

District I

P.O. Box 1000, Santa Fe, NM 87504

District II

P.O. Box 1000, Santa Fe, NM 87504

District III

1000 Rio Brazos, Santa Fe, NM 87504

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
SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: Louis Dreyfus Natural Gas

Telephone: (915) 387-5355

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

Facility Or: Mudge "A" #9
Well Name

Location: Unit or Qtr/Qtr Sec 990' N/ 990' E Sec 6 T27N R11W County San Juan

Pit Type: Separator X Dehydrator Other

Land Type: BLM X, State , Fee , Other

Pit Location: Pit dimensions: length 27, width 27, depth 12
(Attach diagram)

Reference: wellhead X, other

Footage from reference: 15 feet

Direction from reference: 15 Degrees X East North X
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) 0

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) 0

Ranking Score (Total Points)

Date Remediation Started: 2-22-96

Dated Completed: 2-23-96

Remediation Method: Excavation ☒
(Check all appropriate sections)

Approx. cubic yards 324

Landfarmed ☐

Insitu Bioremediation ☐

Other ☐

Remediation Location: Onsite ☒ Offsite ☐
(ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action:

Contamination was remediated by Dilution and Aeration.

This report is for re-sample of completed remediation.

Ground Water Encountered:

No ☒

Yes ☐

Depth

Final Pit:

Closure Sampling:

(if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location See Attached

Sample depth See Attached

Sample date 7-9-97

Sample time

Sample Results

Benzene(ppm) See Attached

Total BTEX(ppm) See Attached

Field headspace(ppm) See Attached

TPH See Attached

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

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

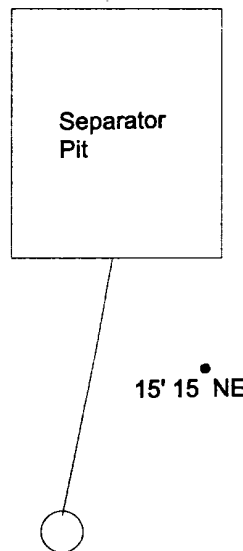
DATE 7-11-97

SIGNATURE

Tommy H. Arnwine

PRINTED NAME Tommy H. Arnwine A.S.P.
AND TITLE Environmental & Safety Director

LOUIS DREYFUS NATURAL GAS
SAN JUAN COUNTY, NEW MEXICO
MUDGE "A" #9
990°N/990°E S6 T27N R11W



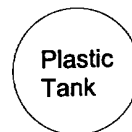
Original Pit Excavation:
Length 27 ft., Width 27 ft., Depth 12 ft

Re-Samples Taken at:
6 feet and 15 feet

Wellhead



Separator



ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Mudgc "A" 9
6 ft.

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

| | | | |
|--------------------|---------------------------|---------------------|----------|
| Client: | Louis Dreyfus Natural Gas | Project #: | 97300-26 |
| Sample ID: | 1 | Date Reported: | 07-10-97 |
| Laboratory Number: | B628 | Date Sampled: | 07-09-97 |
| Chain of Custody: | 5302 | Date Received: | 07-09-97 |
| Sample Matrix: | Soil | Date Analyzed: | 07-10-97 |
| Preservative: | Cool | Date Extracted: | 07-09-97 |
| Condition: | Cool & Intact | Analysis Requested: | BTEX |

| Parameter | Concentration (ug/Kg) | Det. Limit (ug/Kg) |
|--------------|--------------------------|--------------------------|
| Benzene | ND | 8.8 |
| Toluene | 10.9 | 8.4 |
| Ethylbenzene | ND | 7.6 |
| p,m-Xylene | 17.3 | 10.8 |
| o-Xylene | 11.4 | 5.2 |
| Total BTEX | 39.6 | |

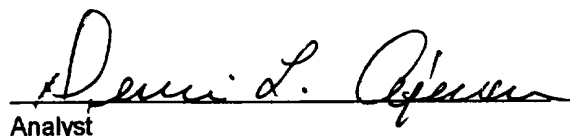
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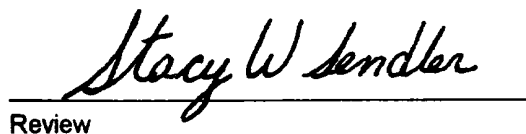
| Surrogate Recoveries: | Parameter | Percent Recovery |
|-----------------------|--------------------|------------------|
| | Trifluorotoluene | 96 % |
| | Bromofluorobenzene | 96 % |

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1994.

Comments: NAPI.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Mudge "A" 9
15 ft.

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

| | | | |
|--------------------|---------------------------|---------------------|----------|
| Client: | Louis Dreyfus Natural Gas | Project #: | 97300-26 |
| Sample ID: | 2 | Date Reported: | 07-10-97 |
| Laboratory Number: | B629 | Date Sampled: | 07-09-97 |
| Chain of Custody: | 5302 | Date Received: | 07-09-97 |
| Sample Matrix: | Soil | Date Analyzed: | 07-10-97 |
| Preservative: | Cool | Date Extracted: | 07-09-97 |
| Condition: | Cool & Intact | Analysis Requested: | BTEX |

| Parameter | Concentration (ug/Kg) | Det. Limit (ug/Kg) |
|--------------|--------------------------|--------------------------|
| Benzene | ND | 8.7 |
| Toluene | 15.8 | 8.3 |
| Ethylbenzene | 16.0 | 7.6 |
| p,m-Xylene | 32.9 | 10.8 |
| o-Xylene | 20.2 | 5.2 |
| Total BTEX | 84.9 | |

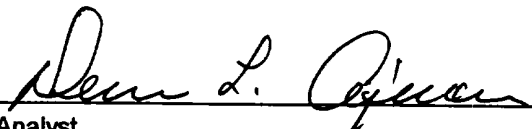
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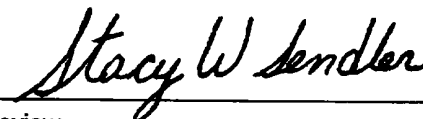
| Surrogate Recoveries: | Parameter | Percent Recovery |
|-----------------------|--------------------|------------------|
| | Trifluorotoluene | 101 % |
| | Bromofluorobenzene | 101 % |

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1994.

Comments: NAPI.


Analyst


Review

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Mudc "A" 9
6 ft.

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

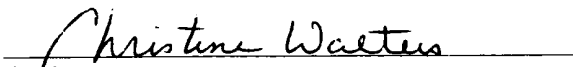
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|----------------------|---------------------------|------------------|-----------|
| Client: | Louis Dreyfus Natural Gas | Project #: | 97300-26 |
| Sample ID: | 1 | Date Reported: | 07-10-97 |
| Laboratory Number: | B628 | Date Sampled: | 07-09-97 |
| Chain of Custody No: | 5302 | Date Received: | 07-09-97 |
| Sample Matrix: | Soil | Date Extracted: | 07-10-97 |
| Preservative: | Cool | Date Analyzed: | 07-10-97 |
| Condition: | Cool and Intact | Analysis Needed: | TPH-418.1 |

| Parameter | Concentration (mg/kg) | Det. Limit (mg/kg) |
|------------------------------|--------------------------|--------------------------|
| Total Petroleum Hydrocarbons | 62.3 | 5.0 |

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: NAPI.


Analyst


Review

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Mudge "A" 9
15th
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

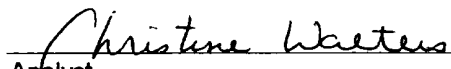
| | | | |
|----------------------|---------------------------|------------------|-----------|
| Client: | Louis Dreyfus Natural Gas | Project #: | 97300-26 |
| Sample ID: | 2 | Date Reported: | 07-10-97 |
| Laboratory Number: | B629 | Date Sampled: | 07-09-97 |
| Chain of Custody No: | 5302 | Date Received: | 07-09-97 |
| Sample Matrix: | Soil | Date Extracted: | 07-10-97 |
| Preservative: | Cool | Date Analyzed: | 07-10-97 |
| Condition: | Cool and Intact | Analysis Needed: | TPH-418.1 |

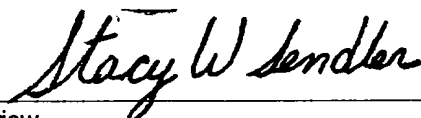
| Parameter | Concentration (mg/kg) | Det. Limit (mg/kg) |
|------------------------------|--------------------------|--------------------------|
| Total Petroleum Hydrocarbons | ND | 5.0 |

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: **NAPI.**


Analyst


Review

CHAIN OF CUSTODY RECORD

| Client/Project Name | | Project Location | | ANALYSIS/PARAMETERS | | | | | | | | | |
|---|-------------|---------------------------------------|------------|---------------------|-------------------|--|------|----------------|--|---------------|---------|--|--|
| Louis Dreyfus Natural Gas | | WAPI | | | | | | | | | | | |
| Sampler: (Signature) <i>Samy W. Chumie</i> | | Chain of Custody Tape No. 97300-26 | | | | | | | | | | | |
| Sample No./ Identification | Sample Date | Sample Time | Lab Number | Sample Matrix | No. of Containers | 8724 (8020) | 7014 | 11811 | | | Remarks | | |
| 1 A9 | 7-9-97 | 9:00 | B628 | Sol | 1 | ✓ | ✓ | ✓ | | | | | |
| 2 A9 | 7-9-97 | 11:05 | B629 | | 1 | ✓ | ✓ | ✓ | | | | | |
| 3 A5 | 7-9-97 | 11:20 | B630 | | 1 | ✓ | ✓ | ✓ | | | | | |
| 4 A5 | 7-9-97 | 11:25 | B631 | | 1 | ✓ | ✓ | ✓ | | | | | |
| 5 A7 | 7-9-97 | 11:40 | B632 | | 1 | ✓ | ✓ | ✓ | | | | | |
| 6 A7 | 7-9-97 | 11:50 | B633 | | 1 | ✓ | ✓ | ✓ | | | | | |
| 7 A8 | 7-9-97 | 12:05 | B634 | | 1 | ✓ | ✓ | ✓ | | | | | |
| 8 A8 | 7-9-97 | 12:30 | B635 | | 1 | ✓ | ✓ | ✓ | | | | | |
| Samples received cool & intact | | | | | | | | | | | | | |
| Relinquished by: (Signature) <i>Samy W. Chumie</i> | | Date 7-9-97 | | Time 13:58 | | Received by: (Signature) <i>Steven L. Oglevee</i> | | Date 7-9-97 | | Time 13:58 | | | |
| Relinquished by: (Signature) | | | | | | Received by: (Signature) | | | | | | | |
| Relinquished by: (Signature) | | | | | | Received by: (Signature) | | | | | | | |

ENVIROTECH INC.

5796 U.S. Highway 64-3014

Farmington, New Mexico 87401

(505) 632-0615

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

July 16, 1997

Mr. Tommy H. Arnwine
Louis Dreyfus Natural Gas Company
P.O. Box 525
Sonora, Texas 76950-0525

(915) 387-6355
fax (915) 387-3744

Project No.: 97300-26

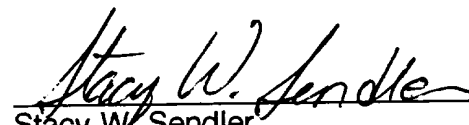
Dear Mr. Arnwine,

Enclosed are the analytical results for the samples taken from the location identified as "NAPI". Eight soil samples were collected from the referenced location by Louis Dreyfus Natural Gas Company personnel 07/09/97, and delivered to the Envirotech Laboratory on 07/09/97 for Total Petroleum Hydrocarbon (TPH) analysis per USEPA Method 418.1, modified for soil, and for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) analysis per USEPA Method 8020.

The samples were documented on Envirotech Chain of Custody No. 5302, and assigned sequential Laboratory Nos. B628 (Sample No. 1) through B635 (Sample No. 8) for tracking purposes.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615.

Respectfully Submitted,
Envirotech, Inc.


Stacy W. Sandler
Environmental Scientist/Laboratory Manager

enclosure

SWS/sws

97300-26/lb1.wpd