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
Olson
9/7/20

PIT REMEDIATION AND CLOSURE REPORT

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

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

Facility Or: Fed. 6-32
Well Name

Location Unit or Qtr/Qtr Sec SW/SE Sec 6 T 26N R07W County Rio Arriba

Pit Type: Separator Dehydrator Other

Land Type: BLM ,State ,Fee , Other

RECEIVED
JAN 2020
OIL CON. DIV.
DIST. 3

Pit Location: (Attach diagram)
Pit dimensions: length 35 , width 25 , depth 12

Reference: wellhead X , Other

Footage from reference: 100 ft.

Direction from reference: Degrees 150° 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: 10-4-95 Date completed: 12-6-99

Remediation Method: (Check all appropriate sections)
Excavation X Approx. cubic yards 388
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 land farm areas. Turn soil and fertilize periodically and sample.

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 X 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 1-17-2000

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

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

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

Louis Dreyfus Natural Gas

January 17, 2000

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

Re: Federal 6-32
Section 6, T26N, R07W, SW/NE
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.

Our initial sampling of the monitor well was within limits outlined by State of New Mexico and BLM guidelines (See Enclosure #1). We received a verbal approval to cease sampling of these wells at that time. LDNG proposes to grout the sample well to surface and abandon.

Excavation was not complete, however a report (See Enclosure #2) 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 June of 1998 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.

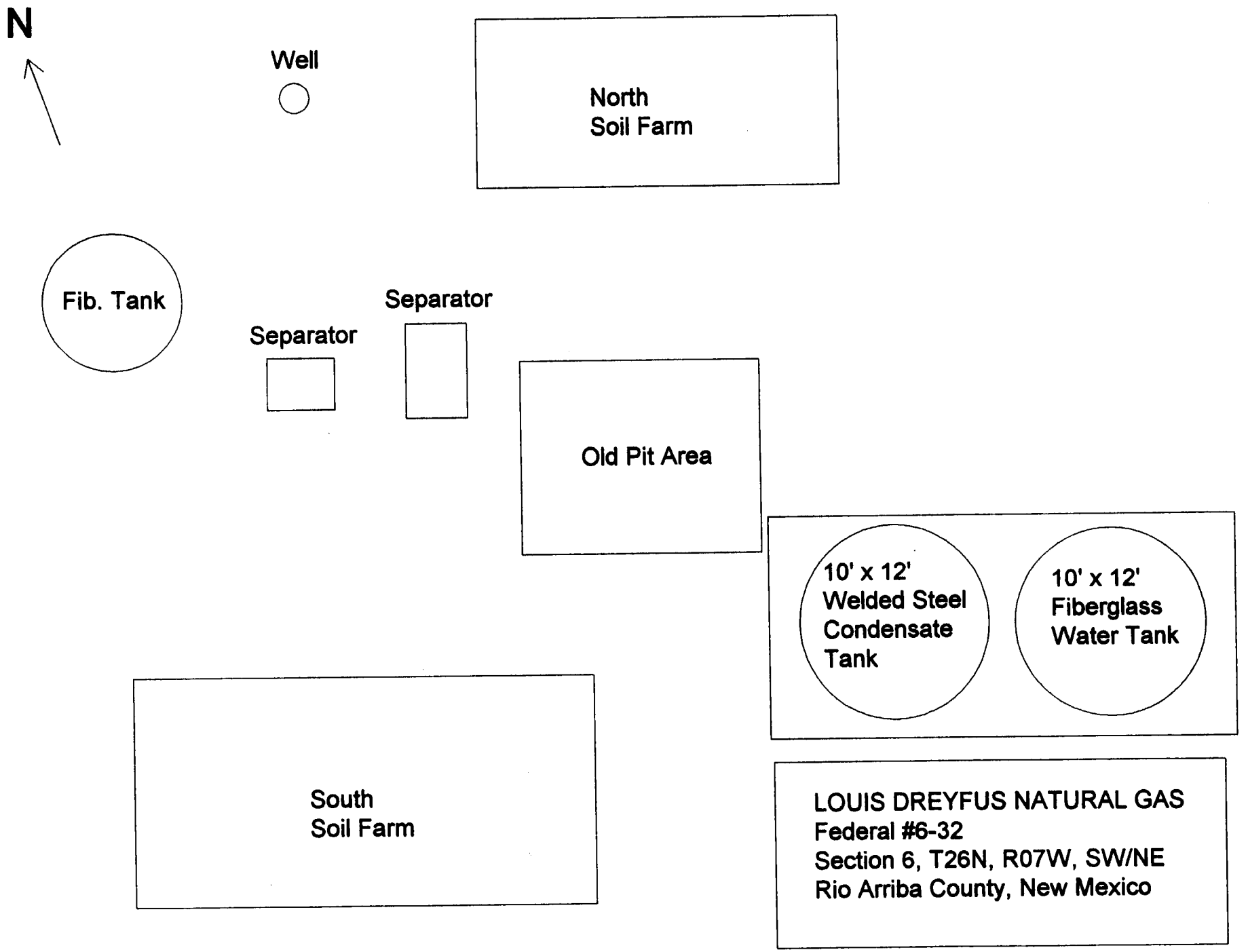
Soil samples tested below required 100 ppm in Gasoline and Diesel Ranges for both soil farms.

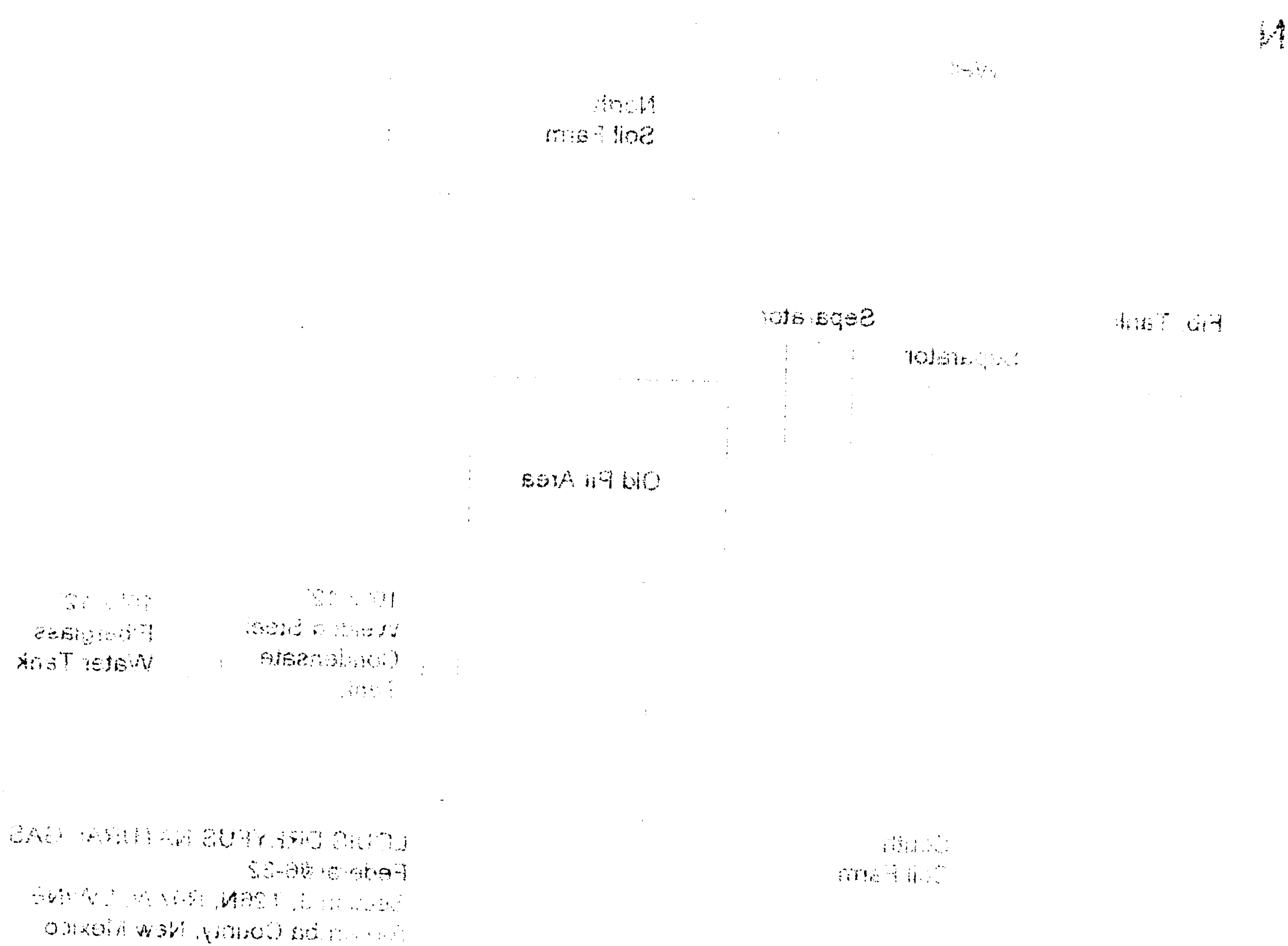
Supporting data for all lab analysis are enclosed and are true and accurate to the best of knowledge. If further information is required, please contact me at (915)387-5355.

Thank you,

Tommy H. Arnwine
Environmental & Safety Director

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


N
Well
North
Soil Farm
Fib. Tank
Separator
Separator
Old Pit Area
10' x 12'
Welded Steel
Condensate
Tank
10' x 12'
Fiberglass
Water Tank
South
Soil Farm
LOUIS DREYFUS NATURAL GAS
Federal #6-32
Section 6, T26N, R07W, SW/NE
Rio Arriba County, New Mexico


North
Soil Farm
Separator
Separator
Old Pit Area
Condensate
Water Tank
County, New Mexico

ENCLOSURE #1

MONITOR WELL DATA

FEDERAL 6-32

ENCLOSURE #1

MONITOR WELL DATA

FEDERAL 6-32

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

January 21, 1996

Louis Dreyfus Natural Gas Co.
Mr. Gene Simer
Post Office Box 370
Carlsbad, New Mexico 88221

RE: Federal #6-32 (Sec 06, T26N, R07W) Monitor Well

Dear Mr. Simer,

Contract Environmental Services, Inc. (CES) is pleased to present this letter report on the installation of a monitoring well for the Federal #6-32 well location. This report includes background information, scope of services, field test data, laboratory data, conclusions and recommendations.

Background Information

On October 4, 1995 CES began excavating contaminated soil from the separator pit on the above referenced well location. The excavation was recently completed with an approximate 150 cubic yards of contaminated soil removed. The soil removed was evenly distributed on the surface where it could be soil farmed until remediated. On October 19, 1995 CES issued a technical report presenting the findings of this investigation. On December 4, 1995 CES installed one monitor well in the anticipated downgradient direction from the excavation. The following day the monitor well was developed and sampled.

Scope Of Services

CES with the help of Phillip Environmental installed the monitor well to a depth of approximately 37 feet. The monitor well is located 8' from the northwest corner of the excavation (Please see attached Figure 1). The bottom 15' of the 4" PVC pipe was slotted (Please see attached Figure 2) and the top 22' was completed with unscreened PVC pipe. The bottom of the monitor well has a 4" screw-on plug that prevents sediments from entering the bottom of the well. All of the joints were composed of screw-together threads. Silica sand was backfilled 2' above the slotted interval. Above the sand a 2' bentonite plug was placed. The remainder of the open hole was grouted to within 2' of groundlevel. From this point to the surface, the PVC pipe was cemented in place. A riser was left on the monitoring well approximately 3' above ground level. T-posts and fluorescent flagging was placed on all sides of the monitor well to protect it before leaving.

The monitor well was developed until the muddy water cleared up prior to sampling. An estimated five volumes of water were removed before collection for laboratory analyses. Water samples were gathered to be analyzed for Benzene, Toluene, Ethylbenzene, Xylenes (BTEX); Metals; Cations / Anions; and Polyaromatic Hydrocarbons (PAH). All water was analyzed using EPA Test Methods.

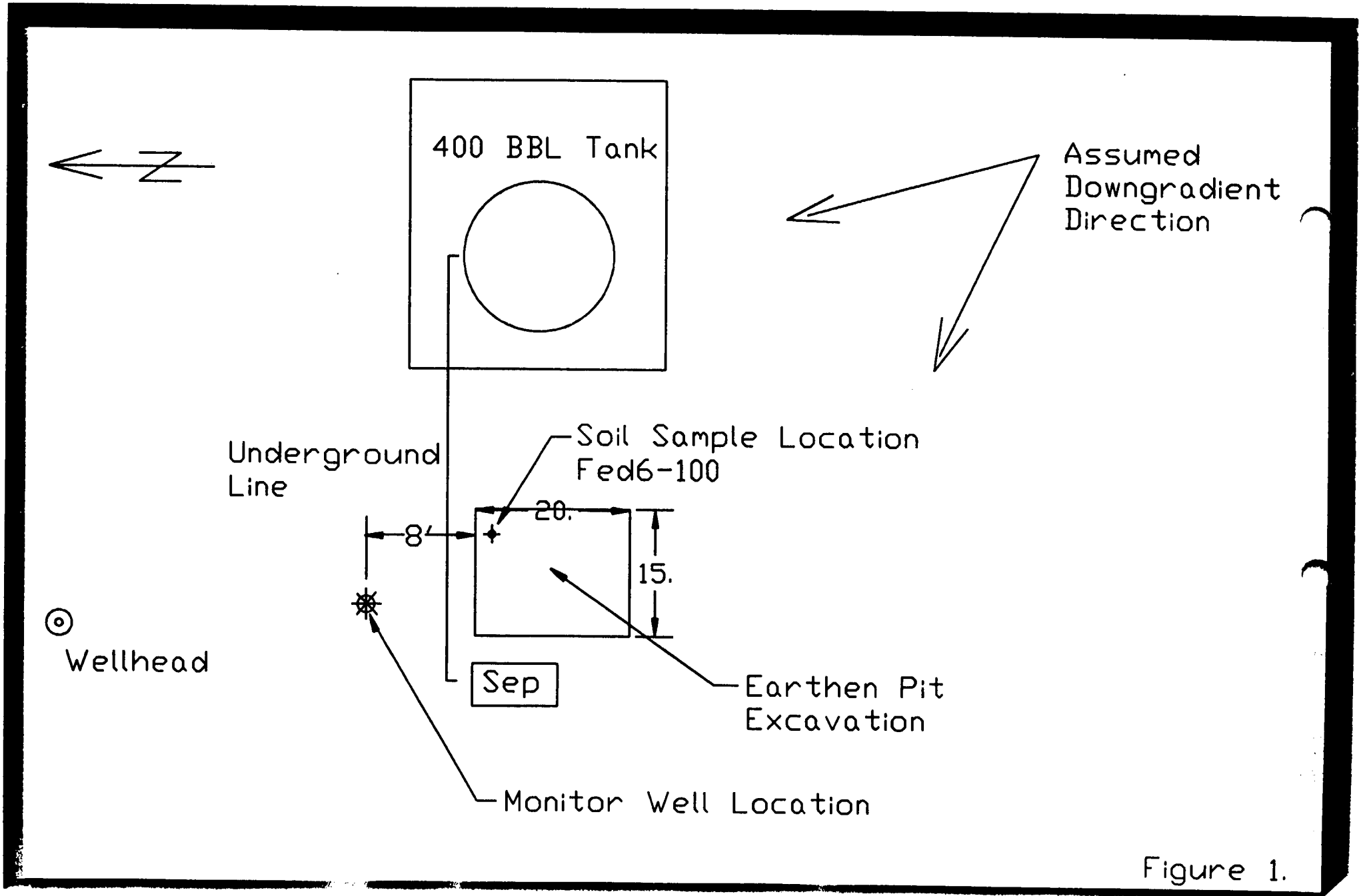
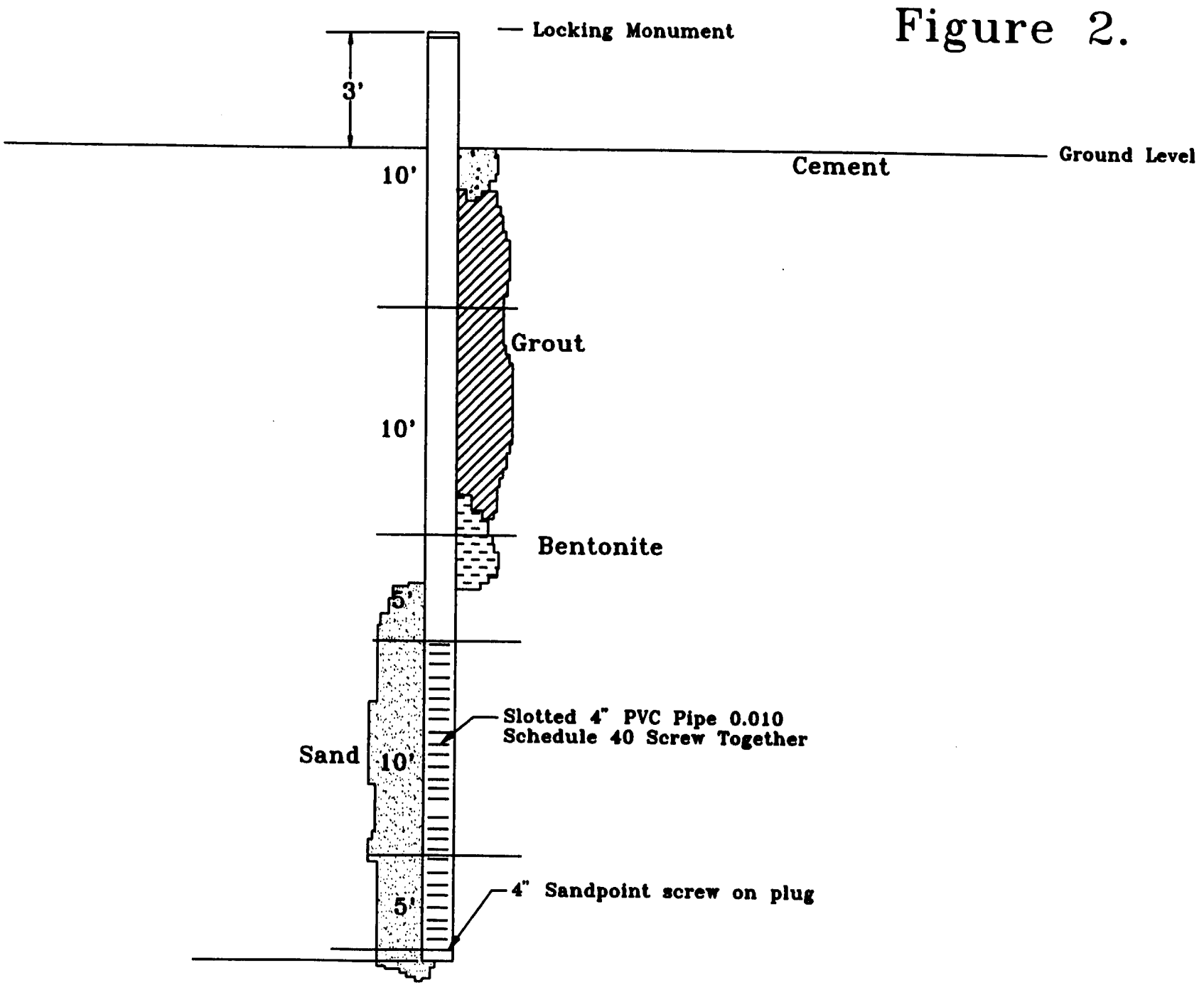

400 BBL Tank
Assumed
Downgradient
Direction
Underground
Line
Soil Sample Location
Fed6-100
20.
8'
15.
Wellhead
Sep
Earthen Pit
Excavation
Monitor Well Location

Figure 1.

Figure 2.


Locking Monument
3'
Ground Level
Cement
10'
Grout
10'
Bentonite
5'
Slotted 4" PVC Pipe 0.010
Schedule 40 Screw Together
Sand
10'
5'
4" Sandpoint screw on plug

During the drilling operations, soil samples were gathered approximately every 5' of depth. Samples were collected from split-spoon samplers driven 24" into the soil. The soil was placed in baggies and tested with the PID Meter for hydrocarbons. The depth to water from the top of the casing riser measured 20'-11 5/8". Considering the height of the riser, that makes the first measured depth to groundwater approximately 18'.

Field Test Data

Field data collected during the drilling process included soil samples tested with a Photo-Ionization Detector (PID) Meter. The field data gathered is presented in the following Table.

Table 1-1.

Sample No.	Depth	PID(PPM)
1	3.5-5.5'	7.8
2	8.5-10.5'	1.5
3	13.5-15.5'	8.0
4	18.5-20.5'	7.1

Water encountered next sampling interval

Laboratory Data

The laboratory data gathered is summarized in the following Table. Individual laboratory reports are attached for your viewing.

Table 1-2.

Sample No.	Description		(Units)	
Fed6-404	BTEX EPA Method 602.2	B	ND	PPB
		T	ND	PPB
		E	ND	PPB
		X	1.08	PPB
Fed6-405	Metals EPA Method 600/4	Arsenic	<0.005	PPM
		Barium	<0.25	PPM
		Cadmium	<0.002	PPM
		Chromium	<0.02	PPM
		Lead	<0.005	PPM
		Mercury	<0.001	PPM
		Selenium	<0.006	PPM
		Silver	<0.01	PPM
Fed6-406	Cation / Anion EPA Method 8310	Total Hardness	101	PPM
		Calcium	28.3	PPM
		Magnesium	7.36	PPM
		Potassium	<5.0	PPM
		Sodium	780	PPM
		Iron	0.05	PPM
		Total Alkalinity	497	PPM
		Bicarbonate	497	PPM

		Chloride	20.0	PPM
		Sulfate	1,360	PPM
	Cation / Anion Difference = 3.82			
Fed6-407	Polynuclear Aromatic Hydrocarbons	Acenaphthene	<2.13	PPB
		Acenaphthylene	<3.74	PPB
		Anthracene	<1.49	PPB
		Benzo(a)anthracene	<0.88	PPB
		Benzo(a)pyrene	<0.39	PPB
		Benzo(b)fluoranthene	<0.19	PPB
		Benzo(k)Fluoranthene	<0.34	PPB
		Benzo(ghi)perylene	<1.23	PPB
		Chrysene	<0.88	PPB
		Dibenzo(a,h)anthracene	<0.72	PPB
		Fluoranthene	<0.15	PPB
		Fluorene	<1.29	PPB
		Indeno(1,2,3-cd)pyrene	<1.05	PPB
		Naphthalene	<5.82	PPB
		Phenanthrene	<1.22	PPB
		Pyrene	<0.13	PPB

Conclusions

Water data for BTEX was below New Mexico Drinking Water Standards as outlined in NMED Drinking Water Regulations (Title 20, Chapter 7, Part 1). Large numbers were found in the following concentrations, Sodium, Alkalinity, Sulfate. These values are to be considered normal for water found in a wash bottom such as this.

Recommendations

As confirmed with NMOCD, CES recommends that a second interval of BTEX water analyses should be collected from the monitor well within 60 days. If the BTEX concentration is below groundwater standards as found in this first interval, the monitoring well should be grouted to the surface and abandoned. "No Further Action" would be applied for to NMOCD for groundwater remediation. The contaminated soil in the soil farm should be regularly tilled as the weather warms until it has been reduced to less than 100 PPM from a laboratory TPH analysis. The excavation could then be backfilled and a "Closure Package" prepared for distribution to NMOCD.

Contract Environmental Services, Inc. appreciates this opportunity to present this letter report on the Federal # 6-32 to Louis Dreyfus Natural Gas. 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.

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Contract Environmental Services, Inc.

Project ID:	Largo Wells	Report Date:	12/09/95
Sample ID:	404 - 407	Date Sampled:	12/05/95
Lab ID:	2066	Date Received:	12/05/95
Sample Matrix:	Water	Date Analyzed:	12/08/95
Preservative:	Cool		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	1.08	1.00
o-Xylene	ND	0.50
Total BTEX	**1.08**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	100	88 - 110%
Bromofluorobenzene	86	86 - 115%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

Total Metals Analysis
Contract Environmental Services, Inc.

Project ID:	Largo Wells	Date Reported:	01/09/96
Sample ID:	404 - 407	Date Sampled:	12/05/95
Laboratory ID:	2066	Time Sampled:	NA
Sample Matrix:	Water	Date Received:	12/05/95

Parameter	Analytical Result (mg/L)	Units
Trace Metals		
Arsenic	< 0.005	mg/L
Barium	< 0.25	mg/L
Cadmium	< 0.002	mg/L
Chromium	< 0.02	mg/L
Lead	< 0.005	mg/L
Mercury	< 0.001	mg/L
Selenium	0.006	mg/L
Silver	< 0.01	mg/L

Reference: U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Comments:

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

API Suite

Contract Environmental Services, Inc.

Project ID:	Largo Wells	Date Reported:	01/09/96
Sample ID:	404 - 407	Date Sampled:	12/05/95
Laboratory ID:	2066	Time Sampled:	NA
Sample Matrix:	Water	Date Received:	12/05/95

Parameter		Analytical Result	Units
General	Lab pH	7.8	s.u.
	Lab Conductivity @ 25° C	3,590	µmhos/cm
	Total Dissolved Solids @ 180°C	2,530	mg/L
	Total Dissolved Solids (Calc)	2,500	mg/L
	Specific Gravity	1.005	***
Anions	Total Alkalinity as $CaCO_3$	497	mg/L
	Bicarbonate Alkalinity as $CaCO_3$	497	mg/L
	Carbonate Alkalinity as $CaCO_3$	NA	mg/L
	Hydroxide Alkalinity as $CaCO_3$	NA	mg/L
	Chloride	20.0	mg/L
	Sulfate	1,360	mg/L
	Nitrate + Nitrite - N	NA	
	Nitrate - N	NA	
	Nitrite - N	NA	
Cations	Total Hardness as $CaCO_3$	101	mg/L
	Calcium	28.3	mg/L
	Magnesium	7.36	mg/L
	Potassium	< 5.0	mg/L
	Sodium	780	mg/L
	Iron	0.05	mg/L
Data Validation			Acceptance Level
	Cation/Anion Difference	3.82	+/- 5 %
	TDS (180):TDS (calculated)	1.0	1.0 - 1.2

Reference U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

Polyaromatic Hydrocarbons
EPA Method 8310

Contract Environmental Services, Inc.

Project ID:	Largo Wells	Report Date:	01/05/96
Sample ID:	404 - 407	Date Sampled:	12/05/95
Lab ID:	2066	Date Received:	12/05/95
Sample Matrix:	Water	Date Extracted:	12/11/95
Preservative:	Cool	Date Analyzed:	12/21/95
Condition:	Intact		

Target Analyte	Concentration (µg/L)
Acenaphthene	< 2.13
Acenaphthylene	< 3.74
Anthracene	< 1.49
Benzo(a)anthracene	< 0.88
Benzo(a)pyrene	< 0.39
Benzo(b)fluoranthene	< 0.19
Benzo(k)fluoranthene	< 0.34
Benzo(ghi)perylene	< 1.23
Chrysene	< 0.88
Dibenzo(a,h)anthracene	< 0.72
Fluoranthene	< 0.15
Fluorene	< 1.29
Indeno(1,2,3-cd)pyrene	< 1.05
Naphthalene	< 5.82
Phenanthrene	< 1.22
Pyrene	< 0.13

Reference: EPA Method 8310: Polynuclear Aromatic Hydrocarbons .

Review

ANALYTICA
ENVIRONMENTAL LABORATORY
807 S. CARLTON • FARMINGTON, NM 87401 • (505) 326-2395

CHAIN OF CUSTODY

Page _____ of _____

PROJECT MANAGER: [redacted]
Analytica Lab I.D.: [redacted]

Company: Cortland Env. Serv.
Address: PO Box 505
Kirtland NM
Phone: 325-1198
Fax:

Bill To: Louis Dreyfus Natl
Company: PO Box
Address: Farmington NM 87499

Sample ID	Date	Time	Matrix	Lab ID	Petroleum Hydrocarbons (418.1)	Gasoline / Diesel (mod. 8015)	Gasoline (GRO)	Aromatic HCs BTEX/MTBE (602 / 8020)	Chlorinated Hydrocarbons (8010)	SDWA Volatiles (502.1 / 503.1)	Chlorinated Pesticides / PCBs (608 / 8080)	Herbicides (615 / 8150)	Volatiles GC/MS (624 / 8240 / 8260)	Base / Neutral / Acid GC/MS (625 / 8270)	Polynuclear Aromatic Hydrocarbons (8100)	TCLP Extraction	Other (specify):	Cation / Anion	Specific Cations (specify):	Specific Anions (specify):	BOD / Fecal / Total Coliform	Solids: TDS / TSS / SS	Nutrients: NH4+ / NO2- / NO3- / TKN	Oil and Grease	Other (specify):	Priority Pollutants	RCRA Metals (Total) Dissolved	RCRA Metals TCLP (1311)	Other (specify):
400-403	12-5-95		water					X							X			X									X		
404-407	"		"					X							X			X									X		
408-411	"		"					X							X			X									X		

Project Information	Sample Receipt
Proj. #:	No. Containers:
Proj. Name: La-go Wells	Custody Seals: Y / N / NA
P. O. No:	Received Intact:
Shipped Via:	Received Cold:

Required Turnaround Time (Prior Authorization Required for Rush)

Sampled By:	Relinquished By:	Relinquished By:
Signature: [signature] Date: 12-5-95	Signature: Date:	Signature: Date:
Company: Cortland Env. Serv. Time:	Company: Time:	Company: Time:
Received By:	**Received By:**	**Received By:**
Signature: Date:	Signature: Date:	Signature: [signature] Date: 12-5
Company: Time:	Company: Time:	Company: Analytica Time: 4:30

Please Fill Out Thoroughly.

Shaded areas for lab use only.

White/Yellow: Analytica
Pink: Client

ENCLOSURE #2

PIT EXCAVATIION DATA

FEDERAL 6-32

ENCLOSURE #2

PIT EXCAVATION DATA

FEDERAL 6-32

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, Federal #6-32, Sec 6, T26N, R07W SW/NE, Rio Arriba County, New Mexico

Dear Mr. Olson,

Contract Environmental Services, Inc. (CES) is pleased to present this "Plan of Action" for the Federal # 6-32 well location on behalf of Louis Dreyfus Natural Gas Corporation (LDNG). This plan contains background information, current site assessment data, a site plan, conclusions and a "Plan of Action".

Background Information

On October 4, 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 70 cubic yards of contaminated soil was removed from the pit area during the excavation process. At a depth of 17' a field PID soil sample indicated that the contaminated soil had not been removed. A confirmation laboratory soil sample was gathered to be processed for Total Petroleum Hydrocarbons (TPH) using EPA Method 418.1. This laboratory soil analysis confirmed that uncontaminated soil had not 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 a berm and fence around storage tanks prevents further excavation in that direction. The separator was located on the west side of the excavation. Underground lines and surface equipment prevented further excavation in at least three of the four directions. Leaving the excavation open for an extended period of time will enable the contaminate wall soil 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	2000+	Center of Pit
10'	#3	2000+	Center of Pit
14'	#4	2000+	Center of Pit
17'	#5	2000+	Center of Pit

Laboratory Data Collected

Depth	Sample No.	PID(PPM)	Location
17'	FED6-100	3,050	Northeast Corner

Conclusions

Soil contamination continued beyond the digging ability of the equipment used. Remaining wall contamination will remediate while the excavation remains open during the soil farm remediation process. CES believes that LDNG has not removed the majority of the contaminated soil or sufficiently defined the vertical extent. CES ranks this site at 100 PPM cleanup score with a maximum benzene level of 10 PPM. The amount of impact to the groundwater is unknown at this point.

Plan of Action

Continue removing the contaminated soils from the excavation, move in a lateral direction testing the excavation walls as the digging proceeds. Remove the contamination in the excavation walls until the PID Meter indicates below 100 PPM. 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. Auger in a monitor well approximately 5' into the groundwater in a downgradient direction from the excavation. A water sample will be collected from this monitor well after the standard 3 volumes of water have been extracted. The water sample will be analyzed for Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) using EPA Method 8020. Return the remediated soils to the pit area as backfill and slightly dome the area to prevent water ponding. In addition, the soils will be checked for contamination approximately every 4' during the drilling process while installing the monitor well. A report on the finding will be presented to NMOCD for their records.

Contract Environmental Services, Inc. appreciates this opportunity to present this "Plan of Action" 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

CHAIN OF CUSTODY RECORD

4307

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: SHAWN ADAMS
Company: CONTRACT ENVIRONMENTAL SERVICES, INC.
Address: PO BOX 505
City, State, Zip: KIRTLAND NM 87417

REPORT RESULTS TO
Name | Title
Company
Mailing Address
City, State, Zip
Telephone No. | Telefax No.

Sampling Location: S. Land 6-32 MKL-5

Sampler: SADAMS

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	HOLD	EPA 418.1	BTEX by EPA	LAB ID
MKL 5-200 MKL #5	9/26/96	2:02	SOIL	ICE	1		X	X	X	
FED-6-200 Final #6-32	9/26/96	3:32	SOIL	ICE	1		X	X	X	
				2:28						

Relinquished by: [signature] Date/Time 9/27/96
Relinquished by: Date/Time
Relinquished by: Date/Time

Received by: Date/Time
Received by: Date/Time
Received by: Date/Time

Method of Shipment:

Authorized by: SADAMS Date 9/27
(Client Signature Must Accompany Request)

Rush: 24 HR TAT AS DISCUSSED | 24-48 Hours | 10 Working Days | Special Instructions:

White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

TOTAL PETROLEUM HYDROCARBONS

Attn:	*Shawn Adams*	*Date:*	27-Sep-96
Company:	*Contract Environmental Services, Inc.*	*COC No.:*	*4307*
Address:	*P.O. Box 505*	*Sample No.*	*12358*
City, State:	*Kirtland, NM 87417*	*Job No.*	*2-1000*

Project Name:	***Federal #6-32***				
Project Location:	***FED-600***				
Sampled by:	SA	Date:	26-Sep-96	Time:	15:30
Analyzed by:	HR	Date:	27-Sep-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Detection Limit*	*Unit of Measure*	*Method*
Total Petroleum Hydrocarbons, TPH	1779	25	mg/kg	EPA Method 418.1

Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

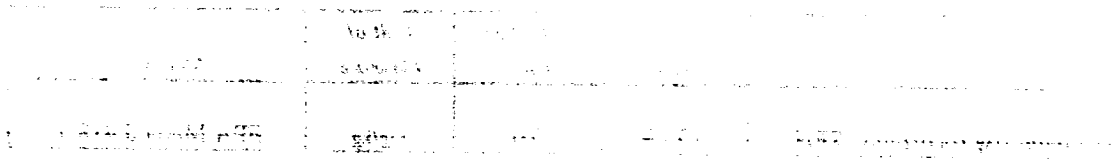
Laboratory Identification	*Analyzed Value*	*Acceptable Range*	*Unit of Measure*
Laboratory Fortified Blank Soil - QCBS2	<25	<25	mg/kg
Laboratory Fortified Spike Soil - QCSS1	893	828 - 1024	mg/kg

Duplication

Laboratory Identification	*(% RSD)*	*Limit (% RSD)*
12357-4307	1.7	15.0

Approved by: JAC

Date: 9/30/96



OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn:	*Shawn Adams*	Date:	1-Oct-96
Company:	*Contract Environmental Services, Inc.*	*COC No.:*	*4307*
Address:	*P.O. Box 505*	*Sample No.*	*12358*
City, State:	*Kirtland, NM 87417*	*Job No.*	*2-1000*

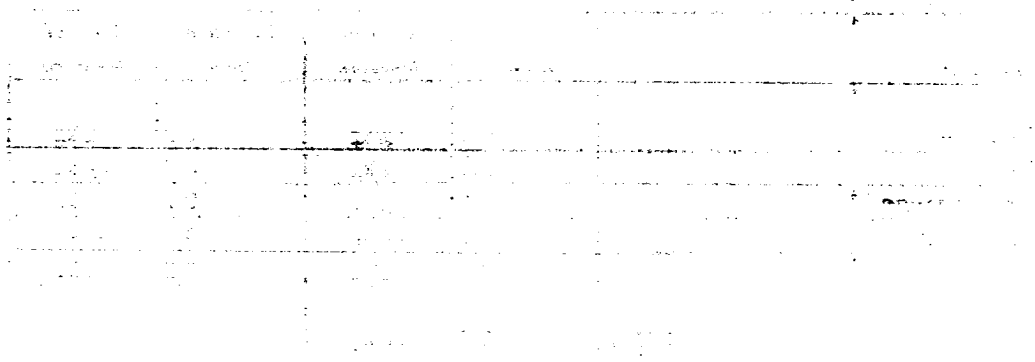
Project Name:	***Federal #6-32***				
Project Location:	***FED-600***				
Sampled by:	SA	Date:	26-Sep-96	Time:	15:30
Analyzed by:	DC	Date:	30-Sep-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	<0.2	ug/kg	0.2	ug/kg
Toluene	2.5	ug/kg	0.2	ug/kg
Ethylbenzene	1.5	ug/kg	0.2	ug/kg
m,p-Xylene	2.2	ug/kg	0.2	ug/kg
o-Xylene	0.6	ug/kg	0.2	ug/kg
TOTAL	6.8	ug/kg		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by:
Date: 10/1/96



OFF: (505) 325-5667

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AROMATIC VOLATILE ORGANICS

Attn:	*Shawn Adams*	Date:	1-Oct-96
Company:	*Contract Environmental Services, Inc.*	*COC No.:*	*4307*
Address:	*P.O. Box 505*	*Sample No.*	*12358*
City, State:	*Kirtland, NM 87417*	*Job No.*	*2-1000*

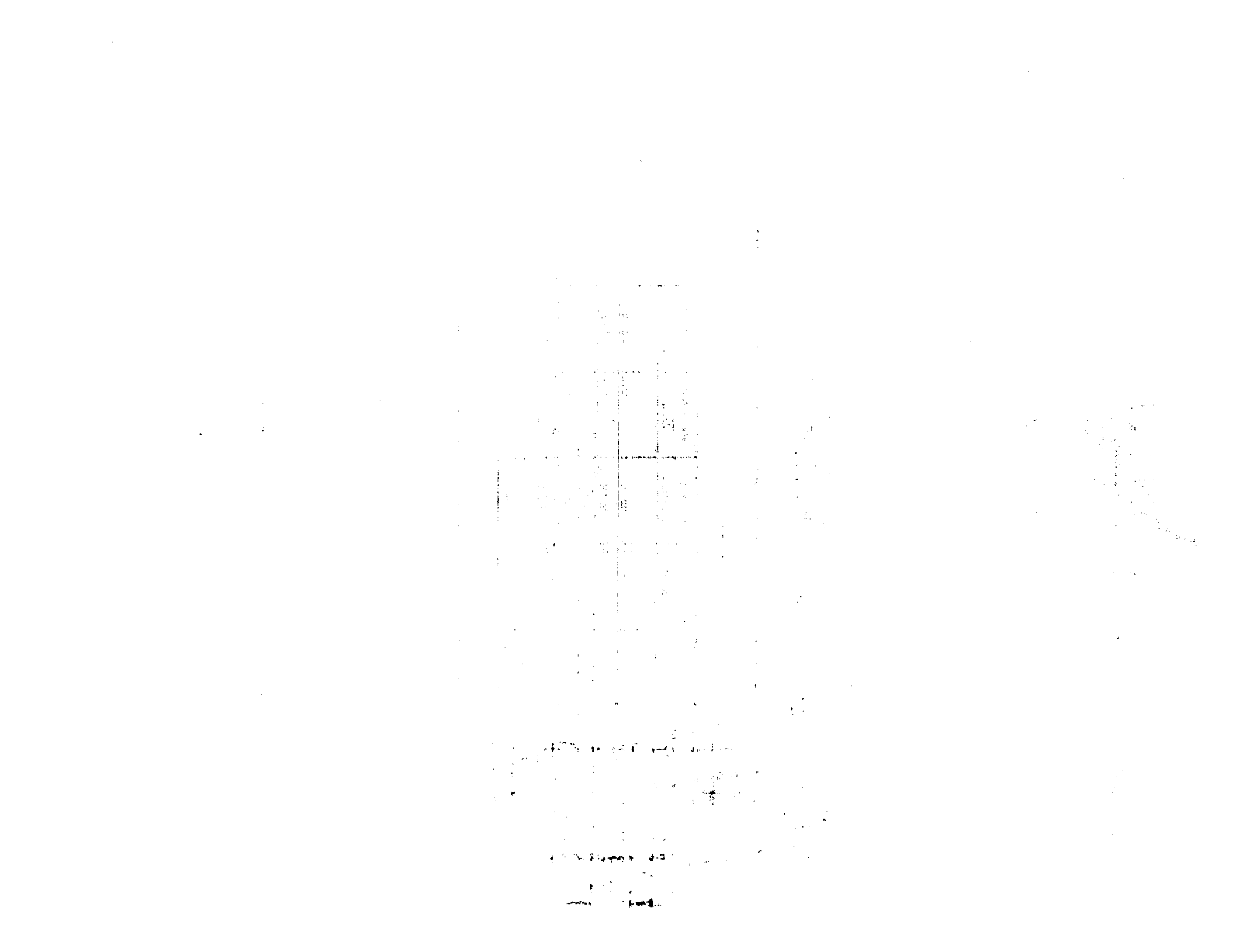
Project Name:	***Federal #6-32***				
Project Location:	***FED-600***				
Sampled by:	SA	Date:	26-Sep-96	Time:	15:30
Analyzed by:	DC	Date:	30-Sep-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	<0.2	ug/kg	0.2	ug/kg
Toluene	2.5	ug/kg	0.2	ug/kg
Ethylbenzene	1.5	ug/kg	0.2	ug/kg
m,p-Xylene	2.2	ug/kg	0.2	ug/kg
o-Xylene	0.6	ug/kg	0.2	ug/kg
TOTAL	6.8	ug/kg		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by:
Date: 10/1/96



ENCLOSURE #3

SOIL FARM DATA

FEDERAL 6-32

ENCLOSURE #3

SOIL FARM DATA

FEDERAL 6-32

CHAIN OF CUSTODY RECORD

5155

Date: 6/19/98

Page 1 of 1

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

Purchase Order No.: | Job No.

SEND INVOICE TO
Name: Shawn Adams
Company: Contract Env. Services, Inc. | Dept.
Address: PO Box 3376
City, State, Zip: Farmington NM 87499

REPORT RESULTS TO
Name | Title
Company
Mailing Address: SAME
City, State, Zip
Telephone No. | Telefax No.

Sampling Location: FEDERAL 6-32
MKL-5
MKL-5A

Sampler: SADAMS

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	418.1 Mod.	EPA 8015 M	PID (PPM)	LAB ID
F632-300 Soil Farm South	6/18/98	10:30	Soil	No	1	X	X	6.0	9806081-01A
F632-301 Soil Farm North	"	10:35	"	"	1	X	X	2.0	-02A
MKL5-302 Soil Farm North	"	11:00	"	"	1	X	X	2.0	-03A
MKL5-303 Soil Farm South	"	11:05	"	"	1	X	X	2.0	-04A
MKL5A-304 Soil Farm Comp.	"	11:20	"	"	1	X	X	6.0	-05A

Relinquished by: Shawn Adams | Date/Time 6/19/98 1108 | Received by: Heidi Rossi | Date/Time 6/19/98 1108
Relinquished by: | Date/Time | Received by: | Date/Time
Relinquished by: | Date/Time | Received by: | Date/Time

Method of Shipment:

Authorized by: SAA Date 6/19
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:
STA			

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

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *30-Jun-98*

Client:	Contract Environmental Services, Inc.	**Client Sample Info:**	Federal 6-32
Work Order:	9806081	**Client Sample ID:**	F632-301 Soil Farm North
Lab ID:	9806081-02A **Matrix:** SOIL	**Collection Date:**	6/18/98 10:35:00 AM
Project:	Soil Farms	**COC Record:**	5155

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015**				Analyst: **HR**
T/R Hydrocarbons: C10-C28	140	25		mg/Kg	1	6/29/98
GASOLINE RANGE ORGANICS		**SW8015**				Analyst: **DC**
T/R Hydrocarbons: C6-C10	ND	0.18		mg/Kg	1	6/23/98

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

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *30-Jun-98*

Client:	Contract Environmental Services, Inc.	**Client Sample Info:**	Federal 6-32
Work Order:	9806081	**Client Sample ID:**	F632-300 Soil Farm South
Lab ID:	9806081-01A **Matrix:** SOIL	**Collection Date:**	6/18/98 10:30:00 AM
Project:	Soil Farms	**COC Record:**	5155

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015**				Analyst: **HR**
T/R Hydrocarbons: C10-C28	50	25		mg/Kg	1	6/27/98
GASOLINE RANGE ORGANICS		**SW8015**				Analyst: **DC**
T/R Hydrocarbons: C6-C10	ND	0.18		mg/Kg	1	6/23/98

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

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