

Denise E. Frost
DEPUTY OIL & GAS INSPECTOR

FEB 08 1999

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE

P.O. BOX 507
DULCE, NEW MEXICO 87528

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

Approved
PIT REMEDIATION AND CLOSURE REPORT

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

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: JICARILLA G-8

Location: Unit: G Sec. 2 T. 26 N R. 5 W County Rio Arriba

Pit Type: Separator Dehydrator X Other

Land Type: Jicarilla Apache

Pit Location: Pit dimensions: length 42' width 20' depth 4'

(Attach diagram) Reference: wellhead X other

Footage from reference: 78'

Direction from reference: DUE Degrees East North
X West of 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)

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)

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)

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)

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)

RANKING SCORE (TOTAL POINTS):

Date Remediation Started: 5/14/98 Date Completed: 11/2/98

Remediation Method: Excavation X Approx. Cubic Yards 5,323

(Check all appropriate sections)

Landfarmed X Amount Landfarmed (cubic yds): 5,323

Other _____

Remediation Location: Onsite X Offsite _____

(i.e., landfarmed onsite, name and location of offsite facility)

General Description of Remedial Action:

Removed contaminated soil from all four side walls
As to get it below 100ppm head space reading.
Dug down 31' and grabbed a 3 point Composite of
Pit bottom Excavation size 76'x61'x31'

Ground Water Encountered: No X Yes _____ Depth _____

Final Pit Closure Sampling:

Sample Location North, East, South, West and
Pit Bottom

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

Sample depth 31'

Sample date 5/21/98 Sample time 1336

Sample Results

Soil: Benzene (ppm) ND Water: Benzene (ppb) _____

Total BTEX (ppm) 15.060 Toluene (ppb) _____

Field headspace (ppm) 1303 Ethylbenzene (ppb) _____

TPH 250 ppm Method 3015 Total Xylenes (ppb) _____

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 MY BELIEF

DATE 5/27/98 PRINTED NAME Roy Burnham

SIGNATURE Roy Burnham AND TITLE Environmental Technician II

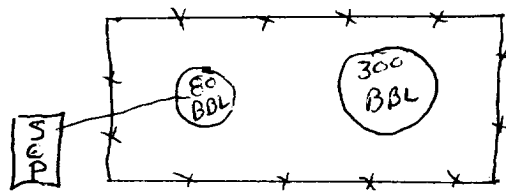
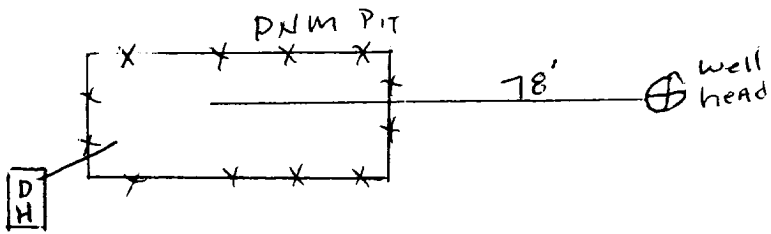
AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON): _____

SIGNED: Kerr C Mammill DATE: 5-26-97

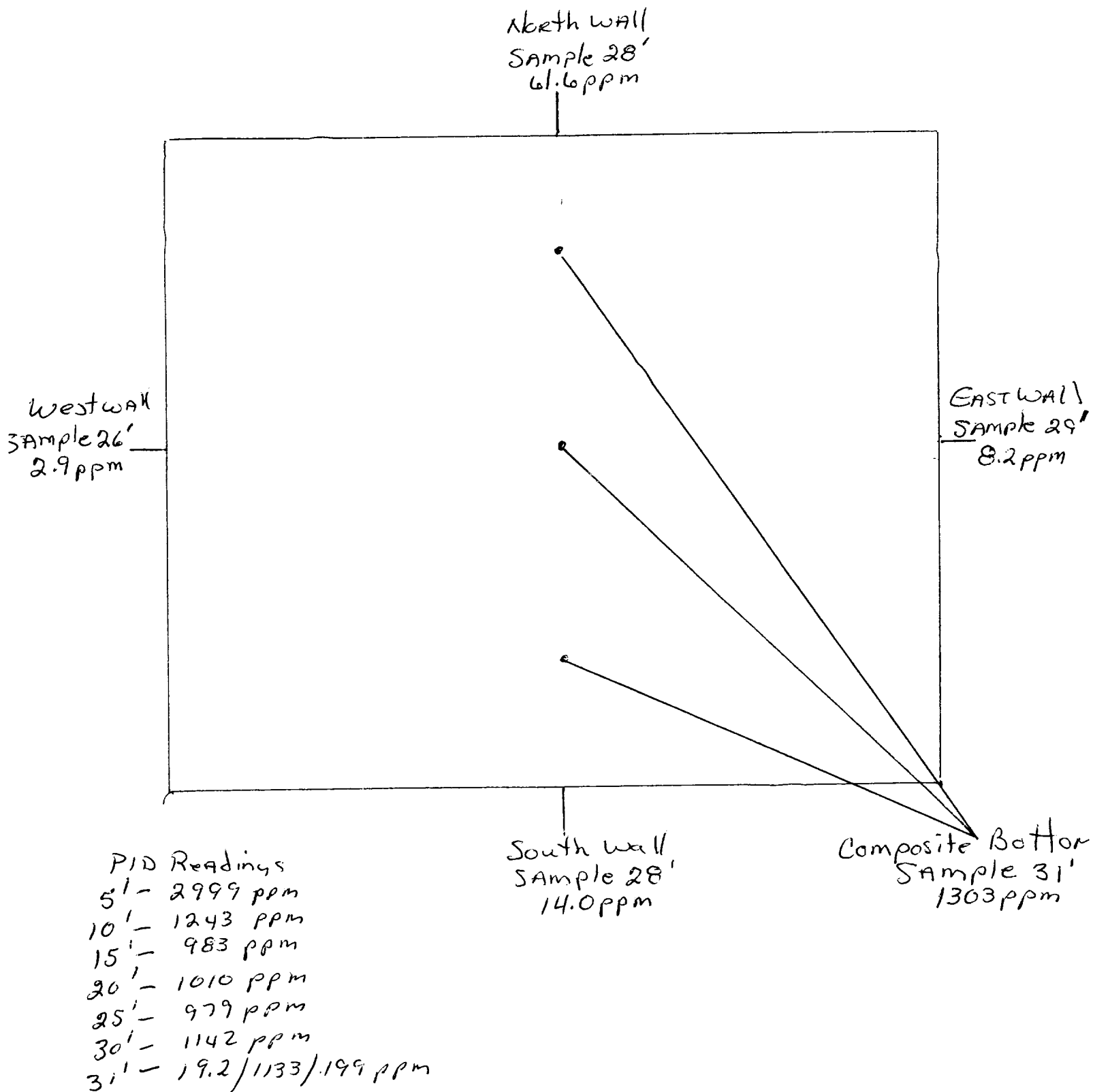
JICARILLA G-8
Sec-2 T26N R5W unit G
BROG

SITE Drawing



Jicarilla G-8
Sec 2 T26N R5W unit G

76' x 61' x 31'



OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 27-May-98

CLIENT: PNM - Public Service Company of NM

Project: Jicarilla G-8

Lab Order: 9805072

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: 27-May-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla G-8
Work Order:	9805072	Client Sample ID:	9805211336; 3pt. Comp. Bottom
Lab ID:	9805072-02A	Matrix:	SOIL
Project:	Jicarilla G-8	Collection Date:	5/21/98 1:36:00 PM
		COC Record:	7154

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	250	25		mg/Kg	1	5/26/98
BTEX		SW8020A				Analyst: DC
Benzene	ND	50		µg/Kg	50	5/24/98
Toluene	660	100		µg/Kg	50	5/24/98
Ethylbenzene	1100	50		µg/Kg	50	5/24/98
m,p-Xylene	11000	100		µg/Kg	50	5/24/98
o-Xylene	2300	50		µg/Kg	50	5/24/98

15060 ppm

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

1 of 1

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OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 27-May-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla G-8
Work Order:	9805072	Client Sample ID:	9805211335; 4pt. Comp. Walls
Lab ID:	9805072-01A	Matrix:	SOIL
Project:	Jicarilla G-8	Collection Date:	5/21/98 1:35:00 PM
		COC Record:	7154

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	5/26/98

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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- TECHNICAL GLANDS EQUIPPED WITH THE LATEST EQUIPMENT

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DULCE, NEW MEXICO 87528

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AND OIL GAS
ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT # 1

Operator: PNM Gas Services (BROG) Telephone: 324-3764
Address: 603 W. Elm Street Farmington, NM 87401
Facility or Well Name: JICARILLA G-8
Location: Unit: G Sec. 2 T. 26 N R. 5 W County Rio Arriba
Land Type: Jicarilla Apache

Date Remediation Started: 5/14/98 Date Completed: 7/22/98
Remediation Method: Landfarmed X Approx. cubic yards 500
Composted _____
Other _____

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

Final Closure Sampling:
Sampling Date: 7/15/98 Time 1525
Sampling Results:
Field Headspace (ppm) 52.0
TPH (ppm) RD \emptyset ND Method 8015
Other _____

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

DATE 7/26/98 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

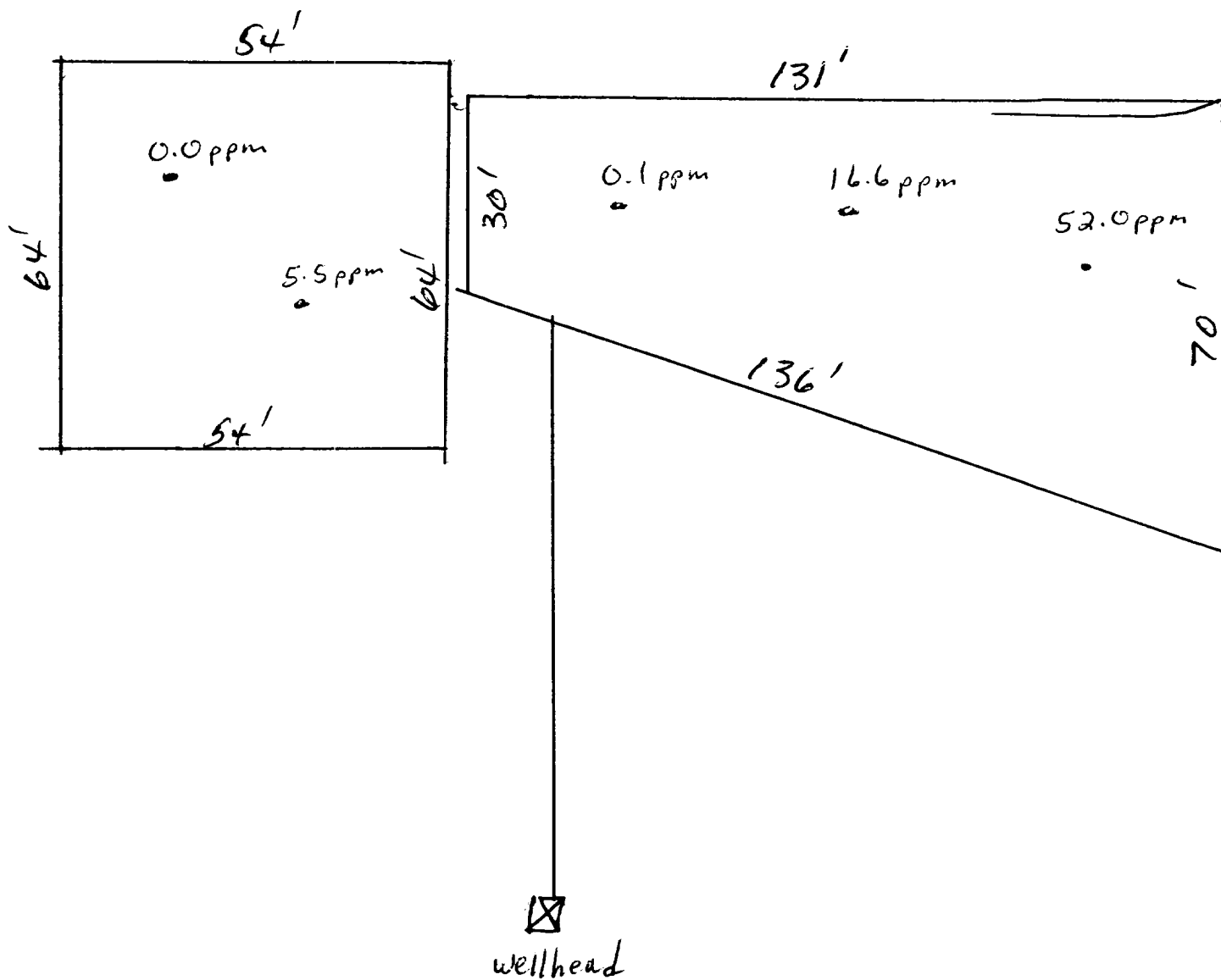
APPROVED: YES X NO (REASON) use as Backfill
SIGNED: Kae C. Mammill DATE: 7-28-98

JILARIIIA G-8

BURLINGTON

UNIT G Sec 2 T26N R5W

LANDFARM #1

↑
N

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 23-Jul-98

CLIENT: PNM - Public Service Company of NM

Project: PNM Pit Remediation

Lab Order: 9807043

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.

The logo for On Site Technologies, Ltd. features the words "ON SITE" in a large, bold, serif font. Below this, the words "TECHNOLOGIES, LTD." are written in a smaller, bold, sans-serif font. The text is centered within a stylized, jagged, mountain-like shape that resembles a signal waveform or a rugged terrain profile. The entire logo is rendered in a high-contrast, black and white, distressed or "grunge" style.

ANALYTICAL REPORT

Date: 23-Jul-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla G-8 #1 LF
Work Order:	9807043	Client Sample ID:	9807151525; 5pt. Composite
Lab ID:	9807043-04A	Matrix:	SOIL
Project:	PNM Pit Remediation	Collection Date:	7/15/98 3:25:00 PM
		COC Record:	7266

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	7/22/98

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

1 of 1

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AND OIL GAS
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ON-SITE SOIL REMEDIATION REPORT #2

Operator: PNM Gas Services (BROG) Telephone: 324-3764
Address: 603 W. Elm Street Farmington, NM 87401
Facility or Well Name: JICARILLA G-8
Location: Unit: G Sec. 2 T. 26 N R. 5 W County Rio Arriba
Land Type: Jicarilla Apache

Date Remediation Started: 5/14/98 Date Completed: 9/3/98
Remediation Method: Landfirmed X Approx. cubic yards 2000
Composted _____
Other _____

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

Final Closure Sampling:

Sampling Date: 8/31/98 Time 0730
Sampling Results:
Field Headspace (ppm) 62.6
TPH (ppm) 87 Method 8015
Other _____

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

DATE 9/14/98 PRINTED NAME Roy Burnham
SIGNATURE Roy Burnham AND TITLE Environmental Technician II

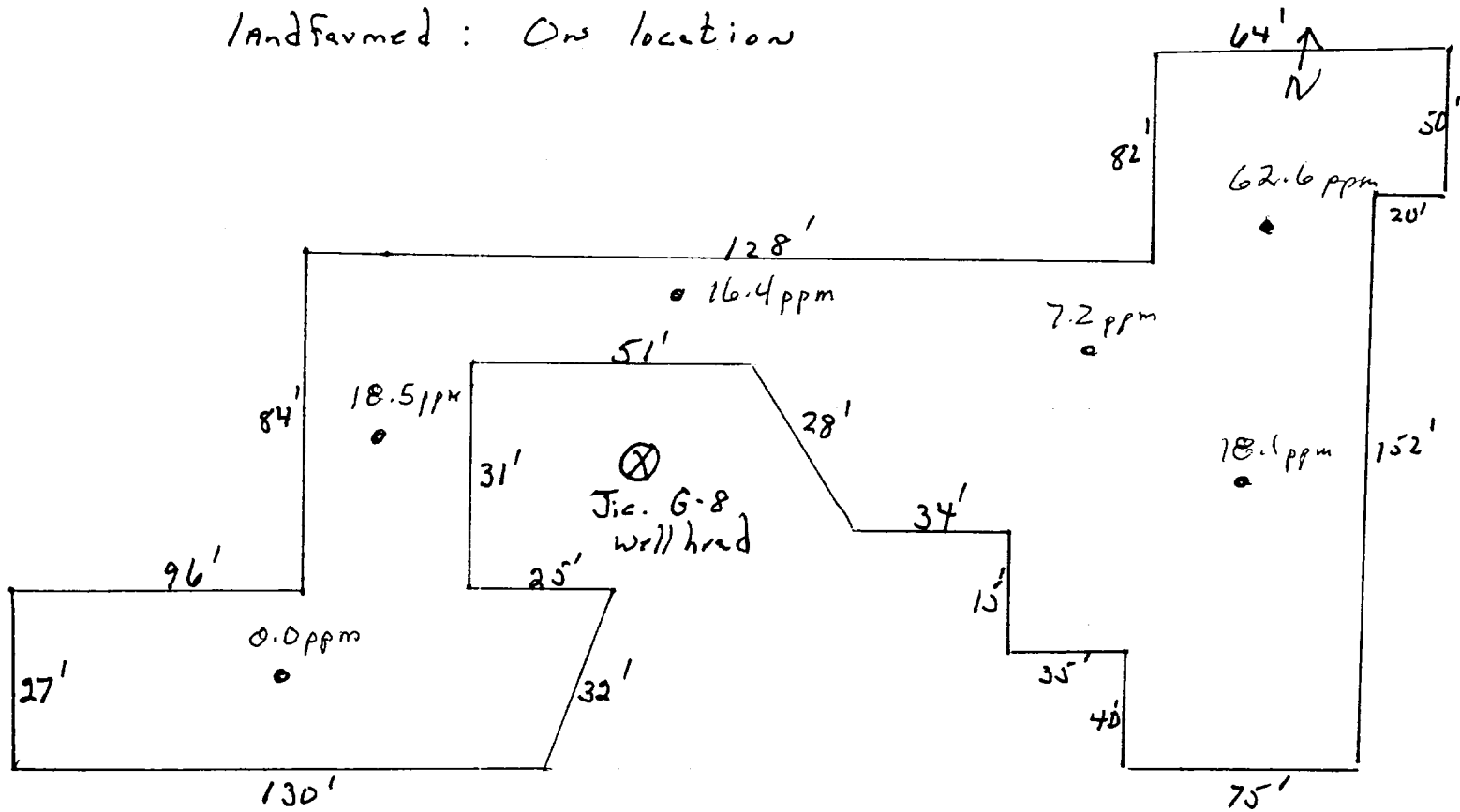
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE
JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE

APPROVED: YES X NO (REASON) was as Backfill
SIGNED: K. C. Munnell DATE: 9-23-98

Jicaville G-8 #2
BRDG
Sec. 2, 26N, 5W, G

8/18/98

Landfarmed: One location



OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 10-Sep-98

CLIENT: PNM - Public Service Company of NM
Project: Jicarilla Landfarms
Lab Order: 9808064

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 G-8 #2 LF
Work Order:	9808064	Client Sample ID:	9808310730; 6pt. Comp
Lab ID:	9808064-01A	Matrix:	SOIL
Project:	Jicarilla Landfarms	Collection Date:	8/31/98 7:30:00 AM
		COC Record:	7435

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	87	25		mg/Kg	1	9/3/98

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

1 of 1

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ON-SITE SOIL REMEDIATION REPORT # 3

Operator: PNM Gas Services (BROG) Telephone: 324-3764
Address: 603 W. Elm Street Farmington, NM 87401
Facility or Well Name: Jicarilla G-8
Location: Unit: G Sec. 2 T. 26 N R. 5 W County Rio Arriba
Land Type: Jicarilla Apache

Date Remediation Started: 5/14/98 Date Completed: 9/3/98
Remediation Method: Landfarmed ☒ Approx. cubic yards 2,000
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: 8/31/98 Time 0745
Sampling Results:
Field Headspace (ppm) 83.3
TPH (ppm) 74 Method 8015
Other ☐

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

DATE 9/14/98 PRINTED NAME Roy Burnham
SIGNATURE Roy Burnham AND TITLE Environmental Technician II

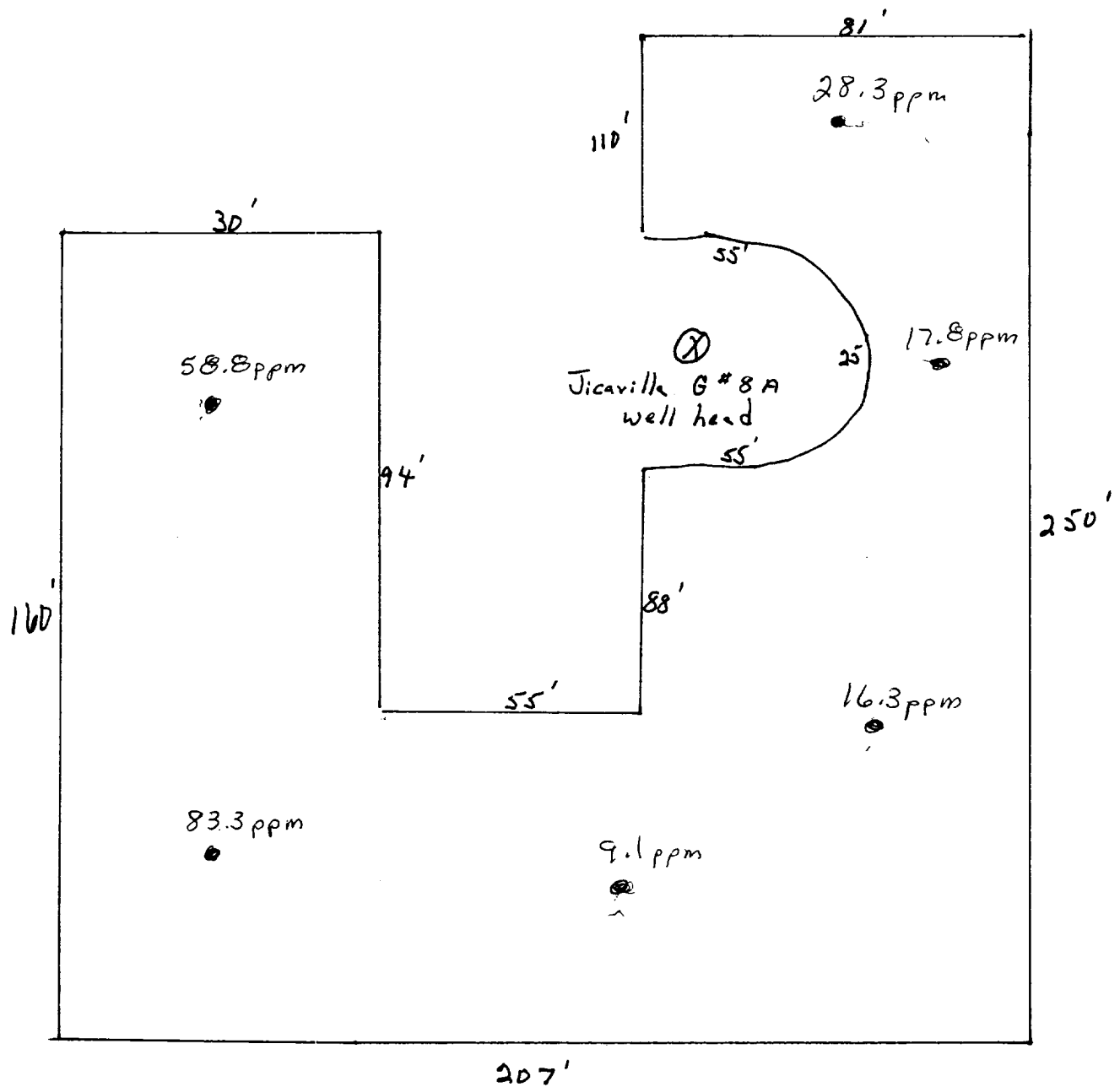
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE
JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE

APPROVED: YES ☒ NO ☐ (REASON) use as Backfill
SIGNED: Ken C Mammill DATE: 9-23-98

Jicavilla G#8 #3
BR
Sec. 2, 26N, 5W, 6

8/17/98

Land Farm: Jicavilla G#8A
BR
Sec. 2, 26N, 5W, P



OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 10-Sep-98

CLIENT: PNM - Public Service Company of NM

Project: Jicarilla Landfarms

Lab Order: 9808064

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 G-8 #3 LF
Work Order:	9808064	Client Sample ID:	9808310745; 6pt. Comp
Lab ID:	9808064-02A	Matrix:	SOIL
Project:	Jicarilla Landfarms	Collection Date:	8/31/98 7:45:00 AM
		COC Record:	7435

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	74	25		mg/Kg	1	9/3/98

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

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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DULCE, NEW MEXICO 87528

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ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT #4

Operator: PNM Gas Services (BROG) Telephone: 324-3764
Address: 603 W. Elm Street Farmington, NM 87401
Facility or Well Name: Jicarilla G-8
Location: Unit: G Sec. 2 T. 26 N R. 5 W County Rio Arriba
Land Type: Jicarilla Apache

Date Remediation Started: 5/14/98 Date Completed: 10/6/98
Remediation Method: Landfarmed ☒ Approx. cubic yards 823
Composted ☐
Other ☐

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

Final Closure Sampling:

Sampling Date: 10/5/98 Time 1615
Sampling Results:
Field Headspace (ppm) 60.3
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

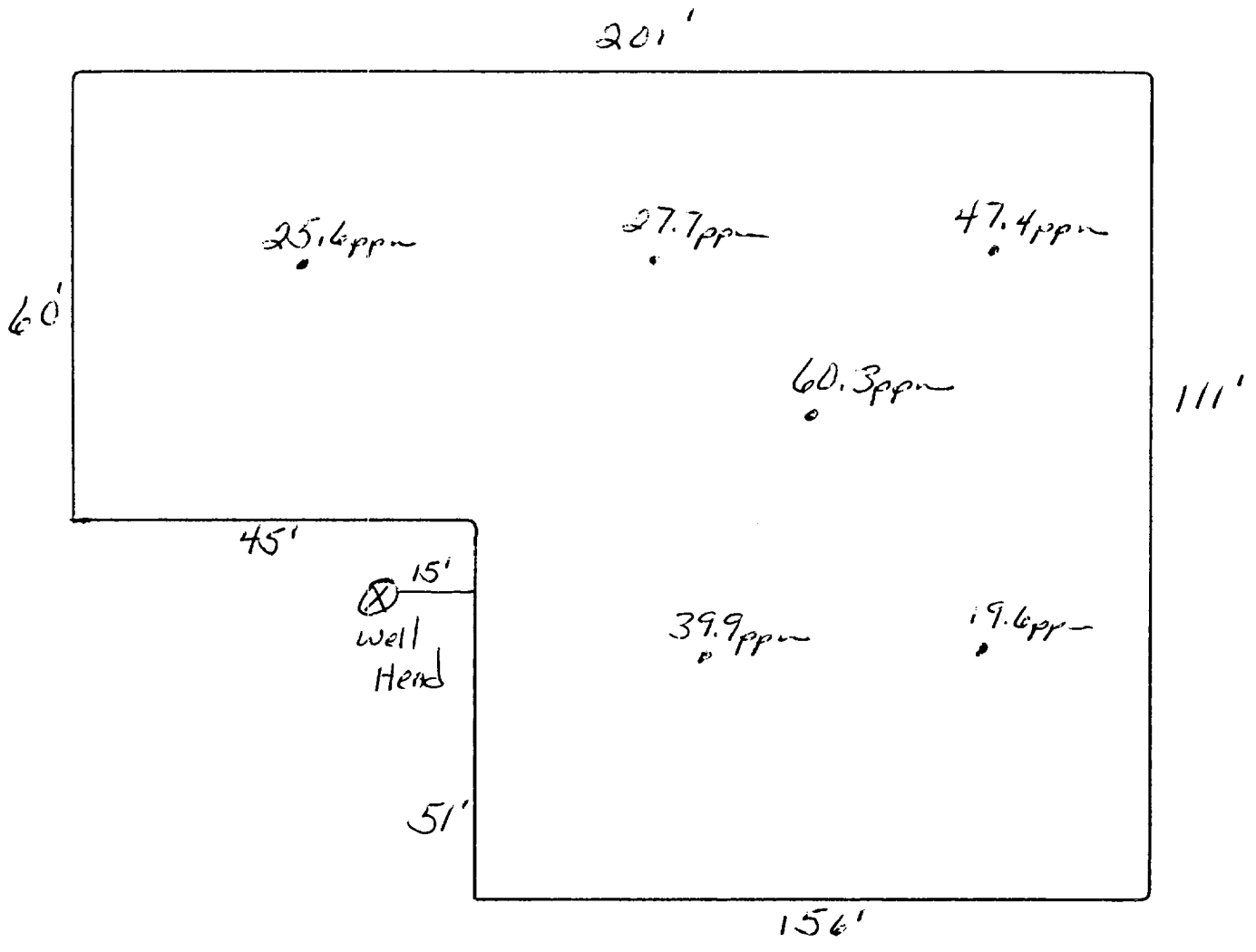
DATE 10/25/98 PRINTED NAME Roy Burnham
SIGNATURE Roy Burnham AND TITLE Environmental Technician II

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

APPROVED: YES ☒ NO ☐ (REASON) Use as Backfill
SIGNED: Ken C. Marshall DATE: 11-2-98

JICARILLA G-8 #4 L.F.
Sec 2 T26N R5W Unit G
BR06

Landform #4 Drawing



OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 08-Oct-98

CLIENT: PNM - Public Service Company of NM

Project: Jicarilla G-8 #4 LF

Lab Order: 9810012

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: 08-Oct-98

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla G-8#4 LF
Work Order:	9810012	Client Sample ID:	9810051615; 6pt. Composite
Lab ID:	9810012-01A	Matrix:	SOIL
Project:	Jicarilla G-8 #4 LF	Collection Date:	10/5/98 4:15:00 PM
		COC Record:	7511

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	10/6/98

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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