

3R - 332

# REPORTS

DATE:

Nov. 1, 1999

Public Service Company  
of New Mexico  
603 W. Elm - P.O. Box 4750  
Farmington, NM 87499  
505 950-1997  
Fax 505 325-7365

November 1, 1999

Oil Conservation Division  
Attention: Bill Olson  
2040 South Pacheco  
Santa Fe, NM 87505



Subject: OCD Closure Reports – 3rd Reporting Quarter, 1999

Dear Mr. Olson:

PNM Environmental Services is submitting closure reports to the Oil Conservation Division for the groundwater sites listed below:

1. Florance #32A
2. Jacques #2A
3. Linda #1A
4. Mangum #1E
5. McClanahan #22
6. McCoy Gas Com A #1
7. Reid #16 Drip

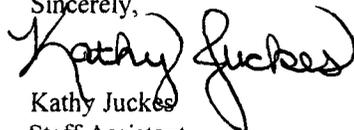
I have provided copies of the closures to Denny Foust for his information.

I have also enclosed copies of closures submitted to Denny Foust for his approval for the sites listed below:

- |                            |                           |                       |                         |
|----------------------------|---------------------------|-----------------------|-------------------------|
| 1. Angel Peak #23E         | 20. Dusenberry #2A        | 39. Grenier #12       | 58. Hanks #12E East     |
| 2. Aztec SRC #8 Drip       | 21. East #10M             | 40. Grenier #13E      | 59. Hanks #12Y          |
| 3. C.M. Morris #3          | 22. East #12              | 41. Grenier #15       | 60. Hanks #17           |
| 4. Crouch Area Drip East   | 23. East #15              | 42. Grenier #15E      | 61. Hare #12            |
| 5. Crouch Area Drip West   | 24. East #16              | 43. Grenier #2A       | 62. Hare #13            |
| 6. Culpepper Martin #10A   | 25. East #22              | 44. Grenier #3        | 63. Hare #15            |
| 7. Culpepper Martin #15A   | 26. East #22A             | 45. Grenier #4 Dehy   | 64. Hare #16            |
| 8. Culpepper Martin #1A GC | 27. East #5               | 46. Grenier #4A Sep   | 65. Hare #17            |
| 9. Culpepper Martin #1A RH | 28. East #8               | 47. Grenier #6A       | 66. Hare #18 East       |
| 10. Culpepper Martin #1E   | 29. East #9A              | 48. Grenier A #1A Sep | 67. Hare #22A           |
| 11. Culpepper Martin #3A   | 30. Eaton Federal #1      | 49. Grenier A #4      | 68. Holder A #1         |
| 12. Culpepper Martin #3M   | 31. EH Pipken #5          | 50. Grenier A #4E     | 69. Horton #1           |
| 13. Culpepper Martin #4A   | 32. EH Pipken #5 Drip     | 51. Grenier A #5      | 70. Horton #1A          |
| 14. Culpepper Martin #4M   | 33. Federal #1E           | 52. Grenier A #6      | 71. Hubbard #1A         |
| 15. Culpepper Martin #8A   | 34. Florance #25          | 53. Grenier A #8      | 72. Jackson #2E         |
| 16. Decker #4A Dehy        | 35. Florance #27A         | 54. Grenier B #3E     | 73. Kutz Government #5J |
| 17. Decker A #3 Drip       | 36. Fred Feasel G #1      | 55. Grenier B #4      | 74. Martinez #1         |
| 18. Decker A #3 Separator  | 37. Fred Feasel G #1 Drip | 56. Gross #1          |                         |
| 19. Dusenberry #1A         | 38. Fred Feasel G #1E     | 57. Gross #1E         |                         |

If you have any questions, please call me at 324-3764.

Sincerely,

  
Kathy Juckes  
Staff Assistant

cc: Denny Foust

District I  
P.O. Box 1980, Hobbs, NM

District II  
P.O. Drawer DD, Artesia, NM 88221

District III  
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

SUBMIT 1 COPY TO  
APPROPRIATE  
DISTRICT OFFICE  
AND 1 COPY TO  
SANTA FE OFFICE

OIL CONSERVATION DIVISION

2040 South Pacheco Street  
Santa Fe, New Mexico 87505

**PIT REMEDIATION AND CLOSURE REPORT**

<b>Operator:</b>	PNM Gas Services ( Amoco )		<b>Telephone:</b>	324-3764	
<b>Address:</b>	603 W. Elm Street Farmington, NM 87401				
<b>Facility or Well Name:</b>	McCoy Gas Com A #1				
<b>Location:</b>	Unit	H	Sec	18	T 31N R 10W County San Juan
<b>Pit Type:</b>	Separator	<input type="checkbox"/>	Dehydrator	<input type="checkbox"/>	Other No equip on site.
<b>Land Type:</b>	BLM	<input type="checkbox"/>	State	<input type="checkbox"/>	Fee <input checked="" type="checkbox"/> Other
<b>Pit Location:</b>	<b>Pit dimensions:</b>	length	width	depth	
(Attach diagram)	<b>Reference:</b>	wellhead	<input checked="" type="checkbox"/>	other	
	<b>Footage from reference:</b>	115'			
	<b>Direction from reference:</b>	15	Degrees	<input type="checkbox"/> East	North <input type="checkbox"/>
				<input checked="" type="checkbox"/> West	South <input checked="" type="checkbox"/>
<b>Depth to Ground Water:</b>		Less than 50 feet	(20 points)		
		50 feet to 99 feet	(10 points)		
(Vertical distance from contaminants to seasonal high water elevation of ground water)		Greater than 100 feet	( 0 points)		20
<b>Wellhead Protection Area:</b>		Yes	(20 points)		
(Less than 200 feet from a private domestic water source, or, less than 1,000 feet from all other water sources)		No	( 0 points)		20
<b>Distance to Surface Water:</b>		Less than 200 feet	(20 points)		
		200 feet to 1,000 feet	(10 points)		
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)		Greater than 1,000 feet	( 0 points)		20
	<b>RANKING SCORE (TOTAL POINTS):</b>				60

McCoy Gas Com A #1

Date Remediation Started: 05/21/1997

Date Completed: 05/23/1997

Remediation Method: Excavation X

Approx. Cubic Yard 637

(Check all appropriate sections)

Landfarmed X

Amount Landfarmed (cubic yds) 325

Other 312 cu yds overburden.

Remediation Location: Onsite \_\_\_\_\_

Offsite X - 325 cu yds hauled to Tierra Environmental.

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

Backfill Material Location: \_\_\_\_\_

General Description of Remedial Action:

Former pit covered over - marked by a T-Post. Excavated contaminated soil to a pit size of 37' X 31' X 15' and transported soil to an offsite commercial landfarm.

Ground Water Encountered: No  Yes  Depth 15'

Final Pit Closure Sampling:

Sample Location Middle of pit.

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

Sample depth 15'

Sample date 05/23/1997 Sample time 8:00:00 AM

Sample Results

Benzene (ppm) 0.875

Total BTEX (ppm) 8.018

Field headspace (ppm) \_\_\_\_\_

TPH (ppm) \_\_\_\_\_ Method 8020A

Vertical Extent (ft) \_\_\_\_\_ Risk Analysis form attached Yes  No

Ground Water Sample: Yes  No

(If yes, see attached Groundwater Site Summary Report)

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

DATE October 28, 1999

PRINTED NAME Maureen Gannon  
AND TITLE Project Manager

SIGNATURE Maureen Gannon

## Groundwater Site Summary Report

Quarter/Year: 4<sup>th</sup>/98, 1<sup>st</sup>/99, 2<sup>nd</sup>/99 & 3<sup>rd</sup>/99

Operator: Amoco  
Sec: 18 Twn: 31N Rng: 10W Unit: H  
Canyon: Animas River

Vulnerable Class: Original  
OCD Ranking: 40  
Lead Agency: NMOCD

Topo Map: Figure 1

Site Map with Analysis: Figure 2

Groundwater Contour Map: Figure 3 (November 1998), Figure 4 (January 1999), Figure 5 (April 1999) & Figure 6 (August 1999)

Groundwater Hydrograph Figure 7

Full-Suite Groundwater Sampling Results: previously submitted

Analytical Results: attached 2<sup>nd</sup>/99 & 3<sup>rd</sup>/99 only

Well Completion Diagram/Log: TMW-1 only

North Star Water Users Assoc. Analytical Results: attached

### Site Hydrology:

The McCoy Gas Com A1 site (Figure 1) lies upon coarse, alluvial floodplain deposits of the Animas River valley, and is located northeast of Aztec, New Mexico. Materials beneath the site are essentially the same as the modern river's bedload, spanning the broad alluvial plains along the major river systems of the San Juan Basin (Stone et al., 1983). The valley floor of the Animas is about one mile wide near the McCoy site. Hydraulic conductivity of these materials is expected to be very high, as they are described as "cobbles" in site excavations and monitor wells.

Irrigation ditches skirt the south and west sides of the site. Recharge to groundwater is likely from drainage of these irrigated lands. The site lies about 100 feet from the river's waterline. The site elevation is about 5775 ft. amsl, while the river is perhaps 10 to 15 feet lower in elevation. Depth to water has ranged from 10 to 14 feet in site monitor wells. Topographic gradient is north to northwest, towards the Animas River.

The local groundwater gradient varies from northeast to southwest depending upon the time of year. During November of 1998 (Figure 3) and August of 1999 (Figure 6), groundwater gradient flows in a northeasterly direction. This may be attributed to low flow on the Animas River and may also be attributed to recharge from Arch Rock Canyon, to the east. It may also be an anomaly of the data representation on the contour map since the groundwater gradient in the fall and the winter is much flatter, and groundwater flow appears to be practically static.

The groundwater gradient during January 1999 (Figure 4) and April 1999 (Figure 5) flows in a southwesterly direction. However, the gradient again is relatively flat indicating a practically static water table surface during wintertime conditions near PNM's former pit area.

The site hydrograph (Figure 7) indicate large fluctuations over time in site water levels (more than three feet over the last two years). Highest water levels were observed during spring of 1998, probably reflecting irrigation leakage, and/or high river stage from spring snowmelt. Lowest water levels are found during the winter months.

### Activities for Previous Year:

Since our last reporting in April of 1999, PNM conducted quarterly sampling on April 21, 1999 and again on August 10, 1999. Water level measurements were taken in all of the monitoring wells. PNM conducted groundwater sampling for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX). All sampling was performed in strict compliance with EPA protocol. PNM delivered the samples to OnSite Technologies,

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### **Public Service Company of New Mexico - Gas Services**

Environmental Services Division - Alvarado Square, MS-0408  
Albuquerque, NM 87158

Contact: Maureen Gannon

Telephone: 505-241-2974

**PNMGS Well Site: McCoy Gas Com A1 (continued)**

Farmington, New Mexico. The samples were analyzed for BTEX using EPA Method 8021B. During the April sampling event only monitor wells MW-2 and MW-4 were sampled. Wells MW-1 and MW-3 had already established concentrations below WQCC standards for four consecutive quarters.

On July 28, 1999, PNM installed a temporary monitor well northeast of our former dehydrator pit in line with the North Star water treatment intake. This well was installed to alleviate any potential concerns regarding impacts to the treatment system. Figure 2 shows the exact location of this well. In addition, PNM interviewed the North Star Water Association and requested analytical data for Safe Drinking Water Act (SDWA) Volatiles collected from the treatment system over the last three years. The results are provided as attachment.

On August 10, 1999, PNM performed quarterly monitoring again. All wells were sampled, including the new temporary well, TMW-1.

**Results:**

Figure 2 presents a site map showing BTEX concentrations for each monitoring well since groundwater contamination was discovered. MW-1, the upgradient well, has shown "non-detect" for BTEX since it's installation. BTEX concentrations in MW-2, -3 and -4 have decreased over time; after secondary source removal in March, 1998 all wells have remained below standards for four consecutive quarters. Resampling of all monitor wells, including temporary monitor well, TMW-1, show that BTEX compounds are below standards at the site.

**Future Actions:**

Consistent with PNM's San Juan Basin Groundwater Management Plan, PNM requests closure of the McCoy Gas Com A1. This request is based upon the analytical data collected over the last two years at the site. The excavation of source materials appears to have been successful in achieving clean-up at the McCoy Gas Com A1. BTEX concentrations in all wells have been below standards for four consecutive quarters.

Upon approval of the groundwater closure report, PNM will plug and abandon the five groundwater monitoring wells at the site. The concrete pad and metal vault surrounding each well will be removed. The well casing will be cut to ground surface and each well will be plugged to the surface with cement containing 5% bentonite.

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Environmental Services Division - Alvarado Square, MS-0408  
Albuquerque, NM 87158

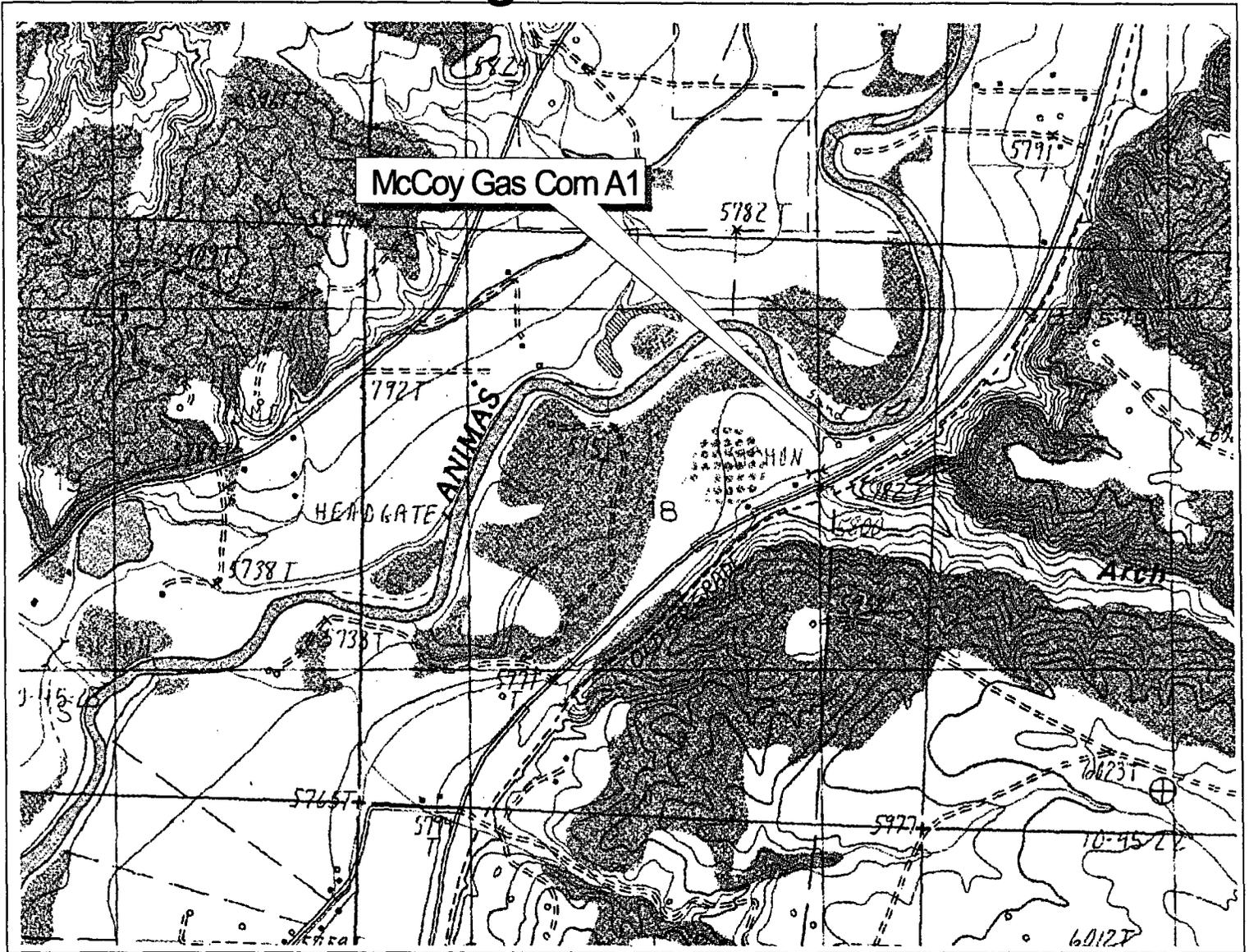
Contact: Maureen Gannon

Telephone: 505-241-2974

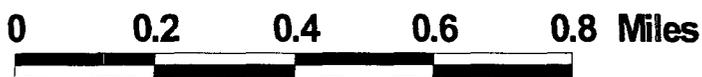
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**Figure 1. McCoy Gas Com A1  
Twn. 31N Rng. 10W Sec. 18 Unit H**



Cedar Hill, NM-Colo Quadrangle



# Figure 2. McCoy Gas Com A1 Site Map & Analytical Results (ppb)

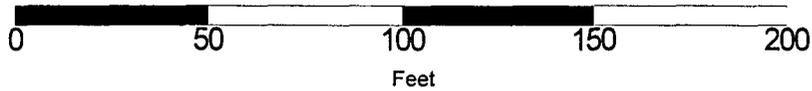
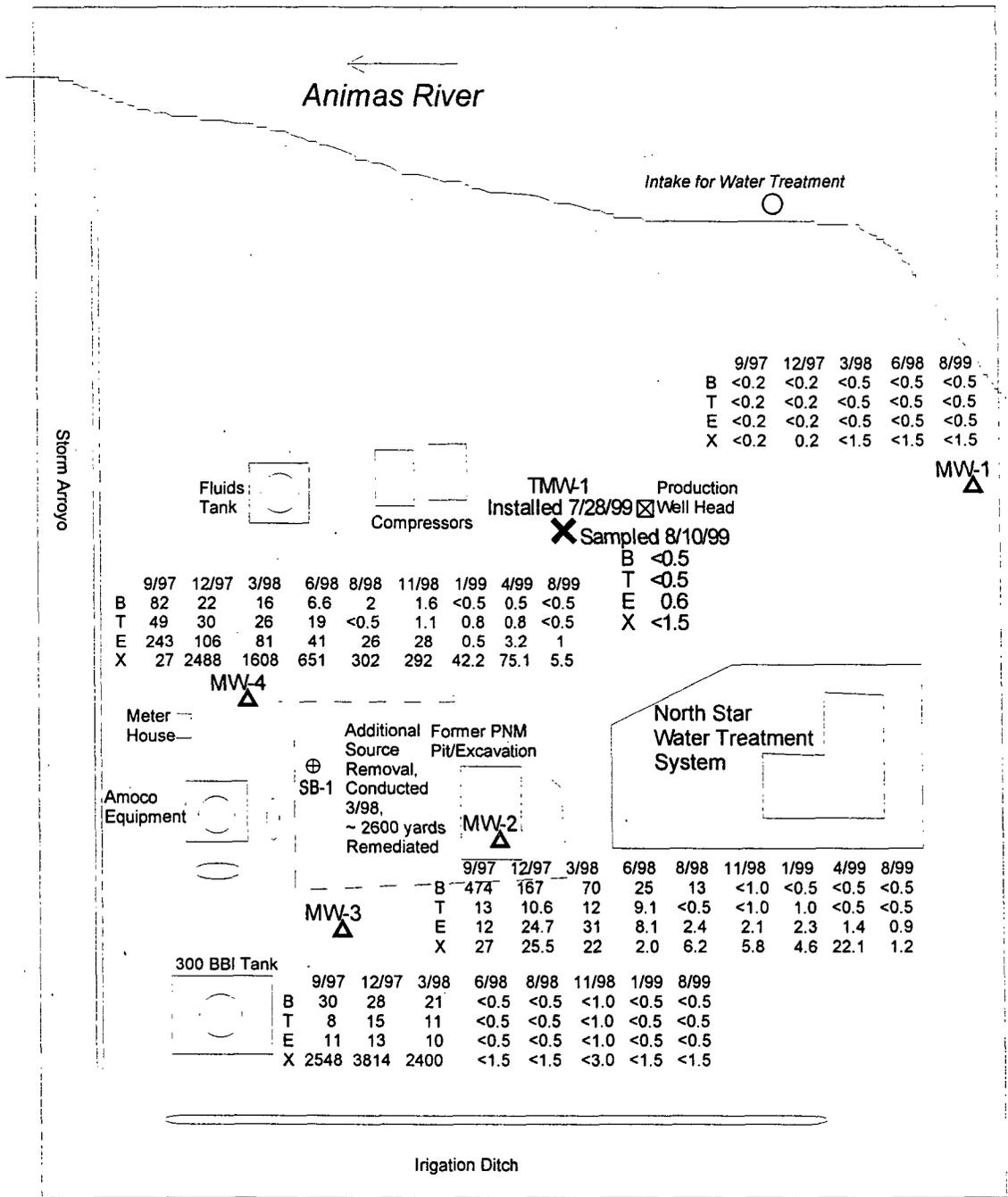


Figure 3.  
McCoy Gas Com A1 Groundwater contour Map  
(November 11, 1998)

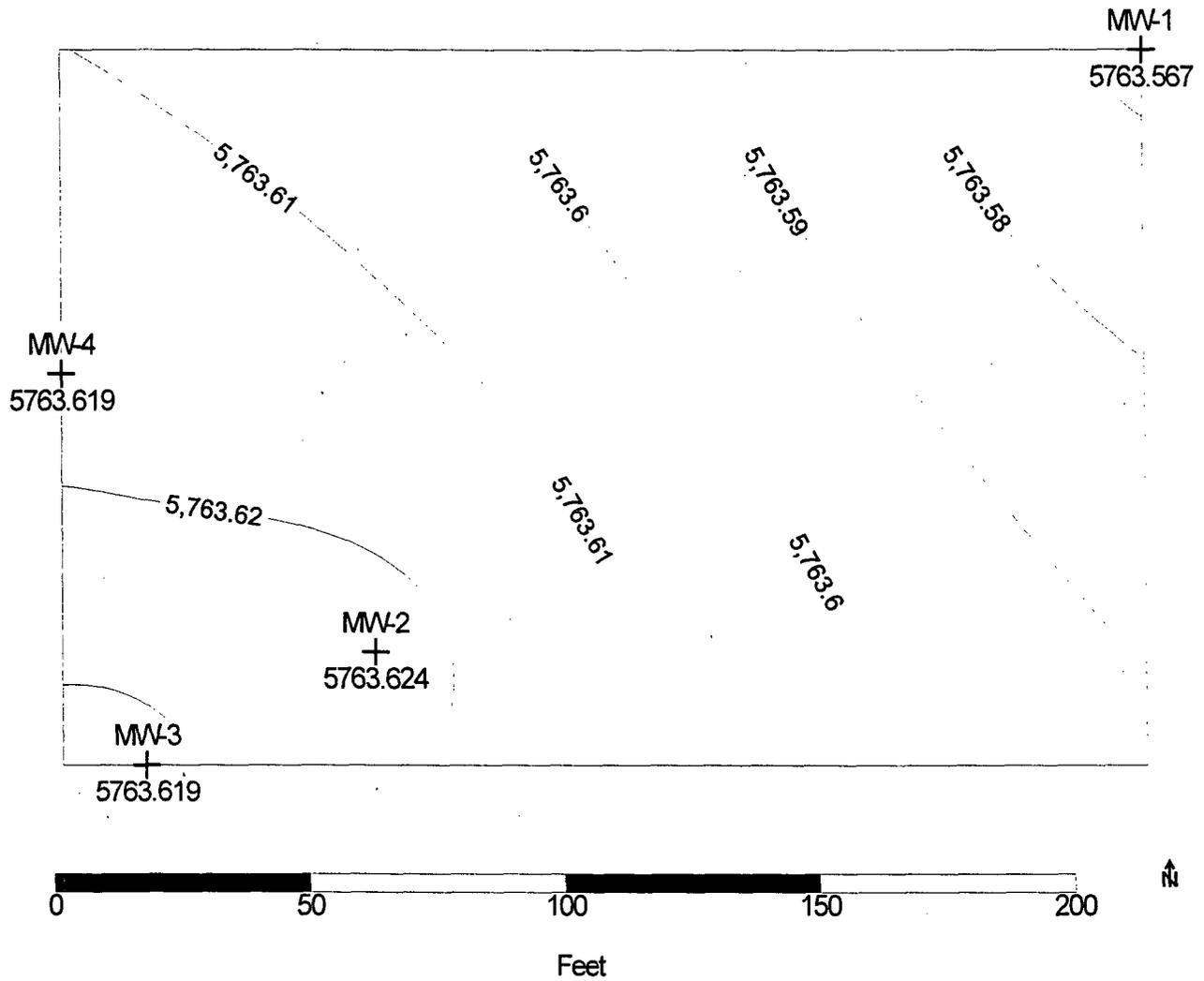


Figure 4.  
McCoy Gas Com A1 Groundwater contour Map  
(January 21, 1999)

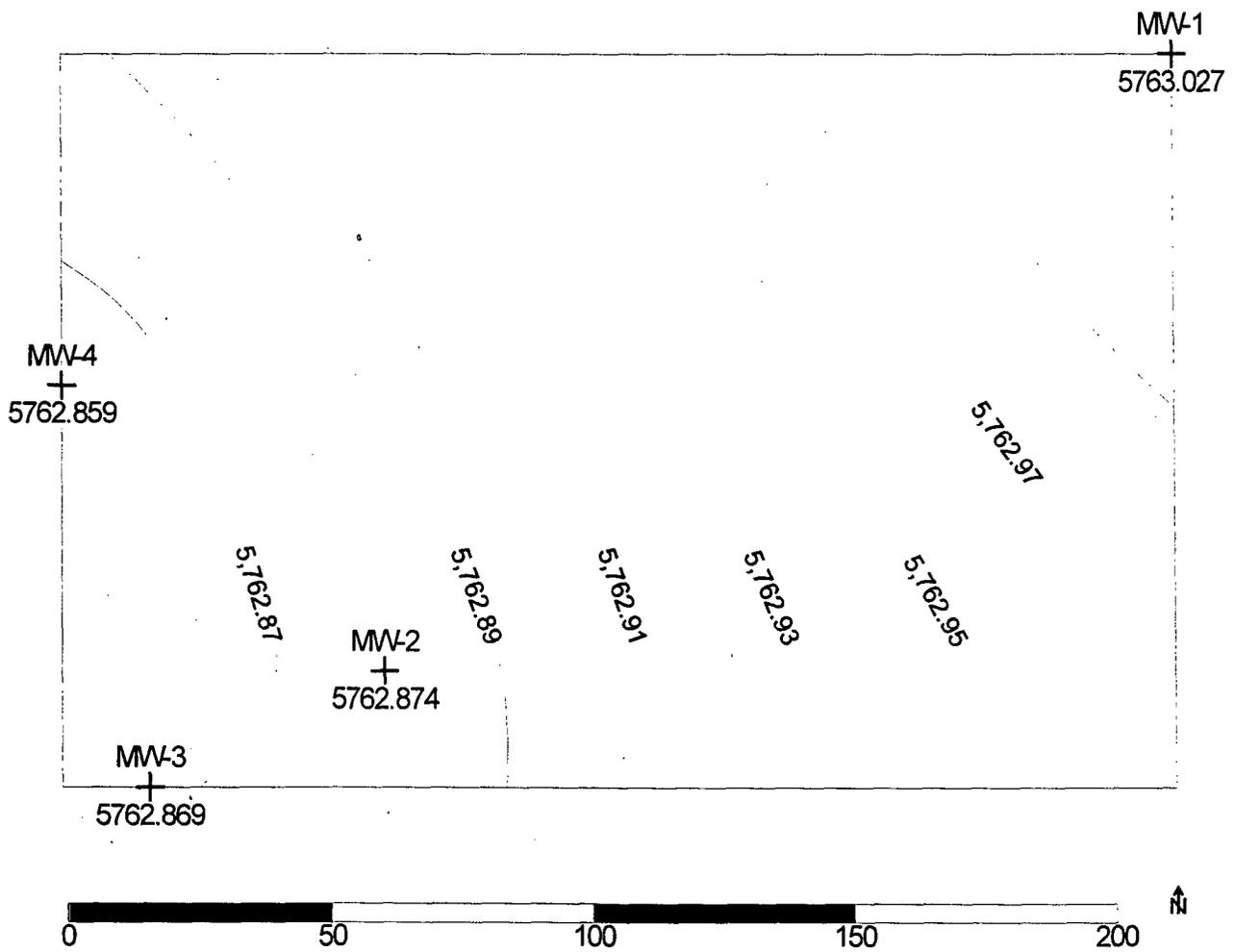


Figure 5.  
McCoy Gas Com A1 Groundwater contour Map  
(April 21, 1999)

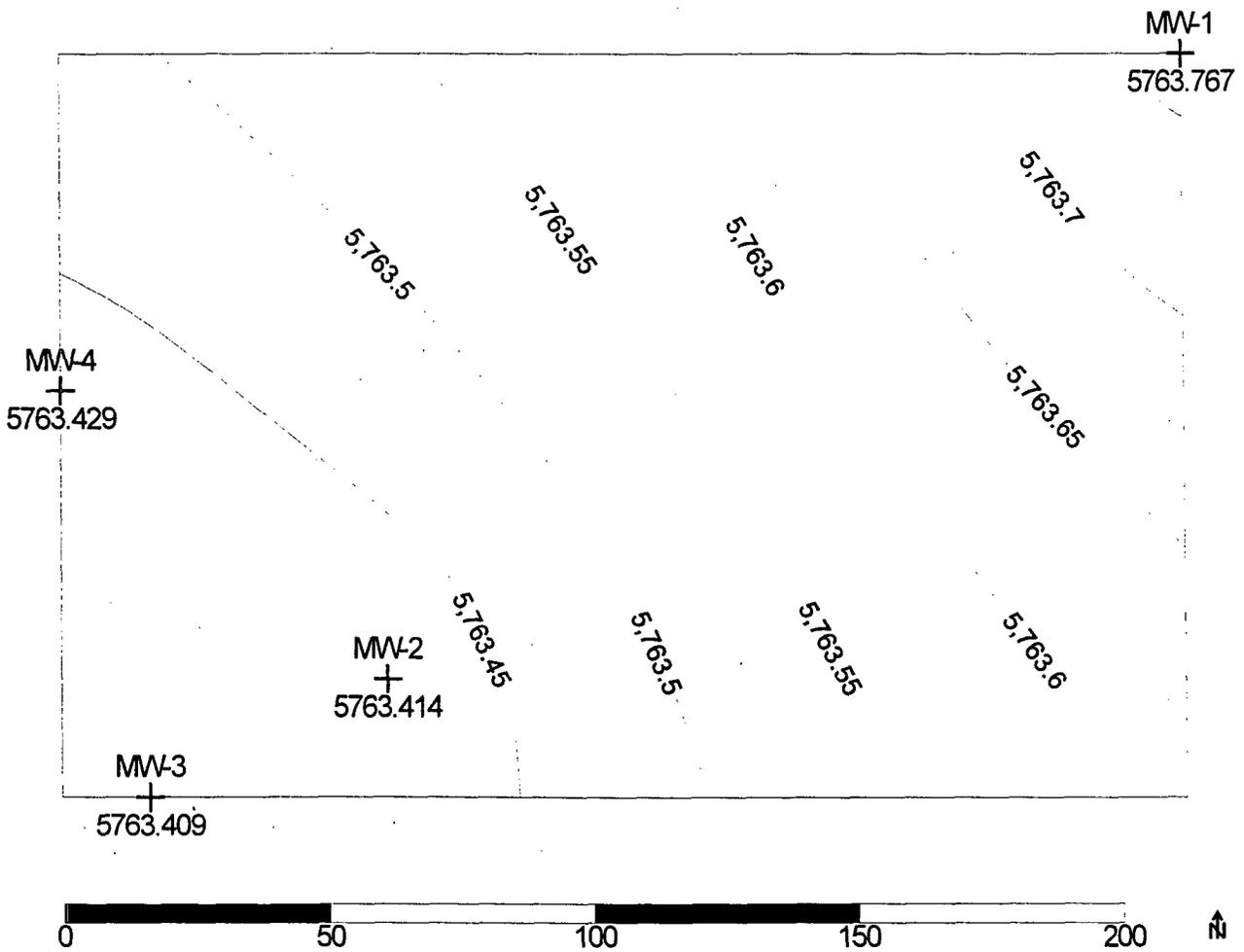
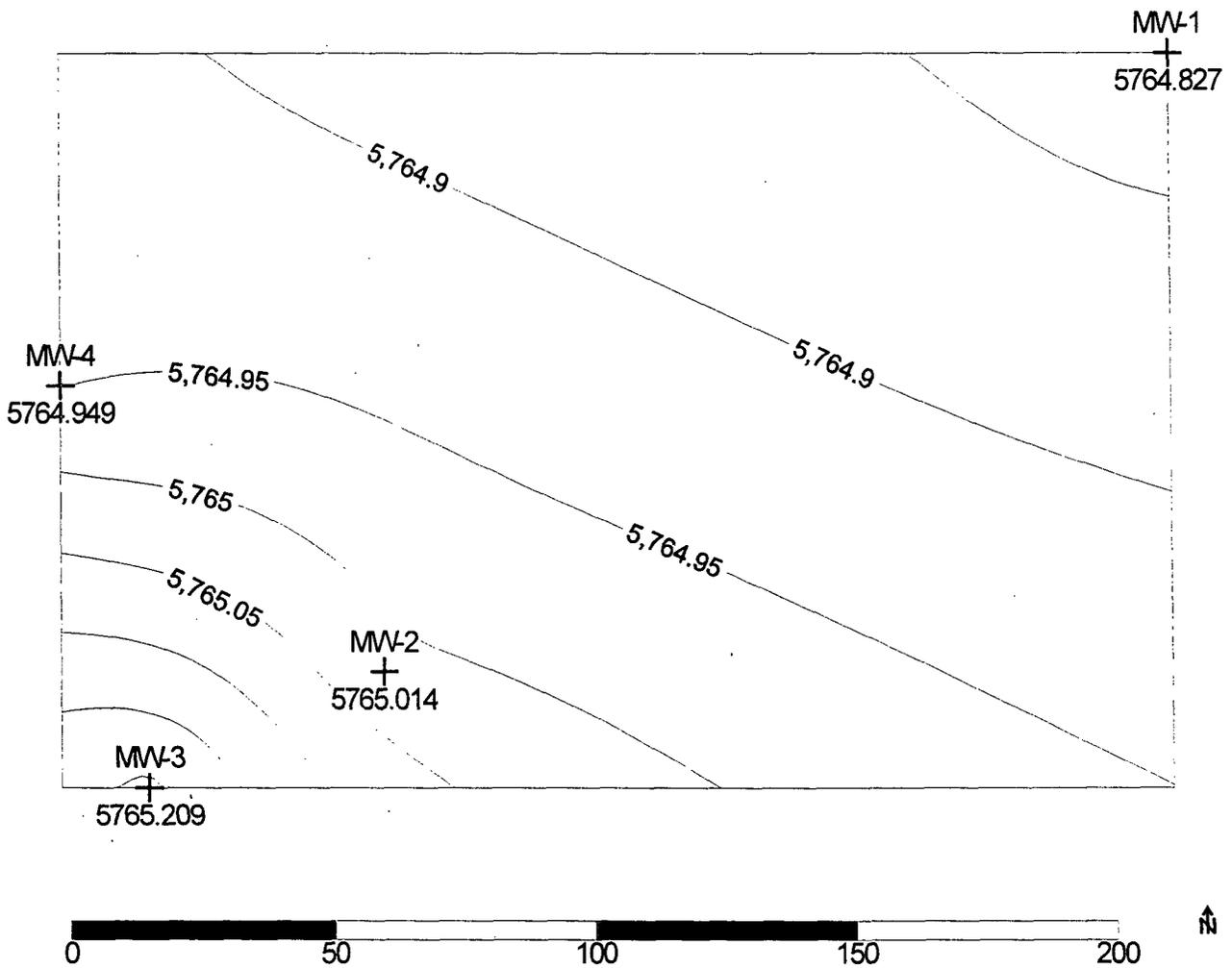
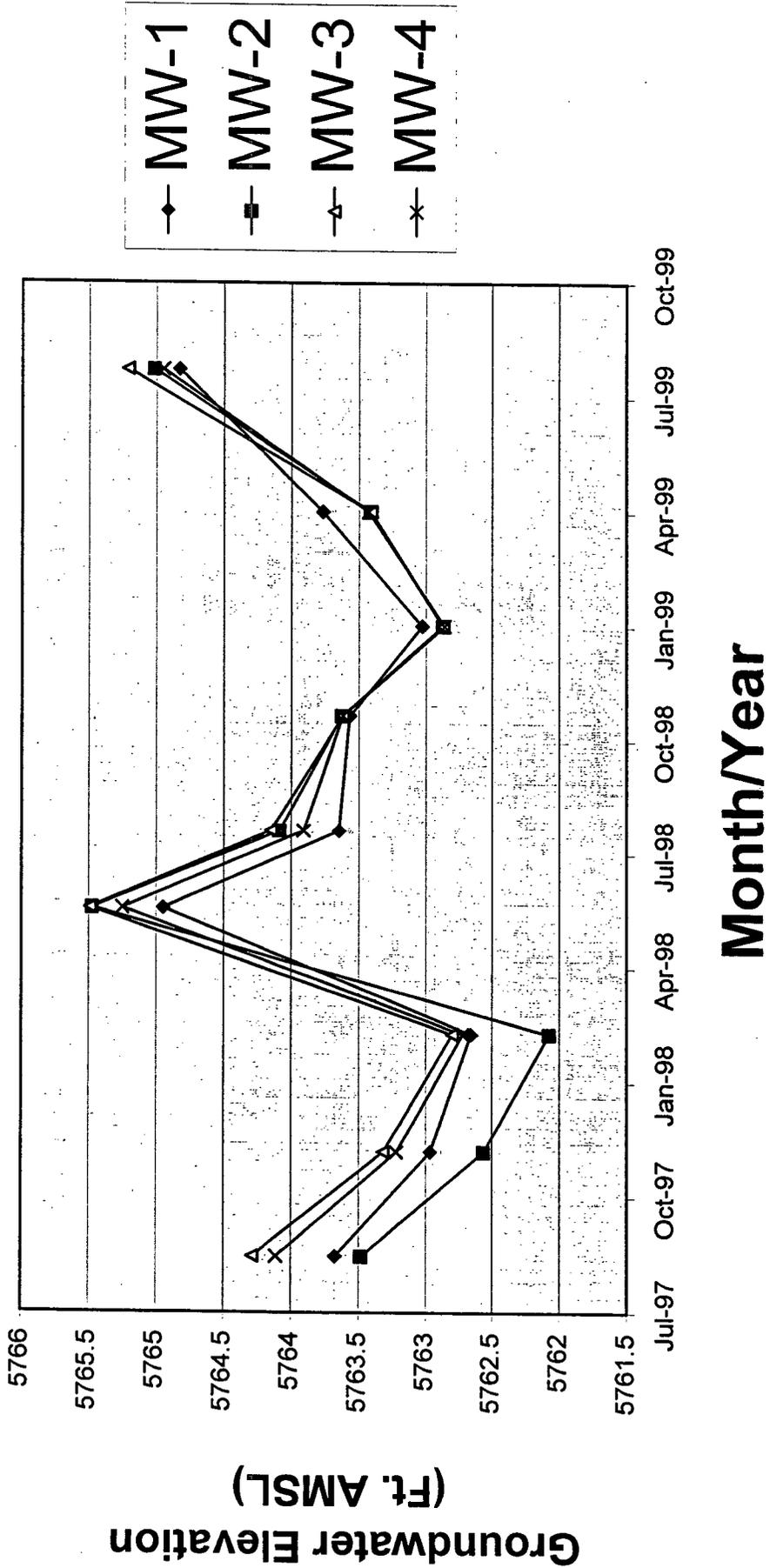


Figure 6.  
McCoy Gas Com A1 Groundwater contour Map  
(August 10, 1999)



# Figure 7. McCoy Gas Com A1 Hydrograph



RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.  
 4000 Monroe Road  
 Farmington, New Mexico 87401  
 (505) 326-2292 FAX (505) 326-2388

Borehole # 1  
 Well # TEMP #1  
 Page 1 of 2

Project Name PNM WELL INSTALLATION  
 Project Number 21300 Phase G001  
 Project Location MCCOY GAS COM AT+1 AMCC

Elevation \_\_\_\_\_  
 Borehole Location SEC 18, T31N, R10W, H  
 GWL Depth 13.72 - TOC 2.9 = 10.82'  
 Logged By C. CULLICOTT  
 Drilled By R. PADILLA, D. PADILLA  
 Date/Time Started 7/28/99 7:40am  
 Date/Time Completed 7/28/99 9:00am

Well Logged By C. CULLICOTT  
 Personnel On-Site R. PADILLA, D. PADILLA  
 Contractors On-Site \_\_\_\_\_  
 Client Personnel On-Site GARY COOK  
 Drilling Method AUGER  
 Air Monitoring Method P.D

Depth (Feet)	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
						BZ	BH	S	
0			SURFACE: SAND						
5	1		① BROWN SILTY CLAY, CLEAN WITH A SMALL % SAND.						SS = 0 6 BLOWS
10	2		② BROWN CLAY w/minor SILT @ 10', 11 1/2 - 12' INCREASINGLY WET GRAVELS (SANDY GRAVEL).						31 BLOWS
15			HIT COBBLES ~12'						
20			TD 15'						
25									
30									
35									
40									

Comments: MONITOR WELL #2 NEARBY, 10.8' DTW  
SUNNY, COOL, SITE 50' FROM ANIMAS RIVER

Geologist Signature Cathy Cullcott

# MONITORING WELL INSTALLATION RECORD

Phillip Environmental Services Corp.  
 4000 Monroe Road  
 Farmington, New Mexico 87401  
 (505) 326-2262 FAX (505) 326-2388

Borehole # \_\_\_\_\_  
 Well # TEMP 1  
 Page 2 of 2

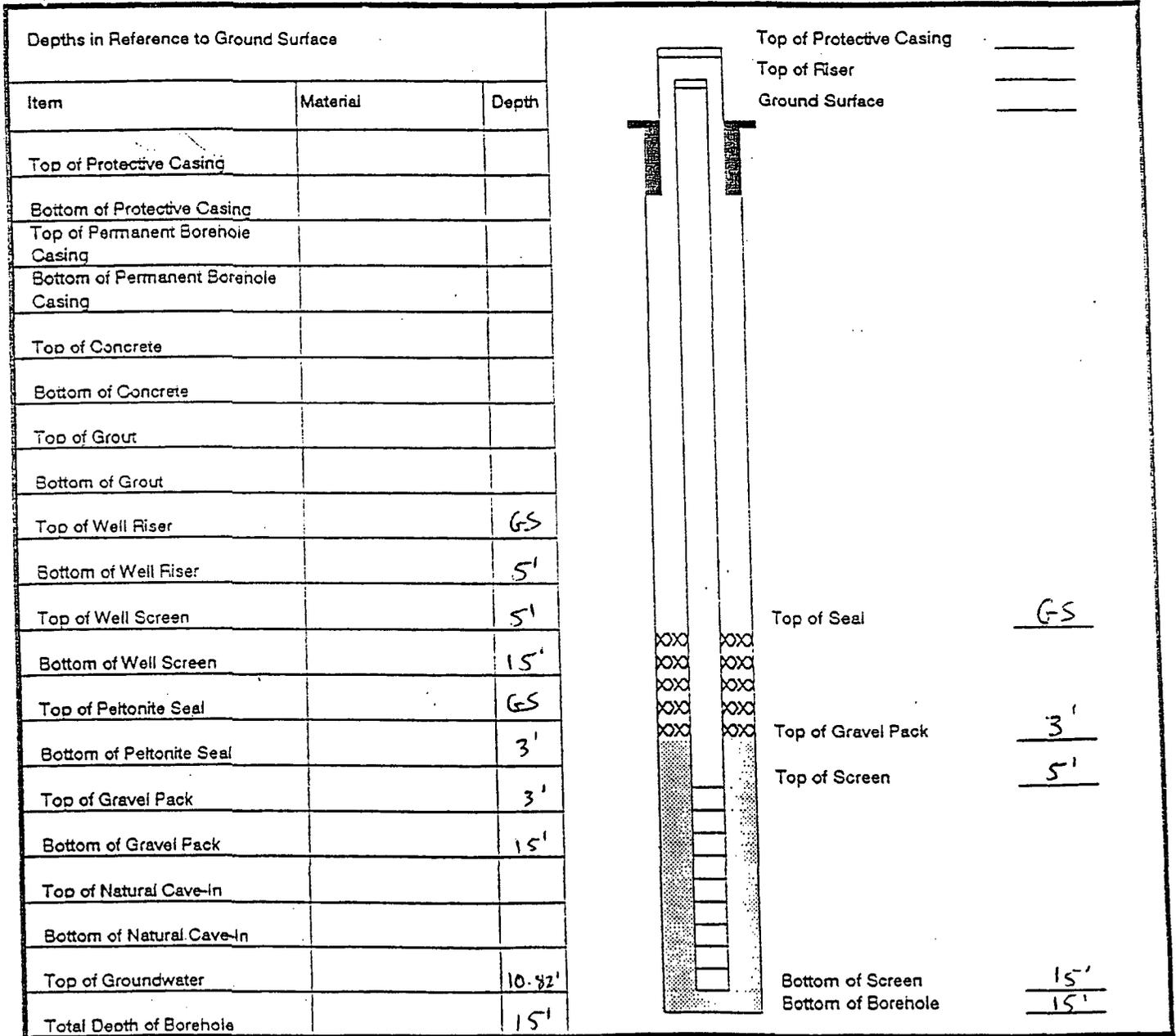
Project Name PNM WELL INSTALLATION

Project Number 21300 Phase 0001  
 Project Location MCCOY GAS COM A #1 AMOCC

On-Site Geologist C. CULLICOTT  
 Personnel On-Site K. PADILLA, D. PADILLA  
 Contractors On-Site \_\_\_\_\_  
 Client Personnel On-Site GARY COOK

Elevation \_\_\_\_\_  
 Well Location S 18, T 31 N, R 10 W, H  
 GWL Depth 13.72 - TOC 2.9 = 10.82'  
 Installed By K. PADILLA, D. PADILLA

Date/Time Started 7/28/99 7:45am  
 Date/Time Completed 7/28/99 9:00am



Comments: \_\_\_\_\_

Geologist Signature Cathy Cullicott

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

WATER CHEMISTRY SECTION [505]-841-2555

March 26, 1997

Request  
ID No. 189547ANALYTICAL REPORT  
SLD Accession No. WC-97-0608Distribution

- User 55000  
 Submitter 67  
 Client  
 SLD Files

To: North Star Water Users Assoc.  
 Box 1120  
 Aztec, NM 87410

From: Water Chemistry Section  
 Scientific Laboratory Division  
 700 Camino de Salud, NE  
 P.O. Box 4700  
 Albuquerque, NM 87196-4700

Re: A water sample submitted to this laboratory on February 28, 1997

User:

Barbara Giesler  
 Drinking Water Bureau  
 NM-ED Office; Suite 4  
 525 Camino de Los Marquez  
 Santa Fe, NM 87502

Submitter:

David Tomko  
 ED Field Office, Farmington  
 724 W. Animas St.  
 Farmington, NM 87401

## DEMOGRAPHIC DATA

<u>COLLECTION</u>		<u>LOCATION</u>
On: 25-Feb-97	By: Clo . . .	WSS #: 200-24; Treatment Plant Source ID:2
At: 14:33 hrs.	In/Near:	North Star Water Users Assoc.

## ANALYTICAL RESULTS

<u>Analysis</u>	<u>Value</u>	<u>D. Lmt.</u>	<u>Units</u>
nitrate+ite as N	< 0.10		mg/L

Reviewed By: \_\_\_\_\_

Diana Suvannunt, Ph.D. 03/26/97  
 Supervisor, Water Chemistry Section



## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE.  
[505] 841-2500

ORGANIC CHEMISTRY SECTION (505) 841-2570

REPORT TO CLIENT: 

North Star Water Users Assoc.
Box 1120
Aztec, NM 87410

SLD No.: OR- 9700425
REQUEST ID No.: 189542
RECEIVED AT SLD: 2/28/97
<input type="checkbox"/> SLD COPY      USER 55000

ED FIELD OFFICE:  N.M.E.D. DRINKING WATER BUREAU

ED Field Office, Farmington
724 W. Animas St.
Farmington, NM 87401

Barbara Giesler
Drinking Water Bureau
NMED
525 Camino de los Marquez, Suite 4
Santa Fe NM 87502

SAMPLE COLLECTION: DATE: 2/25/97 TIME: 1427 BY: Clo

SAMPLING LOCATION: Treatment Plant Source ID#2

WSS #: 20024

REPORTING UNITS: ug/L

Remarks: Sample marked as: being preserved with Hydrochloric Acid;  
No targeted compounds were detected in this sample.

## EPA METHOD 502.2 SDWA VOLATILES BY GAS CHROMATOGRAPHY (PID/ELCD)

DATE EXTRACTED: N/A  
DATE ANALYZED: 3/7/97 10 Days: Within EPA Analysis Time  
SAMPLE VOL (ml): 5

ANALYSIS No.: OR- 9700425
SLD BATCH No.: 73
DILUTION FACTOR: 1.00
REQUEST ID No.: 189542

SAMPLE PRESERVATION: Sample Temperature when received: 5 Degrees C.; pH = 1

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL	SDL	MCL
71-43-2	Benzene		U	0.50	5
108-86-1	Bromobenzene		U	0.50	
74-97-5	Bromochloromethane		U	0.50	
75-27-4	Bromodichloromethane*		U	0.50	80
75-25-2	Bromoform*		U	0.50	80
24-83-9	Bromomethane		U	0.50	
78-93-3	2-Butanone (MEK)		U	5.00	
104-51-8	n-Butylbenzene		U	0.50	
135-98-8	sec-Butylbenzene		U	0.50	
98-06-6	tert-Butylbenzene		U	0.50	
1634-04-4	tert-Butyl methyl ether (MTBE)		U	5.00	
56-23-5	Carbon tetrachloride		U	0.50	5
108-90-7	Chlorobenzene (monochlorobenzene)		U	0.50	100
75-00-3	Chloroethane		U	0.50	
67-66-3	Chloroform*		U	0.50	80
74-87-3	Chloromethane		U	0.50	
95-49-8	2-Chlorotoluene		U	0.50	
106-43-4	4-Chlorotoluene		U	0.50	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.50	0.2
124-48-1	Dibromochloromethane*		U	0.50	80
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	0.50	0.05
74-95-3	Dibromomethane		U	0.50	
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	0.50	600
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	0.50	600
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	0.50	75
75-71-8	Dichlorodifluoromethane		U	0.50	
75-34-3	1,1-Dichloroethane		U	0.50	
107-06-2	1,2-Dichloroethane		U	0.50	5

75-35-4	1,1-Dichloroethane		U	0.50	7
156-59-2	cis-1,2-Dichloroethene		U	0.50	70
156-60-5	trans-1,2-Dichloroethene		U	0.50	100
78-87-5	1,2-Dichloropropane		U	0.50	5
142-28-9	1,3-Dichloropropane		U	0.50	
590-20-7	2,2-Dichloropropane		U	0.50	
563-58-6	1,1-Dichloropropene		U	0.50	
1006-01-5	cis-1,3-Dichloropropene		U	0.50	
1006-02-6	trans-1,3-Dichloropropene		U	0.50	
100-41-4	Ethylbenzene		U	0.50	700
87-68-3	Hexachlorobutadiene		U	0.50	
98-82-8	Isopropylbenzene		U	0.50	
99-87-6	4-Isopropyltoluene		U	0.50	
75-09-2	Methylene chloride (Dichloromethane)		U	0.50	5
91-20-3	Naphthalene		U	0.50	
103-65-1	Propylbenzene		U	0.50	
100-42-5	Styrene		U	0.50	100
630-20-6	1,1,1,2-Tetrachloroethane		U	0.50	
79-34-5	1,1,2,2-Tetrachloroethane		U	0.50	
127-18-4	Tetrachloroethene		U	0.50	5
109-99-9	Tetrahydrofuran (THF)		U	5.00	
108-88-3	Toluene		U	0.50	1000
87-61-5	1,2,3-Trichlorobenzene		U	0.50	
120-82-1	1,2,4-Trichlorobenzene		U	0.50	70
71-55-6	1,1,1-Trichloroethane		U	0.50	200
79-00-5	1,1,2-Trichloroethane		U	0.50	5
79-01-6	Trichloroethene		U	0.50	5
75-69-4	Trichlorofluoromethane		U	0.50	
96-18-4	1,2,3-Trichloropropane		U	0.50	
95-63-6	1,2,4-Trimethylbenzene		U	0.50	
108-67-8	1,3,5-Trimethylbenzene		U	0.50	
75-01-4	Vinyl chloride		U	0.50	2
95-47-6	o-Xylene		U	0.50	
N/A	p- & m-Xylene		U	0.50	
N/A	*Total of Xylenes above*	0.0	U	0.50	10000
N/A	*Total of Trihalomethanes above*	0.0	U	0.50	100

LABORATORY BATCH QUALITY CONTROL SUMMARY									
SURROGATE	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY						
RECOVERIES:	2-Bromochlorobenzene (Photoionization Detector Surrogate)	10.56	105.6%						
	2-Bromochlorobenzene (Electrolytic Conductivity Detector Surrogate)	9.36	93.6%						
LABORATORY FORTIFIED BLANK RECOVERIES	The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compound(s) listed below: <table border="1"><thead><tr><th>COMPOUND</th><th>CONCENTRATION (ug/L)</th><th>% RECOVERY</th></tr></thead><tbody><tr><td>sec-Butylbenzene</td><td>10</td><td>46</td></tr></tbody></table>			COMPOUND	CONCENTRATION (ug/L)	% RECOVERY	sec-Butylbenzene	10	46
COMPOUND	CONCENTRATION (ug/L)	% RECOVERY							
sec-Butylbenzene	10	46							
LABORATORY BLANKS	No target compounds were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below: <table border="1"><thead><tr><th>COMPOUND</th><th>CONCENTRATION (ug/L)</th></tr></thead><tbody><tr><td colspan="2">No Exceptions</td></tr></tbody></table>			COMPOUND	CONCENTRATION (ug/L)	No Exceptions			
COMPOUND	CONCENTRATION (ug/L)								
No Exceptions									

ANALYST: S. A. Mustafa QC APPROVED BY: Ken Sherrill 

#### DEFINITIONS

- \*\* Concentration Exceeds EPA's allowable Maximum Contamination Level
- CAS# Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
- CONC. Concentration (ug/L) of analyte actually detected in the sample
- QUAL Qualifier of analytical results as follows:
  - B Analyte was detected in laboratory blank
  - J Analyte was detected at a level below which an accurate quantitation can be given ( -5 \* SDL)
  - U No analyte was detected above the Sample Detection Limit.
- MCL Maximum Contamination Level Allowed by EPA for SDWA regulated analytes
- SDL Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
- ug/L Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)





## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

AIR &amp; HEAVY METALS SECTION [505]-841-2553

March 18, 1997

Request  
ID No. 189543

<b>ANALYTICAL REPORT</b> <b>SLD Accession No. HM-97-0190</b>
---

Distribution

- (x) User 55000  
(x) Submitter 67  
(x) Client  
(x) SLD Files

To: North Star Water Users Assoc.  
Box 1120  
Aztec, NM 87410

From: Air & Heavy Metals Section  
Scientific Laboratory Division  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water sample submitted to this laboratory on February 28, 1997

User:

Barbara Giesler  
Drinking Water Bureau  
NM-ED Office; Suite 4  
525 Camino de Los Marquez  
Santa Fe, NM 87502

Submitter:

David Tomko  
ED Field Office, Farmington  
724 W. Animas St.  
Farmington, NM 87401

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 25-Feb-97	By: Clo . . .	WSS #: 200-24; Treatment Plant Source ID:2
At: 14:31 hrs.	In/Near: none given	North Star Water Users Assoc.

## ANALYTICAL RESULTS

Analysis	Value	Units	Analyst
Mercury	< 0.0002	mG/L	
Selenium	< 0.0050	mG/L	
Beryllium	< 0.0010	mG/L	
Chromium	< 0.0010	mG/L	
Nickel	< 0.0100	mG/L	
Arsenic	< 0.0010	mG/L	
Cadmium	< 0.0010	mG/L	
Antimony	< 0.0010	mG/L	

Laboratory Remarks:

Barium = <0.1 mg/L  
Thallium = <0.001 mg/L  
Mercury by method 245.1 on 3/11/97 by KF.  
Selenium by method 200.9 on 3/4/97 by RS.  
ICP-MS by method 200.8 on 3/12/97 by JFA for  
Be, Cr, Ni, As, Cd, Sb, Ba, and Tl.

Reviewed By:

Ron Amato 03/18/97  
Supervisor, Air & Heavy Metals Section



## SCIENTIFIC LABORATORY DIVISION

P.O Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
(505) 841-2500



## WATER CHEMISTRY SECTION (505)-841-2555

SAMPLE COLLECTION DATE: 11/2/98

TIME: 0857

BY: Oak

SLD No.: WC-9805116

SAMPLING LOCATION: Plant

SAMPLE MATRIX: WDN

REQUEST ID No.: 2282432

RECEIVED AT SLD: 11/5/98

USER: 55000

SUBMITTER: 60

WSS #: 20024

This Copy of Report for:

North Star Water Users Assoc.  
Box 1120  
Aztec, NM 87410

## DISTRIBUTION TO:

Drinking Water Bureau (U)  
ED Dist #1 Office, Albuquerque (S)  
North Star Water Users Assoc. (C)  
Water Chemistry Section - File Copy

## ANALYTICAL RESULTS

Analyte	Result	Units	Analysis Date	Method	Minimum Level	Dilution Factor	Sample Det. Limit	Analyst	Data Qualifier
Fluoride	<0.4	mG/L	11/18/98	340.2	.1	1.	.1	Jay Finney	

.35 actual

## Laboratory Comments:

Reviewed by Paul Ortega  
Supervisor, Water Chemistry Section

Date Printed: 10-Dec-98

## Data Qualifier Codes and Definitions

- U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. (Note: Analyte may or may not be present.)
- UJ - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

Jay - Lab Tech has Requested Chg format for form info.



## SCIENTIFIC LABORATORY DIVISION

P.O Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
(505) 841-2500



## WATER CHEMISTRY SECTION (505)-841-2555

SAMPLE COLLECTION DATE: 11/2/98TIME: 0900BY: OakSLD No.: **WC-9805132**SAMPLING LOCATION: PlantSAMPLE MATRIX: watREQUEST ID No.: 2282433RECEIVED AT SLD: 11/5/98USER: 55000SUBMITTER: 60WSS #: 20024

This Copy of Report for:

North Star Water Users Assoc.  
Box 1120  
Aztec, NM 87410

## DISTRIBUTION TO:

Drinking Water Bureau (U)  
ED Dist #1 Office, Albuquerque (S)  
North Star Water Users Assoc. (C)  
Water Chemistry Section - File Copy

## ANALYTICAL RESULTS

Analyte	Result	Units	Analysis Date	Method	Minimum Level	Dilution Factor	Sample Det. Limit	Analyst	Data Qualifier
Free Cyanide	< 0.1	mG/L	11/6/98	SM4500-CN(F)	.1	1.	.1	Jay Finney	

Laboratory Comments:

Reviewed by Paul Ortega

*Supervisor, Water Chemistry Section*Date Printed: 11-Dec-98**Data Qualifier Codes and Definitions**

- U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. (Note: Analyte may or may not be present.)
- UJ - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.



## SCIENTIFIC LABORATORY DIVISION

P.O Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
(505) 841-2500



## WATER CHEMISTRY SECTION (505)-841-2555

SAMPLE COLLECTION DATE: 11/2/98TIME: 0853BY: OakSLD No.: **WC-9805101**SAMPLING LOCATION: PlantREQUEST ID No.: 2282431SAMPLE MATRIX: watRECEIVED AT SLD: 11/5/98USER: 55000SUBMITTER: 60WSS #: 20024

This Copy of Report for:

North Star Water Users Assoc.  
Box 1120  
Aztec, NM 87410

## DISTRIBUTION TO:

Drinking Water Bureau (U)  
ED Dist #1 Office, Albuquerque (S)  
North Star Water Users Assoc. (C)  
Water Chemistry Section - File Copy

## ANALYTICAL RESULTS

Analyte	Result	Units	Analysis Date	Method	Minimum Level	Dilution Factor	Sample Det. Limit	Analyst	Data Qualifier
Nitrate + Nitrite	<0.1	mG/L	12/4/98	353.2	.1	1.	.1	Staci Morris	

Laboratory Comments:

The date of analysis passed holding time.

Reviewed by Paul Ortega

*Supervisor, Water Chemistry Section*

Date Printed: 16-Dec-98

## Data Qualifier Codes and Definitions

- U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. (Note: Analyte may or may not be present.)
- UJ - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

## SCIENTIFIC LABORATORY DIVISION

P.O Box 4700  
Albuquerque, NM 87196-4700  
AIR & HEAVY METALS SECTION

700 Camino de Salud, NE  
(505)-841-2500  
(505)-841-2553

SAMPLE COLLECTION: DATE: 11/2/98 TIME: 0859  
MATRIX: wat BY: Oak  
SAMPLING LOCATION: Plant

SLD No.: HM-9802239

REQUEST ID No.: 2282434  
RECEIVED AT SLD: 11/5/98  
USER: 55000  
SUBMITTER: 60  
WSS #: 20024

To: Client

North Star Water Users Assoc.  
Box 1120  
Aztec, NM 87410

North Star Water Users Assoc.

DISTRIBUTION TO:

User  
Submitter  
Client  
SLD Files

Practical Quantitation Limit (PQL) is defined as 10 times the Method Detection Limit (MDL)

## ANALYTICAL RESULTS

Element	Result	Units	Analysis Date	Method	PQL	Dilution Factor	Sample Det. Limit	Analyst	Data Qualifier
Antimony	<0.001	mg/L	11/30/98	200.8	0.001	1	0.001	SP	
Arsenic	<0.001	mg/L	11/30/98	200.8	0.001	1	0.001	SP	
Barium	0.1	mg/L	11/30/98	200.8	0.1	1	0.1	SP	
Beryllium	<0.001	mg/L	11/30/98	200.8	0.001	1	0.001	SP	
Cadmium	<0.001	mg/L	11/30/98	200.8	0.001	1	0.001	SP	
Chromium	<0.001	mg/L	11/30/98	200.8	0.001	1	0.001	SP	
Mercury	<0.0002	mg/L	11/12/98	245.1	0.0002	1	0.0002	JM / SJO	
Nickel	<0.01	mg/L	11/30/98	200.8	0.01	1	0.01	SP	
Selenium	<0.005	mg/L	12/4/98	200.9	0.005	1	0.005	SJO	
Thallium	<0.001	mg/L	11/30/98	200.8	0.001	1	0.001	SP	

## Laboratory Comments:

Reviewed by: Ron Amato  
Supervisor, Air & Heavy Metals Section  
Printed: 12/15/98

NCB

## Data Qualifier Codes and Definitions

A = Insufficient sample for analysis	I = Analyzed in Triplicate	T = Total Metals
B = Laboratory Reagent Blank (RB)	J = Estimated Quantity, only.	TR = Total Recoverable Metals
C = Spike recovery between 80-120%	K = Holding time exceeded	U = Not detected above the PQL or SDL
D = Spike recovery <80% or >120%	L = Equals or exceeds USEPA MCL	UJ = Not detected. Estimated value, only.
E = Over Calibration Range	M = Equals or exceeds USEPA Action Level	
F = Matrix interference suspected	N = Insufficient sample to verify results	
G = Inconsistent results; suggest re-sampling	O = Internal Standards(ICP/MS) <60% or >125% when sample analyzed straight	
H = Analyzed in duplicate	R = The data are unusable	

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT: 

North Star Water Users Assoc.
Box 1120
Aztec, NM 87410

SLD No.: OR- 9802836
REQUEST ID No.: 2282631
RECEIVED AT SLD: 11/5/98
<input type="checkbox"/> SLD COPY      USER 55000

ED FIELD OFFICE:  N.M.E.D. DRINKING WATER BUREAU

ED Dist #1 Office, Albuquerque
Drinking Water Bureau
4131 Montgomery Blvd., NE
Albuquerque, NM 87109

Gilbert Salas
Drinking Water Bureau
NMED
525 Camino de los Marquez, Suite 4
Santa Fe NM 87502

SAMPLE COLLECTION: DATE: 11/2/98 TIME: 906 BY: Oak

SAMPLING LOCATION: Plant

WSS #: 20024 REPORTING UNITS: ug/L

Remarks: Sample marked as: being preserved with Hydrochloric Acid;

## EPA METHOD 502.2 SDWA VOLATILES BY GAS CHROMATOGRAPHY (PID/ELCD)

DATE EXTRACTED: N/A  
DATE ANALYZED: 11/12/98 10 Days: Within EPA Analysis Time  
SAMPLE VOL (ml): 5

ANALYSIS No.: OR- 9802836  
SLD BATCH No.: 435  
DILUTION FACTOR: 1.00  
REQUEST ID No.: 2282631

SAMPLE PRESERVATION: Sample Temperature when received: 14 Degrees C.; pH = 2

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL	SDL	MCL
71-43-2	Benzene		U	0.50	5
108-86-1	Bromobenzene		U	0.50	
74-97-5	Bromochloromethane		U	0.50	
75-27-4	Bromodichloromethane*	11.4		0.50	80
75-25-2	Bromoform*		U	0.50	80
24-83-9	Bromomethane		U	0.50	
78-93-3	2-Butanone (MEK)		U	5.00	
104-51-8	n-Butylbenzene		U	0.50	
135-98-8	sec-Butylbenzene		U	0.50	
98-06-6	tert-Butylbenzene		U	0.50	
1634-04-4	tert-Butyl methyl ether (MTBE)		U	5.00	
56-23-5	Carbon tetrachloride		U	0.50	5
108-90-7	Chlorobenzene (monochlorobenzene)		U	0.50	100
75-00-3	Chloroethane		U	0.50	
67-66-3	Chloroform*	35.1		0.50	80
74-87-3	Chloromethane		U	0.50	
95-49-8	2-Chlorotoluene		U	0.50	
106-43-4	4-Chlorotoluene		U	0.50	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.50	0.2
124-48-1	Dibromochloromethane*	4.7		0.50	80
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	0.50	0.05
74-95-3	Dibromomethane		U	0.50	
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	0.50	600
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	0.50	600
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	0.50	75
75-71-8	Dichlorodifluoromethane		U	0.50	
75-34-3	1,1-Dichloroethane		U	0.50	
107-06-2	1,2-Dichloroethane		U	0.50	5

75-35-4	1,1-Dichloroethene		U	0.50	7
156-59-2	cis-1,2-Dichloroethene		U	0.50	70
156-60-5	trans-1,2-Dichloroethene		U	0.50	100
78-87-5	1,2-Dichloropropane		U	0.50	5
142-28-9	1,3-Dichloropropane		U	0.50	
590-20-7	2,2-Dichloropropane		U	0.50	
563-58-6	1,1-Dichloropropene		U	0.50	
1006-01-5	cis-1,3-Dichloropropene		U	0.50	
1006-02-6	trans-1,3-Dichloropropene		U	0.50	
100-41-4	Ethylbenzene		U	0.50	700
87-68-3	Hexachlorobutadiene		U	0.50	
98-82-8	Isopropylbenzene		U	0.50	
99-87-6	4-Isopropyltoluene		U	0.50	
75-09-2	Methylene chloride (Dichloromethane)		U	0.50	5
91-20-3	Naphthalene		U	0.50	
103-65-1	Propylbenzene		U	0.50	
100-42-5	Styrene		U	0.50	100
630-20-6	1,1,1,2-Tetrachloroethane		U	0.50	
79-34-5	1,1,2,2-Tetrachloroethane		U	0.50	
127-18-4	Tetrachloroethene		U	0.50	5
109-99-9	Tetrahydrofuran (THF)		U	5.00	
108-88-3	Toluene		U	0.50	1000
87-61-5	1,2,3-Trichlorobenzene		U	0.50	
120-82-1	1,2,4-Trichlorobenzene		U	0.50	70
71-55-6	1,1,1-Trichloroethane		U	0.50	200
79-00-5	1,1,2-Trichloroethane		U	0.50	5
79-01-6	Trichloroethene		U	0.50	5
75-69-4	Trichlorofluoromethane		U	0.50	
96-18-4	1,2,3-Trichloropropane		U	0.50	
95-63-6	1,2,4-Trimethylbenzene		U	0.50	
108-67-8	1,3,5-Trimethylbenzene		U	0.50	
75-01-4	Vinyl chloride		U	0.50	2
95-47-6	o-Xylene		U	0.50	
N/A	p- & m-Xylene		U	0.50	
N/A	"Total of Xylenes above"	0.0	U	0.50	10000
N/A	"Total of Trihalomethanes above"	51.2		0.50	100

LABORATORY BATCH QUALITY CONTROL SUMMARY			
SURROGATE	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
RECOVERIES:	2-Bromochlorobenzene (Photoionization Detector Surrogate)	12.5	125.0% High
	2-Bromochlorobenzene (Electrolytic Conductivity Detector Surrogate)	11.1	111.0%
LABORATORY FORTIFIED BLANK RECOVERIES	The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compound(s) listed below:		
	<b>COMPOUND</b>	<b>CONCENTRATION (ug/L)</b>	<b>% RECOVERY</b>
	Vinyl chloride	5.7	57%
	Chloroethane	6.8	68%
	1,1-Dichloroethene	6.8	68%
	Methylene chloride (Dichloromethane)	7.2	72%
LABORATORY BLANKS	No target compounds were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:		
	<b>COMPOUND</b>	<b>CONCENTRATION (ug/L)</b>	
	No Exceptions		

ANALYST: RON DRUVA QC APPROVED BY: Timothy Chapman

DEFINITIONS	
**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quantitation can be given ( ~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for SDWA regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

PI 2282631



Scientific Laboratory Division  
700 Camino de Salud, NE (P.O. Box 4700)  
Albuquerque, NM 87106 (87196-4700)  
Phone: 505-841-2500/-2570/-2566



OR9802836

3 User Code: 55000 Date & Time of Receipt at SLD: 28 NOV -5 PM 1:06 4 Sample Priority: 3 If 1 or 2 call SLD

5 Submitter Code: 101610 WSS Code: 10101-216 User's Site ID: WSD03016 6 Sample Temp. Receipt @ SLD: 14°C

7 Facility or WSS Name: WARTON STAFF

8 Facility/WSS Location: Complete 8, 9 & 10 9 Country: 10 State: or CHANGE NM TO

11 Sampling Location: PLANT

12 Sample Collection: On: 11/2/98 By: DAKLEY At: 09:06

13 Sample Info. Contact: Ph: 505-827-7536 If not collector, per box 12, Please print name here:

14 Reports are mailed to the address specified by the Submitter Code and WSS Code (when present). However, if one of the following applies, please check appropriate boxes below and complete address form.

15 Field Data: (When appropriate) Temperature: °C pH: Chlorinated? YES or NO Chlorine Residual: mG/L Sulfate: mG/L SDWA Compositing: No Compositing Permitted Within This System Only Within All Systems

16 Field Remarks: (Optional)

17 Sample Type: Water Vapor Tissue Other: Liquid Solid Soil Plant Blood

18 Preservation: No Preservation Stored at 4°C Preserved with HCl to pH < 2 Other:

19 Analyses Requested: Please Check the appropriate box(es) below to indicate your analytical request(s); and, please indicate the number of bottles & vials submitted: Bottles Vials

- Volatile Screens: (754) Aromatic & Halogenated Volatiles (EPA 8021) (765) Mass Spectrometer Volatiles (EPA 8260) (774) Volatile Organic Compounds [VOC's] (EPA 502.2) (766) SDWA Total Trihalomethanes (EPA 502.2) Other Specific Compounds or Classes: Remarks: VOI

- Semivolatiles Screens: (789) Drinking Water Semivolatile Screens (Indented list) (775) EDB, DBCP & TCP (EPA 504.1) (758) Acid Herbicides (EPA 515.2) (772) Carbamates (EPA 531.1) (781) Glyphosate (EPA 547) (782) Endothall (EPA 548.1) (783) Diquat (EPA 549.1) (788) SOC (EPA 525.2) (755) Base/Neutral Semivolatiles (No Acids) (EPA 8270) (756) Base/Neutral/Acids Semivolatiles (EPA 625/8270) (760) Organochlorine Pesticides / PCB's (EPA 608) (751) Hydrocarbon Fuel Screen (Modified EPA 8015) (768) Disinfection Byproducts Screen (Indented list) (771) Haloacetic Acids (EPA 552.2) (769) Haloacetonitriles / THM's (EPA 551.1) (770) Chloral Hydrate (EPA 551.1) (773) Total Organic Halides [TOX] (EPA 5320b)

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT: U

North Star Water Users Assoc.
Box 1120
Aztec, NM 87410

SLD No.: OR- 9901121
REQUEST ID No.: 2287388
RECEIVED AT SLD: 6/17/99
<input type="checkbox"/> SLD COPY      USER 55000

ED FIELD OFFICE:  N.M.E.D. DRINKING WATER BUREAU

ED Dist #1 Office, Albuquerque
Drinking Water Bureau
4131 Montgomery Blvd., NE
Albuquerque, NM 87109

Gilbert Salas
Drinking Water Bureau
NMED
525 Camino de los Marquez, Suite 4
Santa Fe NM 87502

SAMPLE COLLECTION: DATE: 6/15/99 TIME: 1010 BY: Her  
 SAMPLING LOCATION: Filter Tech Treatment Plant  
 WSS #: 20024 REPORTING UNITS: ug/L

Remarks: Sample marked as: being preserved with Hydrochloric Acid;  
No targeted compounds were detected in this sample.

## EPA METHOD 502.2 SDWA VOLATILES BY GAS CHROMATOGRAPHY (PID/ELCD)

DATE EXTRACTED: N/A  
 DATE ANALYZED: 6/18/99 3 Days: Within EPA Analysis Time  
 SAMPLE VOL (ml): 5

ANALYSIS No.: OR- 9901121
SLD BATCH No.: 193
DILUTION FACTOR: 1.00
REQUEST ID No.: 2287388

SAMPLE PRESERVATION: Sample Temperature when received: 10 Degrees C.; pH = 1

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL	MCL
71-43-2	Benzene		U	0.50	5
108-86-1	Bromobenzene		U	0.50	
74-97-5	Bromochloromethane		U	0.50	
75-27-4	Bromodichloromethane*		U	0.50	80
75-25-2	Bromoform*		U	0.50	80
24-83-9	Bromomethane		U	0.50	
78-93-3	2-Butanone (MEK)		U	5.00	
104-51-8	n-Butylbenzene		U	0.50	
135-98-8	sec-Butylbenzene		U	0.50	
98-06-6	tert-Butylbenzene		U	0.50	
1634-04-4	tert-Butyl methyl ether (MTBE)		U	5.00	
56-23-5	Carbon tetrachloride		U	0.50	5
108-90-7	Chlorobenzene (monochlorobenzene)		U	0.50	100
75-00-3	Chloroethane		U	0.50	
67-66-3	Chloroform*		U	0.50	80
74-87-3	Chloromethane		U	0.50	
95-49-8	2-Chlorotoluene		U	0.50	
106-43-4	4-Chlorotoluene		U	0.50	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.50	0.2
124-48-1	Dibromochloromethane*		U	0.50	80
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	0.50	0.05
74-95-3	Dibromomethane		U	0.50	
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	0.50	600
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	0.50	600
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	0.50	75
75-71-8	Dichlorodifluoromethane		U	0.50	
75-34-3	1,1-Dichloroethane		U	0.50	
107-06-2	1,2-Dichloroethane		U	0.50	5

75-35-4	1,1-Dichloroethene		U	0.50	7
156-59-2	cis-1,2-Dichloroethene		U	0.50	70
156-60-5	trans-1,2-Dichloroethene		U	0.50	100
78-87-5	1,2-Dichloropropane		U	0.50	5
142-28-9	1,3-Dichloropropane		U	0.50	
590-20-7	2,2-Dichloropropane		U	0.50	
563-58-6	1,1-Dichloropropene		U	0.50	
1006-01-5	cis-1,3-Dichloropropene		U	0.50	
1006-02-6	trans-1,3-Dichloropropene		U	0.50	
100-41-4	Ethylbenzene		U	0.50	700
87-68-3	Hexachlorobutadiene		U	0.50	
98-82-8	Isopropylbenzene		U	0.50	
99-87-6	4-Isopropyltoluene		U	0.50	
75-09-2	Methylene chloride (Dichloromethane)		U	0.50	5
91-20-3	Naphthalene		U	0.50	
103-65-1	Propylbenzene		U	0.50	
100-42-5	Styrene		U	0.50	100
630-20-6	1,1,1,2-Tetrachloroethane		U	0.50	
79-34-5	1,1,2,2-Tetrachloroethane		U	0.50	
127-18-4	Tetrachloroethene		U	0.50	5
109-99-9	Tetrahydrofuran (THF)		U	5.00	
108-88-3	Toluene		U	0.50	1000
87-61-5	1,2,3-Trichlorobenzene		U	0.50	
120-82-1	1,2,4-Trichlorobenzene		U	0.50	70
71-55-6	1,1,1-Trichloroethane		U	0.50	200
79-00-5	1,1,2-Trichloroethane		U	0.50	5
79-01-6	Trichloroethene		U	0.50	5
75-69-4	Trichlorofluoromethane		U	0.50	
96-18-4	1,2,3-Trichloropropane		U	0.50	
95-63-6	1,2,4-Trimethylbenzene		U	0.50	
108-67-8	1,3,5-Trimethylbenzene		U	0.50	
75-01-4	Vinyl chloride		U	0.50	2
95-47-6	o-Xylene*		U	0.50	
N/A	p- & m-Xylene*		U	0.50	
N/A	*Total of Xylenes above*	0.0	U	0.50	10000
N/A	*Total of Trihalomethanes above*	0.0	U	0.50	100

LABORATORY BATCH QUALITY CONTROL SUMMARY			
SURROGATE	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
RECOVERIES:	2-Bromochlorobenzene (Photoionization Detector Surrogate)	10.88	108.8%
	2-Bromochlorobenzene (Electrolytic Conductivity Detector Surrogate)	9.77	97.7%
LABORATORY FORTIFIED	The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compound(s) listed below:		
BLANK RECOVERIES	<u>COMPOUND</u>	<u>CONCENTRATION (ug/L)</u>	<u>% RECOVERY</u>
	Chloroethane	13.08	113%
	Chloroform*	7.88	79%
LABORATORY BLANKS	No target compounds were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:		
	<u>COMPOUND</u>	<u>CONCENTRATION (ug/L)</u>	
	No Exceptions		
ANALYST:	RON DRUVA 	QC APPROVED BY:	 Timothy Chapman

DEFINITIONS	
**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quantitation can be given ( $-5 * \text{SDL}$ )
	U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for SDWA regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

## SCIENTIFIC LABORATORY DIVISION

P.O Box 4700  
Albuquerque, NM 87196-4700  
AIR & HEAVY METALS SECTION

700 Camino de Salud, NE  
(505)-841-2500  
(505)-841-2553

SAMPLE COLLECTION: DATE: 06/15/99 TIME: 10:10  
MATRIX: wpn BY: HERRERA  
FACILITY: North Star WUA  
SAMPLING LOCATION: FILTER TECH TREATMENT PLANT

SLD No.: HM-199900672

REQUEST ID No.: 2289083  
RECEIVED AT SLD: 06/17/99  
USER: 55000  
SUBMITTER: 60  
WSS #: NM3520024

To: Client

North Star Water Users Assoc.  
Box 1120  
Aztec, NM 87410

North Star Water Users Assoc.

DISTRIBUTION TO:  
User  
Submitter  
Client  
SLD Files

Practical Quantitation Limit (PQL) is defined as 10 times the Method Detection Limit (MDL)

## ANALYTICAL RESULTS

Element	Result	Units	Analysis			Dilution Factor	Sample Det. Limit	Analyst	Data Qualifier
			Date	Method	PQL				
Antimony	<0.001	mg/L	8/10/99	200.8	0.001	1	0.001	SMP	CH
Arsenic	<0.001	mg/L	8/10/99	200.8	0.001	1	0.001	SMP	CH
Barium	<0.1	mg/L	8/10/99	200.8	0.1	1	0.1	SMP	CH
Beryllium	<0.001	mg/L	8/10/99	200.8	0.001	1	0.001	SMP	H
Cadmium	<0.001	mg/L	8/10/99	200.8	0.001	1	0.001	SMP	CH
Chromium	0.001	mg/L	8/10/99	200.8	0.001	1	0.001	SMP	CH
Mercury	<0.0002	mg/L	6/22/99	245.1	0.0002	1	0.0002	CP	
Nickel	<0.01	mg/L	8/10/99	200.8	0.01	1	0.01	SMP	CH
Selenium	<0.005	mg/L	8/12/99	200.9	0.005	1	0.005	AM	CH
Thallium	<0.001	mg/L	8/10/99	200.8	0.001	1	0.001	SMP	CH

## Laboratory Comments:

Sample digested using SLD Method 41414.

Reviewed by: Ron Amato  
Supervisor, Air & Heavy Metals Section  
Printed: 8/17/99

rch

## Data Qualifier Codes and Definitions

A = Insufficient sample for analysis  
B = Laboratory Reagent Blank (RB)  
C = Spike recovery between 80-120%  
D = Spike recovery <80% or >120%  
E = Over Calibration Range  
F = Matrix interference suspected  
G = Inconsistent results: suggest re-sampling  
H = Analyzed in duplicate

I = Analyzed in Triplicate  
J = Estimated Quantity, only.  
K = Holding time exceeded  
L = Equals or exceeds USEPA MCL  
M = Equals or exceeds USEPA Action Level  
N = Insufficient sample to verify results  
O = Internal Standards(ICP/MS) <60% or >125% when sample analyzed straight  
R = The data are unusable

T = Total Metals  
TR = Total Recoverable Metals  
U = Not detected above the PQL or SDL  
UJ = Not detected. Estimated value, only.



SAMPLE COLLECTION DATE: 6/15/99 TIME: 1010  
 SAMPLING LOCATION: Filter Tech Treatment Plant  
 SAMPLE MATRIX: wat

BY: HerSLD No.: WC-9902030

REQUEST ID No.:	2289081
RECEIVED AT SLD:	6/17/99
USER:	55000
SUBMITTER:	60
WSS #:	20024

This Copy of Report for::

North Star Water Users Assoc.  
 Box 1120  
 Aztec, NM 87410

## DISTRIBUTION TO:

Drinking Water Bureau (U)  
 ED Dist #1 Office, Albuquerque (S)  
 North Star Water Users Assoc. (C)  
 Water Chemistry Section - File Copy

## ANALYTICAL RESULTS

Analyte	Result	Units	Analysis Date	Method	Minimum Level	Dilution Factor	Sample Det. Limit	Analyst	Data Qualifier
Fluoride	<u>0.166</u>	mGL	6/23/99	340.2	.1	1.	.1	Cliff Kear	

Laboratory Comments:

Reviewed by Chris Dean *CD*  
 Supervisor, Water Chemistry Section

Date Printed: 15-Jul-99

## Data Qualifier Codes and Definitions

- U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. (Note: Analyte may or may not be present.)
- UJ - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.



## SCIENTIFIC LABORATORY DIVISION

P.O Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
(505) 841-2500



WATER CHEMISTRY SECTION (505)-841-2555

SAMPLE COLLECTION DATE: 6/15/99 TIME: 1010 BY: Her  
SAMPLING LOCATION: Filter Tech Treatment Plant  
SAMPLE MATRIX: wat

SLD No.: **WC-9902029**

REQUEST ID No.:	2289082
RECEIVED AT SLD:	6/17/99
USER:	55000
SUBMITTER:	60
WSS #:	20024

This Copy of Report for::

North Star Water Users Assoc.  
Box 1120  
Aztec, NM 87410

## DISTRIBUTION TO:

Drinking Water Bureau (U)  
ED Dist #1 Office, Albuquerque (S)  
North Star Water Users Assoc. (C)  
Water Chemistry Section - File Copy

## ANALYTICAL RESULTS

Analyte	Result	Units	Analysis Date	Method	Minimum Level	Dilution Factor	Sample Det. Limit	Analyst	Data Qualifier
Nitrate + Nitrite	<0.1	mg/L	6/25/99	353.2	.1	1.	.1	Staci Morris	

Laboratory Comments:

Reviewed by Chris Dean *CD*  
Supervisor, Water Chemistry Section

Date Printed: 23-Jul-99**Data Qualifier Codes and Definitions**

- U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. (Note: Analyte may or may not be present.)
- UJ - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

*Rec'd 8/12/99*  
*@*



SCIENTIFIC LABORATORY DIVISION

P.O Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
(505) 841-2500



WATER CHEMISTRY SECTION (505)-841-2555

SAMPLE COLLECTION DATE: 6/15/99 TIME: 1010 BY: Her  
 SAMPLING LOCATION: Filter Tech Treatment Plant  
 SAMPLE MATRIX: wat

SLD No.: **WC-9902031**  
 REQUEST ID No.: 2289084  
 RECEIVED AT SLD: 6/17/99  
 USER: 55000  
 SUBMITTER: 60  
 WSS #: 20024

This Copy of Report for::

North Star Water Users Assoc.  
 Box 1120  
 Aztec, NM 87410

DISTRIBUTION TO:

Drinking Water Bureau (U)  
 ED Dist #1 Office, Albuquerque (S)  
 North Star Water Users Assoc. (C)  
 Water Chemistry Section - File Copy

ANALYTICAL RESULTS

Analyte	Result	Units	Analysis Date	Method	Minimum Level	Dilution Factor	Sample Det. Limit	Analyst	Data Qualifier
Free Cyanide	<0.1	mg/L	6/22/99	SM4500-CN(F)	.1	1.	.1	Cliff Kear	

Laboratory Comments:

Reviewed by Chris Dean *[Signature]*  
 Supervisor, Water Chemistry Section

Date Printed: 23-Jul-99

Data Qualifier Codes and Definitions

- U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. (Note: Analyte may or may not be present.)
- UJ - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

*Rec'd 8/2/99*  
*[Signature]*

PI 2287388



Scientific Laboratory Division  
700 Camino de Salud, NE (P.O. Box 4700)  
Albuquerque, NM 87106 (87196-4700)  
Phone: 505-841-2500/-2570/-2566



For Of OR9901121

3 User Code: 55000 Date & Time of Receipt at SLD: 99 JUN 17 AM 9:30 4 Sample Priority: 3 If 1 or 2 call SLD

5 Submitter Code: 060 WSS Code: NM35-120024 User's Site ID: 6 Sample Temp. Receipt @ SLD: 10 °C

7 Facility or WSS Name: North Star WUA

Facility/WSS Location: Complete 8, 9 & 10 8 County: 9 City: 10 State: or CHANGE NM TO

11 Sampling Location: Filter, Tech, Treatment, Plant

12 Sample Collection: On: 06/15/99 By: Hevryera At: 10:10 Time: 24:00 Hour Clock First Name: Joe

13 Sample Info. Contact: Ph: 505-841-9471 If not collector, per box 12, Please print name here:

14 Reports are mailed to the address specified by the Submitter Code and WSS Code (when present). However, if one of the following applies, please check appropriate boxes below and complete address form. Name: Address: City: State: Zip:

15 Sampling Documentation: (Check) 16a Field Data: (When appropriate) 16b Field Remarks: (Optional) SDWA Comments: SDWA Compositing:

17 Sample Type: Water Vapor Tissue Other: Liquid: (Check only one) Soil Plant Blood Solid:

18 Preservation: Preserved with HCl to pH < 2 No Preservation: (Check all that apply) Stored at 4°C Other: Number of Containers Submitted: Bottles: Vials: 2 Jars:

19 Analyses Requested: Please Check the appropriate box(es) below to indicate your analytical request(s):

Volatile Screens: (754) Aromatic & Halogenated Volatiles (EPA 8021) (765) Mass Spectrometer Volatiles (EPA 8260 or 524.2) (764) Appendix IX Mass Spectrometer VOCs (EPA 8260) (774) Volatile Organic Compounds [VOC's] (EPA 502.2) (766) SDWA Trihalomethanes (EPA 502.2) Remarks or Other Specific Compounds or Classes: Special Extractions: (784) TCLP Extraction, Volatiles (Method 1311) (785) TCLP Extraction, Semivolatiles (Method 1311) Semivolatiles Screens: (789) Drinking Water Semivolatiles Screens (Indented list) (775) EDB, DBCP & TCP (EPA 504.1) (758) Acid Herbicides (EPA 515.2) (772) Carbamates (EPA 531.1) (781) Glyphosate (EPA 547) (782) Endothall (EPA 548.1) (783) Diquat (EPA 549.1) (788) SOC (EPA 525.2) (771) Haloacetic Acids in Drinking Water (EPA 552.2) (750) Hydrocarbon Fuel Screen, GRO (Modified EPA 8015) (751) Hydrocarbon Fuel Screen, GRO/DRO (Mod. EPA 8015) (752) Hydrocarbon Fuel Screen, DRO (Mod. EPA 8015) (755) Base/Neutral Semivolatiles (No Phenols) (EPA 8270) (756) Base/Neutral/Acids Semivolatiles (EPA 625/8270) (759) Polychlorinated Biphenyls (PCBs) (EPA 8082) (760) Organochlorine Pesticides (EPA 608/8081) (786) Explosives Screen (Aberdeen Method)

OFF: (505) 325-5667



LAB: (505) 325-1556

April 28, 1999

RECEIVED  
MAY 03 1999

Maureen Gannon  
PNM - Public Service Company of NM  
Alvarado Square Mail Stop 0408  
Albuquerque, NM 87158  
TEL: (505) 241-2974  
FAX (505) 241-2340

RE: McCoy Gas Com A 1

Order No.: 9904049

Dear Maureen Gannon,

On Site Technologies, LTD. received 2 samples on 4/21/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:  
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "David Cox", is written over the typed name.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 28-Apr-99

---

**CLIENT:** PNM - Public Service Company of NM

**Project:** McCoy Gas Com A 1

**Lab Order:** 9904049

**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-Apr-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	McCoy Gas Com A 1
<b>Work Order:</b>	9904049	<b>Client Sample ID:</b>	9904211155; MW 2
<b>Lab ID:</b>	9904049-01A	<b>Matrix:</b>	AQUEOUS
<b>Project:</b>	McCoy Gas Com A 1	<b>Collection Date:</b>	4/21/99 11:55:00 AM
		<b>COC Record:</b>	7175

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>				Analyst: HR
Benzene	ND	0.5		µg/L	1	4/23/99
Toluene	ND	0.5		µg/L	1	4/23/99
Ethylbenzene	1.4	0.5		µg/L	1	4/23/99
m,p-Xylene	21	1		µg/L	1	4/23/99
o-Xylene	1.1	0.5		µg/L	1	4/23/99

**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

OFF: (505) 325-5667



LAB: (505) 325-1556

### ANALYTICAL REPORT

Date: 28-Apr-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	McCoy Gas Com A 1
<b>Work Order:</b>	9904049	<b>Client Sample ID:</b>	9904211220; MW 4
<b>Lab ID:</b>	9904049-02A	<b>Matrix:</b>	AQUEOUS
<b>Project:</b>	McCoy Gas Com A 1	<b>Collection Date:</b>	4/21/99 12:20:00 PM
		<b>COC Record:</b>	7175

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>		<b>Analyst: HR</b>		
Benzene	0.5	0.5		µg/L	1	4/23/99
Toluene	0.8	0.5		µg/L	1	4/23/99
Ethylbenzene	3.2	0.5		µg/L	1	4/23/99
m,p-Xylene	74	1		µg/L	1	4/23/99
o-Xylene	1.1	0.5		µg/L	1	4/23/99

<b>Qualifiers:</b>	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

August 19, 1999

**RECEIVED**  
**AUG 30 1999**

Maureen Gannon  
PNM - Public Service Company of NM  
Alvarado Square Mail Stop 0408  
Albuquerque, NM 87158  
TEL: (505) 241-2974  
FAX (505) 241-2340

RE: McCoy Gas Com A-1

Order No.: 9908026

Dear Maureen Gannon,

On Site Technologies, LTD. received 6 samples on 08/10/1999 for the analyses presented in the following report.

The Samples were analyzed for the following tests:  
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "David Cox", is written over a horizontal line.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 19-Aug-99

---

**CLIENT:** PNM - Public Service Company of NM  
**Project:** McCoy Gas Com A-1  
**Lab Order:** 9908026

**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.



## ANALYTICAL REPORT

Date: 19-Aug-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	McCoy Gas Com A-1
<b>Work Order:</b>	9908026	<b>Client Sample ID:</b>	9908101246; MW-1
<b>Lab ID:</b>	9908026-01A	<b>Matrix:</b>	AQUEOUS
<b>Project:</b>	McCoy Gas Com A-1	<b>Collection Date:</b>	08/10/1999 12:46:00 PM
		<b>COC Record:</b>	7784

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>		Analyst: DC		
Benzene	ND	0.5		µg/L	1	08/16/1999
Toluene	ND	0.5		µg/L	1	08/16/1999
Ethylbenzene	ND	0.5		µg/L	1	08/16/1999
m,p-Xylene	ND	1		µg/L	1	08/16/1999
o-Xylene	ND	0.5		µg/L	1	08/16/1999

<b>Qualifiers:</b>	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: 19-Aug-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	McCoy Gas Com A-1
<b>Work Order:</b>	9908026	<b>Client Sample ID:</b>	9908101303; MW-2
<b>Lab ID:</b>	9908026-02A	<b>Matrix:</b>	AQUEOUS
<b>Project:</b>	McCoy Gas Com A-1	<b>Collection Date:</b>	08/10/1999 1:03:00 PM
		<b>COC Record:</b>	7784

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>				Analyst: DC
Benzene	ND	0.5		µg/L	1	08/16/1999
Toluene	ND	0.5		µg/L	1	08/16/1999
Ethylbenzene	0.9	0.5		µg/L	1	08/16/1999
m,p-Xylene	1.2	1		µg/L	1	08/16/1999
o-Xylene	ND	0.5		µg/L	1	08/16/1999

**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



**ANALYTICAL REPORT**

Date: 19-Aug-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	McCoy Gas Com A-1
<b>Work Order:</b>	9908026	<b>Client Sample ID:</b>	9908101320; MW-3
<b>Lab ID:</b>	9908026-03A	<b>Matrix:</b>	AQUEOUS
<b>Project:</b>	McCoy Gas Com A-1	<b>Collection Date:</b>	08/10/1999 1:20:00 PM
		<b>COC Record:</b>	7784

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>		<b>Analyst: DC</b>		
Benzene	ND	0.5		µg/L	1	08/16/1999
Toluene	ND	0.5		µg/L	1	08/16/1999
Ethylbenzene	ND	0.5		µg/L	1	08/16/1999
m,p-Xylene	ND	1		µg/L	1	08/16/1999
o-Xylene	ND	0.5		µg/L	1	08/16/1999

<b>Qualifiers:</b>	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: 19-Aug-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	McCoy Gas Com A-1
<b>Work Order:</b>	9908026	<b>Client Sample ID:</b>	9908101333; MW-4
<b>Lab ID:</b>	9908026-04A	<b>Matrix:</b>	AQUEOUS
<b>Project:</b>	McCoy Gas Com A-1	<b>Collection Date:</b>	08/10/1999 1:33:00 PM
		<b>COC Record:</b>	7784

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>		<b>Analyst: DC</b>		
Benzene	ND	0.5		µg/L	1	08/16/1999
Toluene	ND	0.5		µg/L	1	08/16/1999
Ethylbenzene	1	0.5		µg/L	1	08/16/1999
m,p-Xylene	4.4	1		µg/L	1	08/16/1999
o-Xylene	1	0.5		µg/L	1	08/16/1999

<b>Qualifiers:</b>	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: 19-Aug-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	McCoy Gas Com A-1
<b>Work Order:</b>	9908026	<b>Client Sample ID:</b>	9908101350; TW-1
<b>Lab ID:</b>	9908026-05A	<b>Matrix:</b>	AQUEOUS
<b>Project:</b>	McCoy Gas Com A-1	<b>Collection Date:</b>	08/10/1999 1:50:00 PM
		<b>COC Record:</b>	7784

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>		Analyst: DC		
Benzene	ND	0.5		µg/L	1	08/16/1999
Toluene	ND	0.5		µg/L	1	08/16/1999
Ethylbenzene	0.6	0.5		µg/L	1	08/16/1999
m,p-Xylene	ND	1		µg/L	1	08/16/1999
o-Xylene	ND	0.5		µg/L	1	08/16/1999

**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

OFF: (505) 325-5667



LAB: (505) 325-1556

**ANALYTICAL REPORT**

Date: 19-Aug-99

<b>Client:</b>	PNM - Public Service Company of NM	<b>Client Sample Info:</b>	McCoy Gas Com A-1
<b>Work Order:</b>	9908026	<b>Client Sample ID:</b>	9908101420; TW-2
<b>Lab ID:</b>	9908026-06A	<b>Matrix:</b>	AQUEOUS
<b>Project:</b>	McCoy Gas Com A-1	<b>Collection Date:</b>	08/10/1999 2:20:00 PM
		<b>COC Record:</b>	7784

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>		<b>Analyst: DC</b>		
Benzene	ND	0.5		µg/L	1	08/16/1999
Toluene	ND	0.5		µg/L	1	08/16/1999
Ethylbenzene	0.8	0.5		µg/L	1	08/16/1999
m,p-Xylene	ND	1		µg/L	1	08/16/1999
o-Xylene	ND	0.5		µg/L	1	08/16/1999

<b>Qualifiers:</b>	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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# CHAIN OF CUSTODY RECORD

7784

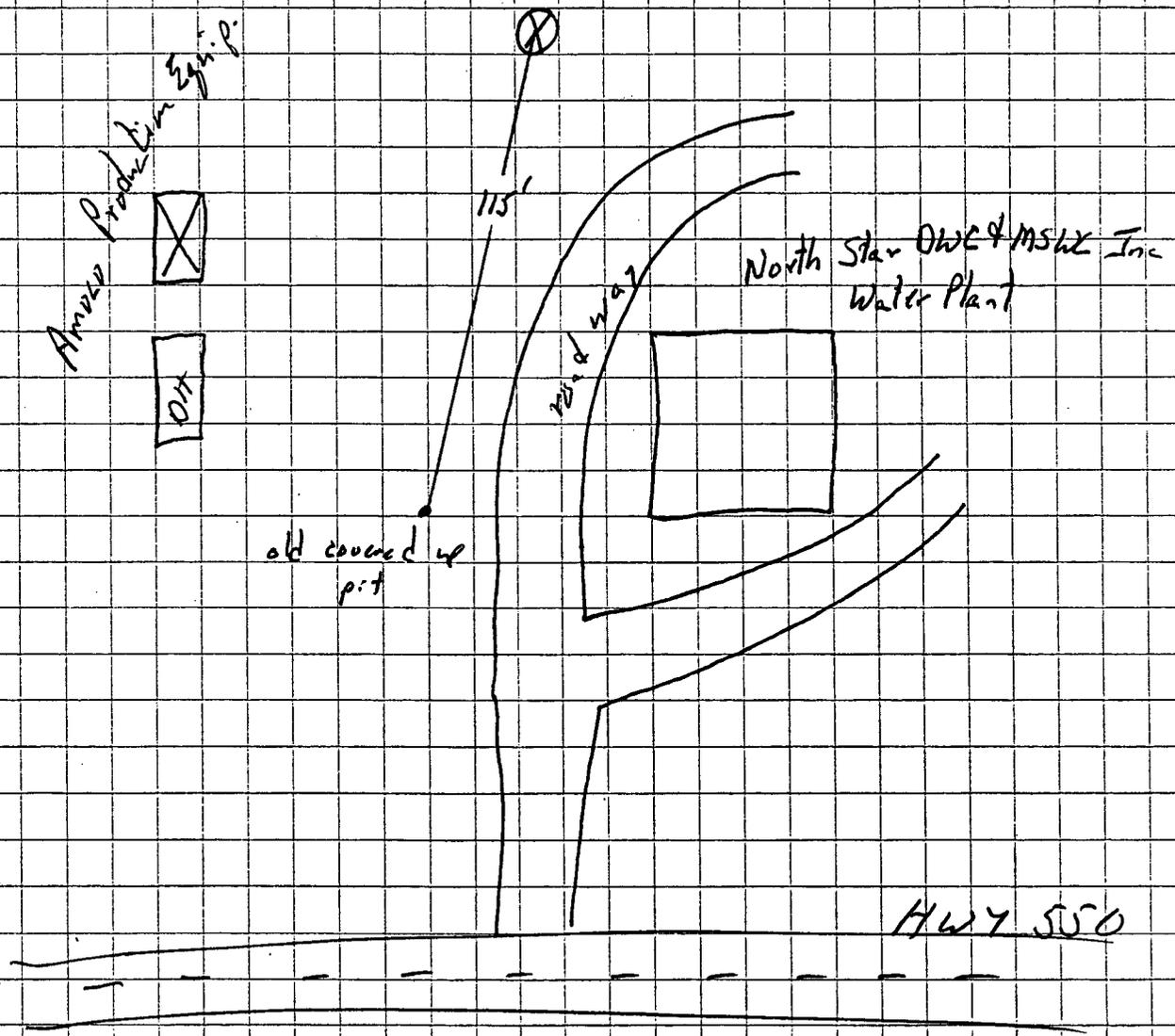
Page: 1 of 1

Date: 8/10/99

612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499  
 LAB: (505) 325-5667 • FAX: (505) 325-6256

Purchase Order No.:		Job No.		Name: Maureen Gannon		Title:					
Name: Denver Bearden		Dept. 324-3763		Company: PNM Gas Services							
Company: PNM Gas Services		Address: 603 W. Elm Street		Mailing Address: Alverado Square, Mail Stop 0408							
City, State, Zip: Farmington, NM 87401				City, State, Zip: Albuquerque, NM 87158							
Sampling Location:				Telephone No. 505-848-2974		Telefax No.:					
McCoey Gas Com. A-1				ANALYSIS REQUESTED (Diagonal lines)							
Sampler: R. Dabrick											
SAMPLE IDENTIFICATION		SAMPLE DATE						MATRIX PRES.		LAB ID	
7908101246	HW-1	8/10/99	1246					HS0	HC1	2	7908101246
7908101303	HW-2	8/10/99	1303					HS0	HC1	2	OZA
7908101320	HW-3	8/10/99	1320					HS0	HC1	2	OSN
7908101333	HW-4	8/10/99	1333					HS0	HC1	2	OSN
7908101350	TW-1	8/10/99	1350	HS0	HC1	2	OSN				
7908101490	TW-2	8/10/99	1490	HS0	HC1	2	OSN				
Relinquished by: Ronald A. Dabrick		Date/Time: 8/10/99 17:25		Received by: J-C		Date/Time: 8/10/99					
Relinquished by:		Date/Time:		Received by:		Date/Time:					
Relinquished by:		Date/Time:		Received by:		Date/Time:					
Method of Shipment: Air - 2 containers				24-48 Hours		10 Working Days					
Authorized by: Ronald A. Dabrick		Date: 8/10/99		Special Instructions: Results to be sent to both parties.							

McCoy Gas Com "A" #1  
Amoco  
Sec. 18, 31N, 10W, H

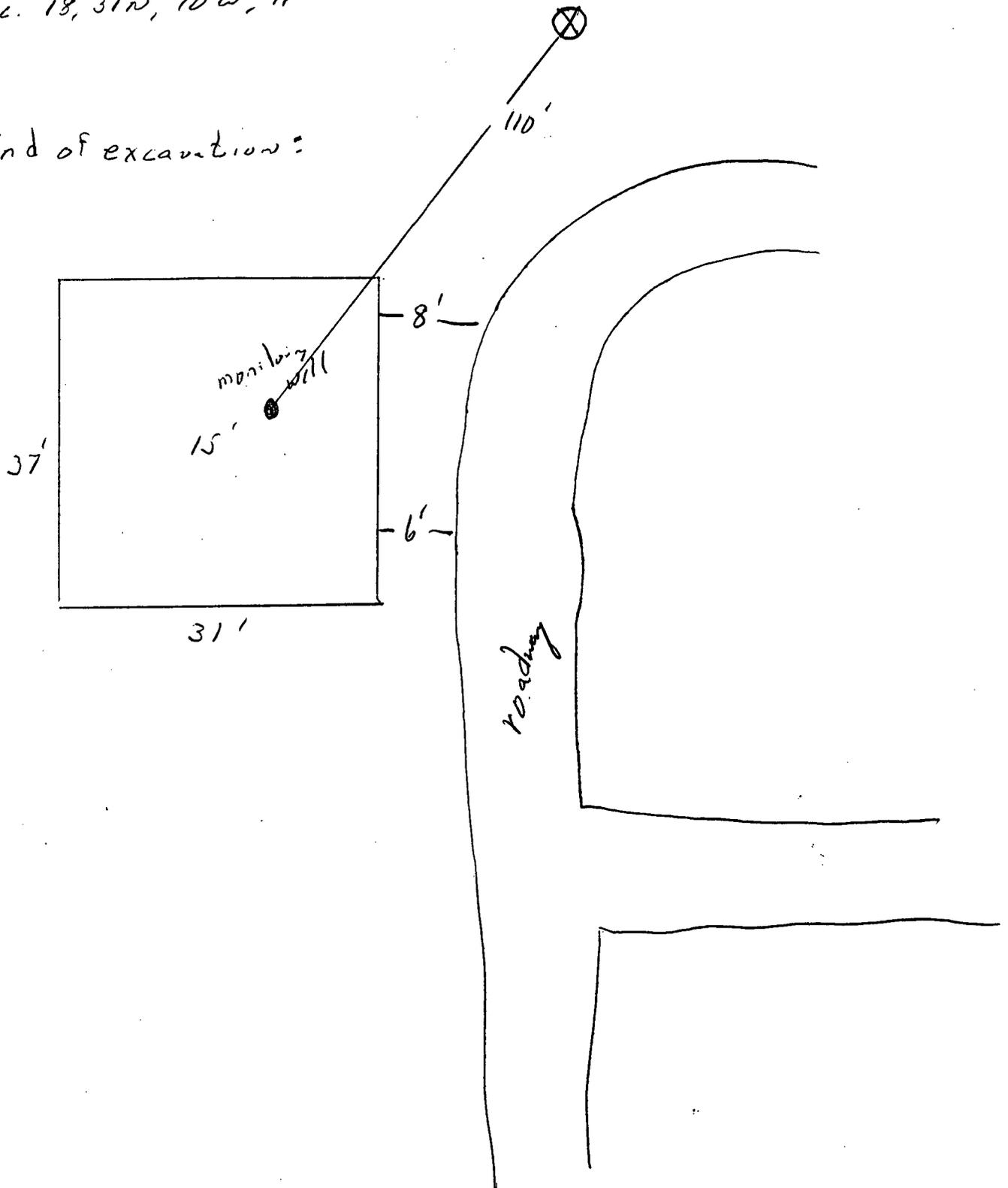


No PNM equipment on location  
pit had been covered up with dirt

McCoy Gas Com "A" #1  
Amoco  
Sec. 18, 31N, 10W, H

5/23/97

End of excavation:



OFF: (505) 325-5667



LAB: (505) 325-1556

**ANALYTICAL REPORT**

Attn: *Denver Bearden*  
 Company: *PNM Gas Services*  
 Address: *603 W. Elm*  
 City, State: *Farmington, NM 87401*

Date: *28-May-97*  
 COC No.: *5887*  
 Sample No.: *14699*  
 Job No.: *2-1000*

Project Name: *PNM Gas Services - McCoy Gas Com "A" #1*  
 Project Location: *9705230800; 15' depth*  
 Sampled by: GC Date: *23-May-97* Time: *8:00*  
 Analyzed by: DC Date: *27-May-97*  
 Sample Matrix: *Liquid*

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	<i>875</i>	<i>ug/L</i>	<i>4</i>	<i>ug/L</i>
<i>Toluene</i>	<i>49</i>	<i>ug/L</i>	<i>4</i>	<i>ug/L</i>
<i>Ethylbenzene</i>	<i>359</i>	<i>ug/L</i>	<i>4</i>	<i>ug/L</i>
<i>m,p-Xylene</i>	<i>6726</i>	<i>ug/L</i>	<i>20</i>	<i>ug/L</i>
<i>o-Xylene</i>	<i>9</i>	<i>ug/L</i>	<i>4</i>	<i>ug/L</i>
<i>TOTAL</i>	<i>8018</i>	<i>ug/L</i>		

ND - Not Detected at Limit of Quantitation

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

Approved By: *[Signature]*  
 Date: *5/28/97*

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