3R - 319

MONITORING REPORT

04/18/2005

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Oil Conservation Division
Environmental Bureau

Environmental Projects
188 County Road 4900
Bloomfield, NM 87413
505-634-4956 Phone
505-632-4780 Fax

April 18, 2005

Mr. Glen Von Gonten
Hydrogeologist
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: GRENIER # 4A DEHY PIT REMEDIATION AND CLOSURE REPORT

Dear Mr. Von Gonten:

Enclosed please find information on remediation and closure activities associated with the unlined surface impoundment located at the Grenier # 4A well site. Public Service Company of New Mexico (PNM) was previously responsible for the site and initiated pit closure activities on May 20, 1999. The site later became the responsibility of Williams upon purchase of Gas Company of New Mexico (GCNM) from PNM. Upon expiration of PNM's retained environmental liabilities associated with this site, Williams agreed to complete necessary closure work. As such, the enclosed documentation reflects activities of both PNM and Williams, all of which has been previously reported.

Site History

Excavation of petroleum hydrocarbon impacted soil beneath the unlined surface impoundment began on May 20, 1999. An approximate total of 316 cubic yards of contaminated soil were removed and remediated in an on-site landfarm. The excavation was reportedly terminated at a depth of 20 feet. Subsequent to the initial excavation and presumably due to high BTEX concentrations in soil samples, PNM returned to the site on September 9, 1999 in an attempt to establish the vertical extent of contamination. At that time, ground water was discovered at 45 feet below ground surface. A sample of the ground water collected from the excavation contained benzene, toluene and total xylene at concentrations in excess of Water Quality Control Commission (WQCC) standards. A letter notifying the Oil Conservation Division (OCD) of ground water contamination at the site was submitted on October 26, 1999.

To evaluate the magnitude and extent of ground water contamination, monitoring wells were installed in and around the former pit location. A down gradient well was installed consistent with standard site investigation protocol. The depth and location of wells were approved by NMOCD. Ground water samples were collected from the wells for two quarters before it was decided to excavate additional soil. On January 25, 2000, PNM returned to the site and excavated an additional 4,280 cubic yards of soil. During this work, monitoring wells MW-2 and MW-4 were removed and replaced by MW-5, MW-6, and MW-7.

Site Hydrogeology

The Grenier # 4A site lies at an elevation of about 6201 feet, northwest of the town of Aztec, NM. It is located along Estes Arroyo, an ephemeral tributary to the Animas River. The site lies in relative highlands between Farmington Glade and the south-flowing Animas River. Near surface drainage is to the south. Based on soil boring information, underlying soils at the site are predominantly silty soil with clay to a depth of about 42 feet where medium grained sand and gravel exists.

Groundwater was found at a depth of 45 feet as noted in field reports completed during the attempt to establish vertical extent of contamination. Water levels have not generally fluctuated seasonally, and have shown an overall decline in recent years.

Monitoring Results

Concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) were analyzed in water samples collected over a three year period following the last excavation work and installation of the existing monitoring network. Of the five wells in the monitoring network, only water from MW-5 was ever measured to have contamination above WQCC MCLs. During the last four monitoring events, benzene levels in MW-5 have been non-detect. Table 1 summarizes the analytical results from sampling of all monitoring wells.

Summary

The unlined surface impoundment at the Grenier # 4A was addressed consistent with OCD Order 7940-C and with the guidelines pertaining to the remediation of unlined surface impoundments. The work included the removal of hydrocarbon impacted soils and an evaluation of groundwater impacted by the historical operation of the impoundment. A network of ground water monitoring wells was installed and ground water analyses showed that a small BTEX plume may have existed in the vicinity of the former pit location. Natural attenuation of the BTEX compounds resulted in contaminant degradation to concentrations less than WQCC MCLs. The monitoring results show that there have been no exceedances of WQCC standards for BTEX in ground water at any time in four of five wells. The fifth well (MW-5), has been found to have only trace levels of ethylbenzene (well below WQCC standards) during the most recent four quarters of monitoring.

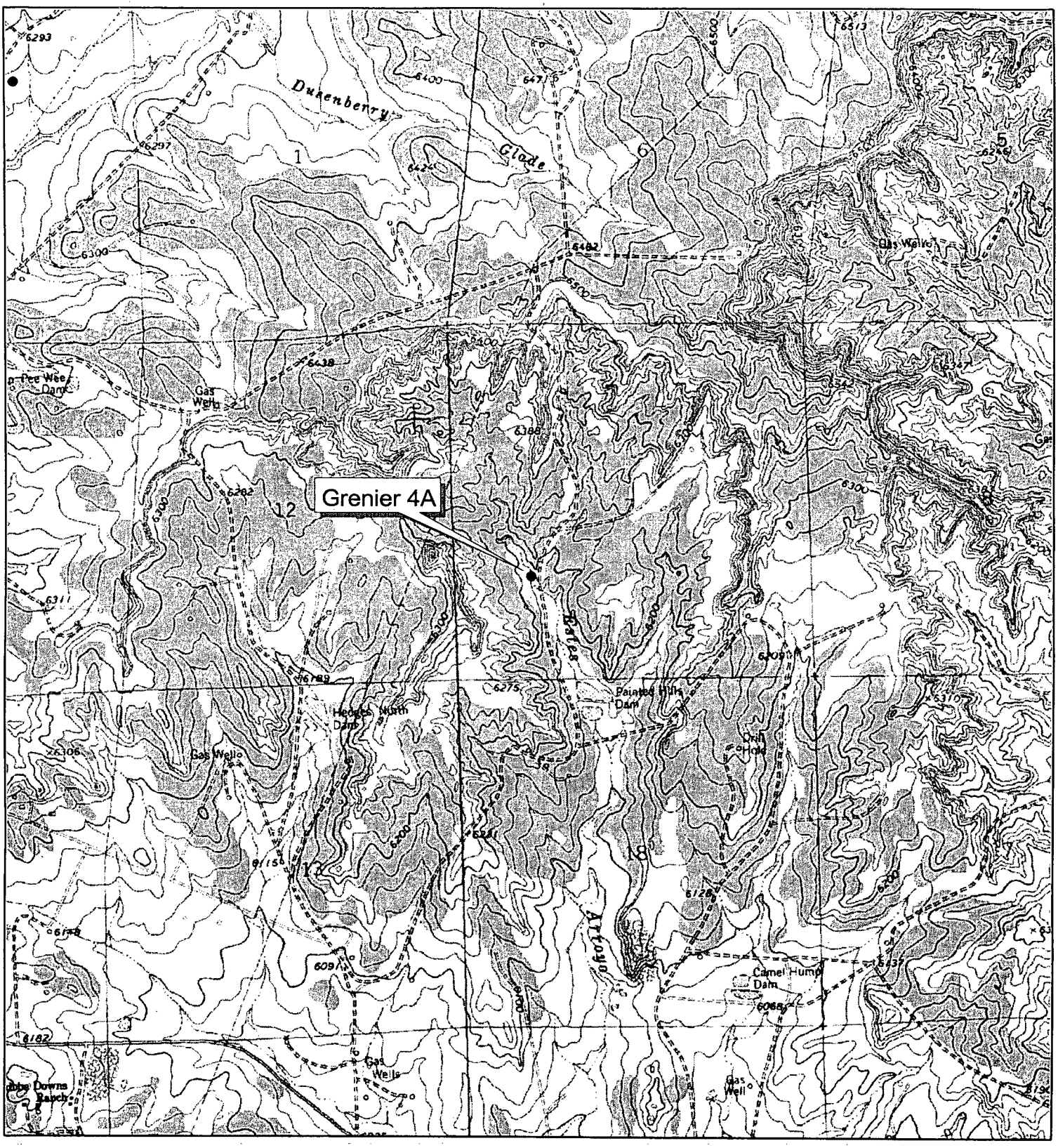
Based on current site conditions, Williams requests approval for closure of the Grenier # 4A site. Following receipt of your closure approval we will plug and abandon the monitoring wells in accordance with applicable guidelines. Williams appreciates your time in reviewing this site closure request. If you have any questions or require any additional information, please contact me at 505-634-4956.

Respectfully,

Mark B. Harvey
Project Coordinator

enclosures

c: Mr. Denny Foust, OCD District III, Aztec
Mr. Bill Liess, BLM Farmington District Office



Williams

Figure 1. Site Location Map
Grenier 4A
Unit M, Sec. 7, T31N, R11W
San Juan County, NM

N

1000 0 1000 2000 Feet

Analytical Data Summary

Site Name:
Grenier 4A

Reporting Period:
1/1/99 To 12/31/04

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-1						
	11/3/99	9911031534	<0.5	0.7	<0.5	<1.5
	3/7/00	0003071355	<0.5	<0.5	<0.5	<1.5
	6/12/00	0006120802	<0.5	<0.5	<0.5	<1.5
	10/26/00	123726OCT00	<1	<1	<1	1.20
	4/26/01	114526APR01	<1	<1	<1	<1
	10/8/01	152308OCT01	<1.0	<2.0	<2.0	<2.0
	3/21/02	105321MAR02	ND	ND	ND	ND
	6/13/02	120313JUN02	ND	ND	ND	ND
	12/5/02	142305DEC02	ND	ND	ND	ND
MW-2						
	11/3/99	9911031416	3400	4200	170	1300
MW-3						
	11/3/99	9911031448	2.7	3.5	<0.5	<1.5
	3/7/00	0003071458	<0.5	<0.5	<0.5	<1.5
	6/12/00	0006120845	<0.5	<0.5	<0.5	<1.5
	10/26/00	130626OCT00	<1	<1	<1	<1
	4/26/01	120326APR01	<1	<1	<1	<1
	3/21/02	111221MAR02	ND	ND	ND	ND
	6/13/02	122413JUN02	ND	ND	ND	ND
	12/5/02	140805DEC02	ND	ND	ND	ND
MW-4						
	11/3/99	9911031520	490	290	85	660
MW-5						
	3/7/00	0003071325	390	620	23	214
	6/12/00	0006120755	280	69	6.8	91
	10/26/00	125326OCT00	<1	<1	8.65	1.75
	1/5/01	123105JAN01	67.1	<1	3.96	<1
	4/26/01	115526APR01	147	1.46	3.25	1.46
	10/8/01	153808OCT01	18	<2.0	<2.0	<2.0
	3/21/02	110321MAR02	ND	ND	3.4	ND
	6/13/02	131513JUN02	ND	ND	2.9	ND
	9/19/02	155719SEP02	ND	ND	ND	ND
	12/5/02	141505DEC02	ND	ND	4.2	ND

Site Name:
Grenier 4A

Reporting Period:
1/1/99 To 12/31/04

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-6						
	3/7/00	0003071426	<0.5	<0.5	<0.5	<1.5
	6/12/00	0006120825	<0.5	<0.5	<0.5	<1.5
	10/26/00	133126OCT00	<1	<1	<1	<1
	1/5/01	124405JAN01	<1	<1	<1	<1
	4/26/01	122026APR01	1.99	1.44	<1	2.59
	10/8/01	152808OCT01	<1.0	<2.0	<2.0	<2.0
	3/21/02	113121MAR02	ND	ND	ND	ND
	6/13/02	121713JUN02	ND	ND	ND	ND
	12/5/02	134005DEC02	ND	ND	ND	ND
MW-7						
	3/7/00	0003071519	<0.5	<0.5	<0.5	<1.5
	6/12/00	0006120903	<0.5	<0.5	<0.5	<1.5
	10/26/00	131826OCT00	<1	<1	<1	<1
	1/5/01	125505JAN01	<1	<1	<1	<1
	4/26/01	121326APR01	<1	<1	<1	<1
	10/8/01	153508OCT01	<1.0	<2.0	<2.0	<2.0
	3/21/02	112221MAR02	ND	ND	ND	ND
	6/13/02	123513JUN02	ND	ND	ND	ND
	12/5/02	135905DEC02	ND	7.9	ND	5.4

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MILE HIGH ENVIRONMENTAL
187 C.R. 4980
Bloomfield, NM 87413

Lab Project Number: 6057809
Client Project ID: SJB-GW GRNR-4A

Attn: Mr. Jim Struhs
Phone: (505)632-4457

Lab Sample No: 605034412 Project Sample Number: 6057809-001 Date Collected: 03/21/02 11:12
Client Sample ID: 111221MAR02 MW-3 Matrix: Water Date Received: 03/27/02 09:40

Parameters	Results	Units	Report Limit	Analyzed	by	CAS No.	Ftnote	Reg Limit
GC Volatiles								
Aromatic Volatile Organics	Prep/Method: EPA 8021 / EPA 8021							
Benzene	ND	ug/l	2.0	03/29/02 19:30	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	03/29/02 19:30	SHF	100-41-4		
Toluene	ND	ug/l	2.0	03/29/02 19:30	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	03/29/02 19:30	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		03/29/02 19:30	SHF	2164-17-2		

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Lab Project Number: 6057809
Client Project ID: SJB-GW GRNR-4A

Lab Sample No: 605034420 Project Sample Number: 6057809-002 Date Collected: 03/21/02 10:53
Client Sample ID: 105321MAR02 MW-1 Matrix: Water Date Received: 03/27/02 09:40

Parameters	Results	Units	Report Limit	Analyzed	by	CAS No.	Ftnote	Reg Limit
GC Volatiles								
Aromatic Volatile Organics	Prep/Method: EPA 8021 / EPA 8021							
Benzene	ND	ug/l	2.0	03/29/02 19:59	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	03/29/02 19:59	SHF	100-41-4		
Toluene	ND	ug/l	2.0	03/29/02 19:59	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	03/29/02 19:59	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		03/29/02 19:59	SHF	2164-17-2		

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Lab Project Number: 6057809
Client Project ID: SJB-GW GRNR-4A

Lab Sample No: 605034438 Project Sample Number: 6057809-003 Date Collected: 03/21/02 11:22
Client Sample ID: 112221MAR02 MW-7 Matrix: Water Date Received: 03/27/02 09:40

Parameters	Results	Units	Report Limit	Analyzed	by	CAS No.	Ftnote	Reg Limit
GC Volatiles								
Aromatic Volatile Organics	Prep/Method: EPA 8021 / EPA 8021							
Benzene	ND	ug/l	2.0	03/29/02 20:28	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	03/29/02 20:28	SHF	100-41-4		
Toluene	ND	ug/l	2.0	03/29/02 20:28	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	03/29/02 20:28	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	103	%		03/29/02 20:28	SHF	2164-17-2		

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Lab Project Number: 6057809
Client Project ID: SJB-GW GRNR-4A

Lab Sample No: 605034453 Project Sample Number: 6057809-004 Date Collected: 03/21/02 11:03
Client Sample ID: 110321MAR02 MW-5 Matrix: Water Date Received: 03/27/02 09:40

Parameters	Results	Units	Report Limit	Analyzed	by	CAS No.	Ftnote	Reg Limit
GC Volatiles								
Aromatic Volatile Organics	Prep/Method: EPA 8021 / EPA 8021							
Benzene	ND	ug/l	2.0	03/29/02 20:57	SHF	71-43-2		
Ethylbenzene	3.4	ug/l	2.0	03/29/02 20:57	SHF	100-41-4		
Toluene	ND	ug/l	2.0	03/29/02 20:57	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	03/29/02 20:57	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		03/29/02 20:57	SHF	2164-17-2		

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Lab Project Number: 6057809
Client Project ID: SJB-GW GRNR-4A

Lab Sample No: 605034461 Project Sample Number: 6057809-005 Date Collected: 03/21/02 11:31
Client Sample ID: 113121MAR02 MW-6 Matrix: Water Date Received: 03/27/02 09:40

Parameters	Results	Units	Report Limit	Analyzed	by	CAS No.	Ftnote	Reg Limit
GC Volatiles								
Aromatic Volatile Organics	Prep/Method: EPA 8021 / EPA 8021							
Benzene	ND	ug/l	2.0	03/29/02 21:27	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	03/29/02 21:27	SHF	100-41-4		
Toluene	ND	ug/l	2.0	03/29/02 21:27	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	03/29/02 21:27	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	103	%		03/29/02 21:27	SHF	2164-17-2		

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Lab Project Number: 6059938
Client Project ID: GRNR4A

Lab Sample No: 605211929 Project Sample Number: 6059938-001 Date Collected: 06/13/02 12:03
Client Sample ID: 120313JUN02 MW-1 Matrix: Water Date Received: 06/20/02 09:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles								
Aromatic Volatile Organics	Method: EPA 8021							
Benzene	ND	ug/l	2.0	06/24/02 22:16		71-43-2		
Ethylbenzene	ND	ug/l	2.0	06/24/02 22:16		100-41-4		
Toluene	ND	ug/l	2.0	06/24/02 22:16		108-88-3		
Xylene (Total)	ND	ug/l	5.0	06/24/02 22:16		1330-20-7		
a,a,a-Trifluorotoluene (S)	105	%		06/24/02 22:16		98-08-8		

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Lab Project Number: 6059938
Client Project ID: GRNR4A

Lab Sample No: 605211937 Project Sample Number: 6059938-002 Date Collected: 06/13/02 12:24
Client Sample ID: 122413JUN02 MW-3 Matrix: Water Date Received: 06/20/02 09:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles								
Aromatic Volatile Organics	Method: EPA 8021							
Benzene	ND	ug/l	2.0	06/24/02 22:44		71-43-2		
Ethylbenzene	ND	ug/l	2.0	06/24/02 22:44		100-41-4		
Toluene	ND	ug/l	2.0	06/24/02 22:44		108-88-3		
Xylene (Total)	ND	ug/l	5.0	06/24/02 22:44		1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		06/24/02 22:44		98-08-8		

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Lab Project Number: 6059938
Client Project ID: GRNR4A

Lab Sample No: 605211945 Project Sample Number: 6059938-003 Date Collected: 06/13/02 13:15
Client Sample ID: 131513JUN02 MW-5 Matrix: Water Date Received: 06/20/02 09:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles								
Aromatic Volatile Organics	Method: EPA 8021							
Benzene	ND	ug/l	2.0	06/24/02 23:12		71-43-2		
Ethylbenzene	2.9	ug/l	2.0	06/24/02 23:12		100-41-4		
Toluene	ND	ug/l	2.0	06/24/02 23:12		108-88-3		
Xylene (Total)	ND	ug/l	5.0	06/24/02 23:12		1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		06/24/02 23:12		98-08-8		

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Lab Project Number: 6059938
Client Project ID: GRNR4A

Lab Sample No: 605211952 Project Sample Number: 6059938-004 Date Collected: 06/13/02 12:17
Client Sample ID: 121713JUN02 MW-6 Matrix: Water Date Received: 06/20/02 09:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles								
Aromatic Volatile Organics	Method: EPA 8021							
Benzene	ND	ug/l	2.0	06/25/02 12:47		71-43-2		
Ethylbenzene	ND	ug/l	2.0	06/25/02 12:47		100-41-4		
Toluene	ND	ug/l	2.0	06/25/02 12:47		108-88-3		
Xylene (Total)	ND	ug/l	5.0	06/25/02 12:47		1330-20-7		
a,a,a-Trifluorotoluene (S)	103	%		06/25/02 12:47		98-08-8		

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Lab Project Number: 6059938
Client Project ID: GRNR4A

Lab Sample No: 605211960 Project Sample Number: 6059938-005 Date Collected: 06/13/02 12:35
Client Sample ID: 123513JUN02 MW-7 Matrix: Water Date Received: 06/20/02 09:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles								
Aromatic Volatile Organics	Method: EPA 8021							
Benzene	ND	ug/l	2.0	06/24/02 19:42	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	06/24/02 19:42	SHF	100-41-4		
Toluene	ND	ug/l	2.0	06/24/02 19:42	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	06/24/02 19:42	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	96	%		06/24/02 19:42	SHF	98-08-8		

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Lab Project Number: 6063156
Client Project ID: GRNR4A

Lab Sample No: 605467984 Project Sample Number: 6063156-001 Date Collected: 09/19/02 15:57
Client Sample ID: 155719SEP02 MW-5 Matrix: Water Date Received: 09/26/02 09:15

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	ND	ug/l	2.0	1.0	10/03/02 00:29		71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	10/03/02 00:29		100-41-4		
Toluene	ND	ug/l	2.0	1.0	10/03/02 00:29		108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	10/03/02 00:29		1330-20-7		
a,a,a-Trifluorotoluene (S)	100	%		1.0	10/03/02 00:29		98-08-8		

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Lab Project Number: 6065460
Client Project ID: SJB-GW

Lab Sample No: 605652643 Project Sample Number: 6065460-001 Date Collected: 12/05/02 14:23
Client Sample ID: 142305DEC02 MW-1 Matrix: Water Date Received: 12/06/02 10:07

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	ND	ug/l	2.0	1.0	12/11/02 16:21	JPR	71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	12/11/02 16:21	JPR	100-41-4		
Toluene	ND	ug/l	2.0	1.0	12/11/02 16:21	JPR	108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	12/11/02 16:21	JPR	1330-20-7		
a,a,a-Trifluorotoluene (S)	100	%		1.0	12/11/02 16:21	JPR	98-08-8		

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Lab Project Number: 6065460
Client Project ID: SJB-GW

Lab Sample No: 605652650 Project Sample Number: 6065460-002 Date Collected: 12/05/02 14:15
Client Sample ID: 141505DEC02 MW-5 Matrix: Water Date Received: 12/06/02 10:07

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	ND	ug/l	2.0	1.0	12/11/02 16:56	JPR	71-43-2		
Ethylbenzene	4.2	ug/l	2.0	1.0	12/11/02 16:56	JPR	100-41-4		
Toluene	ND	ug/l	2.0	1.0	12/11/02 16:56	JPR	108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	12/11/02 16:56	JPR	1330-20-7		
a,a,a-Trifluorotoluene (S)	97	%		1.0	12/11/02 16:56	JPR	98-08-8		

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Lab Project Number: 6065460
Client Project ID: SJB-GW

Lab Sample No: 605652668 Project Sample Number: 6065460-003 Date Collected: 12/05/02 14:08
Client Sample ID: 140805DEC02 MW-3 Matrix: Water Date Received: 12/06/02 10:07

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	ND	ug/l	2.0	1.0	12/11/02 17:30	JPR	71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	12/11/02 17:30	JPR	100-41-4		
Toluene	ND	ug/l	2.0	1.0	12/11/02 17:30	JPR	108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	12/11/02 17:30	JPR	1330-20-7		
a,a,a-Trifluorotoluene (S)	99	%		1.0	12/11/02 17:30	JPR	98-08-8		

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

Lab Project Number: 6065460
Client Project ID: SJB-GW

Lab Sample No: 605652676 Project Sample Number: 6065460-004 Date Collected: 12/05/02 13:59
Client Sample ID: 135905DEC02 MW-7 Matrix: Water Date Received: 12/06/02 10:07

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	ND	ug/l	2.0	1.0	12/11/02 18:04	JPR	71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	12/11/02 18:04	JPR	100-41-4		
Toluene	7.9	ug/l	2.0	1.0	12/11/02 18:04	JPR	108-88-3		
Xylene (Total)	5.4	ug/l	5.0	1.0	12/11/02 18:04	JPR	1330-20-7		
a,a,a-Trifluorotoluene (S)	94	%		1.0	12/11/02 18:04	JPR	98-08-8		

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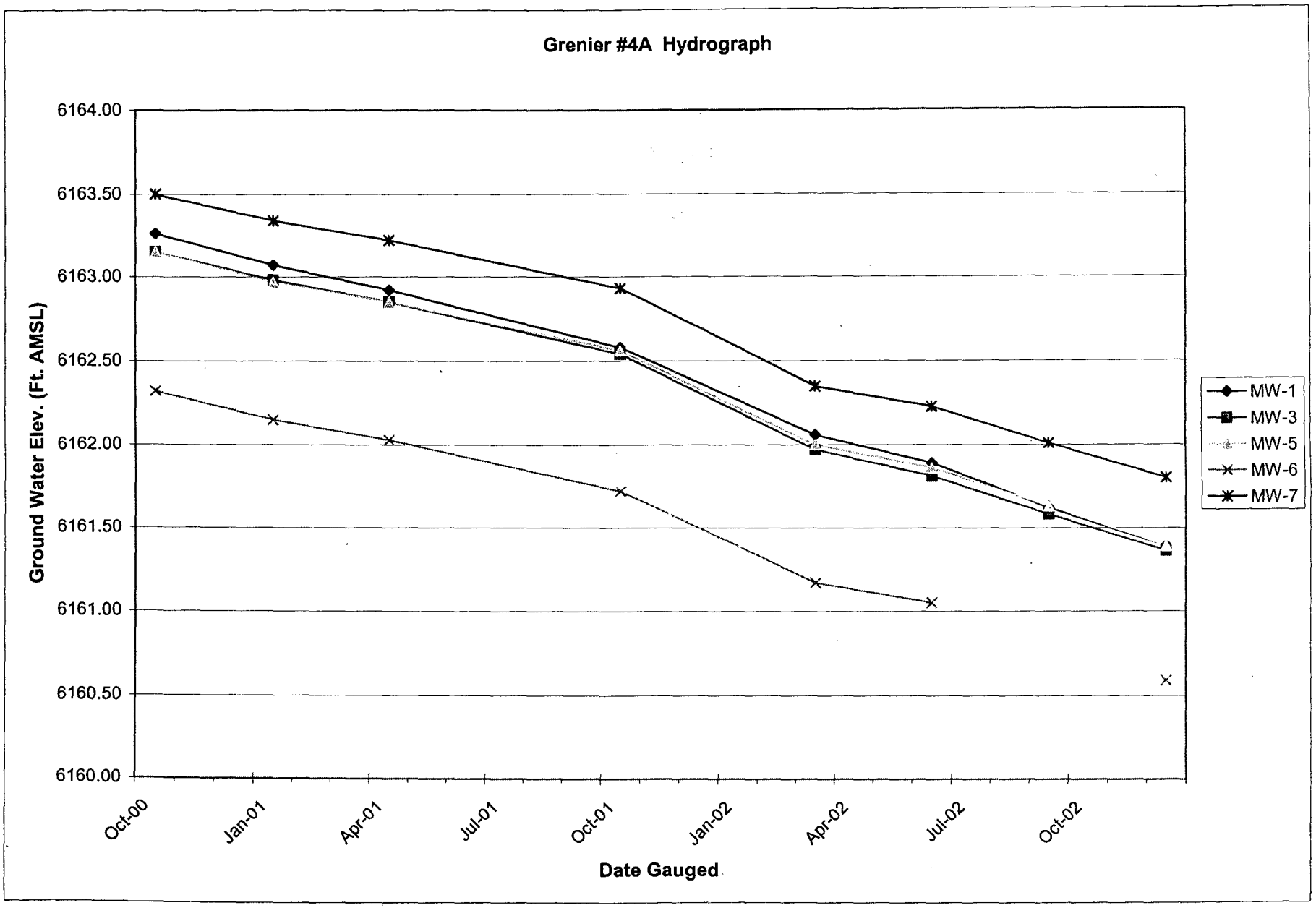
www.pacelabs.com

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

Lab Project Number: 6065460
Client Project ID: SJB-GW

Lab Sample No: 605652684 Project Sample Number: 6065460-005 Date Collected: 12/05/02 13:40
Client Sample ID: 134005DEC02 MW-6 Matrix: Water Date Received: 12/06/02 10:07

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	ND	ug/l	2.0	1.0	12/11/02 18:39	JPR	71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	12/11/02 18:39	JPR	100-41-4		
Toluene	ND	ug/l	2.0	1.0	12/11/02 18:39	JPR	108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	12/11/02 18:39	JPR	1330-20-7		
a,a,a-Trifluorotoluene (S)	98	%		1.0	12/11/02 18:39	JPR	98-08-8		


Grenier #4A Hydrograph
Ground Water Elev. (Ft. AMSL)
6164.00
6163.50
6163.00
6162.50
6162.00
6161.50
6161.00
6160.50
6160.00
Oct-00
Jan-01
Apr-01
Jul-01
Oct-01
Jan-02
Apr-02
Jul-02
Oct-02
Date Gauged
MW-1
MW-3
MW-5
MW-6
MW-7

Public Service Company
of New Mexico
Alvarado Square MS 0408
Albuquerque, NM 87158

October 26, 1999

Mr. William Olson
Hydrogeologist
Oil Conservation Division
2040 So. Pacheco
Santa Fe, New Mexico 87505

RE: NOTIFICATION OF GROUNDWATER CONTAMINATION AT THE GRENIER 4A DEHYDRATOR WELL SITE

Dear Bill:

Pursuant to New Mexico Water Quality Control Commission (WQCC) Regulations, section 1-203, PNM hereby provides written notification of groundwater contamination at the Grenier 4A, located in S7 T31N R11W, unit letter "M". Figure 1 is a topographic map showing the location of the site. The operator is Burlington Resources. This letter follows e-mail notification provided to you on Monday, October 18, 1999 (M. Gannon, PNM to B. Olson, OCD).

On September 9, 1999, a PNM environmental technician discovered groundwater at 45 feet below ground surface during vertical extent determination. A groundwater sample was collected and delivered to OnSite Technologies, Farmington, New Mexico. A hardcopy of the analytical results is attached and a summary of the BTEX constituent concentrations is provided below:

Component	Units	WQCC Stds.	Groundwater Sample
Benzene	ppb	10	**4000**
Toluene	ppb	750	**5500**
Ethylbenzene	ppb	750	180
Xylenes	ppb	620	**1600**
Total BTEX	ppb		11,280

Bold type indicates a WQCC exceedance.

This letter serves as written notification of groundwater impact at the Grenier 4A Dehydrator. PNM will conduct future activities at the site pursuant to PNM's Groundwater Management Plan. If you have any questions, please call me at (505) 241-2974. Thank you.

Sincerely,
PNM Environmental Services

Maureen Gannon
Project Manager

Attachment

Unlined Surface Impoundment Assessment Form

Site Information:

Well Name:	Grenier 4A			
Operator:	Burlington			
Legal Description:	Sec: 7	Twn: 31N	Rng: 11W	Unit: M

Vulnerable Area: ☐ Original ☐ Expanded ☐ Extended ☐ Other _____

Date: 5/19/99 **Time:** 1600 AM/PM

Well Pad Dimensions: L 400 W 300

Data Sheet #:

Canyon: Estes Arroyo **Quad Map (#):** Adobie Downs

County: San Juan **Run #:** 1071

Pit Information:

PNM Pit: ☒ Yes ☐ No
☐ Active ☐ SAT
☒ Abandoned ☐ Inaccessible
L 12 W 12 D 3

PNM Equipment: ☒ Yes ☐ No
Tank Set: ☒ Yes ☐ No
Discharges to Pit: ☒ SEP ☒ DH ☐ DR ☐ None

Ref: WH ☒ Other _____
Distance from Ref. 120'
Degrees: Due North

OVM 870 ppm (Sep) 858 (Oct)
Testhole Depth 8" 16"
Soil Desc. Black Black

Lab Sample: ☐ Yes ☒ No Sample #(s): _____ COC#: _____

Geographical:

Geology: ☐ SS ☐ Clay ☒ Sand ☐ Outcrop ☐ Rock ☐ Gravel ☐ Cliffs ☐ Silt ☐ Other _____

Terrain: ☐ Mesa Top ☒ Trailing Slope ☐ River Bottom ☐ Other _____

Land Use: ☒ Grazing ☐ Residential ☒ Recreation ☐ Other _____

Land Type: ☒ BLM ☐ State ☐ Fee ☐ Other _____

Vegetation:

	Well Pad	Area
☐	Normal	☒
☐	Stressed	☐
☐	None	☐

Ranking:

Depth to Groundwater:
(Vertical distance from contaminants to seasonal high water elevation of groundwater)
Less than 50 feet (20 points)
50 feet to 99 feet (10 points)
Greater than 100 feet (0 points)
0

Wellhead Protection Area:
(Less than 200 feet from a private domestic water source, or less than 1,000 feet from all other water sources)
Yes (20 points)
No (0 points)
0

Distance to Surface Water:
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals, and ditches)
Less than 200 feet (20 points)
200 feet to 1,000 feet (10 points)
Greater than 1,000 feet (0 points)
0

Distance to Ephemeral Stream (dry wash):
(Horizontal distance to all downgradient streams having a width of at least 10 feet) ***Jicarilla only***
Less than or equal to 100 feet (10 points)
Greater than 100 feet (0 points)
_____

Distance to Nearest Lake, Playa, or Watering Pond:
(Horizontal distance to all downgradient lakes, playas, and livestock or wildlife water ponds) ***Jicarilla only***
Less than or equal to 100 feet (10 points)
Greater than 100 feet (0 points)
0

0

General Comments:

Assessor's Signature: Randall A Dedrick **Date:** 5/19/99

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

OIL CONSERVATION DIVISION

2040 South Pacheco Street
Santa Fe, New Mexico 87505

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

PIT REMEDIATION AND CLOSURE REPORT

Operator: PNM Gas Services (Burlington) **Telephone:** 324-3764

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Grenier #4A Dehy

Location: Unit M Sec 7 T 31 N R 11 W County _____

Pit Type: Separator ___ Dehydrator X Other _____

Land Type: BLM X State ___ Fee ___ Other _____

Pit Location: Pit dimensions: length 12' width 12' depth 3'

(Attach diagram) Reference: wellhead X other _____

Footage from reference: 120'

Direction from reference: Due Degrees ___ East North X of ___ West South ___

Depth to Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water	Less than 50 feet 50 feet to 99 feet Greater than 100 feet	(20 points) (10 points) (0 points)	Ø
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1,000 feet from all other water sources)	Yes No	(20 points) (0 points)	Ø
Distance to Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches	Less than 200 feet 200 feet to 1,000 feet Greater than 1,000 feet	(20 points) (10 points) (0 points)	Ø
	RANKING SCORE (TOTAL POINTS):		Ø

Date Remediation Started: 5/20/99 **Date Completed:** 5/20/99

Remediation Method: (Check all appropriate sections)
Excavation X Approx. Cubic Yard 316
Landfarmed X Amount Landfarmed (cubic yds) 316
Other

Remediation Location: (i.e., landfarmed onsite, name and location of offsite facility)
Onsite X Offsite

Backfill Material Location:

General Description of Remedial Action:

Excavated Pit to a depth of 20': Left some contamination on East and South wall, production equipment and 45 BBL TK next to excavation. North and West wall clean: Bottom HOT Final Excavation: 29' X 24' X 20'.

Ground Water Encountered: No X Yes Depth

Final Pit Closure Sampling: (if multiple samples, attach sample result and diagram of sample locations and depths.)

Sample Location: North, East, South, West side walls and Pit bottom
Sample depth: 20'
Sample date: 5/20/99 Sample time: 0944 0946

Sample Results

Benzene (ppm)
Total BTEX (ppm)
Field headspace (ppm): 26.5
TPH (ppm) Method: 8015

Vertical Extent (ft) Risk Analysis form attached Yes No

Ground Water Sample: Yes No X (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 5/20/99
SIGNATURE Roy Burnham
PRINTED NAME AND TITLE **Roy Burnham, Environmental Technician III**

Excavation Work Sheet

PNM Environmental Services

Date	Name
4/20/99	Roy Burnham

Well Name	Operator	S	T	R	UI
Grenier 4A (DH)	Burlington	7	31N	1W	M

Pit Dimensions at Start	Excavation Dimensions at End
12'x12'x3	29'x24'x20

Excavated Cu. Yds.	Overburden Cu. Yds.	Spoil Cu. Yds.
516	200	316

PIT PID READINGS		
Feet	Center	Soil Type
5'	1116 ppm	Sand Gray/Black
10'	1114 ppm	Sand Black
15'	1213 ppm	Sand Gray/Black
20'	1251 ppm	Sand Brown
25'		

Composite Sample # (Walls): 9905200944 H.S. 26.5ppm

Composite Sample # (Bottom): 9905200946

	Location	Depth	PID Reading
	North Wall	18'	2.6 ppm
X	South Wall	18'	749 ppm
X	East Wall	18'	1284 ppm
	West Wall	18'	11.4 ppm
	Pit Bottom	20'	1251 ppm

Land Farm Location:

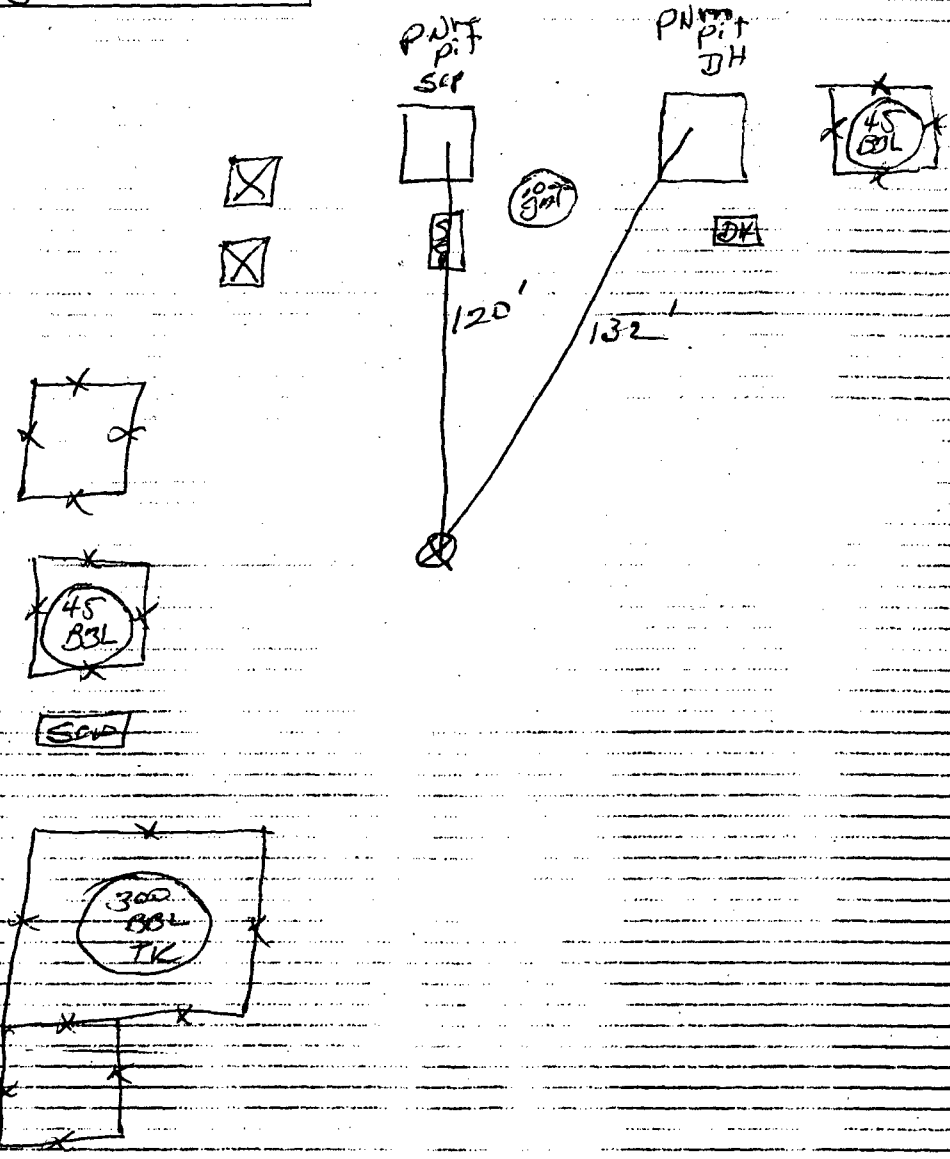
Field Notes: 0745 Removed fence S/u digging on Dothe Pit. stopped digging on East and South Wall, Production Equipment and 45 BBL Next to excavation. Sampled East and South Wall. North and west wall clean. Putting overburden into Pit. Bottom Hot

Well Name:	Grenier 4A DH			
Legal Description:	Sec	Twn	Rng	Unit
	7	31N	11W	M
Burlington				

Data Sheet #:

N W E S

Site Drawing



PNM Gas Services

Excavation Field Notes
Jicarilla

Date: 1-25-00		Name: Roy Burnham				
Well Name		Operator	S	T	R	UI
Grenier 4A D.H.		BROG	7	31N	11W	M
Pit Dimensions at Start		Excavation Dimensions at End				
Ø		98 X 63 X 50				
Excavated Cu. Yds.	~~Composite Sample # (walls):~~ Overburden 11,433					
	~~Composite Sample # (bottom):~~ Contamination 4,280 cu yds					

PIT READINGS

Feet	Reading	Soil Type	Location	Headspace	Depth
5'	clean	sand/clay	North Wall	75 ppm pid	48'
10'	clean	Sand/clay	South Wall	301 ppm pid	46'
15'	clean	Sand/clay	East Wall	890 ppm Pid	47'
20'	1437 ppm	Sand/clay	West Wall	~~300~~ ppm pid	48'
25'	↓	Sand clay	Pit Bottom		
30'		Sand clay			
40'		Sand/clay			
50'	350-600 ppm				

Land Farm Location:

Field Notes: 1-25-00 Removed equipment s/u digging : Removed M.W.#2 spent most of the day removing overburden. Contamination under D.H (South wall) Grade level to depth of 17'. Contamination spreading out. Ramping in on East wall. S/D and fenced
1-26-00 - STILL working on Removing overburden Working on West Wall at 15' down Contamination spread out in all direction enlarging Pit. S/D and fenced. App 2012 cu yd of overburden and 595 cu yds of contamination Removed. ~~S/D and fenced.~~
1-27-00 digging all day removing contamination dug down to a depth of 30' Removing more overburden. Fenced pit S/D for the weekend.
1-31-00 Removed fence s/u digging dug down to 34' pid reading 1300 to 1400 ppm moved out and benched side walls and removed more overburden on EAST WAL S/D and fenced
2-1-00 Removed fence Dug all day dug down to 35' to 36' slow going because depth of pit we have to move the Contamination twice. S/D and fenced.
2-2-00 Removed fence dug down to H_2O at 49' to 50' Sampled west wall 300 ppm on Pid digging back toward the East Wall S/D and fenced

PNM
Environmental Services

Excavation Field Notes
Jicarilla

Date: 1-25-00 cont.	Name: Roy Burnham
Well Name: Grenier 4A	Operator: BROG

2-3-00 Removed fence s/u digging on EAST wall. Back filling on West wall. Hauling contamination to L.F. dug all day removing contamination and overburden as needed. s/o and fenced

2-7-00 Removed fence s/u digging. Digging on EAST wall and Northeast, Southeast Corners. Contamination going away. There is a band of contamination 2' thick at bottom of Pit 48' to bottom on East wall and NE and S.E. corners. s/o and fenced will Sample tomorrow.

2-8-00 Removed fenced s/u back filling Sampled EAST North and South wall in middle of contamination Band. s/o and fenced

2-9-00 Removed fence s/u backfilling and hauling Contamination finished hauling Contamination. s/o and fenced.

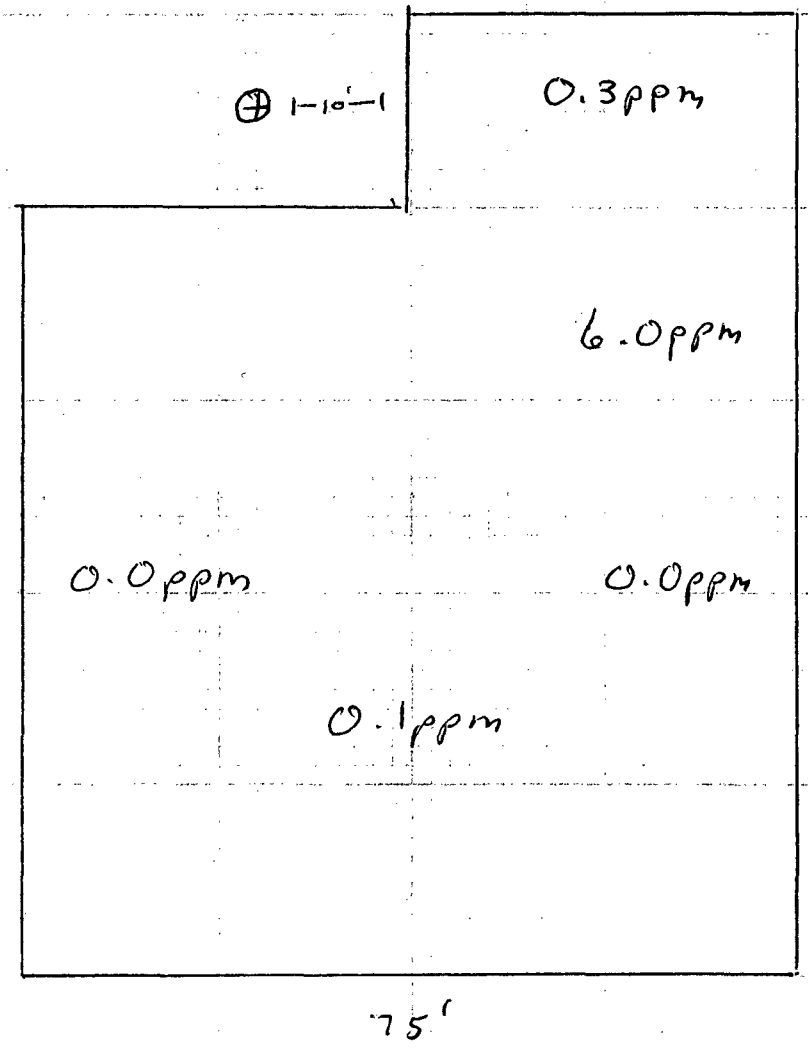
2-10-00 Removed fence s/u Backfilling worked all day s/o for the weekend fenced Pit

2-14-00 Removed fence s/u Backfilling s/o at 1400hrs Pit is backfilled.

Grenier # 4A (Dtl)
Sec-7 T-31N R-11W WM
Burlington

Landfarm Drawing

App 588 cu yds

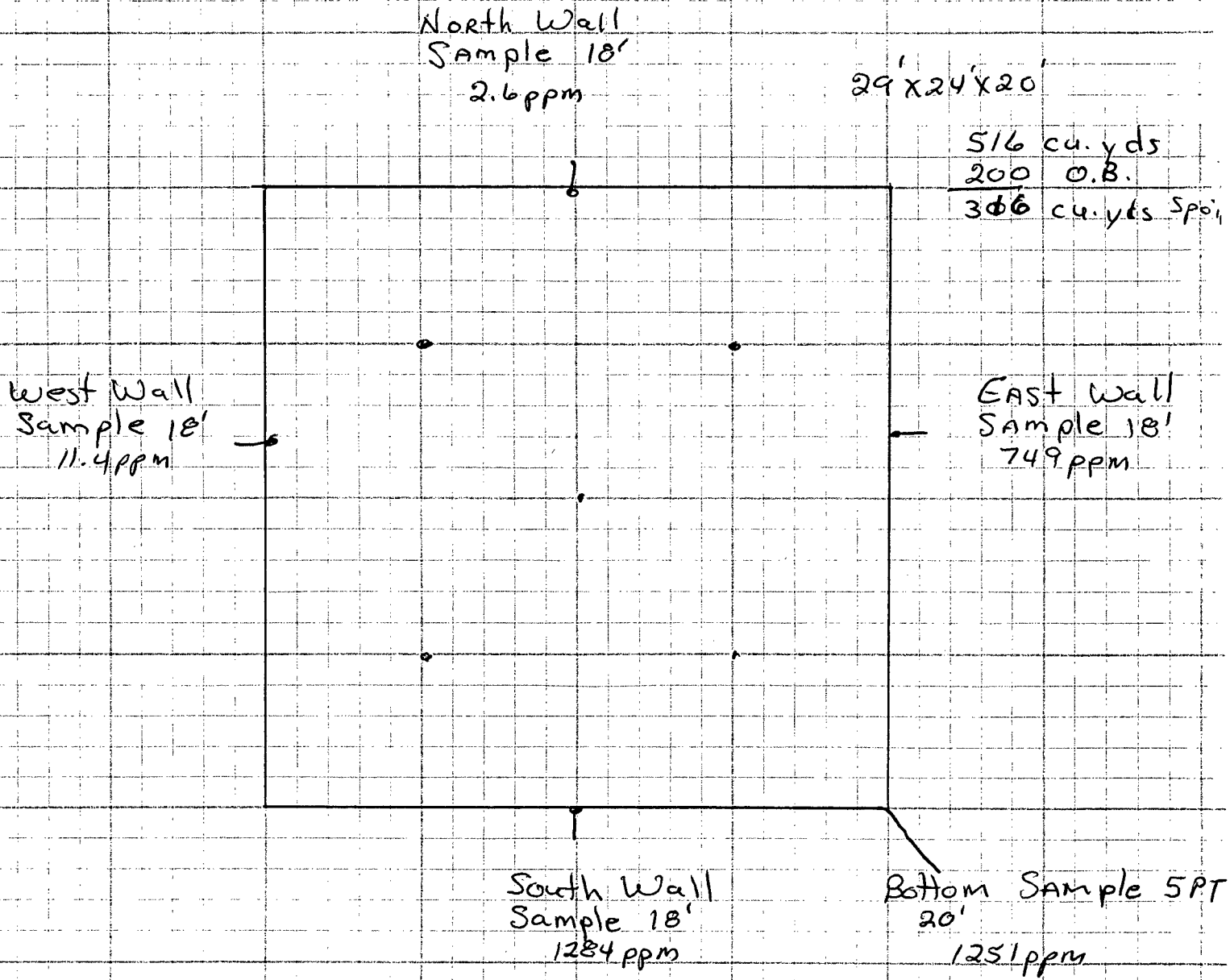


2" to 12" Depth
Headspace 2.1ppm
Sample # 990707/1050

Not to Scale

Grenier 4A (DH)
Sec-7 T-31N R-11W UL-M
Burlington

Excavation Drawing

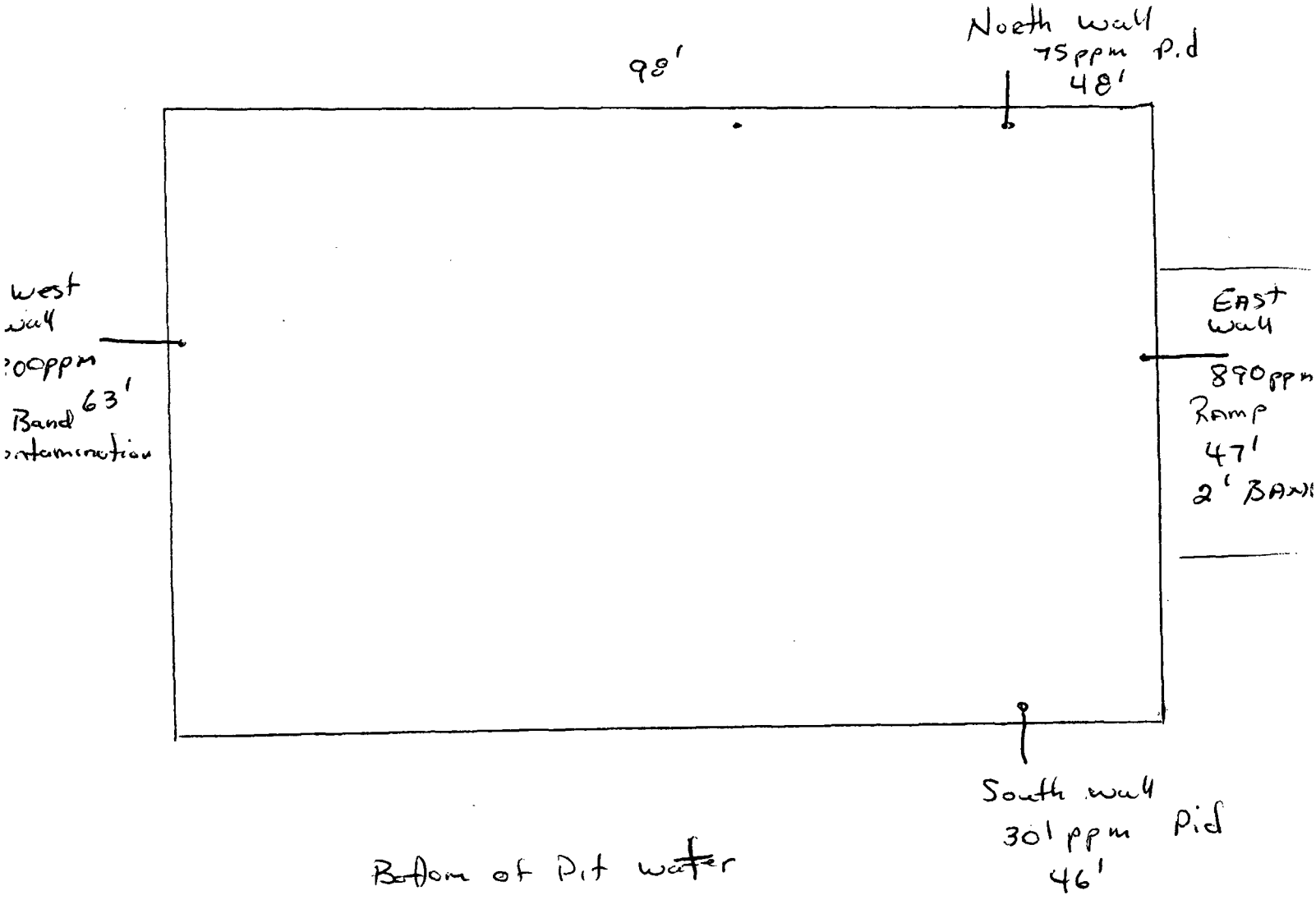


Grenier 4A D.H.
Sec-7 T-31N R-11W unit M

EXCAVATION DRAWING

98X63X50' 16,433 cuyds

4,280 cu yds
Contamination



OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

July 22, 1999

Dusenberry 1A LF
Dusenberry 2A LF
Grenier 1A LF
Grenier 4DH LF
Grenier 14 LF
Grenier 4A Sep LF
Grenier 4A DH LF
Grenier 15 LF
Grenier 12 LF
Grenier 3 LF
Horton 1A LF

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: Dusenbery, Grenier & Horton LF

Order No.: 9907013

Dear Maureen Gannon,

On Site Technologies, LTD. received 11 samples on 7/7/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Diesel Range Organics (SW8015B)

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,

David Cox

LANDFARM CONFIRMATION

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD. **Date:** *22-Jul-99*

CLIENT:	PNM - Public Service Company of NM
Project:	Dusenbery, Grenier & Horton LF
Lab Order:	9907013

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.

P.O. BOX 2606 • FARMINGTON, NM 87499

Ron

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *22-Jul-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	Grenier 4A DH LF
Work Order:	9907013	**Client Sample ID:**	9907071050; 5pt Comp
Lab ID:	9907013-08A **Matrix:** SOIL	**Collection Date:**	7/7/99 10:50:00 AM
Project:	Dusenbery, Grenier & Horton LF	**COC Record:**	7032

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015B**				Analyst: **DC**
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	7/20/99

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

P.O. BOX 2606 • FARMINGTON, NM 87499