	24	40078 4	4090920*	12015	100	60	40
UTM location was derived from I	LSS - soo Hi	elp									·····					

9/15/09 10:32 AM

Page 1 of 25

WATER COLUMN/ AVERAGE DEPTH TO WATER



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MMQonline Public Version



http://www.emnrd.state.nm/us/MMD/MMQonline/MMQonline-PUBLIC-PROD.mwf

Monday, September 21, 2009 4:45 PM



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ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting Lease Management Contract Pumping 7415 East Main Farmington, New Mexico 87402 (505) 327-4892 • Fax: (505) 327-9834

September 22, 2009

Registration for a Small Landfarm Great Western Drilling Company SE/4 Section 7, T32N, R11W San Juan County, NM

Surface Owner Approval

An agreement with the surface owner authorizing approval of the site for a landfarm is attached.

Depth to Ground Water

According to the NM State Engineer's iWaters Database (please see attached listing), the closest fresh water well is one mile southwest of the proposed landfarm in NE Section 19, T32N, R11W. Depth the groundwater in this well is 155'. This location is at a similar elevation and with similar topography as the proposed landfarm site.

Siting Requirements

As can be seen on the attached topo map and aerial photograph, there are no watercourses, lakes, sinkholes, or playa lakes within 200 feet of the proposed landfarm nor is it within 500' of a wetland. There are no permanent residences, schools, hospitals, churches, or other institutional building within 500' of the proposed landfarm.

According to the attached FEMA Flood Map the proposed location is not in the 100 year floodplain.

The attached EMNRD Mining and Mineral Division mining map, indicates that there are no mines in the vicinity of the proposed landfarm.

The area of the proposed landfarm is relatively flat and is not in an unstable area.



Landfarm Operations

This will be Great Western Drilling Company's only landfarm. The landfarm will be bermed to prevent rain water run-on and run-off.

Only non-hazardous wastes (soil contaminated with hydrocarbons) will be accepted and the facility. The contaminated soil will not contain free liquids and will pass the paint filter test. Chlorides concentrations will be 500 mg/kg or below.

A sign will be posted at the facility indicating the landfarm's location, expiration date, and emergency contact numbers.

The contaminated soils will be spread to a thickness not to exceed 8 inches and will be disked once a month and will treat by watering and adding bioremediation materials as necessary.

Great Western Drilling will maintain records showing the origin, date, and hauling company for each load of contaminated soil delivered to the landfarm. The remediation activities will also be recorded and be available for NMOCD inspection. A Closure Report on Form C-137 EZ, along with photographs of the closed site will be submitted to the environmental bureau in the OCD's Santa Fe office.

Paul C. Thompson, P.E.

Paul C. Thompson, P.E. Agent for Great Western Drilling Company

Sep 21 09 03:06p

Pam and Kennon Decker

505 334 8866

FROM : GREAT WESTERN DRILLING FARM

FAX NO. 1500 237 Date:

Kenzo Decker 143 CR. 2300 Aztec, N.M. 87410

Mr. Decker,

Great Western Drilling Co. is requesting permission to have a Landfarm/Biopile on your laac. The location of the farm is Unit P, Section 7, Township 32 N, Range 11 W. The location mome is J.E. Decker #5. The farm will be maintained as outlined by the Oil Conservation Division, 1000 Rio Brazos Road, Aztec, N.M.

I <u>KCNNON</u> <u>DecKes</u> give Great Western Drilling Co. permission to go ahead with the aboye stated Landfarm/Biopile.

Signature

NG Date

NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

1

Form C-102 Supersedes C-128 Effective 1-1-65 \

		All distance	s must be from	m the outer boundaries of	f the Section.		
Operator			L	9280			Well No.
Great Weste	ern Drilling	Company		Decker P.C.			5
Unit Letter	Section	Township		Range	County		
P	7	32N		<u> 11W</u>	San Ju	lan	
Actual Footage Loc	ation of Well:						
Ground Level Flew:	feet from the	South	line and	150 fee	t from the	East	line
667.2	Producing FC		P	201			
0013	<u> </u>	a cliffs					Actor
I. Outline th	e acreage dedic	ated to the su	bject well	by colored pencil	or hachure	marks on t	he plat below.
2. If more th interest an	aan one lease is 1d royalty).	s dedicated to	the well,	outline each and id	entify the c	ownership t	hereof (both as to working
3. If more the dated by c	ommunitization,	different owner unitization, fo	rship is de rce-pooling	dicated to the well, s. etc?	have the i	nterests of	t all owners been consoli-
Yes		answer is "yes	" type of	consolidation			
If answer this form i	is "no," list the Enecessary.)	owners and tr	act descrip	otions which have a	ctually bee	en consolid	ated. (Use reverse side of
No allowat forced-pool sion.	le will be assig ling, or otherwise	ned to the well e) or until a non	until all in -standard 1	nterests have been unit, eliminating su	consolidate ch interest	ed (by com s, has been	munitization, unitization, a approved by the Commis-
	<u> </u>			······································	· · · · · · · · · · · · · · · · · · ·		CERTIFICATION
5401	e Lino	50 9 7 /P	. Co			l hereby tained he best of m	certify that the information con- rein is true and complete to the y knowledge and belief.
		500 0	N N	7ex.			
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9				1	12		
1	• .					hereby	certify that the well location
	1			12		shown on	this plat was plotted from tield
	1					under my	supervision, and that the same
	·					is true o	and correct to the best of my
	1					knowledge	e and belief.
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• •							
						Date Survey	red. A. L. A. M. A. P. M. L.
SCALE: 1"=10	000					March	11, 1978
						Registered:	Protestional Engineer () i Sinveyof () Karre June ()
						Certificate	Not



New Mexico Office of the State Engineer Water Column/Average Depth to Water

		(qı (qı	uarte uarte	ers a ers a	ire f	I=NW smalle	/ 2≕Ni est to ∣	E 3=SV largest)	V 4=SE)) (NAD8:	3 UTM in m	eters)	()	n feet)	
	Sub		Ç	Q	Q	4	• • ••* •					Depth [Depth W	ater
POD Number	basin Us	e Count	у б	416	4	Sec	Tws	Rng	X	Y	Distance	Well \	VaterCo	lumn
SJ 01360	ST	K SJ		2	2	19 -	32N	11W	230954	4096508*	2154	180	155	25
SJ 03865 CLOSEST W	er st	K SJ	2	3	4	201	32N	11W	232217	4095306	3608	200		
SJ 00055	IN	o sj			2	25	32N	12W	229105	4094796*	4257	[•] 504		
SJ 03583	DO	M SJ	1	1	1	23	32N	12W	226477	4096872*	4761	167	60	107
SJ 00020	NC	T SJ			3	29	32N	11W	231467	4093877*	4819	588		
SJ 00021	NC	T SJ			3	23	32N	11W	236177	4095304*	6263	585		
SJ 00026	IN	J SJ			2	33	32N	11W	233717	4092955*	6368	321		
SJ 02163	DO	M SJ	4	4	4	21	30N	12W	224688	4096488	6571	31	15	16
SJ 01327	ST	K SJ	3	2	2	23	32N	11W	237092	4096187*	6677	90	50	40
SJ 01106	DO	M SJ		4	3	35	32N	12W	226851	4092240*	7586	180	115	65
SJ 00017	IN	D SJ			2	24	32N	11W	238546	4096052*	8088	105		
SJ 03738 POD1	DO	M SJ	3	1	4	01	31N	12W	228612	4090866*	8121	115	50	65
SJ 03022	DO	M SJ	2	3	4	01	31N	12W	228764	4090661*	8278	490	250	240
SJ 03134	DO	M SJ	2	3	4	01.	31N	12W	228764	4090661*	8278	80	20	60
SJ 02099	DO	M SJ		4	4	01	31N	12W	229006	4090568*	8310	95		
SJ 02034	DO	M SJ		3	4	01	31N	12W	228665	4090562*	8399	85	55	30
SJ 03488	DO	M SJ	2	3	3	01	31N	12W	228084	4090678*	8462	150		
SJ 01649	DO	M SJ	4	3	4	01	31N	12W	228764	4090461*	8471	220	161	59
SJ 03660	DO	M SJ	4	3	4	01	31N	12W	228764	4090461*	8471	70	42	28
SJ 01660	DO	M SJ	3	3	4	01	31N	12W ·	228564	4090461*	8524	320	275	45
SJ 01213	MC	N SJ	4	3	2	18	32N	12W	221160	4098002*	9751	640	20	620
SJ 01212	MC	N SJ	3	1	4	18	32N	12W	220948	4097615*	9996	43	5	38
SJ 03429	DO	M SJ	3	1	3	20	32N	10W	240675	4095316*	10341	103	54	49
SJ 01356	DO	M SJ		3	3	31	32N	10W	239013	4091829*	10614	65	50	15
SJ 03858 POD1	ST	K SJ	3	2	4	18₹	31N	11W	230326	4087706	10969	295	85)	. 210
SJ 03857 POD1	ST	K SJ	3	2	1	14	31N	11W	236033	4088283	11582	220	60	160
SJ 01977	DO	M SJ		3	2	06	31N	10W	239768	4091024*	11711	93	33	60
SJ 01958	DO	M SJ			2	06	31N	10W	239969	4091225*	11736	103	83	20
SJ 03308	DO	M SJ	3	34	2	06	31N	10W	240078	4090920*	12015	100	60	40
*UTM location was derived from	n PLSS - se	e Help												

SAN JUNN GEWARY SE SECTION 7, TERN, RILU J.E. DECKER #5 LOCATION





Monday, September 21, 2009 4:45 PN











JUN 1 5 2011

June 10, 2011

Project No. 99010-0011

Mr. Richard Choate Great Western Drilling 7415 E. Main St Farmington, New Mexico 87401

Phone: (575) 396-5538

SAMPLING OF THE LANDFARM LOCATED AT THE JE DECKER #5 WELL SITE, SAN JUAN RE: **COUNTY, NEW MEXICO** for #3-B remediation

Dear Mr. Choate,

Enclosed please find the analytical results for the sampling activities at the JE Decker #5 well site, located in Section 17, Township 32N, Range 11W, San Juan County, New Mexico. The landfarm was divided into five (5) sections, and one (1) five (5) point composite sample was collected from each section at approximately one (1) to 1.5 feet below ground surface. Additionally, one (1) soil sample was collected from the vadose zone at five (5) feet below ground surface in Section 5, due to Section 5 being the lowest elevation at the land farm as determined in the New Mexico Oil Conservation Division (NMOCD) Final Closure Report Sampling Requirements. Each sample was collected into a four (4)-ounce glass jar, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory to be analyzed for total petroleum hydrocarbons (TPH) using USEPA Method 8015 and USEPA Method 418.1, for benzene and BTEX using USEPA Method 8021 and for chlorides using USEPA Method 4500B. All samples returned results below the regulatory standards of 500 ppm TPH using USEPA Method 8015, 2500 TPH using USEPA Method 418.1, 0.2 ppm benzene and 50 ppm BTEX, and 500 ppm total chlorides; see enclosed Analytical Results. Envirotech, Inc. recommends the landfarm be closed and site returned to native conditions.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted, **ENVIROTECH, INC.**

1 WAMAAA · FOV:

Toni McKnight, EIT **Environmental Project Manager** tmcknight@envirotech-inc.com

Enclosures: Analytical Results

Cc: Client File No. 99010



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Great Western Drilling	Project #:	99010-0011
Sample ID:	Block 1	Date Reported:	05-02-11
Laboratory Number:	57993	Sampled:	04-28-11
Chain of Custody No:	11618	Date Received:	04-28-11
Sample Matrix:	Soil	Date Extracted:	04-29-11
Preservative:	Cool	Date Analyzed:	04-29-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	61.2	0.2
Diesel Range (C10 - C28)	70.9	0.1
Total Petroleum Hydrocarbons	132	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments:

J E Decker #5

Analyst

Review



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Great Western Drilling	Project #:	99010-0011
Sample ID:	Block 2	Date Reported:	05-02-11
Laboratory Number:	57994	Sampled:	04-28-11
Chain of Custody No:	11618	Date Received:	04-28-11
Sample Matrix:	Soil	Date Extracted:	04-29-11
Preservative:	Cool	Date Analyzed:	04-29-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	0.1	0.1
Total Petroleum Hydrocarbons	0.1	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments:

J E Decker #5

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Analyst

Review



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Great Western Drilling	Project #:	99010-0011
Sample ID:	Block 3	Date Reported:	05-02-11
Laboratory Number:	57995	Sampled:	04-28-11
Chain of Custody No:	11618	Date Received:	04-28-11
Sample Matrix:	Soil	Date Extracted:	04-29-11
Preservative:	Cool	Date Analyzed:	04-29-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hvdrocarbons	ND	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments:

J E Decker #5

Analyst

Review


EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Great Western Drilling	Project #:	99010-0011
Sample ID:	Block 4	Date Reported:	05-02-11
Laboratory Number:	57996	Sampled:	04-28-11
Chain of Custody No:	11618	Date Received:	04-28-11
Sample Matrix:	Soil	Date Extracted:	04-29-11
Preservative:	Cool	Date Analyzed:	04-29-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hvdrocarbons	ND	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments:

J E Decker #5

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Analyst



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Great Western Drilling	Project #:	99010-0011
Sample ID:	Block 5	Date Reported:	05-02-11
Laboratory Number:	57997	Sampled:	04-28-11
Chain of Custody No:	11618	Date Received:	04-28-11
Sample Matrix:	Soil	Date Extracted:	04-29-11
Preservative:	Cool	Date Analyzed:	04-29-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments:

J E Decker #5

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Analyst

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EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Great Western Drilling	Project #:	99010-0011
Sample ID:	Block 5 @ 5'	Date Reported:	05-02-11
Laboratory Number:	57998	Sampled:	04-28-11
Chain of Custody No:	11618	Date Received:	04-28-11
Sample Matrix:	Soil	Date Extracted:	04-29-11
Preservative:	Cool	Date Analyzed:	04-29-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments:

J E Decker #5

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Analyst

Review



EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC		Project #:		N/A
Sample ID:	04-29-11	QA/QC	Date Reported:		05-02-11
Laboratory Number:	57990		Date Sampled:		N/A
Sample Matrix:	Methylene	Chloride	Date Received:		N/A
Preservative:	N/A		Date Analyzed:		04-29-11
Condition:	N/A		Analysis Requested:		ТРН
	I-Cal Date	I-Cal RF:	C-Cal RF: %	Difference	Accept Range
Gasoline Range C5 - C10	40662	9.996E+02	1.000E+03	0.04%	0 - 15%
Diesel Range C10 - C28	40662	9.996E+02	1.000E+03	0.04%	0 - 15%
Blank Conc. (mg/L - mg/Kg)	Concentration	Det	ection Limit	
Gasoline Range C5 - C10		2.36	0.2	2	
Diesel Range C10 - C28		1.50	0.1	1	
Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Range	
Gasoline Range C5 - C10	ND	ND	0.00%	0 - 30%	
Diesel Range C10 - C28	ND	ND	0.00%	0 - 30%	
Spike Conc. (mg/Kg)	Sample.	Spike Added	Spike Result	Recovery	Accept: Range
Gasoline Range C5 - C10	ND	250	249	99.5%	75 - 125%
Diesel Range C10 - C28	ND	250	231	92.4%	75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, December 1996.

Comments:

QA/QC for Samples 57989-57991, 57993-57800

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Client:	Great Western Drilling	Project #:	9901	0-0011
Sample ID:	Block1	Date Reported:	05-02	2-11
Laboratory Number:	57993	Date Sampled:	04-28	3-11
Chain of Custody:	11618	Date Received:	04-28	8-11
Sample Matrix:	Soil	Date Analyzed:	05-02	2-11
Preservative:	Cool	Date Extracted:	04-29	9-11
Condition:	Intact	Analysis Requested:	ΒΤΕΧ	(
		Dilution:	10	
			Det.	
	Conce	entration	Limit	
Parameter	(ug/	Kg)	(ug/Kg)	
Benzene		ND	0.9	
Toluene		ND	1.0	
Ethylbenzene		ND	1.0	
p,m-Xylene		ND	1.2	
o-Xylene		ND	0.9	
Total BTEX		ND		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	84.4 %
	1,4-difluorobenzene	99.3 %
	Bromochlorobenzene	86.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: J E Decker #5

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Analyst



Client:	Great Western Drilling	Project #:	99010-001	1
Sample ID:	Block2	Date Reported:	05-02-11	
Laboratory Number:	57994	Date Sampled:	04-28-11	
Chain of Custody:	11618	Date Received:	04-28-11	
Sample Matrix:	Soil	Date Analyzed:	05-02-11	
Preservative:	Cool	Date Extracted:	04-29-11	
Condition:	Intact	Analysis Requested:	BTEX	
		Dilution:	10	
			Det.	
	Con	centration	Limit	
Parameter	(u	g/Kg)	(ug/Kg)	
Benzene		ND	0.9	
Toluene		ND	1.0	
Ethylbenzene		ND	1.0	
p,m-Xylene		ND	1.2	
o-Xylene		ND	0.9	
Total BTEX		ND		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	80.8 %
	1,4-difluorobenzene	80.5 %
	Bromochlorobenzene	86.3 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: J E Decker #5

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Analyst



Client:	Great Western Drilling	Project #:	ç	99010-0011	
Sample ID:	Block3	Date Reported:	(05-02-11	
Laboratory Number:	57995	Date Sampled:	(04-28-11	
Chain of Custody:	11618	Date Received:	(04-28-11	
Sample Matrix:	Soil	Date Analyzed:	(05-02-11	
Preservative:	Cool	Date Extracted:	(04-29-11	
Condition:	Intact	Analysis Requested:	E	BTEX	
		Dilution:		10	
Parameter	Conce (ug/l	entration Kg)	Det. Limit (ug/Kg)		
Benzene Toluene		ND ND	0.9 1.0		
Ethylbenzene		ND	1.0		
p,m-Xylene		ND	1.2		
o-Xylene		ND	0.9		
Total BTEX		ND			

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	86.3 %
	1,4-difluorobenzene	86.0 %
	Bromochlorobenzene	83.1 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: J E Decker #5

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Analyst



Great Western Drilling	Project #:		99010-0011	
Block 4	Date Reported:		05-02-11	
57996	Date Sampled:		04-28-11	
11618	Date Received:		04-28-11	
Soil	Date Analyzed:		05-02-11	
Cool	Date Extracted:		04-29-11	
Intact	Analysis Requeste	ed:	BTEX	
	Dilution:		10	
		Det.		
Conce	ntration	Limit		
(ug/l	Kg)	(ug/Kg)		
	ND	0.9		
	ND	1.0		
	ND	1.0		
	ND	1.2		
	ND	0.9		
	ND			
	Great Western Drilling Block 4 57996 11618 Soil Cool Intact Conce (ug/l	Great Western Drilling Project #: Block 4 Date Reported: 57996 Date Sampled: 11618 Date Received: Soil Date Analyzed: Cool Date Extracted: Intact Analysis Requester Dilution: Concentration (ug/Kg) ND ND ND ND ND	Great Western Drilling Project #: Block 4 Date Reported: 57996 Date Sampled: 11618 Date Received: Soil Date Analyzed: Cool Date Extracted: Intact Analysis Requested: Dilution: Det. Concentration Limit (ug/Kg) (ug/Kg) ND 0.9 ND 1.0 ND 1.0 ND 1.2 ND 0.9 ND 1.2 ND 0.9	Great Western Drilling Project #: 99010-0011 Block 4 Date Reported: 05-02-11 57996 Date Sampled: 04-28-11 11618 Date Received: 04-28-11 Soil Date Analyzed: 05-02-11 Cool Date Analyzed: 05-02-11 Cool Date Extracted: 04-29-11 Intact Analysis Requested: BTEX Dilution: 10 10 Det. Concentration (ug/Kg) O.9 ND 1.0 ND ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.2 ND 0.9 ND 0.9

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	82.5 %
	1,4-difluorobenzene	85.8 %
	Bromochlorobenzene	94.5 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: J E Decker #5

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Analyst

Review



Client: Sample ID: Laboratory Number: Sample Matrix: Preservative: Condition:	N/A 0502BBLK QA/QC 58022 Soil N/A N/A		Project #: Date Reported: Date Sampled: Date Received: Date Analyzed: Analysis: Dilution:	۲ ۲ ۲ ۲ ۲	N/A 05-02-11 N/A N/A 05-02-11 3TEX 0
Calibration and	I-Cal RF:	C-Cal RF:	%Diff:	Blank	Detect:
Detection Limits (ug/L)	<u> The second s</u>	«-Ассериякая	ge 0 - 15%	CONC	(Eirnt
Benzene	1.1850E+005	1.1874E+005	0.2%	ND	0.1
Toluene	1.2941E+005	1.2967E+005	0.2%	ND	0.1
Ethylbenzene	1.1152E+005	1.1174E+005	0.2%	ND	0.1
p,m-Xylene	2.6075E+005	2.6128E+005	0.2%	ND	0.1
o-Xylene	1.0600E+005	1.0622E+005	0.2%	ND	0.1
Duplicate Conc: (ug/Kg) Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene	Sample ND ND ND ND ND ND	ND ND ND ND ND ND ND	0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	Accept Range 0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	0.9 1.0 1.0 1.2 0.9
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	500	523	105%	39 - 150
Toluene	ND	500	528	106%	46 - 148
Ethylbenzene	ND	500	524	105%	32 - 160
p,m-Xylene	ND	1000	1,040	104%	46 - 148
o-Xylene	ND	500	532	106%	46 - 148
ND - Parameter not detected at the sta Dilution: Spike and spiked sample con	ted detection limit.	lilution proportion	al to sample dilution		

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996. Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

QA/QC for Samples 58022, 57993-58000 Comments: 07 Analyst Review



EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Condition:	Intact	Analysis Needed:	TPH-418.1
Preservative:	Cool	Date Analyzed:	04/29/11
Sample Matrix:	Soil	Date Extracted:	04/29/11
Chain of Custody No:	11618	Date Received:	04/28/11
Laboratory Number:	57994	Date Sampled:	04/28/11
Sample ID:	Block 2	Date Reported:	05/02/11
Client:	Great Western Drilling	Project #:	99010-0011

Parameter	(mg/kg)	(mg/kg)
	Concentration	Limit
		Det.

Total Petroleum Hydrocarbons20.39.5

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: J E Decker #5

17 Analyst

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5796 US Highway 64, Farmington, NM 87401

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Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com



EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS QUALITY ASSURANCE REPORT

Client: Sample ID: Laboratory Number Sample Matrix: Preservative: Condition:	:	QA/QC QA/QC 04-29 -TPH.QA/ Freon-113 N/A N/A	/QC 57993	Project #: Date Reported: Date Sampled: Date Analyzed: Date Extracted: Analysis Needeo) ((((N/A 05/02/11 N/A 04/29/11 04/29/11 FPH
Calibration	ItCal Dates 04/15/11	C-Cal Date 04/29/11	1-Cal RF: 1,590	<u>,</u> C¹Cal\RF∷ % 1,490	Difference 6.3%	Accept. Range +/- 10%
Blank Conc. (m TPH	ng/Kg)		Concentration ND	D	etection Lim 9.5	iit
Duplicate Cond TPH	::- (mg/Kg)		Sample 24.2	Duplicate %	Difference 0.0%	Accept Range +/- 30%
Spike Conc. (m TPH	ng/Kg)	Sample 24.2	Spike Added 2,000	Spike Result % 1,910	Recovery. 94.4%	Accept Range 8

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments:

QA/QC for Samples 57993-58000

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Analyst

Review



Client:	Great Western Drilling	Project #:	99010-0011
Sample ID:	Block 1	Date Reported:	05/03/11
Lab ID#:	57993	Date Sampled:	04/28/11
Sample Matrix:	Soil	Date Received:	04/28/11
Preservative:	Cool	Date Analyzed:	05/03/11
Condition:	Intact	Chain of Custody:	11618

Parameter

Concentration (mg/Kg)

Total Chloride

20

Reference:

U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

J E Decker #5

1

Analyst

Review

Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com



Client:	Great Western Drilling	Project #:	99010-0011
Sample ID:	Block 2	Date Reported:	05/03/11
Lab ID#:	57994	Date Sampled:	04/28/11
Sample Matrix:	Soil	Date Received:	04/28/11
Preservative:	Cool	Date Analyzed:	05/03/11
Condition:	Intact	Chain of Custody:	11618

Parameter

Concentration (mg/Kg)

Total Chloride

20

Reference:

U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

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J E Decker #5

Analyst

Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com



Client:	Great Western Drilling	Project #:	99010-0011
Sample ID:	Block 3	Date Reported:	05/03/11
Lab ID#:	57995	Date Sampled:	04/28/11
Sample Matrix:	Soil	Date Received:	04/28/11
Preservative:	Cool	Date Analyzed:	05/03/11
Condition:	Intact	Chain of Custody:	11618

Parameter

Concentration (mg/Kg)

Total Chloride

50

Reference:

U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

J E Decker #5

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Analyst



Client:	Great Western Drilling	Project #:	99010-0011
Sample ID:	Block 4	Date Reported:	05/03/11
Lab ID#:	57996	Date Sampled:	04/28/11
Sample Matrix:	Soil	Date Received:	04/28/11
Preservative:	Cool	Date Analyzed:	05/03/11
Condition:	Intact	Chain of Custody:	11618

Parameter

Concentration (mg/Kg)

Total Chloride

30

Reference:

U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

J E Decker #5

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Analyst



Client:	Great Western Drilling	Project #:	99010-0011
Sample ID:	Block 5	Date Reported:	05/03/11
Lab ID#:	57997	Date Sampled:	04/28/11
Sample Matrix:	Soil	Date Received:	04/28/11
Preservative:	Cool	Date Analyzed:	05/03/11
Condition:	Intact	Chain of Custody:	11618

Parameter

Concentration (mg/Kg)

Total Chloride

50

Reference:

U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

J E Decker #5

17

Analyst

Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com

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	Great Western Drilling	Project #:	99010-0011
ID:	Block 5 @ 5'	Date Reported:	05/03/11
:	57998	Date Sampled:	04/28/11
Matrix:	Soil	Date Received:	04/28/11
ative:	Cool	Date Analyzed:	05/03/11
on:	Intact	Chain of Custody:	11618
on:	Intact	Chain of Custody:	11618

Parameter

Concentration (mg/Kg)

Total Chloride

10

Reference:

U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

J E Decker #5

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Analyst

CHAIN OF CUSTODY RECORD

			CH	AIN	OF	CU	51	ГО	D	YI	2E		0	RI	\mathbf{C}				118	518	•.	
Client: GREAT LUEST	ERN DTIT	AK	Project Name /	Location	R#	5								ANAL	YSIS	/ PAF	AME	TERS	,			
Client Address:	<u>cree</u>		Sampler Name:	nella.	ight	2			3015)	18021)	8260)	S				-	X	*				
Client Phone No.:		(Client No.: 99010	- 00	1(Vethod 8	(Methoc	Method	8 Metal	/ Anion		with H/F		418.1)	RIDE			e Cool	e Intact
Sample No./ Identification	Sample Date	Sample Time	Lab No.	S N	ample ⁄latrix	No./Volume of Containers	Pres HgCl ₂	ervative HCI 095	TPH (втех	VOC (I	RCRA	Cation	RCI	TCLP	PAH	TPH (CHLO			Sampl	Sampl
Block 1	4 28/11	15.15	57993	Solid	Sludge Aqueous	407	4				 							~			Ý	У
BLOCK 2	129/11	15.20	57994	Solid	Aqueous	1 407	ξα, ΄ 											V			1	
BLOCK 3	128/11	13:15	57995	Solid	Sludge Aqueous	1400			V													
BLOCKY	4/28/11	15:30	57996	Solid	Sludge Aqueous	1407		~														
BLOCKS	1/28/11	15:35	57997	Soil? Solid	Sludge Aqueous	1402											/	1				
BLOCK SES	128/11	15:40	57998	Seil ^P Solid	Sludge Aqueous	1/102		/		1											1	+
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous					<i></i>												
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
Relinquished by: (Signa	ature)		2		Date	Time	R	eceive	ed by:	(Sign	ature)	4			 1				4/	Date	Tir	ne VN
Relinquished by: (Signa	ature)	<u>~</u>			1-0111	17.00	R	eceive	ed by:	≴Sig na	ature)				<u> </u>					<u> </u>		00
Relinquished by: (Signa	ature)					· · ·	R	eceive	ed by:	(Signa	ature)				<u></u>	·						
Relinquished by: (Signa	ature)				3	env	aly	r C tica	ed by: 1 La	(Signa e (borc	ature))										

District I	State of New Mexico	
District II	ergy Minerals and Natural Resources	
1301 W. Grand Avenue, Artesia, NM-88240 / V L. D	Oil Concernation Division	
1000 Rio Brazos Roado Agree NW 87419 PM 12 04	1220 South St. Francis Dr	Form C-137 EZ
1220 S. St. Francis Dr., Santa Fe, NM 87505	1220 South St. Francis DI. Sonta Eo. NM 87505	Revised August 5, 2009
	Salita FC, INM 87505	Submit 1 Copy to Santa Fe Office
REGISTRATION/ FINAL C Section 7 of 19.15.36 NMAC defines a small landfarm as a less in a single lift of eight inches or less, remains activ petroleum hydrocarbon-contaminated soils (excluding dri active small lat	CLOSURE REPORT FOR SMAL a centralized landfarm of two acres or less that be for a maximum of three years from the date o ill cuttings) that are exempt or non-hazardous w andfarm per governmental section at any time.	LLANDFARM has a total capacity of 2000 cubic yards or f its registration and that receives only aste. The operator shall operate only one ESVINETE 1000 JUSS
GENERAL INFORMATION		sca joliolao
1. X Small Landfarm Registration	Small Landfarm Final Close (*Must be submitted within three years from the submitted within three years from	are Report* SCR 70/04/09 om the registration date)
2. Operator: GREAT WESTERN DRILLIN	G Company	
Address: 700 W. LowsiAnd ST. M	1. DLAND TK 79701	· · · · · · · · · · · · · · · · · · ·
Contact Person: SAM ROBERTS	Phone: (432	682-5241
3. Location: <u>SE</u> /4 <u>SE</u> /4 Sectio	n <u>7</u> Township <u>32 A</u>	Range
REGISTRATION		
1. As operator, are you the surface estate owner of the statement that demonstrates a written agreement is estaproposed small landfarm.	he proposed site? 🔲 Yes 🛛 No ablished with the surface estate owner auth	If no, please attach a certification orizing the use of the site for the
 Will the proposed small landfarm comply with the Yes □ No 	e siting requirements of Subsections A and	B of 19.15.36.13 NMAC?
 A. Depth to ground water. No small landfarm shall be located where g 	ground water is less than 50 feet below the lo	west elevation at which the

- operator will place oil field waste. B. No surface waste management facility shall be located:
 - within 200 feet of a watercourse, lakebed, sinkhole or playa lake;
 - within an existing wellhead protection area or 100-year floodplain;
 - within, or within 500 feet of, a wetland;
 - within the area overlying a subsurface mine;
 - within 500 feet from the nearest permanent residence, school, hospital, institution or church in existence at the time of initial application; or
 - within an unstable area, unless the operator demonstrates that engineering measures have been incorporated into the surface waste management facility design to ensure that the surface waste management facility's integrity will not be compromised.

3. Attach a plat and topographic map showing the small landfarm's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the small landfarm site; watercourses; fresh water sources, including wells and springs; oil and gas wells or other production facilities; and inhabited buildings within one mile of the site's perimeter.

Based on the information provided with this submittal, registration of a small landfarm can only be granted if the operator complies with the following understandings and conditions:

• The operator shall operate only one active small landfarm per governmental section at any time. No small landfarm shall be located more than one mile from the operator's nearest oil or gas well or other production facility.

• The operator shall accept only exempt or non-hazardous wastes consisting of soils (excluding drill cuttings) generated as a result of accidental releases from production operations, that are predominantly contaminated by petroleum hydrocarbons, do not contain free liquids, would pass the paint filter test and where testing shows chloride concentrations are 500 mg/kg or below.

• The operator shall berm the landfarm to prevent rainwater run-on and run-off.

• The operator shall post a sign at the site readable from a distance of 50 feet and listing the operator's name; small landfarm registration number; location by unit letter, section, township and range; expiration date; and an emergency contact telephone number.

• The operator shall spread and disk contaminated soils in a single eight inch or less lift within 72 hours of receipt. The operator shall conduct treatment zone monitoring to ensure that the TPH concentration, as determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, does not exceed 2500 mg/kg; and that the chloride

concentration, as determined by EPA method 300.1, does not exceed 500 mg/kg. The operator shall treat soils by disking at least once a month and by watering and adding bioremediation enhancing materials when needed.

• The operator shall maintain records reflecting the generator, the location of origin, the volume and type of oil field waste, the date of acceptance and the hauling company for each load of oil field waste received. The division shall post on its website each small landfarm's location, operator and registration date. In addition, the operator shall maintain records of the small landfarm's remediation activities in a form readily accessible for division inspection. The operator shall maintain all records for five years following the small landfarm's closure.

• The operator shall submit a final closure report on a form C-137 EZ, together with photographs of the closed site, to the environmental bureau in the division's Santa Fe office.

CERTIFICATION

I hereby certify that the information submitted with this registration is true, accurate and complete to the best of my knowledge and belief and agree to the understandings and conditions of this registration.

Name: Sam Roberts	Title: Area Englacer
Signature: Ruts	Date: 10/19/09
E-mail Address: <u>sroberts@gwdc.com</u>	_
OCD REGISTRATION: Approved. Date : 11/19/09	Denied. Date:
Comments:	
OCD Representative Signature:	
Title: Enimuental Engrice	OCD Registration Number: 11-3-002
FINAL CLOSURE REPORT	

Were the landfarmed soils able to achieve the closure performance standards, listed below, within three years from the registration date? Yes No (Please provide laboratory analytical results)

- benzene, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 0.2 mg/kg;
- Total BTEX, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 50 mg/kg;
- TPH, as determined by EPA SW-846 method 418.1 or other EPA method approved by the division, shall not exceed 2500 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, shall not exceed 500 mg/kg; and
 chlorides, as determined by EPA method 300.1, shall not exceed 500 mg/kg.

If yes, were the additional closure requirements listed below satisfied? 🗌 Yes 📋 No (Please provide photos)

- The operator shall re-vegetate soils remediated to the closure performance standards if left in place in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC.
- If the operator returns remediated soils to the original site, or with division permission, recycles them, re-vegetate the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC;
- The operator shall remove berms on the small landfarm and buildings, fences, roads and equipment; and
- The operator shall clean up the site and collect one vadose zone soil sample from three to five feet below the middle of the treatment zone, or in an area where liquids may have collected due to rainfall events; the vadose zone soil sample shall be collected and analyzed using the methods specified above for TPH, BTEX and chlorides.

If no, were the landfarmed soils that have not or cannot be remediated to the closure performance standards within three years removed to a division-approved surface waste management facility, and the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC and re-vegetated? Yes No (Please provide photos)

CERTIFICATION

I hereby certify that the information submitted with this final closure report is true, accurate and complete to the best of my knowledge and belief.

Name:	Title:	
Signature:	Date:	
E-mail Address:		
OCD CLOSURE REVIEW: Closure Approved. Date :	Closure Denied. Date:	
Comments:		-,
OCD Representative Signature:		
Title:	OCD Registration Number:	





Petroleum Engineering Consulting Lease Management Contract Pumping 7415 East Main Farmington, New Mexico 87402 (505) 327-4892 • Fax: (505) 327-9834

.

November 12, 2009

Mr. Brad Jones NMOCD 1220 South St. Francis Dr. Santa Fe, NM 87505

Re: Great Western Drilling Small Landfarm Application

Dear Mr. Jones,

Please replace/add the attached pages to the previously submitted Small Landfarm application for Great Western Drilling on the Decker #5 location. I believe I have made all of your suggested changes, but if not, please call me at (505) 327-4892.

Sincerely,

Paul C. Thom

Paul C. Thompson, P.E.





ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting Lease Management Contract Pumping 7415 East Main Farmington, New Mexico 87402 (505) 327-4892 • Fax: (505) 327-9834

November 12, 2009

Registration for a Small Landfarm Great Western Drilling Company SE/4 Section 7, T32N, R11W San Juan County, NM

Surface Owner Approval

An agreement with the surface owner authorizing approval of the site for a landfarm is attached.

Depth to Ground Water

According to the NM State Engineer's iWaters Database (please see attached listing), the closest fresh water well is one mile southwest of the proposed landfarm in NE Section 19, T32N, R11W. Depth the groundwater in this well is 155'. This location is at a similar elevation and with similar topography as the proposed landfarm site.

Siting Requirements

As can be seen on the attached topo map and aerial photograph, there are no watercourses, lakes, sinkholes, or playa lakes within 200 feet of the proposed landfarm nor is it within 500' of a wetland. There are no permanent residences, schools, hospitals, churches, or other institutional building within 500' of the proposed landfarm. The land farm will not be in a "wellhead protection area".

According to the attached FEMA Flood Map the proposed location is not in the 100 year floodplain.

The attached EMNRD Mining and Mineral Division mining map, indicates that there are no mines in the vicinity of the proposed landfarm.

The area of the proposed landfarm is relatively flat and is not in an unstable area.



Landfarm Operations

This will be Great Western Drilling Company's only landfarm. The landfarm will be bermed to prevent rain water run-on and run-off.

Only non-hazardous wastes (soil contaminated with hydrocarbons) will be accepted and the facility. No drill cuttings will be allowed at this site. The contaminated soil will not contain free liquids and will pass the paint filter test. Chlorides concentrations will be 500 mg/kg or below.

A sign will be posted at the facility indicating the landfarm's location, expiration date, and emergency contact numbers.

The contaminated soils will be spread to a thickness not to exceed 8 inches and will be disked once a month and will treat by watering and adding bioremediation materials as necessary.

Great Western Drilling will maintain records showing the origin, date, and hauling company for each load of contaminated soil delivered to the landfarm. The remediation activities will also be recorded and be available for NMOCD inspection. A Closure Report on Form C-137 EZ, along with photographs of the closed site will be submitted to the environmental bureau in the OCD's Santa Fe office.

Paul C. Thomps-

Paul C. Thompson, P.E. Agent for Great Western Drilling Company





SCALE : 1 = 1000



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Kenzo Decker 142 CR. 2300 Azrec, N.M. 87410

Mr. Decker,

Great Western Drilling Co. is requesting permission to have a Landfarm/Biopile on your land. The location of the farm is Unit P, Section 7, Township 32 N, Range 11 W. The location norme is J.E. Decker #5. The farm will be maintained as outlined by the Oil Conservation Division, 1000 Rio Brazos Road, Aztec, N.M.

I <u>KENNON</u> <u>Dec Kes</u> give Great Western Drilling Co. permission to go ahead with the above stated Landfarm/Biopile.

Signature

09

NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

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Form C-102 Supersedes C-128 Effective 1-1-65 \

		All distanc	es must be from	the outer bo	undaries of	the Secti	on.		
Operator			Leo	ISe				Well No	•
Great Wester	n Drilling	Company		Decker_	P.C.			5	
Unit Letter S	Section	Township		Range		County		-	
P	7	32N		<u>11W</u>		San	Juan		······································
Actual Footage Locati	ion of Well:	_							
1170	feet from the	South	line and 11	50	feet	from the	East	line	
Ground Level Elev:	Producing Fo	rmation	Poo	1				Dedicated Acre	age:
	Picture	d Cliffs							Асгев
1. Outline the	acreage dedic	ated to the s	ubject well	by colored	l pencil or	hachu	e marks on	the plat below	· .
2. If more than interest and	n one lease is royalty).	s dedicated t	o the well, or	utline eac	h and ider	ntify the	e ownership	thereof (both	as to working
3. If more than dated by con	one lease of nmunitization,	different owne unitization, fo	ership is dedi orce-pooling.	icated to t etc?	he well, ł	ave the	e interests (of all owners	been consoli-
Yes [inswer is "ye	s; type of co	nsolidatio	on			· · · · · · · · · · · · · · · · · · ·	
If answer is this form if n	"no," list the necessary.)	owners and t	ract descript	ions whicl	h have act	ually b	een consoli	dated. (Use re	verse side of
No allowable forced-poolin sion.	e will be assign 1g, or otherwise	ned to the wel)or until a no	l until all int n-standard un	erests hav it, elimina	ve been co ating such	onsolida interes	ated (by co sts, has bee	mmunitization, n approved by	, unitization, the Commis-
								CERTIFICAT	ION
					•		I hereby	certify that the i	information con-
							tained h	erein is true and	complete to the
							bestof	ny knowledge and	l bellef.
State	Line .	5097.18	<u>Co/</u>	<u>o,</u>	· · · · · · · · · · · · · · · · · · ·				ſ
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	ł			_`@	1150'				
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)				1.			I hereby	certify that the	e well location
				20			shown or	n this plat was pl	otted from field
	t						notes of	actual surveys	made by me or
	ſ	[under my	supervision, and	I that the same
	I.	1			į ·		is true	and correct to t	he best of my
×		5087.28			<u> </u>	ł	knowledg	e and belief.	
•								•	
.							Date Surve	yed. <u>State</u>	P. 211
SCALE: 1"=100	01						March	11, 1978	1.1.
							Registered	Professional End	ineer '
							and Light	d'Sarveyot ()	
	-						Fied	3 april	2
							Fred E	Kerr Jr.	<u>c</u>
							Certificate	No. EPATA	- 5 /
							3950	\mathcal{E}_{j}	Mr. S. S. S.



New Mexico Office of the State Engineer Water Column/Average Depth to Water

			(qua	irtei	rs a	re '	1=NV	V 2=NE	E 3=SW /	4=SE)					
	(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)														
BOD Number	Sub	Hee	County	Q 64	Q 16	Q ∶⊿	Sec	Twe	Rng	Y	•	Distance	Depth Woll	Depth V	later
	Dasm	USE	County	Ų4	. 10		10-	1 113	King.		4000500*	DIStance	400		or
SJ 01360		STK	, Sì	0	2	2	19	32N	1100	230954	4096508"	2154	180	(155)	25
SJ 03865 CLOSEST	well	SIK	SJ	2	3	4	20%	32N	1100	232217	4095306	3608	200		
SJ 00055		IND	SJ			2	25	32N	12W	229105	4094796*	4257	` 504		
SJ 03583		DOM	SJ	1	1	1	23	32N	12W	226477	4096872*	4761	167	60	107
SJ 00020		NOT	SJ			3	29	32N	11W	231467	4093877*	4819	588		
SJ 00021		NOT	SJ			3	23	32N	11W	236177	4095304*	6263	585		
SJ 00026		IND	SJ			2	33	32N	11W	233717	4092955*	6368	321		
SJ 02163		DOM	SJ	4	4	4	21	30N	12W	224688	4096488	6571	31	15	16
SJ 01327		STK	SJ	3	2	2	23	32N	11W	237092	4096187*	6677	90	50	40
SJ 01106		DOM	SJ		4	3	35	32N	12W	226851	4092240*	7586	180	115	65
SJ 00017		IND	SJ			2	24	32N	11W	238546	4096052*	8088	105		
SJ 03738 POD1		DOM	SJ	3	1	4	01	31N	12W	228612	4090866*	8121	115	50	65
SJ 03022		DOM	SJ	2	3	4	01	31N	12W	228764	4090661*	8278	490	250	240
SJ 03134		DOM	SJ	2	3	4	01	31N	12W	228764	4090661*	8278	80	20	60
SJ 02099		DOM	SJ		4	4	01	31N	12W	229006	4090568*	8310	95		
SJ 02034		DOM	SJ		3	4	01	31N	12W	228665	4090562*	8399	85	55	30
SJ 03488		DOM	SJ	2	3	3	01	31N	12W	228084	4090678*	8462	150		
SJ 01649		DOM	SJ	4	3	4	01	31N	12W	228764	4090461*	8471	220	161	59
SJ 03660		DOM	SJ	4	3	4	01	31N	12W	228764	4090461*	8471	70	42	28
SJ 01660		DOM	SJ	3	3	4	01	31N	12W ·	228564	4090461*	8524	320	275	45
SJ 01213		MON	SJ	4	3	2	18	32N	12W	221160	4098002*	9751	640	20	620
SJ 01212		MON	SJ	3	1	4	18	32N	12W	220948	4097615*	9996	43	5	38
SJ 03429		DOM	SJ	3	1	3	20	32N	10W	240675	4095316*	10341	103	54	49
SJ 01356		DOM	SJ		3	3	31	32N	10W	239013	4091829*	10614	65	50	15
SJ 03858 POD1		STK	SJ	3	2	4	187	31N	11W	230326	4087706	10969	295	85)	210
SJ 03857 POD1		STK	SJ	3	2	1	14	31N	11W	236033	4088283	11582	220	60	160
SJ 01977		DOM	SJ		3	2	06	31N	10W	239768	4091024*	11711	93	33	60
SJ 01958		DOM	SJ			2	06	31N	10W	239969	, 4091225*	11736	103	83	20
SJ 03308		DOM	SJ	3	4	2	06	31N	10W	240078	4090920*	12015	100	60	40
*UTM location was derived fi	rom PLSS	- see H	lelp												

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ADOR





TROPOSED LAND FARM J.E. DECKER #5 LOCATION SE SECTION 7, T32N, RIIW SAN JUAN COUNTY

Monday, September 21, 2009 4:45 PM



MMQonline Public Version



	RECEIVED	,	
Υ.	District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, 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	For State Use Only: Registration # Form C-137 EZ Revised August 3, 2009 Submit 1 Copy to Santa Fe Office
		L CLOCUDE DEDODT FOD CMAL	

REGISTRATION/ FINAL CLOSURE REPORT FOR SMALL LANDFARM

Section 7 of 19,15,36 NMAC defines a small landfarm as a centralized landfarm of two acres or less that has a total capacity of 2000 cubic yards or less in a single lift of eight inches or less, remains active for a maximum of three years from the date of its registration and that receives only petroleum hydrocarbon-contaminated soils (excluding drill cuttings) that are exempt or non-hazardous waste. The operator shall operate only one active small landfarm per governmental section at any time.

GENERAL INFORMATION

1.	🔀 Small Landfarm Registration 🗌 Small Landfarm Final Closure Report*
	(*Must be submitted within three years from the registration date)
2.	Operator: GREAT WESTERN DRILLING COMPANY
	Address: C/O WALSH ENGINEERING, 7415 E. MAIN GT., FARMINGTON, N.M. 87402
	Contact Person: PAuc THOMPSON Phone: 505. 327. 4892
3.	Location: <u>SE</u> 4 Section 7 Township <u>SL</u> Range 11 W

REGISTRATION

1. As operator, are you the surface estate owner of the proposed site? \Box Yes No If no, please attach a certification statement that demonstrates a written agreement is established with the surface estate owner authorizing the use of the site for the proposed small landfarm.

Will the proposed small landfarm comply with the siting requirements of Subsections A and B of 19.15.36.13 NMAC? Yes No No

A. Depth to ground water.

- No small landfarm shall be located where ground water is less than 50 feet below the lowest elevation at which the operator will place oil field waste.
- **B.** No surface waste management facility shall be located:
 - within 200 feet of a watercourse, lakebed, sinkhole or plava lake;
 - within an existing wellhead protection area or 100-year floodplain;
 - within, or within 500 feet of, a wetland;
 - within the area overlying a subsurface mine;
 - within 500 feet from the nearest permanent residence, school, hospital, institution or church in existence at the time of initial application; or
 - within an unstable area, unless the operator demonstrates that engineering measures have been incorporated into the surface waste management facility design to ensure that the surface waste management facility's integrity will not be compromised.

Attach a plat and topographic map showing the small landfarm's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the small landfarm site; watercourses; fresh water sources, including wells and springs; oil and gas wells or other production facilities; and inhabited buildings within one mile of the site's perimeter.

Based on the information provided with this submittal, registration of a small landfarm can only be granted if the operator complies with the following understandings and conditions:

The operator shall operate only one active small landfarm per governmental section at any time. No small landfarm shall be located more than one mile from the operator's nearest oil or gas well or other production facility.

The operator shall accept only exempt or non-hazardous wastes consisting of soils (excluding drill cuttings) generated as a result of accidental releases from production operations, that are predominantly contaminated by petroleum hydrocarbons, do not contain free liquids, would pass the paint filter test and where testing shows chloride concentrations are 500 mg/kg or below.

The operator shall berm the landfarm to prevent rainwater run-on and run-off.

The operator shall post a sign at the site readable from a distance of 50 feet and listing the operator's name; small landfarm registration number; location by unit letter, section, township and range; expiration date; and an emergency contact telephone number.

The operator shall spread and disk contaminated soils in a single eight inch or less lift within 72 hours of receipt. The operator shall conduct treatment zone monitoring to ensure that the TPH concentration, as determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, does not exceed 2500 mg/kg; and that the chloride concentration, as determined by EPA method 300.1, does not exceed 500 mg/kg. The operator shall treat soils by disking at least once a month and by watering and adding bioremediation enhancing materials when needed.

• The operator shall maintain records reflecting the generator, the location of origin, the volume and type of oil field waste, the date of acceptance and the hauling company for each load of oil field waste received. The division shall post on its website each small landfarm's location, operator and registration date. In addition, the operator shall maintain records of the small landfarm's remediation activities in a form readily accessible for division inspection. The operator shall maintain all records for five years following the small landfarm's closure.

• The operator shall submit a final closure report on a form C-137 EZ, together with photographs of the closed site, to the environmental bureau in the division's Santa Fe office.

CERTIFICATION

I hereby certify that the information submitted with this registration is true, accurate and complete to the best of my knowledge and belief and agree to the understandings and conditions of this registration.

Title	OCD Pagistration Number:
OCD Representative Signature:	
Comments:	
OCD REGISTRATION: Approved. Date :	Denied. Date:
E-mail Address: PAUL @ WALSHEAG. NET	
Signature: Paul C. Thomps-	Date: 9/22/89
Name: PARL C. THOM 750-1	Title: AGENT

FINAL CLOSURE REPORT

Were the landfarmed soils able to achieve the closure performance standards, listed below, within three years from the registration date? Yes No (Please provide laboratory analytical results)

- benzene, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 0.2 mg/kg;
- Total BTEX, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 50 mg/kg;
- TPH, as determined by EPA SW-846 method 418.1 or other EPA method approved by the division, shall not exceed 2500 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, shall not exceed 500 mg/kg; and
- chlorides, as determined by EPA method 300.1, shall not exceed 500 mg/kg.

If yes, were the additional closure requirements listed below satisfied? 🗌 Yes 🗌 No (Please provide photos)

- The operator shall re-vegetate soils remediated to the closure performance standards if left in place in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC.
- If the operator returns remediated soils to the original site, or with division permission, recycles them, re-vegetate the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC;
- The operator shall remove berms on the small landfarm and buildings, fences, roads and equipment; and
- The operator shall clean up the site and collect one vadose zone soil sample from three to five feet below the middle of the treatment zone, or in an area where liquids may have collected due to rainfall events; the vadose zone soil sample shall be collected and analyzed using the methods specified above for TPH, BTEX and chlorides.

If no, were the landfarmed soils that have not or cannot be remediated to the closure performance standards within three years removed to a division-approved surface waste management facility, and the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC and re-vegetated? Yes No (Please provide photos)

CERTIFICATION

I hereby certify that the information submitted with this final closure report is true, accurate and complete to the best of my knowledge and belief.

Name:	Title:
Signature:	Date:
E-mail Address:	
OCD CLOSURE REVIEW: Closure Approved. Date :	Closure Denied. Date:
Comments:	
OCD Representative Signature:	
Title:	OCD Registration Number:





ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting Lease Management Contract Pumping 7415 East Main Farmington, New Mexico 87402 (505) 327-4892 • Fax: (505) 327-9834

September 22, 2009

Registration for a Small Landfarm Great Western Drilling Company SE/4 Section 7, T32N, R11W San Juan County, NM

Surface Owner Approval

An agreement with the surface owner authorizing approval of the site for a landfarm is attached.

Depth to Ground Water

According to the NM State Engineer's iWaters Database (please see attached listing), the closest fresh water well is one mile southwest of the proposed landfarm in NE Section 19, T32N, R11W. Depth the groundwater in this well is 155'. This location is at a similar elevation and with similar topography as the proposed landfarm site.

Siting Requirements

As can be seen on the attached topo map and aerial photograph, there are no watercourses, lakes, sinkholes, or playa lakes within 200 feet of the proposed landfarm nor is it within 500' of a wetland. There are no permanent residences, schools, hospitals, churches, or other institutional building within 500' of the proposed landfarm.

According to the attached FEMA Flood Map the proposed location is not in the 100 year floodplain.

The attached EMNRD Mining and Mineral Division mining map, indicates that there are no mines in the vicinity of the proposed landfarm.

The area of the proposed landfarm is relatively flat and is not in an unstable area.


Landfarm Operations

This will be Great Western Drilling Company's only landfarm. The landfarm will be bermed to prevent rain water run-on and run-off.

Only non-hazardous wastes (soil contaminated with hydrocarbons) will be accepted and the facility. The contaminated soil will not contain free liquids and will pass the paint filter test. Chlorides concentrations will be 500 mg/kg or below.

A sign will be posted at the facility indicating the landfarm's location, expiration date, and emergency contact numbers.

The contaminated soils will be spread to a thickness not to exceed 8 inches and will be disked once a month and will treat by watering and adding bioremediation materials as necessary.

Great Western Drilling will maintain records showing the origin, date, and hauling company for each load of contaminated soil delivered to the landfarm. The remediation activities will also be recorded and be available for NMOCD inspection. A Closure Report on Form C-137 EZ, along with photographs of the closed site will be submitted to the environmental bureau in the OCD's Santa Fe office.

Paul C. Thomas -Paul C. Thompson, P.E.

Agent for Great Western Drilling Company

FROM : GREAT WESTERN DRILLING FARM

Kenzo Docker 143 CR: 2300 Azrec, N.M. 87410

Mr. Decker,

Great Western Drilling Co. is requesting permission to have a Landfarm/Biopile on your land. The location of the farm is Unit P, Section 7, Township 32 N, Range 11 W. The location number is J.E. Decker #5. The farm will be maintained as outlined by the Oil Conservation Division, 1000 Rio Brazos Road, Aztec, N.M.

I <u>KENNON</u> <u>DecKes</u> give Great Western Drilling Co. permission to go ahead with the above stated Landfarm/Biopile.

FAX NO. 1500 327 AKS

Signature

NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

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Form C-102 Supersedes C-128 Effective 1-1-65

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		All distance	es must be from	n the outer bou	indaries of	the Section		
Operator			Le	ease				Well No.
Great West	ern Drilling	Company		Decker P	<u>.</u>			5
Unit Letter	Section	Township		Range		County		
Р	7	32N		<u> 11W</u>		San J	uan	
Actual Footage Lo	cation of Well;							
1170	feet from the	South	line and]	150	feet	from the	East	line
Ground Level Elev	Producing F	ormation	Po	wl .				Dedicated Acreage:
6613	Pictur	ed Cliffs						Acres
 Outline 1 If more interest 2 If more that dated by Yes If answer this form 	the acreage dedi- than one lease i and royalty). Than one lease of communitization, No If is "no," list the	cated to the s is dedicated to different owned unitization, for answer is "yes e owners and t	ubject well o the well, crship is de prce-pooling s," type of o ract descrip	by colored outline each dicated to th s. etc? consolidatio	pencil of and iden ne well, l n	r hachure ntify the have the tually be	marks on ownership interests en consoli	the plat below. thereof (both as to working of all owners been consoli-
No allows forced-po sion.	oling, or otherwis	gned to the wel e)or until a no	l until all in n-standard u	nterests hav unit, elimina	e been c ting suc	onsolida h interes	I hereb	OMMUNITIZATION, UNITIZATION, en approved by the Commis- CERTIFICATION y certify that the information con- herein is true and complete to the
Sta	t <u>e Line</u>	5097.18 Sec 1	 	10, Tex.			Name	
		5087.28			<u> </u>	2725.8'	Position Company Date I hereb shown c notes o under m is true knowled	by certify that the well location on this plat was plotted from field of actual surveys made by me or by supervision, and that the same and correct to the best of my lige and belief.
SCALE: 1"=	1000 •						Date Surve March Registered and Lig Fred Certificat 3950	eyed 11, 1978 d. Protestional Engineer ad Surveyof () B. Kerr Jr.

EO PM 24 . 11



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)														
	÷.	(qua	rter	s a	re s	malle	st to I	argest)	(NAD83	3 UTM in m	eters)) (جناب دین	In feet)	
Sub POD Number basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth M WaterCo	later olumn
SJ 01360 🗲	STK	SJ		2	2	19 -	32N	11W	230954	4096508*	2154	180	(155)	25
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SJ 01977	DOM	SJ		3	2	06	31N	10W	239768	4091024*	11711	93	33	60
SJ 01958	DOM	SJ			2	06	31N	10W	239969	4091225*	11736	103	83	20
SJ 03308	DOM	SJ	3	4	2	06	31N	10W	240078	4090920*	12015	100	60	40
*UTM location was derived from PLSS	6 - see l	Help												

ADOB





TROPOSED LAND FARM J.E. DECKER #5 LOCATION SE SECTION 7, T32N, RILW SAN JUAN COUNTY



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MMQonline Public Version

LAND FARM SITE SE/4 SECTIM 7, TZZN, Rulu



http://www.emnrd.state.nm.us/MMD/MMQonline/MMQonline-PUBLIC-PROD.mwf

Monday, September 21, 2009 4:45 PM

District I 1625 N. French Dr., Hobbs: NM-88240 District II 1301 by Crand Avenue Article IV (1991)	State of New Mexico ergy Minerals and Natural Resources	
District III 1000 Rio Brazos Road Avere, NW 87410 District IV 1220 PM 12 04	Oil Conservation Division 1220 South St. Francis Dr.	Form C-137 EZ Revised August 3, 2009
	Santa Fe, NM 87505	Submit 1 Copy to Santa Fe Office
REGISTRATION/ FINAL Section 7 of 19.15.36 NMAC defines a small landfarm as less in a single lift of eight inches or less, remains acti petroleum hydrocarbon-contaminated soils (excluding d active small l	CLOSURE REPORT FOR SMA a centralized landfarm of two acres or less tha we for a maximum of three years from the date rill cuttings) that are exempt or non-hazardous andfarm per governmental section at any time.	LL LANDFARM t has a total capacity of 2000 cubic yards or of its registration and that receives only waste. The operator shall operate only one ESTIMATE 1000 JULS.
GENERAL INFORMATION	_	SCR 10/19/09
1. Small Landfarm Registration	Small Landfarm Final Clo (*Must be submitted within three years f	sure Report* (777, 777, 777, 777, 777, 777, 777, 77
2. Operator: GREAT WESTERN DRILL	NG ComPANY	
Address: 700 W. LowsiAnd ST.,	MIDLAND, TK 79701	
Contact Person: SAM ROBERTS	Phone: (43	2) 682 - 5241
3. Location: <u>SE</u> /4 <u>SE</u> /4 Sect	ion 7 Township 32 A	Range <u>11 W</u>
REGISTRATION		
1. As operator, are you the surface estate owner of statement that demonstrates a written agreement is exproposed small landfarm.	the proposed site?	If no, please attach a certification thorizing the use of the site for the
2. Will the proposed small landfarm comply with t X Yes □ No	he siting requirements of Subsections A ar	nd B of 19.15.36.13 NMAC?
A. Depth to ground water.		
 No small landfarm shall be located where operator will place oil field waste. 	e ground water is less than 50 feet below the	lowest elevation at which the
B. No surface waste management facility shall be	e located:	

- within 200 feet of a watercourse, lakebed, sinkhole or playa lake;
- within an existing wellhead protection area or 100-year floodplain;
- within, or within 500 feet of, a wetland;
- within the area overlying a subsurface mine;
- within 500 feet from the nearest permanent residence, school, hospital, institution or church in existence at the time of initial application; or
- within an unstable area, unless the operator demonstrates that engineering measures have been incorporated into the surface waste management facility design to ensure that the surface waste management facility's integrity will not be compromised.

3. Attach a plat and topographic map showing the small landfarm's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the small landfarm site; watercourses; fresh water sources, including wells and springs; oil and gas wells or other production facilities; and inhabited buildings within one mile of the site's perimeter.

Based on the information provided with this submittal, registration of a small landfarm can only be granted if the operator complies with the following understandings and conditions:

• The operator shall operate only one active small landfarm per governmental section at any time. No small landfarm shall be located more than one mile from the operator's nearest oil or gas well or other production facility.

• The operator shall accept only exempt or non-hazardous wastes consisting of soils (excluding drill cuttings) generated as a result of accidental releases from production operations, that are predominantly contaminated by petroleum hydrocarbons, do not contain free liquids, would pass the paint filter test and where testing shows chloride concentrations are 500 mg/kg or below.

• The operator shall berm the landfarm to prevent rainwater run-on and run-off.

• The operator shall post a sign at the site readable from a distance of 50 feet and listing the operator's name; small landfarm registration number; location by unit letter, section, township and range; expiration date; and an emergency contact telephone number.

• The operator shall spread and disk contaminated soils in a single eight inch or less lift within 72 hours of receipt. The operator shall conduct treatment zone monitoring to ensure that the TPH concentration, as determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, does not exceed 2500 mg/kg; and that the chloride

concentration, as determined by EPA method 300.1, does not exceed 500 mg/kg. The operator shall treat soils by disking at least once a month and by watering and adding bioremediation enhancing materials when needed.

• The operator shall maintain records reflecting the generator, the location of origin, the volume and type of oil field waste, the date of acceptance and the hauling company for each load of oil field waste received. The division shall post on its website each small landfarm's location, operator and registration date. In addition, the operator shall maintain records of the small landfarm's remediation activities in a form readily accessible for division inspection. The operator shall maintain all records for five years following the small landfarm's closure.

• The operator shall submit a final closure report on a form C-137 EZ, together with photographs of the closed site, to the environmental bureau in the division's Santa Fe office.

CERTIFICATION

I hereby certify that the information submitted with this registration is true, accurate and complete to the best of my knowledge and belief and agree to the understandings and conditions of this registration.

Signature:	Name: Sam Roberts	Title: Area Englacer
E-mail Address:	Signature: San Ruhts	Date: 10/19/09
OCD REGISTRATION: Approved. Date :	E-mail Address: <u>sruberts@gwdc.c</u>	com
Comments:	OCD REGISTRATION: Approved. Date :	Denied. Date:
OCD Representative Signature: Title: OCD Registration Number: FINAL CLOSURE REPORT Were the landfarmed soils able to achieve the closure performance standards, listed below, within three years from the registration date? Yes No (Please provide laboratory analytical results) • benzene, as determined by EPA SW-846 method 3021 B or 8260B, shall not exceed 0.2 mg/kg; • Total BTEX, as determined by EPA SW-846 method 311 or other EPA method approved by the division; shall not exceed 500 mg/kg; and • chlorides, as determined by EPA SW-846 method 311 or other EPA method approved by the division; shall not exceed 500 mg/kg; and • chlorides, as determined by EPA SW-846 method 311 or other EPA SW-846 method 8015M, shall not exceed 500 mg/kg; and • chlorides, as determined by EPA SW-846 method 300.1, shall not exceed 0.2 mg/kg. If yes, were the additional closure requirements listed below satisfied? Yes No (Please provide photos) • The operator shall re-vegetate soils remediated to the closure performance standards if left in place in accordance with Paragraph (6) of Subsection A of 19.15.36.18 MAAC; • The operator shall remove berns on the small flaffarm and buildings, fence; nocal sand equipment; and • The operator shall remove berns on the small flaffarm and buildings, fence; nocal sand fully in the eyers are management facility, and we collect due to rainfall events; the vadosa zone soil sample shall be collected and analyzed using the metho	Comments:	
Title:	OCD Representative Signature:	
FINAL CLOSURE REPORT Were the landfarmed soils able to achieve the closure performance standards, listed below, within three years from the registration date? Yes No (Please provide laboratory analytical results) • benzen, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 0.2 mg/kg; • Total BTEX, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 500 mg/kg; • TPH, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 500 mg/kg; • The as determined by EPA SW-846 method 300.1, shall not exceed 500 mg/kg; If yes, were the additional closure requirements listed below satisfied? Yes No (Please provide photos) • The operator shall re-vegetate soils remediated to the closure performance standards if left in place in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC. • If the operator shall re-vegetate soils to the original site, or with division permission, recycles them, re-vegetate the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC. • The operator shall remove berms on the small landfarm and buildings, fences, roads and equipment; and • The operator shall remove berms on the small andfarm and buildings, forces, roads and equipment; and • The operator shall remove berms on the small band farm and buildings, fences, roads and equipment; and • The operator shall new there liquids may have collected due to rainfall events; the vadose zone soil sample shall be collected and analyzed using the methods specified above for TPH, BTEX and chlorides. </th <th>Title:</th> <th>OCD Registration Number:</th>	Title:	OCD Registration Number:
Were the landfarmed soils able to achieve the closure performance standards, listed below, within three years from the registration date? Yes No (Please provide laboratory analytical results) • benzene, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 0.2 mg/kg; • Total BTEX, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 500 mg/kg; • TPH, as determined by EPA SW-846 method 418.1 or other EPA method approved by the division, shall not exceed 500 mg/kg; • TPH, as determined by EPA SW-846 method 300.1, shall not exceed 500 mg/kg. If yes, were the additional closure requirements listed below satisfied? Yes No • Pherageraph (6) of Subsection A of 19.15.36.18 NMAC. • If the operator shall re-vegetate soils remediated to the closure performance standards if left in place in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC; • The operator shall clean up the site and collect one vadose zone soil sample from three to five feet below the middle of the treatment zone, or in an area where liquids may have collected due to rainfall events; the vadose zone soil sample from three to five feet below the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC; If no, were the landfarmed soils that have not or cannot be remediated to the closure performance standards within three years removed to a division-approved surface waste management facility, and the cell filled in with native soil to the standards in Paragraph (6) of Subsection A	FINAL CLOSURE REPORT	
If no, were the landfarmed soils that have not or cannot be remediated to the closure performance standards within three years removed to a division-approved surface waste management facility, and the cell filled in with native soil to the standards in Paragrap (6) of Subsection A of 19.15.36.18 NMAC and re-vegetated? Yes No (Please provide photos) CERTIFICATION I hereby certify that the information submitted with this final closure report is true, accurate and complete to the best of my knowled; and belief. Name: Date: Date: E-mail Address: Closure Approved. Date : Closure Denied. Date: OCD Representative Signature: OCD Registration Number:	 date? Yes No (Please provide laboratory analy benzene, as determined by EPA SW-846 method 8021 If Total BTEX, as determined by EPA SW-846 method 803. TPH, as determined by EPA SW-846 method 418.1 or or mg/kg; the GRO and DRO combined fraction, as determ chlorides, as determined by EPA method 300.1, shall not five, were the additional closure requirements listed below s. The operator shall re-vegetate soils remediated to the cle Paragraph (6) of Subsection A of 19.15.36.18 NMAC. If the operator returns remediated soils to the original si in with native soil to the standards in Paragraph (6) of S The operator shall remove berms on the small landfarm The operator shall clean up the site and collect one vador treatment zone, or in an area where liquids may have co collected and analyzed using the methods specified abort. 	B or 8260B, shall not exceed 0.2 mg/kg; D21 B or 8260B, shall not exceed 50 mg/kg; D21 B or 8260B, shall not exceed 50 mg/kg; other EPA method approved by the division, shall not exceed 2500 nined by EPA SW-846 method 8015M, shall not exceed 500 mg/kg; and ot exceed 500 mg/kg. atisfied? Yes No (Please provide photos) osure performance standards if left in place in accordance with te, or with division permission, recycles them, re-vegetate the cell filled Subsection A of 19.15.36.18 NMAC; and buildings, fences, roads and equipment; and ose zone soil sample from three to five feet below the middle of the ollected due to rainfall events; the vadose zone soil sample shall be ve for TPH, BTEX and chlorides.
CERTIFICATION I hereby certify that the information submitted with this final closure report is true, accurate and complete to the best of my knowled and belief. Name: Title: Date: Signature: Date: E-mail Address: Date: Coco CLOSURE REVIEW: Closure Approved. Date : Closure Denied. Date: OCD CLOSURE REVIEW: Closure Approved. Date : Closure Denied. Date: OCD Representative Signature: Title: OCD Registration Number:	If no, were the landfarmed soils that have not or cannot be rem removed to a division-approved surface waste management fa (6) of Subsection A of 19.15.36.18 NMAC and re-vegetated?	nediated to the closure performance standards within three years icility, and the cell filled in with native soil to the standards in Paragraph Yes No (Please provide photos)
Name:	CERTIFICATION I hereby certify that the information submitted with this final of and belief.	closure report is true, accurate and complete to the best of my knowledge
Signature: Date: E-mail Address:	Name:	Title:
E-mail Address: OCD CLOSURE REVIEW: Closure Approved. Date: Closure Denied. Date: Comments: OCD Representative Signature: Title: OCD Registration Number:	Signature:	Date:
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	Title:	OCD Registration Number:





ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting Lease Management Contract Pumping

7415 East Main Farmington, New Mexico 87402 (505) 327-4892 • Fax: (505) 327-9834

September 22, 2009

Registration for a Small Landfarm Great Western Drilling Company SE/4 Section 7, T32N, R11W San Juan County, NM

Surface Owner Approval

An agreement with the surface owner authorizing approval of the site for a landfarm is attached.

Depth to Ground Water

According to the NM State Engineer's iWaters Database (please see attached listing), the closest fresh water well is one mile southwest of the proposed landfarm in NE Section 19, T32N, R11W. Depth the groundwater in this well is 155'. This location is at a similar elevation and with similar topography as the proposed landfarm site.

Siting Requirements

As can be seen on the attached topo map and aerial photograph, there are no watercourses, lakes, sinkholes, or playa lakes within 200 feet of the proposed landfarm nor is it within 500' of a wetland. There are no permanent residences, schools, hospitals, churches, or other institutional building within 500' of the proposed landfarm.

According to the attached FEMA Flood Map the proposed location is not in the 100 year floodplain.

The attached EMNRD Mining and Mineral Division mining map, indicates that there are no mines in the vicinity of the proposed landfarm.

The area of the proposed landfarm is relatively flat and is not in an unstable area.



Landfarm Operations

This will be Great Western Drilling Company's only landfarm. The landfarm will be bermed to prevent rain water run-on and run-off.

Only non-hazardous wastes (soil contaminated with hydrocarbons) will be accepted and the facility. The contaminated soil will not contain free liquids and will pass the paint filter test. Chlorides concentrations will be 500 mg/kg or below.

A sign will be posted at the facility indicating the landfarm's location, expiration date, and emergency contact numbers.

The contaminated soils will be spread to a thickness not to exceed 8 inches and will be disked once a month and will treat by watering and adding bioremediation materials as necessary.

Great Western Drilling will maintain records showing the origin, date, and hauling company for each load of contaminated soil delivered to the landfarm. The remediation activities will also be recorded and be available for NMOCD inspection. A Closure Report on Form C-137 EZ, along with photographs of the closed site will be submitted to the environmental bureau in the OCD's Santa Fe office.

Paul C. Thomas -Paul C. Thompson, P.E.

Agent for Great Western Drilling Company

Kenno Decker 143 CR, 2300 Azrec, NM, 87410

Mr. Decker,

Great Western Drilling Co. is requesting permission to have a Landfarm/Biopile on your lanc. The location of the farm is Unit P, Section 7, Township 32 N, Range 11 W. The location name is J.E. Decker #5. The farm will be maintained as outlined by the Oil Conservation Division, 1000 Rio Brazos Road, Aztec, N.M.

I <u>Kenned</u> <u>DecKes</u> give Great Western Drilling Co. permission to go ahead with the above stated Landfarm/Biopile.

Peter mar Signature

7/09

NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

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Operator			L	9050					Well No.
Great Weste	ern Drilling	Company		Decker P	•C •]	5
Unit Letter	etter Section Township					County		-	
Р	7	32N		11W		San	Juan		
Actual Footage Loc	ation of Well:							·	· · · · · · · · · · · · · · · · · · ·
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Ground Level Elev:	Producing Fo	rmation	P	bol				Dedica	ted Acreage:
6613	Picture	d Cliffs						1	Acres
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ENDLAR 11

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Form C-102 Supersedes C-128 Effective 1-1-65 ×



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)														
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)											-1			
POD Number basin	Use (County	Q 64	Q 16	Q 4	Sec	Tws	Rna	x	Y	[Distance	Depth [Well \	Depth W NaterCo	ater lumn
SJ 01360	STK	SJ	• •	2	2	19 1	32N	11W	230954	4096508*	2154	180	(155)	25
S.1 03865	STK	SJ	2	3	4	201	32N	11W	232217	4095306	3608	200		
SJ 00055	IND	SJ			2	25	32N	12W	229105	4094796*	4257	· 504		
SJ 03583	DOM	SJ	1	1	1	23	32N	12W	226477	4096872*	4761	167	60	107
SJ 00020	NOT	SJ			3	29	32N	11W	231467	4093877*	4819	588		
SJ 00021	NOT	SJ			3	23	32N	11W	236177	4095304*	6263	585		
SJ 00026	IND	SJ			2	33	32N	11W	233717	4092955*	6368	321		
SJ 02163	DOM	SJ	4	4	4	21	30N	12W	224688	4096488	6571	31	15	16
SJ 01327	STK	SJ	3	2	2	23	32N	11W	237092	4096187*	6677	90	50	40
SJ 01106	DOM	SJ		4	З	35	32N	12W	226851	4092240*	7586	180	115	65
SJ 00017	IND	SJ			2	24	32N	11W	238546	4096052*	8088	105		
SJ 03738 POD1	DOM	SJ	3	1	4	01	31N	12W	228612	4090866*	8121	115	50	65
SJ 03022	DOM	SJ	2	3	4	01	31N	12W	228764	4090661*	8278	490	250	240
SJ 03134	DOM	SJ	2	3	4	01	31N	12W	228764	4090661*	8278	80	20	60
SJ 02099	DOM	SJ		4	4	01	31N	12W	229006	4090568*	8310	95		
SJ 02034	DOM	SJ		3	4	01	31N	12W	228665	4090562*	8399	85	55	30
SJ 03488	DOM	SJ	2	3	3	01	31N	12W	228084	4090678*	8462	150		
SJ 01649	DOM	SJ	4	3	4	01	31N	12W	228764	4090461*	8471	220	161	59
SJ 03660	DOM	SJ	4	3	4	01	31N	12W	228764	4090461*	8471	70	42	28
SJ 01660	DOM	SJ	3	3	4	01	31N	12W ·	228564	4090461*	8524	320	275	45
SJ 01213	MON	SJ	4	3	2	18	32N	12W	221160	4098002*	9751	640	20	620
SJ 01212	MON	SJ	3	1	4	18	32N	12W	220948	4097615*	9996	43	5	38
SJ 03429	DOM	SJ	3	1	3	20	32N	10W	240675	4095316*	10341	103	54	49
SJ 01356	DOM	SJ		3	3	31	32N	10W	239013	4091829*	10614	65	50	15
SJ 03858 POD1	STK	SJ	3	2	4	18¥	31N	11W	230326	4087706	10969	295	85)	210
SJ 03857 POD1	STK	SJ	3	2	1	14	31N	1 1W	236033	4088283	11582	220	60	160
SJ 01977	DOM	SJ		3	2	06	31N	10W	239768	4091024*	11711	93	33	60
SJ 01958	DOM	SJ			2	06	31N	10W	239969	4091225*	11736	103	83	20
SJ 03308	DOM	SJ	3	4	2	06	31N	10W	240078	4090920*	12015	100	60	40
*UTM location was derived from PLSS	5 - see H	lelp												

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PROPOSED LAND FARM J.E. DECKER #5 LOCATION SE SECTION 7, TSZN, RIIW SAN JUAN COUNTY

Monday, September 21, 2009 4:45 PM



MMQonline Public Version

LAND FARM CITE SE/4 SECTIM 7, TZZN, RUW

