

Denny E. Faust
DEPUTY OIL & GAS INSPECTOR

FEB 08 1999

Approved

JICARILLA APACHE TRIBE

ENVIRONMENTAL PROTECTION OFFICE

P.O. BOX 507
DULCE, NEW MEXICO 87528

SUBMIT 1 COPY TO
NATURAL
RESOURCE DEPT
AND OIL-GAS
ADMINISTRATION

11151
BTEX
NO
13-1004

PIT REMEDIATION AND CLOSURE REPORT

Operator: PNM Gas Services (Tanner) Telephone: 324-3764

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Jicarilla L#6

Location: Unit: M Sec. 34 T. 25 N R. 5 W County Rio Arriba

Pit Type: Separator Dehydrator X Other

Land Type: Jicarilla Apache

Pit Location: Pit dimensions: length 21' width 21' depth 2'

(Attach diagram) Reference: wellhead X other

Footage from reference: 100

Direction from reference: 85° Degrees East North
X West of South X

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 1,000 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 1,000 feet (10 points)
Greater than 1,000 feet (0 points) 0

Distance to Ephemeral Stream (dry wash):

(Horizontal distance to all downgradient streams having a width of at least 10 feet)

Less than or equal to 100 feet (10 points)
Greater than 100 feet (0 points) 0

Distance to Nearest Lake, Playa, or Watering Pond:

(Horizontal distance to all downgradient lakes, playas, and livestock or wildlife water ponds)

Less than or equal to 100 feet (10 points)
Greater than 100 feet (0 points) 0

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: 7/13/98 Date Completed: 11/2/98 RAD
~~7/14/98~~
Remediation Method: Excavation ☒ Approx. Cubic Yards 1033
Landfarmed ☒ Amount Landfarmed (cubic yds): 1033
(Check all appropriate sections) Other _____

Remediation Location: Onsite ☒ Offsite Jicarilla L#7 (P+A)
(i.e., landfarmed onsite, name and location of offsite facility) 683 yards SAME legal
approx. 350 yds.

General Description of Remedial Action:

Excavated pit 30' x 31' x 30'. Removed contaminated soil from all four side walls to get a below 100 ppm head space reading. Dig bottom of pit to 30' depth and sampled.

Ground Water Encountered: No ☒ Yes _____ Depth _____

Final Pit Closure Sampling:

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

Sample Location 4 walls @ 16' 9807141530
Bottom @ 30' 9807141520

Sample depth 16' + 30'

Sample date 7/14/98 Sample time 1520 - 1530

Sample Results

Soil: Benzene (ppm) 0.740

Water: Benzene (ppb) _____

Total BTEX (ppm) 60.54

Toluene (ppb) _____

Field headspace (ppm) 1628 ppm

Ethylbenzene (ppb) _____

TPH 150 ppm Method 8015

Total Xylenes (ppb) _____

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 MY BELIEF

DATE 8/3/98

PRINTED NAME Gary Cook
Roy Burnham

SIGNATURE Mary Cook

AND TITLE Environmental Technician III

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

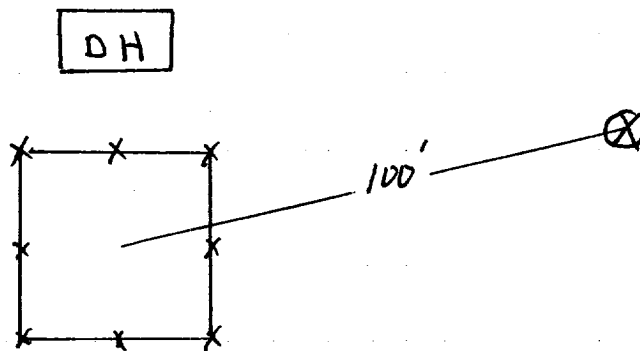
APPROVED: YES ☒ NO _____ (REASON): R.A. Attached

SIGNED: K. C. Mammall DATE: 9-9-98

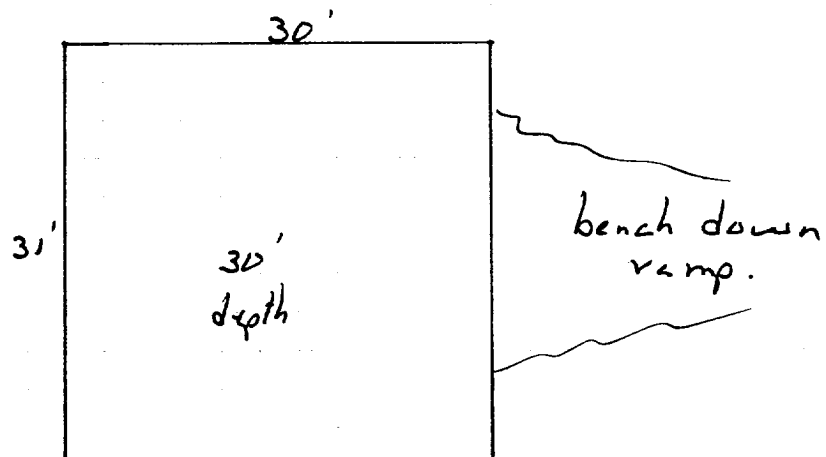
Jicavilla L#6
Taurus
Sec. 34, 25N, 5W, M

7/13/98

Start of excavation:



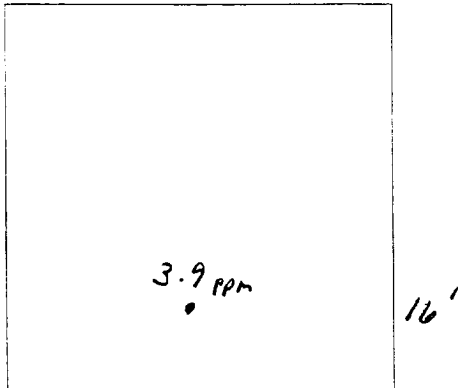
End of excavations:



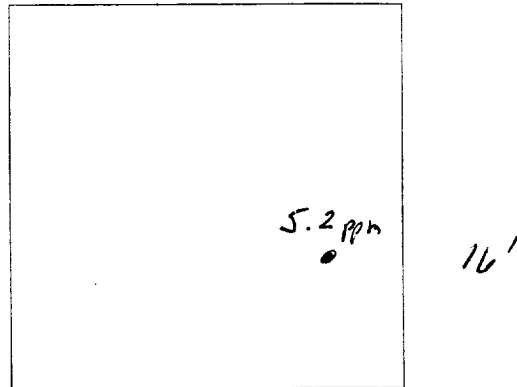
Jicarilla L # 6

7/13/98

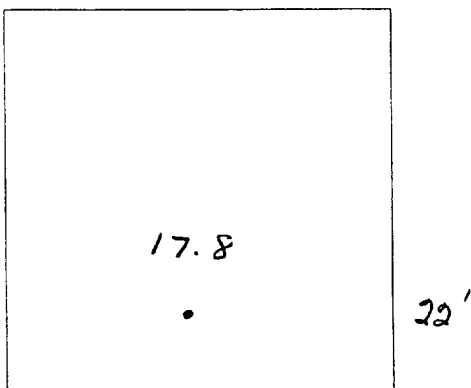
North Wall



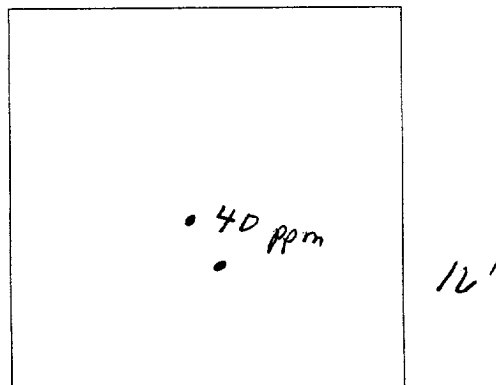
South Wall



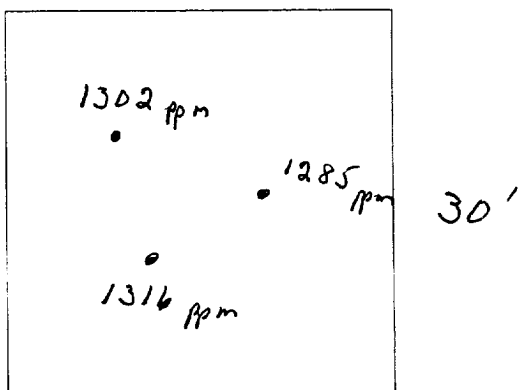
East Wall



West Wall



Bottom



3 pt. comp.
headspace reading = 1628 ppm

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 28-Jul-98

CLIENT: PNM - Public Service Company of NM
Project: PNM Pit Remediation
Lab Order: 9807049

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.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 28-Jul-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla L#6
Work Order:	9807049	Client Sample ID:	9807141520; Bottom @ 30ft.
Lab ID:	9807049-02A	Matrix:	SOIL
Project:	PNM Pit Remediation	Collection Date:	7/14/98 3:20:00 PM
		COC Record:	7314

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	150	25		mg/Kg	1	7/27/98
BTEX		SW8020A				Analyst: HR
Benzene	740	250		µg/Kg	250	7/23/98
Toluene	17000	500		µg/Kg	250	7/23/98
Ethylbenzene	2600	250		µg/Kg	250	7/23/98
m,p-Xylene	34000	500		µg/Kg	250	7/23/98
o-Xylene	6200	250		µg/Kg	250	7/23/98

60.54 ppm

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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OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 28-Jul-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla L#6
Work Order:	9807049	Client Sample ID:	9807141530; Walls @ 16ft.
Lab ID:	9807049-01A	Matrix:	SOIL
Project:	PNM Pit Remediation	Collection Date:	7/14/98 3:30:00 PM
		COC Record:	7314

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	7/23/98

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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Environmental Services

Well Name:	Jicarilla L #6
Well Legals:	Unit M, Sec 34, T25N, R5W
Pit Type:	Dehydrator
Horizontal Distance to Surface Water:	Greater than 1,000 feet
Groundwater Depth:	Greater than 100 feet

RISK ANALYSIS

PNM requests closure of their former pit on the Jicarilla L #6 well site using a limited risk analysis based on the following conditions:

1. Groundwater is estimated to be at a depth of 192 feet based upon the elevation of the site and the elevation of the nearest "listed" or "named" wash (Canada Larga). (Reference: Otero Store Mesa, NM series 7.5 minute topographic map.)
2. The site is located outside of the "vulnerable area" as defined under OCC Order No. R-7940-C.
3. PNM excavated 1,033 cubic yards of soil from the former pit. Subsurface lateral contamination has been remediated (see attached map and analytical results for the side wall profiles). Source removal minimizes the possibility of surface water contamination.
4. The excavation was terminated at a depth of 30 feet. PNM excavated and performed remediation to the maximum depth and horizontal extent practicable.

PNM believes their former pit on the Jicarilla L #6 well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 800 pits.

JICARILLA APACHE TRIBE
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DULCE, NEW MEXICO 87528

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ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT #1

Operator: PNM Gas Services (Taurus) Telephone: 324-3764
Address: 603 W. Elm Street Farmington, NM 87401
Facility or Well Name: Jicarilla L # 6
Location: Unit: m Sec. 34 T. 25 N R. 5 W County Rio Arriba
Land Type: Jicarilla Apache

Date Remediation Started: 7/13/98 Date Completed: 9/4/98
Remediation Method: Landfarmed ☒ Approx. cubic yards (RB) 1033 yds
Composted ☐
Other ☐

Depth to Ground Water: (pts.) 0
Distance to an Ephemeral Stream: (pts.) 0
Distance to Nearest Lake, Playa,
or Watering Pond: (pts.) 0
Wellhead Protection Area: (pts.) 0
Distance to Surface Water: (pts.) 0
Ranking Score (Total Points): 0

Final Closure Sampling:

Sampling Date: 9/1/98 Time 1605
Sampling Results:
Field Headspace (ppm) 2.9
TPH (ppm) 54 Method 8015
Other

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

DATE 9/13/98 PRINTED NAME Roy Burnham
SIGNATURE Roy Burnham AND TITLE Environmental Technician II

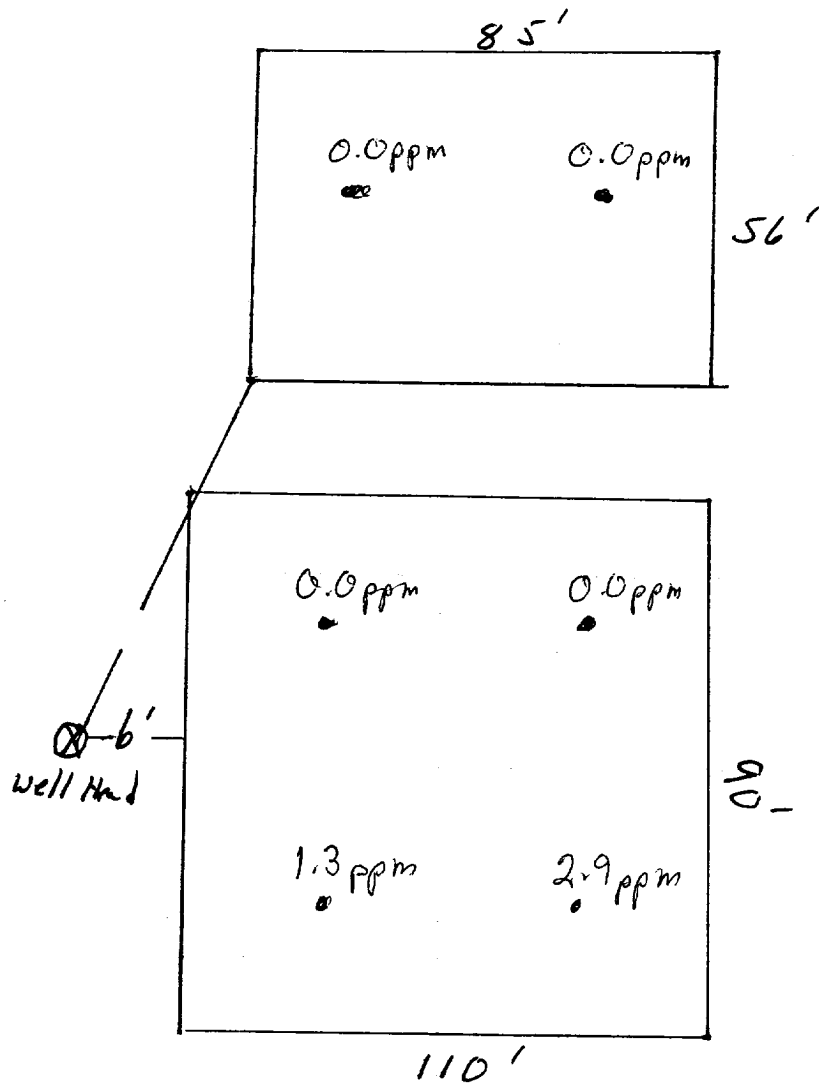
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE
JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE

APPROVED: YES ☒ NO ☐ (REASON) use as Backfill
SIGNED: Kewl M... DATE: 9-23-98

Jiceville L #6 #1
Taurus
Sec. 34, 25N, 5W, m

7-15-98

Landfarm: On location



683 yards

2"-12" depth

soil vapor headspace =

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 10-Sep-98

CLIENT: PNM - Public Service Company of NM
Project: PNM Pit Remediation
Lab Order: 9809002

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.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 10-Sep-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla L-6 #1 LF
Work Order:	9809002	Client Sample ID:	9809011605; 6pt. Comp.
Lab ID:	9809002-04A	Matrix:	SOIL
Project:	PNM Pit Remediation	Collection Date:	9/1/98 4:05:00 PM
		COC Record:	7437

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	54	25		mg/Kg	1	9/4/98

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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ON-SITE SOIL REMEDIATION REPORT #2

Operator: PNM Gas Services (TAURUS) Telephone: 324-3764
Address: 603 W. Elm Street Farmington, NM 87401
Facility or Well Name: JICARILLA L #6
Location: Unit: M Sec. 34 T. 25 N R. 5 W County Rio Arriba
Land Type: Jicarilla Apache

Date Remediation Started: 7/13/98 Date Completed: 10/8/98
Remediation Method: Landfarmed X Approx. cubic yards 350
Composted
Other

Depth to Ground Water: (pts.) 0
Distance to an Ephemeral Stream: (pts.) 0
Distance to Nearest Lake, Playa,
or Watering Pond: (pts.) 0
Wellhead Protection Area: (pts.) 0
Distance to Surface Water: (pts.) 0
Ranking Score (Total Points): 0

Final Closure Sampling:

Sampling Date: 9/30/98 Time 1705
Sampling Results:
Field Headspace (ppm) 12.9
TPH (ppm) ND Method 8015
Other

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

DATE 10/25/98 PRINTED NAME Roy Burnham
SIGNATURE Roy Burnham AND TITLE Environmental Technician II

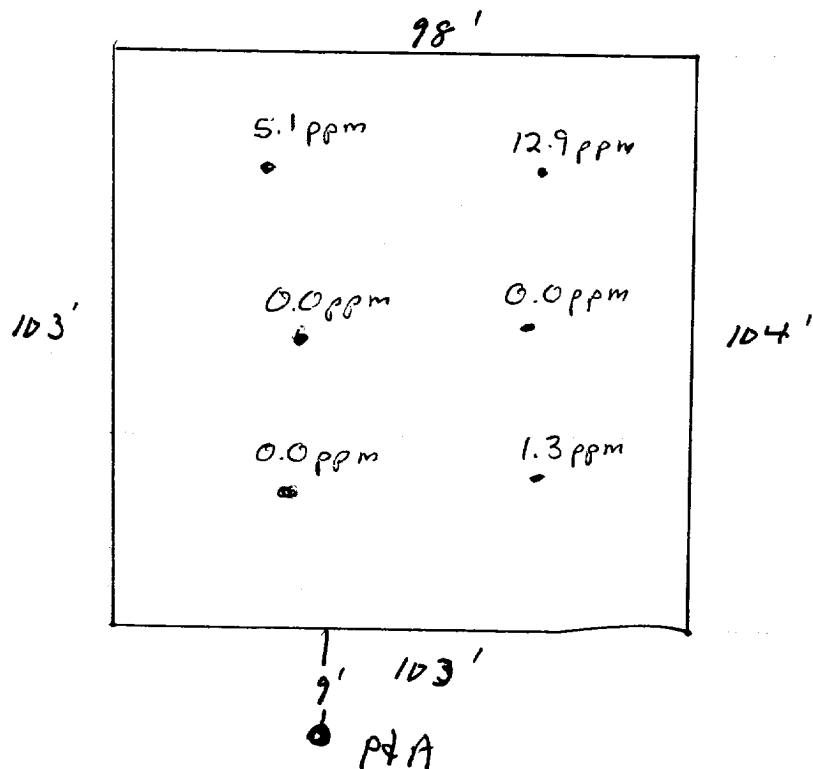
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE
JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE

APPROVED: YES X NO (REASON) use as Backfill
SIGNED: Ken C. M... DATE: 11-2-98

Jicavilla L#6 #2
Taurus
Sec. 34, 25N, 5W, m

7-15-98

Land Farm: Jicavilla L#7 (PTA)
Taurus
Sec. 34, 25N, 5W, m



350 yards

2"-12" depth

Soil vapor headspace =

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 14-Oct-98

Client: PNM - Public Service Company of NM
Work Order: 9810006
Lab ID: 9810006-05A **Matrix:** SOIL
Project: Jicarilla Landfarms

Client Sample Info: Jicarilla L-6 #2 LF
Client Sample ID: 9809301705; 6pt. Composite
Collection Date: 9/30/98 5:05:00 PM
COC Record: 7510

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: DC
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	10/8/98

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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