

3R - 325

REPORTS

DATE:

2000



Environmental Services
187 County Road 4980
Bloomfield, New Mexico 87413
(505) 632-4409
(505) 632-4405

September 18, 2000

RECEIVED

SEP 28 2000

Mr. William Olson
Hydrologist
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 2000 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT

Dear Mr. Olson:

Enclosed for your review is the 2000 San Juan Basin Annual Groundwater Report prepared by Williams for work conducted by Public Service New Mexico (PNM). The report presents monitoring data for twenty-two sites having petroleum hydrocarbon impacted groundwater, which resulted from the past use of unlined surface impoundments. The reporting period begins in the second quarter of 1999 and ends in the second quarter of 2000. The sites included in the report are listed in Table 1, attached.

The natural gas production and gathering facilities at which the impacted groundwater sites are located were formerly owned and operated by PNM. The facilities became assets of Williams upon purchase of the Gas Company of New Mexico (GCNM) from PNM. PNM had retained certain environmental liabilities associated with the assets including obligations for unlined surface impoundment impacts to soil and groundwater. Subsequent negotiations between PNM and Williams resulted in an agreement whereby Williams would complete further investigations and remediation at sites not previously closed by PNM. The agreement also states that Williams will complete work at sites where PNM has identified soil or groundwater contamination or otherwise initiated remedial actions.

During PNM's tenure, management of sites with hydrocarbon impacted groundwater was directed by their Ground Water Management Plan. This plan specified general procedures for site investigation, remediation, and reporting. The plan called for PNM to prepare an annual report summarizing the results of groundwater monitoring at each site. The report was to be submitted each April 1st and include data collected during the second, third and fourth quarters of the previous year and data from the first quarter of the reporting year.

Anticipating termination of their environmental obligations, PNM requested on March 4, 2000 an extension for submittal of the 2000 annual report so that they could also include data collected during the second quarter of 2000. Although PNM completed collection of monitoring data for the second quarter of 2000, they did not prepare and submit an annual report. Williams has prepared the 2000 annual report in an effort to maintain project continuity and to provide closure to PNM's management of the project.

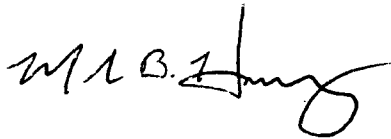
As with most projects of this magnitude, first hand knowledge is paramount to prepare a thorough summary of site activities. Given the limited firsthand knowledge of project workings, Williams is in the unenviable position of trying to glean information from only the paper record. As such, the 2000 report simply transmits the PNM-collected data to OCD in what we hope is a concise and useable format. Initially, it was Williams' goal to provide more comprehensive reporting on the status of each site, however, preliminary evaluation of the data soon revealed that accurate interpretations could not be formulated in a timely manner.

Williams is continuing to review and evaluate the data provided by PNM to determine the best course for future actions at the sites. Preliminary review has revealed several high priority needs. For the majority of sites, accurate surveys are needed along with development of site base maps and a comprehensive database to facilitate project management. Moreover, sites with free product should be evaluated to determine the efficacy of free-product recovery and whether or not all source contributions are known.

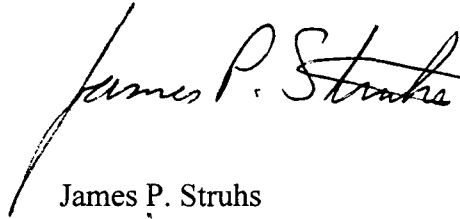
Organization of the report follows the same format used by PNM. Data for each site is contained in a separate tabbed section labeled with the site name. Each section contains a data summary table listing each monitoring well. The absence or presence of free product is indicated on the table and the concentrations of the BTEX compounds for the reporting period are noted. Following the data summary table are the actual laboratory analytical reports. In an effort to make this document more manageable, the laboratory quality control reports have not been included. These reports will of course remain a part of the project file and be made available for review upon request. In addition to the analytical data, a contour map depicting the elevation of the water table as interpolated from water-level data is also included. When possible, hydrographs illustrating the seasonal fluctuations in water-table elevations are presented.

Thank you for your understanding of the Williams position and the time to review this submittal. Mr. Jim Struhs has been assigned the role of Project Hydrogeologist and as such will be involved in many of the day to day project operations. If you have any questions regarding the report, you may call me at (505) 632-4409 or Jim at (505) 632-4457.

Best regards,



Mark B. Harvey
Project Manager
Mark.Harvey@Williams.com



James P. Struhs
Project Hydrogeologist
Jim.Struhs@Williams.com

Attachment
Enclosure

c: Denny Foust, OCD Aztec District Office
Bill Liess, BLM Farmington District Office
Allen Talley, Williams

Table 1. List of Sites for Period Q2/1999 to Q2/2000

Site Name	Section	Township	Range	Unit Letter	OCD Notified	Installed Wells	2nd QTR 1999	3rd QTR 1999	4th QTR 1999	1st QTR 2000	2nd QTR 2000
Albright #4 Drip	22	29N	10W	F	9-Jul-99	28-Jul-99		5-Aug-99	6-Dec-99	5-Mar-00	7-Jun-00
Blanco Wash Drip	31	27N	8W	J	19-Feb-99	6-Apr-99	28-Apr-99	28-Sep-99	6-Dec-99	17-Mar-00	7-Jun-00
Chamberlain 1	14	32N	12W	F	30-Sep-99	13-Sep-99			11-Nov-99	1-Feb-00	2-May-00
Davis 1	11	31N	12W	E	2-Mar-99	2-Aug-99	25-May-99	20-Sep-99	8-Dec-99	14-Mar-00	8-Jun-00
Dogie East Pit	4	25N	6W	D	7-Jul-97	20-May-98	27-Apr-99	21-Sep-99	16-Nov-99	15-Feb-00	11-May-00
Dogie North Pit	4	25N	6W	D	7-Jul-97	6-Jul-97	27-Apr-99	21-Sep-99	16-Nov-99	15-Feb-00	11-May-00
Florence 124	27	29N	9W	C	12-Aug-96	28-Aug-96	7-Apr-99	28-Jul-99	14-Oct-99	1-Feb-00	26-Apr-00
Florence 40	21	30N	8W	G	27-Jan-97	29-Jan-97	21-Apr-99	28-Jul-99	1-Nov-99	21-Mar-00	14-Jun-00
Florence M 47X	5	30N	9W	G	27-Jan-97	6-Feb-97	21-Apr-99	28-Jul-99	3-Nov-99	23-Mar-00	14-Jun-00
Grenier 4A	7	31N	11W	M	18-Oct-99	28-Sep-99			3-Nov-99	7-Mar-00	12-Jun-00
Hampton 4M	13	30N	11W	N	7-Jan-97	31-Jan-97	5-May-99	12-Jul-99	21-Oct-99	27-Jan-00	13-Jun-00
Honolulu Drip	15	26N	4W	B	18-Jun-96	13-Jun-96	14-Apr-99	21-Sep-99	23-Nov-99	9-Feb-00	23-May-00
Ice Canyon Drip	15	26N	6W	B	1-Dec-97	13-May-98	27-Apr-99	20-Sep-99	16-Nov-99	7-Feb-00	18-May-00
Jicarilla Contract 147-6	6	25N	5W	C	13-Aug-98	27-Jan-99	14-Apr-99	27-Sep-99	15-Nov-99	20-Mar-00	7-Jun-00
Kaufman 1	33	31N	13W	H	9-Mar-00					9-Mar-00	22-May-00
Miles Federal 1E Drip	5	26N	7W	N	23-Jun-97	7-Jul-97	1-Jun-99	3-Aug-99	23-Nov-99	7-Feb-00	18-May-00
O' Shea 1M	3	31N	13W	F	6-Jun-98	9-Jul-98	24-May-99	6-Aug-99	12-Nov-99	3-Feb-00	9-May-00
Patterson A Com A1	2	31N	12W	G	2-Mar-99	15-Mar-99	2-Jun-99	6-Aug-99	22-Nov-99	15-Mar-00	8-Jun-00
Pritchard 2	6	30N	8W	J	22-Feb-99	1-Apr-99	26-May-99	17-Aug-99	20-Oct-99	26-Jan-00	17-Apr-00
Randleman 1	13	31N	11W	K	9-May-97	14-May-97	19-Apr-99	17-Aug-99	27-Oct-99	25-Jan-00	10-Apr-00
Wilmerding 1M	10	31N	13W	C	5-Jun-98	1-Jul-98	1-Jun-99	10-Aug-99	12-Oct-99	1-Feb-00	1-May-00
Zachry 18E	11	28N	10W	O	6-Sep-96	19-Nov-96	20-Apr-99	2-Aug-99	1-Nov-99	31-Jan-00	26-Apr-00



RECEIVED

SEP 20 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Annual
Groundwater
Report
2000

San Juan Basin, New Mexico
Unlined Surface Impoundments

Site Summary Report

Site Name: Jicarilla Contract 147-6

Reporting Period: 2nd Qtr 1999 - 2nd Qtr 2000

Location: Unit C, Sec 6, Twn 25N, Rng 5W

Canyon: Tapicito

Operator: Amoco

Vulnerable Class: expanded

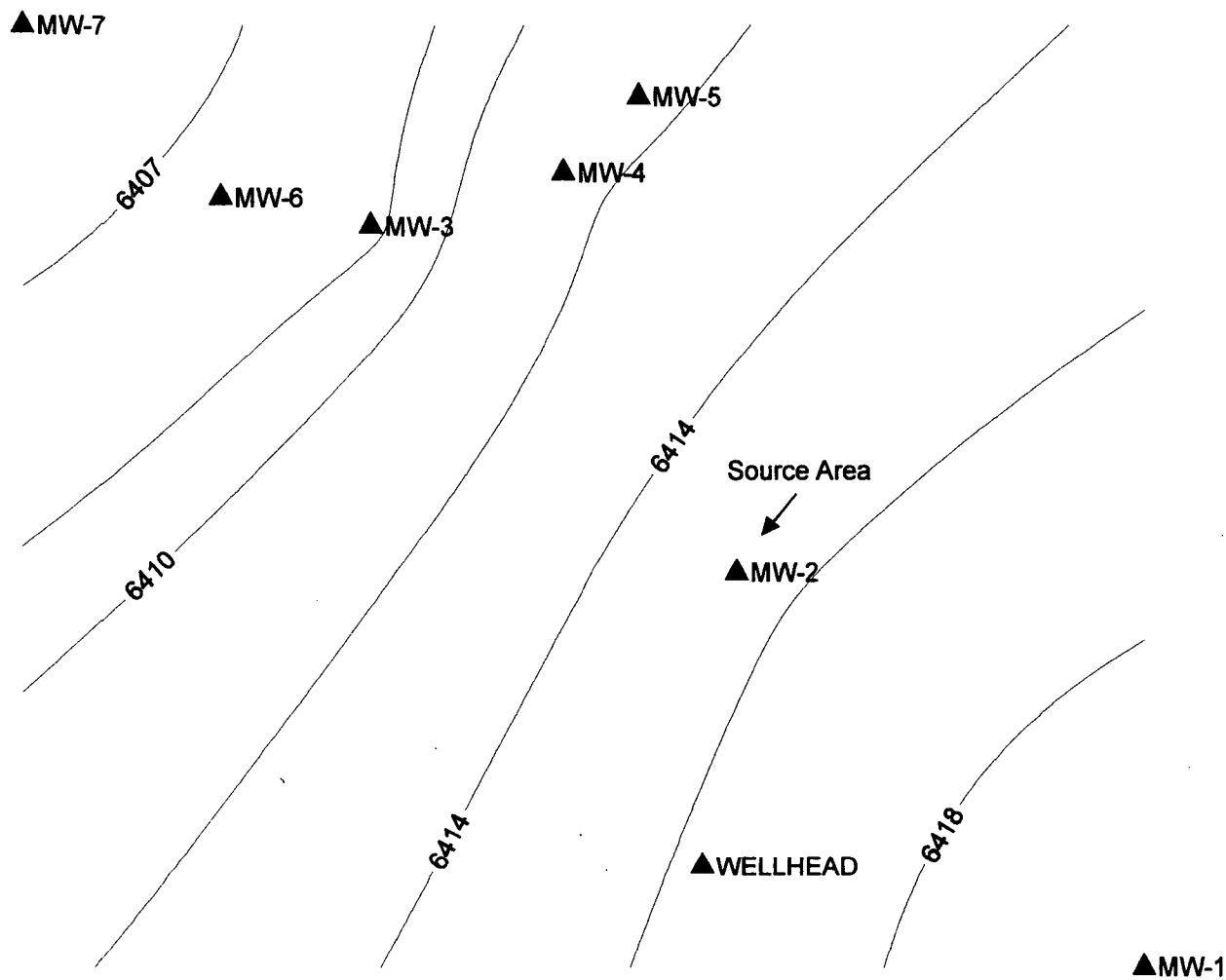
OCD Ranking: 40

Lead Agency: NMOCD / JAEPO

Status Narrative

This site has ten monitoring wells, with six quarters of ground water monitoring completed to date. The downgradient extent of contamination is well defined, spanning approximately 700 feet of the lower wash. Lateral contamination is defined to the east along the terraced wash and bounded to the west by the bedrock canyon walls. It appears that there may be a preferential contaminant migration pathway along the west side where the alluvium meets the sandstone bedrock. The upgradient extent of contamination along the southwestern wall of the canyon near Amoco's former separator pit is unclear. Recently installed monitoring wells MW-8 and MW-9 should provide some insight in this area.

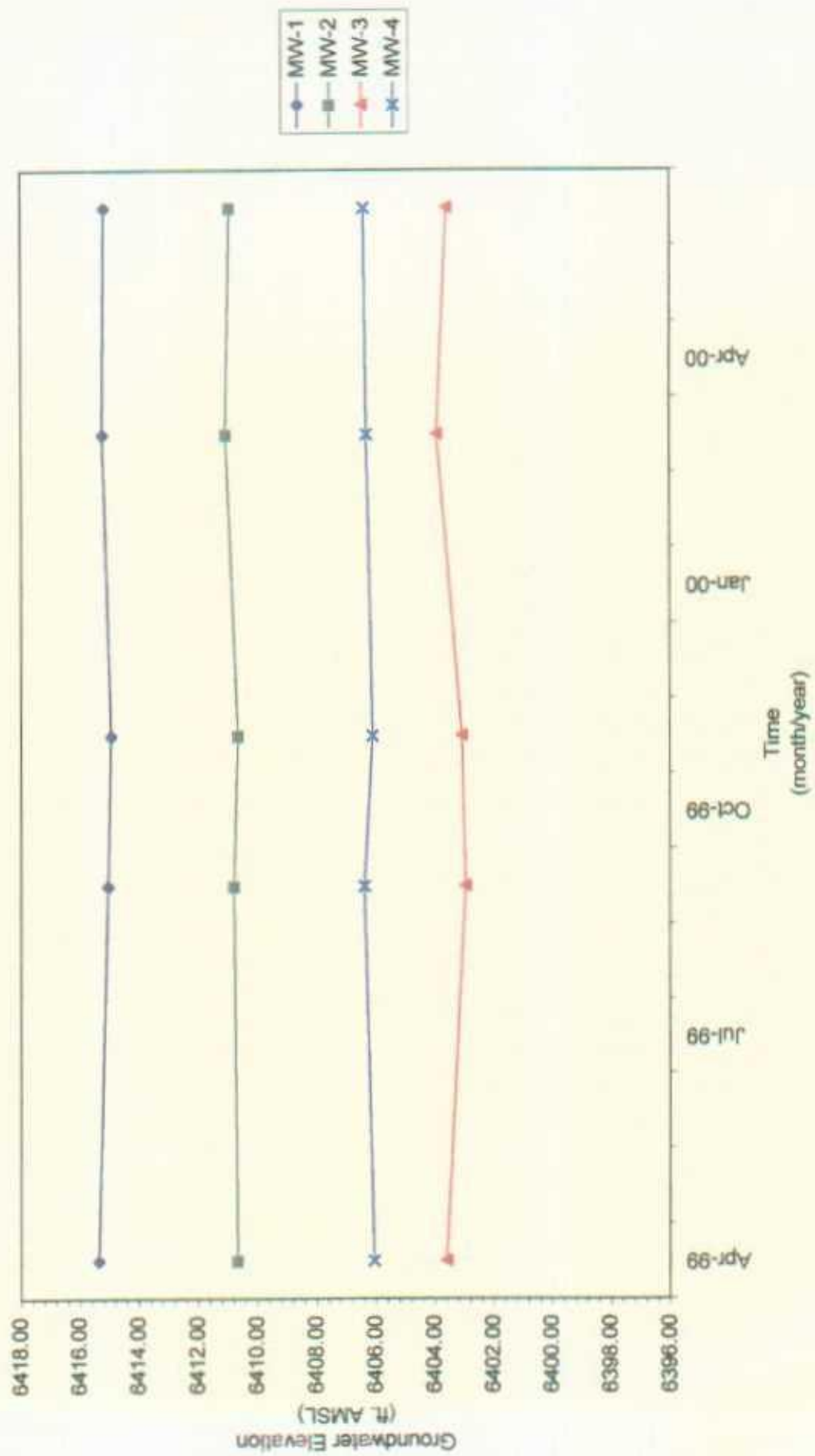
Jicarilla Contract 147-6
Potentiometric Surface Map
(November 15, 1999)



0ft 100ft 200ft 300ft 400ft

↑N

Jicarilla 147-6
 Hydrograph for Period Q2/1999 - Q2/2000
 (Elevation vs. Time)



Jicarilla Contract 147 #6
Summary of Groundwater Analytical Data
(Q2/1999 - Q2/2000)

Well ID	Sample ID	Sample Date	Free Product		Analytes (values in ug/L)			
			Present Yes/No	Thickness (ft.)	benzene	toluene	ethylbenzene	total xylenes
MW-1	9904141500	14-Apr-99	N		<0.5	<0.5	<0.5	<1.5
	9909271310	27-Sep-99	N		<0.5	<0.5	<0.5	<1.5
	9911151235	15-Nov-99	N		<0.5	<0.5	<0.5	<1.5
	NS	20-Mar-00	N					
	NS	7-Jun-00	N					
MW-2	9904141528	14-Apr-99	N		230	<5	<5	671
	9910140915	14-Oct-99	N		55	<0.5	3	196
	9911151305	15-Nov-99	N		130	<0.5	15	272
	0003200904	20-Mar-00	N		140	5	120	440
	0006061312	6-Jun-00	N		52	<0.5	48	46
MW-3	9904141554	14-Apr-99	N		6700	3100	220	3360
	9909271500	27-Sep-99	N		5800	2800	260	3560
	9911151335	15-Nov-99	N		5200	1800	200	2970
	0003200928	20-Mar-00	N		3900	460	230	1710
	0006061326	7-Jun-00	N		4400	64	190	1232
MW-4	9904141612	14-Apr-99	N		280	30	5	500
	9909271400	27-Sep-99	N		56	<0.5	3.6	21.6
	9911151400	15-Nov-99	N		120	<0.5	8.1	41.5
	0003200948	20-Mar-00	N		250	<0.5	45	47
	0006061339	7-Jun-00	N		270	1.6	5.6	10.2
MW-5	9909271430	27-Sep-99	N		<0.5	<0.5	1.5	1.9
	9911151430	15-Nov-99	N		<2.5	6	39	<7.5
	0003201016	20-Mar-00	N		5.1	<0.5	210	8
	0006061357	7-Jun-00	N		1.5	<0.5	3.3	2.9
MW-6	9909271535	27-Sep-99	N		16000	460	280	1299
	9911151500	15-Nov-99	N		20000	840	330	1640
	0003201044	20-Mar-00	N		18000	630	380	1530
	0006061414	7-Jun-00	N		19000	820	370	1960
MW-7	9911151530	15-Nov-99	N		0.5	1.3	0.5	4.6
	0003201109	20-Mar-00	N		5.5	0.8	0.9	4.7
	0006061431	7-Jun-00	N		<0.5	<0.5	<0.5	<1.5
MW-8	0003201159	20-Mar-00	N		2400	2300	55	540
	0006061458	7-Jun-00	N		1100	130	27	106.7
MW-9	0003201133	20-Mar-00	N		<0.5	1.4	<0.5	1.5
	0006061441	7-Jun-00	N		<0.5	<0.5	<0.5	<1.5
MW-10	0003201222	20-Mar-00	N		0.8	2.9	<0.5	1.5
	0006061513	7-Jun-00	N		<0.5	<0.5	<0.5	<1.5

ND = analyte not detected above method detection limit

NS = well not sampled for specified analytes

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 03-May-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	9904026	Client Sample ID:	9904141500; MW-1
Lab ID:	9904026-01A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	4/14/99 3:00:00 PM
		COC Record:	7037

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Benzene	ND	0.5		µg/L	1	4/16/99
Toluene	ND	0.5		µg/L	1	4/16/99
Ethylbenzene	ND	0.5		µg/L	1	4/16/99
m,p-Xylene	ND	1		µg/L	1	4/16/99
o-Xylene	ND	0.5		µg/L	1	4/16/99

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

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 03-May-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	9904026	Client Sample ID:	9904141528; MW-2
Lab ID:	9904026-02A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	4/14/99 3:28:00 PM
		COC Record:	7037

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	230	5		µg/L	10	4/16/99
Toluene	ND	5		µg/L	10	4/16/99
Ethylbenzene	ND	5		µg/L	10	4/16/99
m,p-Xylene	630	10		µg/L	10	4/16/99
o-Xylene	41	5		µg/L	10	4/16/99

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

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 03-May-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	9904026	Client Sample ID:	9904141554; MW-3
Lab ID:	9904026-03A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	4/14/99 3:54:00 PM
		COC Record:	7037

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	6700	25		µg/L	50	4/16/99
Toluene	3100	25		µg/L	50	4/16/99
Ethylbenzene	220	25		µg/L	50	4/16/99
m,p-Xylene	2800	50		µg/L	50	4/16/99
o-Xylene	560	25		µg/L	50	4/16/99

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 03-May-99

Client: PNM - Public Service Company of NM
Work Order: 9904026
Lab ID: 9904026-04A **Matrix:** AQUEOUS
Project: Jicarilla Contract 147-6

Client Sample Info: Jicarilla Contract 147-6
Client Sample ID: 9904141612; MW-4
Collection Date: 4/14/99 4:12:00 PM
COC Record: 7037

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	280	2.5		µg/L	5	4/20/99
Toluene	30	2.5		µg/L	5	4/20/99
Ethylbenzene	5	2.5		µg/L	5	4/20/99
m,p-Xylene	440	5		µg/L	5	4/20/99
o-Xylene	60	2.5		µg/L	5	4/20/99

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

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-Oct-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9909079	Client Sample ID:	9909271310; MW-1
Lab ID:	9909079-01A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	09/27/1999 1:10:00 PM
		COC Record:	7825

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	09/29/1999
Toluene	ND	0.5		µg/L	1	09/29/1999
Ethylbenzene	ND	0.5		µg/L	1	09/29/1999
m,p-Xylene	ND	1		µg/L	1	09/29/1999
o-Xylene	ND	0.5		µg/L	1	09/29/1999

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

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-Oct-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9909079	Client Sample ID:	9909271500; MW-3
Lab ID:	9909079-03A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	09/27/1999 3:00:00 PM
		COC Record:	7825

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	5800	25		µg/L	50	09/30/1999
Toluene	2800	25		µg/L	50	09/30/1999
Ethylbenzene	260	25		µg/L	50	09/30/1999
m,p-Xylene	3000	50		µg/L	50	09/30/1999
o-Xylene	560	25		µg/L	50	09/30/1999

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

Sur: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-Oct-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9909079	Client Sample ID:	9909271400; MW-4
Lab ID:	9909079-04A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	09/27/1999 2:00:00 PM
		COC Record:	7825

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Benzene	56	0.5		µg/L	1	09/30/1999
Toluene	ND	0.5		µg/L	1	09/30/1999
Ethylbenzene	3.6	0.5		µg/L	1	09/30/1999
m,p-Xylene	19	1		µg/L	1	09/30/1999
o-Xylene	2.6	0.5		µg/L	1	09/30/1999

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

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-Oct-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9909079	Client Sample ID:	9909271430; MW-5
Lab ID:	9909079-05A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	09/27/1999 2:30:00 PM
		COC Record:	7825

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	09/30/1999
Toluene	ND	0.5		µg/L	1	09/30/1999
Ethylbenzene	1.5	0.5		µg/L	1	09/30/1999
m,p-Xylene	ND	1		µg/L	1	09/30/1999
o-Xylene	1.9	0.5		µg/L	1	09/30/1999

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

P.O. BOX 2606 • FARMINGTON, NM 87499

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-Oct-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9909079	Client Sample ID:	9909271535; MW-6
Lab ID:	9909079-06A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	09/27/1999 3:35:00 PM
		COC Record:	7825

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	16000	50		µg/L	100	09/30/1999
Toluene	460	50		µg/L	100	09/30/1999
Ethylbenzene	280	50		µg/L	100	09/30/1999
m,p-Xylene	1200	100		µg/L	100	09/30/1999
o-Xylene	99	50		µg/L	100	09/30/1999

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

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 22-Oct-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9910025	Client Sample ID:	9910140915; MW-2
Lab ID:	9910025-01A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	10/14/99 9:15:00 AM
		COC Record:	7767

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	55	0.5		µg/L	1	10/18/99
Toluene	ND	0.5		µg/L	1	10/18/99
Ethylbenzene	2.6	0.5		µg/L	1	10/18/99
m,p-Xylene	190	1		µg/L	1	10/18/99
o-Xylene	6.5	0.5		µg/L	1	10/18/99

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

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Nov-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9911027	Client Sample ID:	9911151235; MW-1
Lab ID:	9911027-01A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	11/15/99 12:35:00 PM
		COC Record:	7858

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	11/18/99
Toluene	ND	0.5		µg/L	1	11/18/99
Ethylbenzene	ND	0.5		µg/L	1	11/18/99
m,p-Xylene	ND	1		µg/L	1	11/18/99
o-Xylene	ND	0.5		µg/L	1	11/18/99

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

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Nov-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9911027	Client Sample ID:	9911151305; MW-2
Lab ID:	9911027-02A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	11/15/99 1:05:00 PM
		COC Record:	7858

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Benzene	130	0.5		µg/L	1	11/18/99
Toluene	ND	0.5		µg/L	1	11/18/99
Ethylbenzene	15	0.5		µg/L	1	11/18/99
m,p-Xylene	230	1		µg/L	1	11/18/99
o-Xylene	42	0.5		µg/L	1	11/18/99

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

Sum: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Nov-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9911027	Client Sample ID:	9911151335; MW-3
Lab ID:	9911027-03A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	11/15/99 1:35:00 PM
		COC Record:	7858

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	5200	25		µg/L	50	11/18/99
Toluene	1800	25		µg/L	50	11/18/99
Ethylbenzene	200	25		µg/L	50	11/18/99
m,p-Xylene	2600	50		µg/L	50	11/18/99
o-Xylene	370	25		µg/L	50	11/18/99

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Nov-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9911027	Client Sample ID:	9911151400; MW-4
Lab ID:	9911027-04A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	11/15/99 2:00:00 PM
		COC Record:	7858

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	120	0.5		µg/L	1	11/18/99
Toluene	ND	0.5		µg/L	1	11/18/99
Ethylbenzene	8.1	0.5		µg/L	1	11/18/99
m,p-Xylene	39	1		µg/L	1	11/18/99
o-Xylene	2.5	0.5		µg/L	1	11/18/99

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

Sur: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Nov-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9911027	Client Sample ID:	9911151430; MW-5
Lab ID:	9911027-05A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	11/15/99 2:30:00 PM
		COC Record:	7858

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	2.5		µg/L	5	11/18/99
Toluene	6	2.5		µg/L	5	11/18/99
Ethylbenzene	39	2.5		µg/L	5	11/18/99
m,p-Xylene	ND	5		µg/L	5	11/18/99
o-Xylene	ND	2.5		µg/L	5	11/18/99

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

Sur: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Nov-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9911027	Client Sample ID:	9911151500; MW-6
Lab ID:	9911027-06A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	11/15/99 3:00:00 PM
		COC Record:	7858

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Benzene	20000	100		µg/L	200	11/19/99
Toluene	840	50		µg/L	100	11/18/99
Ethylbenzene	330	50		µg/L	100	11/18/99
m,p-Xylene	1500	100		µg/L	100	11/18/99
o-Xylene	140	50		µg/L	100	11/18/99

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Nov-99

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla 147-6
Work Order:	9911027	Client Sample ID:	9911151530; MW-7
Lab ID:	9911027-07A	Matrix:	AQUEOUS
Project:	Jicarilla 147-6	Collection Date:	11/15/99 3:30:00 PM
		COC Record:	7858

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	0.5	0.5		µg/L	1	11/18/99
Toluene	1.3	0.5		µg/L	1	11/18/99
Ethylbenzene	0.5	0.5		µg/L	1	11/18/99
m,p-Xylene	1.1	1		µg/L	1	11/18/99
o-Xylene	3.5	0.5		µg/L	1	11/18/99

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

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 27-Mar-00

Client: PNM - Public Service Company of NM
Work Order: 0003032
Lab ID: 0003032-01A **Matrix:** AQUEOUS
Project: Jicarilla Contract 147-6

Client Sample Info: Jicarilla Contract 147-6
Client Sample ID: 0003200904; MW-2
Collection Date: 3/20/2000 9:04:00 AM
COC Record: 8504

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	140	0.5		µg/L	1	3/22/2000
Toluene	5.3	0.5		µg/L	1	3/22/2000
Ethylbenzene	120	0.5		µg/L	1	3/22/2000
m,p-Xylene	400	5		µg/L	5	3/23/2000
o-Xylene	40	0.5		µg/L	1	3/22/2000

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

1 of 10

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 27-Mar-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0003032	Client Sample ID:	0003200928; MW-3
Lab ID:	0003032-02A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	3/20/2000 9:28:00 AM
		COC Record:	8504

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	3900	25		µg/L	50	3/23/2000
Toluene	460	25		µg/L	50	3/23/2000
Ethylbenzene	230	25		µg/L	50	3/23/2000
m,p-Xylene	1600	50		µg/L	50	3/23/2000
o-Xylene	110	25		µg/L	50	3/23/2000

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

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 27-Mar-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0003032	Client Sample ID:	0003200948; MW-4
Lab ID:	0003032-03A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	3/20/2000 9:48:00 AM
		COC Record:	8504

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	250	2.5		µg/L	5	3/24/2000
Toluene	ND	0.5		µg/L	1	3/23/2000
Ethylbenzene	45	0.5		µg/L	1	3/23/2000
m,p-Xylene	45	1		µg/L	1	3/23/2000
o-Xylene	2	0.5		µg/L	1	3/23/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 27-Mar-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0003032	Client Sample ID:	0003201016; MW-5
Lab ID:	0003032-04A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	3/20/2000 10:16:00 AM
		COC Record:	8504

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	5.1	0.5		µg/L	1	3/23/2000
Toluene	ND	0.5		µg/L	1	3/23/2000
Ethylbenzene	210	2.5		µg/L	5	3/24/2000
m,p-Xylene	7.5	1		µg/L	1	3/23/2000
o-Xylene	0.5	0.5		µg/L	1	3/23/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 27-Mar-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0003032	Client Sample ID:	0003201044; MW-6
Lab ID:	0003032-05A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	3/20/2000 10:44:00 AM
		COC Record:	8504

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	18000	100		µg/L	200	3/23/2000
Toluene	630	25		µg/L	50	3/24/2000
Ethylbenzene	380	25		µg/L	50	3/24/2000
m,p-Xylene	1400	50		µg/L	50	3/24/2000
o-Xylene	130	25		µg/L	50	3/24/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 27-Mar-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0003032	Client Sample ID:	0003201109; MW-7
Lab ID:	0003032-06A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	3/20/2000 11:09:00 AM
		COC Record:	8504

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	5.5	0.5		µg/L	1	3/23/2000
Toluene	0.8	0.5		µg/L	1	3/23/2000
Ethylbenzene	0.9	0.5		µg/L	1	3/23/2000
m,p-Xylene	3.6	1		µg/L	1	3/23/2000
o-Xylene	1.1	0.5		µg/L	1	3/23/2000

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

6 of 10

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 27-Mar-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0003032	Client Sample ID:	0003201159; MW-8
Lab ID:	0003032-08A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	3/20/2000 11:59:00 AM
		COC Record:	8504

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	2400	10		µg/L	20	3/24/2000
Toluene	2300	10		µg/L	20	3/24/2000
Ethylbenzene	55	10		µg/L	20	3/24/2000
m,p-Xylene	430	20		µg/L	20	3/24/2000
o-Xylene	110	10		µg/L	20	3/24/2000

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

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 27-Mar-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0003032	Client Sample ID:	0003201133; MW-9
Lab ID:	0003032-07A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	3/20/2000 11:33:00 AM
		COC Record:	8504

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	3/23/2000
Toluene	1.4	0.5		µg/L	1	3/23/2000
Ethylbenzene	ND	0.5		µg/L	1	3/23/2000
m,p-Xylene	1.5	1		µg/L	1	3/23/2000
o-Xylene	ND	0.5		µg/L	1	3/23/2000

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

Surrogate - Surrogate

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 27-Mar-00

Client: PNM - Public Service Company of NM
Work Order: 0003032
Lab ID: 0003032-09A **Matrix:** AQUEOUS
Project: Jicarilla Contract 147-6

Client Sample Info: Jicarilla Contract 147-6
Client Sample ID: 0003201222; MW-10
Collection Date: 3/20/2000 12:22:00 PM
COC Record: 8504

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
-----------	--------	-----	------	-------	----	---------------

AROMATIC VOLATILES BY GC/PID

SW8021B

Analyst: DM

Benzene	0.8	0.5		µg/L	1	3/24/2000
Toluene	2.9	0.5		µg/L	1	3/24/2000
Ethylbenzene	ND	0.5		µg/L	1	3/24/2000
m,p-Xylene	1.5	1		µg/L	1	3/24/2000
o-Xylene	ND	0.5		µg/L	1	3/24/2000

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

Surrogate - Surrogate

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0006021	Client Sample ID:	0006061312; MW-2
Lab ID:	0006021-01A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	6/6/2000 1:12:00 PM
		COC Record:	7886

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	52	0.5		µg/L	1	6/12/2000
Toluene	ND	0.5		µg/L	1	6/12/2000
Ethylbenzene	48	0.5		µg/L	1	6/12/2000
m,p-Xylene	21	1		µg/L	1	6/12/2000
o-Xylene	25	0.5		µg/L	1	6/12/2000

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

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0006021	Client Sample ID:	0006061326; MW-3
Lab ID:	0006021-02A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	6/7/2000 1:26:00 PM
		COC Record:	7886

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	4400	25		µg/L	50	6/12/2000
Toluene	64	25		µg/L	50	6/12/2000
Ethylbenzene	190	25		µg/L	50	6/12/2000
m,p-Xylene	1200	50		µg/L	50	6/12/2000
o-Xylene	32	25		µg/L	50	6/12/2000

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

Surrogate - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0006021	Client Sample ID:	0006061339; MW-4
Lab ID:	0006021-03A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	6/7/2000 1:39:00 PM
		COC Record:	7886

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	270	2.5		µg/L	5	6/13/2000
Toluene	1.6	0.5		µg/L	1	6/12/2000
Ethylbenzene	5.6	0.5		µg/L	1	6/12/2000
m,p-Xylene	8.7	1		µg/L	1	6/12/2000
o-Xylene	1.5	0.5		µg/L	1	6/12/2000

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
Surrogate - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0006021	Client Sample ID:	0006061357; MW-5
Lab ID:	0006021-04A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	6/7/2000 1:57:00 PM
		COC Record:	7886

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	1.5	0.5		µg/L	1	6/12/2000
Toluene	ND	0.5		µg/L	1	6/12/2000
Ethylbenzene	3.3	0.5		µg/L	1	6/12/2000
m,p-Xylene	2.2	1		µg/L	1	6/12/2000
o-Xylene	0.7	0.5		µg/L	1	6/12/2000

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

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0006021	Client Sample ID:	0006061414; MW-6
Lab ID:	0006021-05A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	6/7/2000 2:14:00 PM
		COC Record:	7886

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Benzene	19000	50		µg/L	100	6/12/2000
Toluene	820	50		µg/L	100	6/12/2000
Ethylbenzene	370	50		µg/L	100	6/12/2000
m,p-Xylene	1800	100		µg/L	100	6/12/2000
o-Xylene	160	50		µg/L	100	6/12/2000

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

Surrogate - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0006021	Client Sample ID:	0006061431; MW-7
Lab ID:	0006021-06A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	6/7/2000 2:31:00 PM
		COC Record:	7886

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	6/12/2000
Toluene	ND	0.5		µg/L	1	6/12/2000
Ethylbenzene	ND	0.5		µg/L	1	6/12/2000
m,p-Xylene	ND	1		µg/L	1	6/12/2000
o-Xylene	ND	0.5		µg/L	1	6/12/2000

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

Surrogate - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0006021	Client Sample ID:	0006061458; MW-8
Lab ID:	0006021-08A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	6/7/2000 2:58:00 PM
		COC Record:	7886

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Benzene	1100	5		µg/L	10	6/12/2000
Toluene	130	5		µg/L	10	6/12/2000
Ethylbenzene	27	5		µg/L	10	6/12/2000
m,p-Xylene	99	10		µg/L	10	6/12/2000
o-Xylene	7.7	5		µg/L	10	6/12/2000

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

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	PNM - Public Service Company of NM	Client Sample Info:	Jicarilla Contract 147-6
Work Order:	0006021	Client Sample ID:	0006061513; MW-10
Lab ID:	0006021-09A	Matrix:	AQUEOUS
Project:	Jicarilla Contract 147-6	Collection Date:	6/7/2000 3:13:00 PM
		COC Record:	7886

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	6/12/2000
Toluene	ND	0.5		µg/L	1	6/12/2000
Ethylbenzene	ND	0.5		µg/L	1	6/12/2000
m,p-Xylene	ND	1		µg/L	1	6/12/2000
o-Xylene	ND	0.5		µg/L	1	6/12/2000

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

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -