District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD,
District III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTE FE OFFICE

Approved
8/50
9/7/200

PIT REMEDIATION AND CLOSURE REPORT

Operator: Louis Dreyfus Natural Gas Telephone: (915) 387-5355

Address: P.O. Box 525, Sonora, TX 76950

Facility Or: MKL #2-R
Well Name

Location Unit or Qtr/Qtr Sec N Sec 5 T 26N R07W County

Pit Type: Separator Dehydrator Other

Land Type: BLM ,State ,Fee , Other

Pit Location: (Attach diagram)
Pit dimensions: length 12, width 12, depth 12

Reference: wellhead , Other

Footage from reference: 30ft.

Direction from reference: Degrees 300° East North of West South

Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet	(20 points)	
	50 feet to 99 feet	(10 points)	
	Greater than 100 feet	(0 points)	20
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources	Yes	(20 points)	
	No	(0 points)	0
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	(20 points)	
	200 feet to 1000 feet	(10 points)	
	Greater than 1000 feet	(0 points)	-20

RANKING SCORE (TOTAL POINTS):

Date Remediation Started: 9-27-95 **Date completed:** 11-12-99

Remediation Method: (Check all appropriate sections)
Excavation X Approx. cubic yards 64
Landfarmed X Insitu Bioremediation
Other

Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility)
Onsite X Offsite

General Description of Remedial Action:
Placed excavated soil into two soil farms areas. Turn soil and fertilize periodically.

Ground Water Encountered: No X Yes Depth

Final Pit:
Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)
Sample location
Sample depth
Sample date Sample time

Sample Results
Benzene (ppm)
Total BTEX (ppm)
Field headspace (ppm)
TPH

Ground Water Sample: Yes No X (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 7-24-00

SIGNATURE PRINTED NAME AND TITLE Tommy H. Arnwine Environmental & Safety Director

Environmental & Safety Department
P.O. Box 525
Sonora, Texas
76950

Telephone 1 915 387-5355
Fax 1 915 387-3744

Louis Dreyfus Natural Gas

July 24, 2000

New Mexico Oil Conservation Division
Mr. Bill Olson
2400 Pacheco Street
Sante Fe, NM 85730

Re:MKL #2-R
Section 5, T26N, R07W,
Rio Arriba County, New Mexico

Please consider the enclosed data for "Final Closure" of pit and monitor well at this location.

Data has been gathered on this location from work done by either Louis Dreyfus Natural Gas personnel or by Contract Environmental Services, Inc., working under directions of LDNG personnel. This data includes a sundry notice, pit remediation and closure report , site diagram, and enclosures 1, 2, and 3 discussed below.

Excavation was not complete, however a report (See Enclosure #1) from Contract Environmental Services shows that excavation was completed as far as possible without disturbing permanent equipment. Verbal approval was received from OCD and BLM to hold excavation at this point.

Our attention was then directed to the soil farms for remediation. Soil samples taken in September of 1996 show one of these soil farms is within limits of guidelines (See Enclosure #3). The other soil farm was turned and fertilized and resampled on 6 Dec. 99. These test show this farm also within limits.

Soil from soil farms will be used to contour location in standards for surrounding area and revegitate to BLM standards for the Largo Canyon area.

Soil samples tested below required 100 ppm in Gasoline and Diesel Ranges for both soil farms.

Supporting data for all lab analysis are enclosed and are true and accurate to the best of knowledge. If further information is required, please contact me at (915)387-5355.

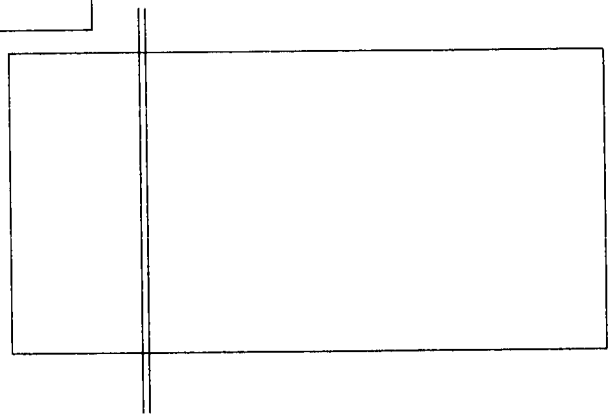
Thank you,

Tommy H. Arnwine
Environmental & Safety Director

cc: Gene Simer
OCD- Aztec-Denny Faust
BLM- Farmington- Bill Liese

LOUIS DREYFUS NATURAL GAS
MKL # 2-R
Sec 5 T26N R07W
Rio Arriba County, New Mexico

DEHY

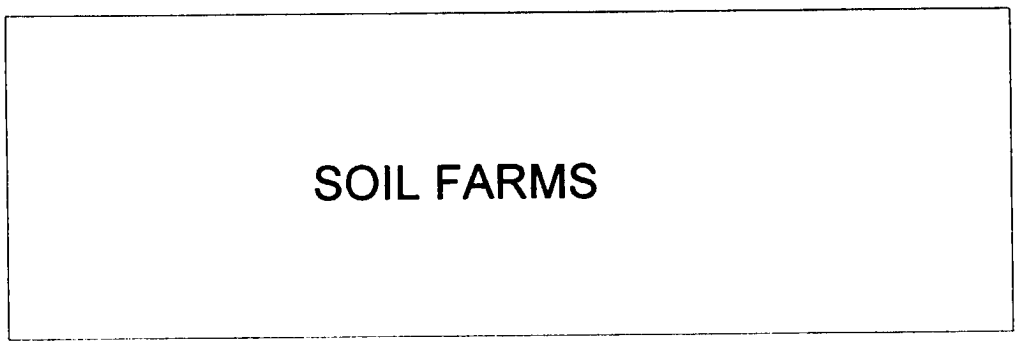


PIT
AREA

UNDERGROUND
LINE CROSSING PIT

N ←

WELL



SOIL FARMS

ENCLOSURE 1

MKL #2-R

Louis Dreyfus Natural Gas

re: MKL #2R
Sec. 5 T26N R07W

Rationale for Risk Based Closure

As per the report from "Contract Environmental Services, Inc., (enclosed) the contaminated soil was removed to depth in center of pit and the remainder of the pit was cleaned to this same depth.

"It is anticipated that not all contamination was removed from the walls of the excavation. On the north side of the excavation a subsurface flowline prevents removing all contaminated material. On the east side of the excavation the separator is located. These features eliminate further excavation in at least two directions. Leaving the excavation open for an extended period of time will enable the contaminated soils in the walls to remediate as well".

FILE

Contract Environmental Services, Inc.
Post Office Box 505
Kirtland, New Mexico 87417-0505
Phone (505) 325-1198

October 19, 1995

New Mexico Oil Conservation Division
Mr. Bill Olson
2400 Pacheco Street
Santa Fe, New Mexico 85730

RE: Louis Dreyfus Natural Gas Corporation, MKL #2R, Sec 5, T26N, R07W SE/SW, Rio Arriba County, New Mexico

Dear Mr. Olson,

Contract Environmental Services, Inc. (CES) is pleased to present this "Closure Report" for the MKL #2R well location on behalf of Louis Dreyfus Natural Gas Corporation (LDNG). This report contains background information, current site assessment data, a site plan, conclusions and recommendations.

Background Information

On September 27, 1995 CES began excavating the soil immediately below the earthen pit. As soils were removed from the excavation, periodic samples were gathered to be analyzed using a Photo-Ionization Detector (PID) meter. Soils removed were transferred to another portion of the wellpad to establish a soil farm for continued remediation. These soils were spread on the wellpad some 6" to 12" in depth to allow for aeration and the release of volatile aromatic hydrocarbons.

Approximately 45 cubic yards of contaminated soil was removed from the pit area during the excavation process. At a depth of 12-13' a field PID soil sample indicated that the contaminated soil had been removed. A confirmation laboratory soil sample was gathered to be processed for Total Petroleum Hydrocarbons (TPH) using EPA Method 8015 Modified. This laboratory soil analysis confirmed that uncontaminated soil had been reached. The remainder of the pit area was "Cleaned Out" to this same depth. It is anticipated that not all contamination was removed from the walls of the excavation. On the north side of the excavation a subsurface flow line prevents removing all contaminated material. On the east side of the excavation the separator is located. These features eliminate further excavation in at least two directions. Leaving the excavation open for an extended period of time will enable the contaminated soils in the wall to remediate as well.

The following is field PID data collected during the removal process.

Center Of Earthen Pit

PID Field Data Collected

Depth	Sample No.	PID(PPM)	Location
4'	#1	2000+	Center of Pit
6'	#2	500	Center of Pit
10'	#3	55	Center of Pit
13'	#4	7.0	Center of Pit

Laboratory Data Collected

Depth	Sample No.	8015(PPM) Gas	Diesel	Location
12'	MKL2A-100	89.3	17.9	Northeast Corner

The field PID data and the recently received laboratory data indicate that significant clean soil was reached in the excavation prior to contact with groundwater.

Conclusions

Soil contamination discontinued in the center of the excavation prior to contacting groundwater. The core of the contamination has been removed and is currently remediating on the well pad. Remaining wall contamination will remediate while the excavation remains open during the soil farm remediation process. CES believes that LDNG has adequately removed contaminated soil and sufficiently defined the vertical extent. CES ranks this site at 100 PPM cleanup score with a maximum benzene level of 10 PPM.

Recommendations

Remediate the soils contained in the soil farm to below 100 PPM laboratory TPH by EPA Method 418.1 or 8015 Modified for gas and diesel. Return the remediated soils to the pit area as backfill and slightly dome the area to prevent water ponding. A report on the findings should be presented to NMOCD for their records.

Contract Environmental Services, Inc. appreciates this opportunity to present this "Closure Report" on behalf of Louis Dreyfus Natural Gas Corporation. If you have questions or require additional information, please don't hesitate to contact our offices at (505) 325-1198 or stop by at 4200 Hawkins Road, Farmington.

Sincerely,

Shawn A. Adams
Contract Environmental Services, Inc.

cc: Mr. Denny Foust, NMOCD Farmington
Mr. Bill Liese, BLM Farmington

ENCLOSURE 2

MKL #2-R

[illegible]

CHAIN OF CUSTODY RECORD

4359

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 9/27/96

Page 1 of 1

Purchase Order No.:	Job No.		
SEND INVOICE TO: Name	Mike Rainwater	REPORT RESULTS TO: Name	Shawn Adams / Title
Company	Louis Dreyfus Natural Gas / Dept.	Company	Contract Env. Services
Address		Mailing Address	PO Box 505
City, State, Zip	Flora NM	City, State, Zip	Kirtland NM 87417
		Telephone No.	325-1198 / Telefax No.

Sampling Location: Louis Dreyfuss Soil Farms - Largo

Sampler: Jayson Blanchard

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	Reg. 4oz glass	TPH by 418.1	LAB ID
MKL-500 MKL-5 Soil Farm	9/27/96	1230pm	Soil	none	1	X	X	17360-4359
MKL-501 "	"	"	"	"	1	X	X	17361
MKL-502 "	"	"	"	"	1	X	X	17362
MKL-503 "	"	"	"	"	1	X	X	17363
Fed-600 Federal 6-32 Soil Farm	"	100pm	"	"	1	X	X	17364
Fed-601 "	"	"	"	"	1	X	X	17365
Fed-602 "	"	"	"	"	1	X	X	17366
MKL-200 MKL-2R Soil Farm	"	130pm	"	"	1	X	X	17367
MKL-201 "	"	"	"	"	1	X	X	17368
Miles-100 Miles Federal 1E Soil Farm	"	200pm	"	"	1	X	X	17369
Miles-101 "	"	"	"	"	1	X	X	17370
Miles-102 "	"	"	"	"	1	X	X	17371

ANALYSIS REQUESTED

Relinquished by: Jayson Blanchard	Date/Time 9/27/96 1300pm	Received by:	Date/Time 1/27/96 4 1:5
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: Jayson Blanchard (Client Signature Must Accompany Request) Date 9/27/96

Rush	24-48 Hours	10 Working Days	Special Instructions:

Distribution: White - LAB Pink – Sampler Goldenrod – Client

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

TOTAL PETROLEUM HYDROCARBONS

Attn:	*Shawn Adams*	*Date:*	1-Oct-96
Company:	*Contract Environmental Services, Inc.*	*COC No.:*	*4359*
Address:	*P.O. Box 505*	*Sample No.*	*12367*
City, State:	*Kirtland, NM 87417*	*Job No.*	*2-1000*

Project Name:	***Loius Dreyfus Natural Gas - MKL-2R Soil Farm***				
Project Location:	***MKL-200***				
Sampled by:	JB	Date:	27-Sep-96	Time:	13:30
Analyzed by:	DC/BV	Date:	30-Sep-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Detection Limit*	*Unit of Measure*	*Method*
Total Petroleum Hydrocarbons, TPH	46	25	mg/kg	EPA Method 418.1

Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	*Analyzed Value*	*Acceptable Range*	*Unit of Measure*
Laboratory Fortified Blank Soil - QCBS2	<25	<25	mg/kg
Laboratory Fortified Spike Soil - QCSS1	850	828 - 1024	mg/kg

Duplication

Laboratory Identification	*(% RSD)*	*Limit (% RSD)*
12328-3974	0.8	15.0

Approved by:

Date: 10/1/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

TOTAL PETROLEUM HYDROCARBONS

Attn:	*Shawn Adams*	*Date:*	1-Oct-96
Company:	*Contract Environmental Services, Inc.*	*COC No.:*	*4359*
Address:	*P.O. Box 505*	*Sample No.*	*12368*
City, State:	*Kirtland, NM 87417*	*Job No.*	*2-1000*

Project Name:	***Loius Dreyfus Natural Gas - MKL-2R Soil Farm***				
Project Location:	***MKL-201***				
Sampled by:	JB	Date:	27-Sep-96	Time:	13:30
Analyzed by:	DC/BV	Date:	30-Sep-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Detection Limit*	*Unit of Measure*	*Method*
Total Petroleum Hydrocarbons, TPH	505	25	mg/kg	EPA Method 418.1

Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	*Analyzed Value*	*Acceptable Range*	*Unit of Measure*
Laboratory Fortified Blank Soil - QCBS2	<25	<25	mg/kg
Laboratory Fortified Spike Soil - QCSS1	850	828 - 1024	mg/kg

Duplication

Laboratory Identification	*(% RSD)*	*Limit (% RSD)*
12368-4359	9.5	15.0

Approved by:

Date: 10/1/96

ENCLOSURE 3

MKL #2-R

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

December 06, 1999

Tommy H. Arnwine
Louis Dreyfus Natural Gas
P.O. Box 220
Flora Vista, NM 87415
TEL: (915) 387-5355
FAX (915) 387-3744

RE: Landfarms Order No.: 9911023

Dear Tommy H. Arnwine,

On Site Technologies, LTD. received 7 samples on 11/12/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Diesel Range Organics (SW8015B)
Gasoline Range Organics (SW8015B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD. **Date:** *06-Dec-99*

CLIENT: Louis Dreyfus Natural Gas
Project: Landfarms
Lab Order: 9911023

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

10421

CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: _____

Page: _____ of _____

Purchase Order No.:	Project No.		
SEND INVOICE TO: Name	Louise Dreyfus Natural Gas	REPORT RESULTS TO: Name	Title
Company	Dept.	Company	
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No.	Telefax No.

PROJECT LOCATION:

SAMPLER'S SIGNATURE:

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE PRES.	Number of Containers	8015 MOD GRO/DRO	BTEX	LAB ID
Land Farm MKL 5-A #1					X			9911023-01A
MKL 5-A #3					X			
Fed-6-32 #1					X			9911023-02A
" #2					X			
" #3					X			
Tribal 1-E #1					X			9911023-03A
#2					X			
#3					X			
MKL 2-R #1					X			9911023-04A

ANALYSIS REQUESTED

Relinquished by:	Date/Time	Received by: Heidi Reese	Date/Time 11/12/99 14
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Rush | | 24-48 Hours | | 10 Working Days | | By Date |

Authorized by: Mike Ramirez Date 11/12/99 2:15 PM
(Client Signature Must Accompany Request)

Special Instructions / Remarks:
RUN BTEX ONLY IF 8015 MOD PASSES
11/12/99

Distribution: White - On Site Yellow - LAB Pink - Sampler Goldenrod - Client

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *06-Dec-99*

Client:	Louis Dreyfus Natural Gas	**Client Sample Info:**	Landfarm
Work Order:	9911023	**Client Sample ID:**	MKL 2-R #1
Lab ID:	9911023-04A **Matrix:** SOIL	**Collection Date:**	11/12/99
Project:	Landfarms	**COC Record:**	10421-10422

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015B**				Analyst: **DM**
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	11/24/99
GASOLINE RANGE ORGANICS		**SW8015B**				Analyst: **DC**
T/R Hydrocarbons: C6-C10	ND	0.18		mg/Kg	1	11/16/99
GASOLINE RANGE ORGANICS		**SW8015B**				Analyst: **DM**
Benzene	ND	10		µg/Kg	1	11/16/99
Ethylbenzene	ND	10		µg/Kg	1	11/16/99
m,p-Xylene	ND	20		µg/Kg	1	11/16/99
o-Xylene	ND	20		µg/Kg	1	11/16/99
Toluene	ND	30		µg/Kg	1	11/16/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499