3R - 347

MONITORING REPORT

04/18/2005

RECEIVED
3R0347

APR 28 2005

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: WILMERDING # 1M 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 Wilmerding # 1M well site. Public Service Company of New Mexico (PNM) was previously responsible for the site and initiated pit closure activities on May 21, 1998. 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 21, 1998. An approximate total of 2,800 cubic yards of contaminated soil were removed and disposed of at an approved off-site waste management facility. The excavation was reportedly terminated at a depth of 16 feet, ten feet below where ground water was encountered. 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 June 9, 1998. Work at the site included the removal of approximately 5700 barrels of water prior to backfilling.

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 periodically from the wells over a period of six years through June 2003. Irrigation to the surrounding field has apparently ceased and the wells have been dry since 2003.

Site Hydrogeology

The Wilmerding # 1M site lies at an elevation of about 5810 feet, just southwest of the town of La Plata, NM. The site lies within the broad alluvial plain of the south-flowing La Plata River. Irrigation ditches divert water form the La Plata and carry water to irrigate fields on the alluvial plain throughout the growing season.

The site is less than one mile from the streambed of the La Plata River, however, there are three nearby irrigation ditches that have exerted strong control over site hydrology. The McDermott and Cunningham ditches lie east of the site and the Highland Park ditch lies just west of the site. Topography drops to the south at this site.

During site excavation activities, about 6 – 7 feet of clay was encountered in the subsurface. Beyond this depth, cobbles and gravels were prevalent. Groundwater was found at a depth of 6 feet as noted in field reports completed during excavation activities. Following excavation and subsequent backfilling, monitoring wells were installed. Based on monitoring since 1998, water levels fluctuate radically depending on the presence or absence of water in the irrigation ditches. On numerous occasions, monitoring wells were found to be dry, suggesting an artificial water table.

Monitoring Results

Concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) were analyzed in water samples collected during quarters when water was present. Of the four wells in the monitoring network, only wells MW-1, MW-2, and MW-4 had sufficient water to sample in 2003. Results of the 2003 sampling events confirm earlier results when water samples could be collected. Table 1 summarizes the analytical results from episodic sampling of the monitoring wells.

Following the initial sampling event, there have been only benzene spikes measured in exceess of WQCC standards in one well. It is arguable that the initial sample was not representative due to soil agitation and liberation of contaminants during excavation of the soil mass. Further, a significant amount of water was removed from the excavation which likely resulted in more representative conditions subsequent to excavation work.

Summary

The unlined surface impoundment at the Wilmerding # 1M 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 for several years.

Based on current site conditions, Williams requests approval for closure of the Wilmerding # 1M 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

Wilmerding 1M - T31N, R13W, S10, Unit C

LA PLATA, N. MEX.- COLO.

Wilmerding 1M
Summary of Groundwater Analytical Data
(Q2/1999 - Q2/2003)

			Free Product		Analytes (values in ug/L)			
Well ID	Sample ID	Sample Date	Present Yes/No	Thickness (ft.)	benzene	toluene	ethylbenzene	total xylenes
MW-1	9906011354	1-Jun-99	N		<0.5	<0.5	<0.5	<1.5
	9908101505	10-Aug-99	N		<0.5	<0.5	<0.5	<1.5
	9910121055	12-Oct-99	N		<0.5	<0.5	<0.5	<1.5
	0005011029	1-May-00	N		<0.5	<0.5	<0.5	<1.5
	WLM1M-UG-MW1	11-May-01	N		<1.0	<1.0	<1.0	<1.0
	133802JUN03	2-Jun-03	N		<1.0	<1.0	<1.0	<1.0
MW-2	9906011420	1-Jun-99	N		<0.5	1	<0.5	<1.5
	9908101532	10-Aug-99	N		<0.5	<0.5	<0.5	<1.5
	9910121115	12-Oct-99	N		<0.5	<0.5	<0.5	<1.5
	0002010940	1-Feb-00	N		<0.5	<0.5	1.4	<1.5
	0005011057	1-May-00	N		<0.5	<0.5	<0.5	<1.5
	WLM1M-SA-MW2	11-May-01	N		<1.0	<1.0	<1.0	<1.0
	095821MAY03	21-May-03	N		<1.0	<1.0	<1.0	<1.0
MW-3	9906011445	1-Jun-99	N		<0.5	<0.5	<0.5	<1.5
	9908101552	10-Aug-99	N		<0.5	<0.5	<0.5	<1.5
	9910121131	12-Oct-99	N		<0.5	<0.5	<0.5	<1.5
	0005011122	1-May-00	N		<0.5	<0.5	<0.5	<1.5
	WLM1M-DG-MW3	11-May-01	N		<1.0	<1.0	<1.0	<1.0
MW-4	9906011515	1-Jun-99	N		0.8	<0.5	0.8	<1.5
	9908101615	10-Aug-99	N		<0.5	<0.5	0.7	<1.5
	9910121148	12-Oct-99	N		59	0.6	1.5	3.1
	9911220922	22-Nov-99	N		11	<2.5	<2.5	<7.5
	0005011148	1-May-00	N		<0.5	<0.5	0.6	<1.5
	WLM1M-DG-MW4	11-May-01	N		<1.0	<1.0	<1.0	<1.0
	140302JUN03	2-Jun-03	N		<1.0	<1.0	<1.0	<1.0

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

June 03, 2003

Mr. Jim Struhs
MILE HIGH ENVIRONMENTAL
188 C.R. 4900
Bloomfield, NM 87413

RE: Lab Project Number: 6070867
Client Project ID: SJBGW-WLM-IM

Dear Mr. Struhs:

Enclosed are the analytical results for sample(s) received by the laboratory on May 28, 2003. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Mary Jane Walls
mjwalls@pacelabs.com
Project Manager

Kansas/NELAP Certification Number E-10116

Enclosures

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

SAMPLE SUMMARY

Lab Project Number: 6070867
Client Project ID: SJBGW-WLM-IM

Project Sample Number	Sample Number	Client Sample ID	Matrix	Date Collected	Date Received
6070867-001	606106342	095821MAY03	Water	05/21/03 09:58	05/28/03 08:40

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Lab Project Number: 6070867
Client Project ID: SJBGW-WLM-IM

Lab Sample No: 606106342 Project Sample Number: 6070867-001 Date Collected: 05/21/03 09:58
Client Sample ID: 095821MAY03 Matrix: Water Date Received: 05/28/03 08:40

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	06/02/03 13:27	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	05/31/03 01:03	SHF	100-41-4		
Toluene	ND	ug/l	2.0	1.0	05/31/03 01:03	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	06/02/03 13:27	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	92	%		1.0	05/31/03 01:03	SHF	98-08-8		

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Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

Lab Project Number: 6070867
Client Project ID: SJBGW-WLM-IM

PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
(S)	Surrogate

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QUALITY CONTROL DATA

Lab Project Number: 6070867
Client Project ID: SJBGW-WLM-IM

QC Batch: 145741 Analysis Method: EPA 8021
QC Batch Method: EPA 8021 Analysis Description: Aromatic Volatile Organics
Associated Lab Samples: 606106342

METHOD BLANK: 606106888
Associated Lab Samples: 606106342

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Benzene	ug/l	ND	2.0	
Ethylbenzene	ug/l	ND	2.0	
Toluene	ug/l	ND	2.0	
Xylene (Total)	ug/l	ND	5.0	
a,a,a-Trifluorotoluene (S)	%	93		

LABORATORY CONTROL SAMPLE: 606106896

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Benzene	ug/l	20.00	20.88	104	85-120	
Ethylbenzene	ug/l	20.00	19.72	99	87-114	
Toluene	ug/l	20.00	19.99	100	87-114	
Xylene (Total)	ug/l	60.00	61.49	102	88-115	
a,a,a-Trifluorotoluene (S)				91	86-115	1

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Lenexa, KS 66219
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Fax: 913.599.1759

Lab Project Number: 6070867
Client Project ID: SJBGW-WLM-IM

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

LCS(D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
DUP	Sample Duplicate
ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
RPD	Relative Percent Difference
(S)	Surrogate
[1]	Insufficient sample volume received for the MS/MSD. Acceptable recovery of the LCS indicates the analytical system is in control.

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

735368

Page: 2 of 5

Required Client Information: Section A

Company: Mile High Services
Address: 188 C.R. 4900
Bloomfield N.M. 87413
Phone: 505-634-4956 Fax: 505-632-4781

Required Client Information: Section B

Report To: Jim Struhs
Copy To: see section A
Invoice To:
P.O.
Project Name: SJBGW - WLM-1M
Project Number: SJBGW - May 03

Client Information (Check quote/contract):
Requested Due Date: *TAT: 7days

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

To Be Completed by Pace Analytical and Client Section C

Quote Reference: 020304-401
Project Manager: Mary Jane Walls
Project #: 60170867
Profile #:

Section D Required Client Information:

SAMPLE ID
One character per box.
(A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

Requested Analysis:

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED (mm / dd / yy)	TIME COLLECTED (hh:mm a/p)	# Containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	BTEX										Remarks / Lab ID
1	095821MAY03	WT	5/21/03	0958	2				X				X	X					2	P	✓			60106342
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

SHIPMENT METHOD	AIRBILL NO	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Federal Express	828051645403	5-27-03	1	1	Steve Archuleta / MHS	5/27/03	0922		5/28/03	840

SAMPLE CONDITION

Temp in °C	2.2
Received on Ice	(Y)/N
Sealed Cooler	Y/(N)
Samples Intact	(Y)/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Steve Archuleta
SIGNATURE of SAMPLER: Steve Archuleta
DATE Signed: (MM / DD / YY) 5-27-03

2

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev 0402

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Fax: 913.599.1759

June 09, 2003

Mr. Jim Struhs
MILE HIGH ENVIRONMENTAL
188 C.R. 4900
Bloomfield, NM 87413

RE: Lab Project Number: 6071172
Client Project ID: SJBGW-WLMIM

Dear Mr. Struhs:

Enclosed are the analytical results for sample(s) received by the laboratory on June 5, 2003. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Adam Taylor

For: Mary Jane Walls
mjwalls@pacelabs.com
Project Manager

Kansas/NELAP Certification Number E-10116

Enclosures

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Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

SAMPLE SUMMARY

Lab Project Number: 6071172
Client Project ID: SJBGW-WLMIM

Project Sample Number	Sample Number	Client Sample ID	Matrix	Date Collected	Date Received
6071172-001	606131399	133802JUN03	Water	06/02/03 13:38	06/05/03 09:15
6071172-002	606131407	140302JUN03	Water	06/02/03 14:03	06/05/03 09:15
6071172-003	606131415	134802JUN03	Water	06/02/03 13:48	06/05/03 09:15

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9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

SAMPLE ANALYTE COUNT

Lab Project Number: 6071172
Client Project ID: SJBGW-WLMIM

Project Sample Number	Sample No	Client Sample ID	Analysis Code	Analysis Description	Analytes Reported
6071172-001	606131399	133802JUN03	8020 WPAC	Aromatic Volatile Organics	5
6071172-002	606131407	140302JUN03	8020 WPAC	Aromatic Volatile Organics	5
6071172-003	606131415	134802JUN03	8020 WPAC	Aromatic Volatile Organics	5

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Fax: 913.599.1759

Lab Project Number: 6071172
Client Project ID: SJBGW-WLMIM

Lab Sample No: 606131399 Project Sample Number: 6071172-001 Date Collected: 06/02/03 13:38
Client Sample ID: 133802JUN03 Matrix: Water Date Received: 06/05/03 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	06/06/03 21:49	ARF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	06/06/03 21:49	ARF	100-41-4		
Toluene	ND	ug/l	2.0	1.0	06/06/03 21:49	ARF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	06/06/03 21:49	ARF	1330-20-7		
a,a,a-Trifluorotoluene (S)	101	%		1.0	06/06/03 21:49	ARF	98-08-8		

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Lab Project Number: 6071172
Client Project ID: SJBGW-WLMIM

Lab Sample No: 606131407 Project Sample Number: 6071172-002 Date Collected: 06/02/03 14:03
Client Sample ID: 140302JUN03 Matrix: Water Date Received: 06/05/03 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	06/06/03 22:18	ARF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	06/06/03 22:18	ARF	100-41-4		
Toluene	ND	ug/l	2.0	1.0	06/06/03 22:18	ARF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	06/06/03 22:18	ARF	1330-20-7		
a,a,a-Trifluorotoluene (S)	101	%		1.0	06/06/03 22:18	ARF	98-08-8		

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Lab Project Number: 6071172
Client Project ID: SJBGW-WLMIM

Lab Sample No: 606131415 Project Sample Number: 6071172-003 Date Collected: 06/02/03 13:48
Client Sample ID: 134802JUN03 Matrix: Water Date Received: 06/05/03 09:15

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	2.3	ug/l	2.0	1.0	06/06/03 22:48	ARF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	06/06/03 22:48	ARF	100-41-4		
Toluene	ND	ug/l	2.0	1.0	06/06/03 22:48	ARF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	06/06/03 22:48	ARF	1330-20-7		
a,a,a-Trifluorotoluene (S)	102	%		1.0	06/06/03 22:48	ARF	98-08-8		

REPORT OF LABORATORY ANALYSIS

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

Lab Project Number: 6071172
Client Project ID: SJBGW-WLMIM

PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
(S)	Surrogate

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Phone: 913.599.5665
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QUALITY CONTROL DATA

Lab Project Number: 6071172
Client Project ID: SJBGW-WLMIM

QC Batch: 146400 Analysis Method: EPA 8021
QC Batch Method: EPA 8021 Analysis Description: Aromatic Volatile Organics
Associated Lab Samples: 606131399 606131407 606131415

METHOD BLANK: 606132967
Associated Lab Samples: 606131399 606131407 606131415

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Benzene	ug/l	ND	2.0	
Ethylbenzene	ug/l	ND	2.0	
Toluene	ug/l	ND	2.0	
Xylene (Total)	ug/l	ND	5.0	
a,a,a-Trifluorotoluene (S)	%	105		

LABORATORY CONTROL SAMPLE: 606132975

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Benzene	ug/l	20.00	21.93	110	85-120	
Ethylbenzene	ug/l	20.00	21.45	107	87-114	
Toluene	ug/l	20.00	21.48	107	87-114	
Xylene (Total)	ug/l	60.00	65.59	109	88-115	
a,a,a-Trifluorotoluene (S)				102	86-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606133239 606133247

Parameter	Units	606131548 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Footnotes
Benzene	ug/l	0	20.00	21.45	20.80	107	104	82-121	3	16	
Ethylbenzene	ug/l	0	20.00	21.11	20.56	106	103	84-114	3	14	
Toluene	ug/l	0	20.00	20.93	20.13	105	101	85-112	4	18	
Xylene (Total)	ug/l	0.7257	60.00	64.86	62.82	107	104	83-115	3	16	
a,a,a-Trifluorotoluene (S)						108	107	86-115			

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Lenexa, KS 66219
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Lab Project Number: 6071172
Client Project ID: SJBGW-WLMIM

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

LCS(D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
DUP	Sample Duplicate
ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
RPD	Relative Percent Difference
(S)	Surrogate

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

718812

Page: 1 of 1

Required Client Information: **Section A**

Company: Mile High Services
Address: 188 C.R. 4900
Bloomfield N.M. 87413
Phone: 505-634-4956 Fax: 505-632-4781

Required Client Information: **Section B**

Report To: Jim Struhs
Copy To: see section A
Invoice To:
P.O.
Project Name: SJBGW-WLMIM
Project Number: SJBGW-JUN03

Client Information (Check quote/contract):
Requested Due Date: *TAT: 7days

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

To Be Completed by Pace Analytical and Client **Section C**

Quote Reference: 020304-4101
Project Manager: Mary Jane Walls
Project #: 6071172
Profile #:

Section D **Required Client Information:**

SAMPLE ID

One character per box.
(A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED (mm / dd / yy)	TIME COLLECTED (hh:mm a/p)	# Containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: BTEX	Remarks / Lab ID
1	133802JUN03	WT	6-2-03	1338	2				X				X X	2 BV	60613199
2	140302JUN03	WT	6-2-03	1403	2				X				X X	1	1407
3	134802JUN03	WT	6-2-03	1348	2				X				X X	1	1415
4															
5															
6															
7															
8															
9															
10															
11															
12															

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS
Fed. Ex.	841516616477200	6-4-03	1

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
1-3	Steve Archuleta / MHS	6-4-03	1010		6/5/3	95

SAMPLE CONDITION

Temp in °C	3.2
Received on Ice	(Y)/N
Sealed Cooler	Y(N)
Samples Intact	(Y)N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Steve Archuleta
SIGNATURE of SAMPLER: Steve Archuleta
DATE Signed: (MM / DD / YY) 6-4-03

SEE REVERSE SIDE FOR INSTRUCTIONS

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

October 02, 2003

Mr. Jim Struhs
MILE HIGH ENVIRONMENTAL
188 C.R. 4900
Bloomfield, NM 87413

RE: Lab Project Number: 6075061
Client Project ID: WLM

Dear Mr. Struhs:

Enclosed are the analytical results for sample(s) received by the laboratory on September 26, 2003. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Mary Jane Walls
mjwalls@pacelabs.com
Project Manager

Kansas/NELAP Certification Number E-10116

Enclosures

REPORT OF LABORATORY ANALYSIS

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Phone: 913.599.5665
Fax: 913.599.1759

SAMPLE SUMMARY

Lab Project Number: 6075061
Client Project ID: WLM

Project Sample Number	Sample Number	Client Sample ID	Matrix	Date Collected	Date Received
6075061-001	606461531	124617SEP03	Water	09/17/03 12:46	09/26/03 08:55
6075061-002	606461549	131317SEP03	Water	09/17/03 13:13	09/26/03 08:55

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Fax: 913.599.1759

SAMPLE ANALYTE COUNT

Lab Project Number: 6075061
Client Project ID: WLM

Project Sample Number	Sample No	Client Sample ID	Analysis Code	Analysis Description	Analytes Reported
6075061-001	606461531	124617SEP03	8020 WPAC	Aromatic Volatile Organics	5
6075061-002	606461549	131317SEP03	8020 WPAC	Aromatic Volatile Organics	5

REPORT OF LABORATORY ANALYSIS

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Fax: 913.599.1759

Lab Project Number: 6075061
Client Project ID: WLM

Lab Sample No: 606461531 Project Sample Number: 6075061-001 Date Collected: 09/17/03 12:46
Client Sample ID: 124617SEP03 Matrix: Water Date Received: 09/26/03 08:55

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	3.2	ug/l	2.0	1.0	09/30/03 16:02	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	09/29/03 17:38	SHF	100-41-4		
Toluene	ND	ug/l	2.0	1.0	09/29/03 17:38	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	09/29/03 17:38	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	97	%		1.0	09/29/03 17:38	SHF	98-08-8		

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

Lab Project Number: 6075061
Client Project ID: WLM

Lab Sample No: 606461549 Project Sample Number: 6075061-002 Date Collected: 09/17/03 13:13
Client Sample ID: 131317SEP03 Matrix: Water Date Received: 09/26/03 08:55

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	78.	ug/l	2.0	1.0	09/30/03 12:37	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	09/30/03 12:37	SHF	100-41-4		
Toluene	15.	ug/l	2.0	1.0	09/30/03 12:37	SHF	108-88-3		
Xylene (Total)	11.	ug/l	5.0	1.0	09/30/03 12:37	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	96	%		1.0	09/30/03 12:37	SHF	98-08-8		

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Lab Project Number: 6075061
Client Project ID: WLM

PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
(S)	Surrogate

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QUALITY CONTROL DATA

Lab Project Number: 6075061
Client Project ID: WLM

QC Batch: 154026 Analysis Method: EPA 8021
QC Batch Method: EPA 8021 Analysis Description: Aromatic Volatile Organics
Associated Lab Samples: 606461531 606461549

METHOD BLANK: 606462091
Associated Lab Samples: 606461531 606461549

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Benzene	ug/l	ND	2.0	
Ethylbenzene	ug/l	ND	2.0	
Toluene	ug/l	ND	2.0	
Xylene (Total)	ug/l	ND	5.0	
a,a,a-Trifluorotoluene (S)	%	98		

LABORATORY CONTROL SAMPLE: 606462109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Benzene	ug/l	20.00	20.55	103	85-120	
Ethylbenzene	ug/l	20.00	19.54	98	87-114	
Toluene	ug/l	20.00	19.89	99	87-114	
Xylene (Total)	ug/l	60.00	57.46	96	88-115	
a,a,a-Trifluorotoluene (S)				95	86-115	1

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Fax: 913.599.1759

Lab Project Number: 6075061
Client Project ID: WLM

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

LCS(D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
DUP	Sample Duplicate
ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
RPD	Relative Percent Difference
(S)	Surrogate
[1]	The MS and/or MSD compound(s) recovery information is not available due to insufficient sample volume. The LCS demonstrates the analytical system was in control for this QA/QC sample group.

CHAIN-OF-CUSTODY / Analytical Request Document

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750985

Page: 1 of 1

To Be Completed by Pace Analytical and Client

Required Client Information: **Section A**

Company	MHS
Address	188 CR 4900
	BLOOMFIELD, NM 87413
Phone	970-769-0119
Fax	

Required Client Information: **Section B**

Report To:	Jim Struhs
Copy To:	
Invoice To:	Jim Struhs
P.O.	
Project Name:	SJB-GW
Project Number:	WLM

Client Information (Check quote/contract):
Requested Due Date: *TAT:

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C

Quote Reference:	
Project Manager:	MARY JANE WALLS
Project #:	60750061
Profile #:	

Requested Analysis: BTEX

Section D **Required Client Information:**

SAMPLE ID

One character per box.
(A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED (mm / dd / yy)	TIME COLLECTED (hh:mm a/p)	# Containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Remarks / Lab ID
1	1246 17SEP03	WT	9/17/03	1246	2				X				X	2 P1 2 60649615314
2	1313 17SEP03	"	"	1313	2				X				X	4 1549
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	James P. Struhs / MHS	9/25	1400		9/26/3	855

SAMPLE CONDITION

Temp in °C	1.4
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: James P. Struhs

SIGNATURE of SAMPLER: James P. Struhs

DATE Signed: (MM / DD / YY) 9/25/03

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev 0402

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

June 9, 1998

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

RE: NOTIFICATION OF GROUNDWATER CONTAMINATION: WILMERDING #1M 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 Wilmerding #1 M well site, located in S10 T31N R13W, unit letter C. A topographic map showing the location of the site is provided as an attachment. The operator is Chateau. This letter follows Email notification provided to you on Friday, June 5, 1998 (M. Gannon, PNM to B. Olson, OCD).

On May 22, 1998, during a routine pit remediation, a PNM environmental technician discovered groundwater at 8 feet below ground surface. A groundwater sample was collected and delivered to OnSite Technologies, Farmington, New Mexico. A hardcopy of the analytical results is attached. A summary of the analytical results is provided below:

Component	Units	WQCC Stds.	Groundwater Sample
Benzene	ppb	10	**170**
Toluene	ppb	750	**1,900**
Ethylbenzene	ppb	750	280
Xylenes	ppb	620	**3,260**
Total BTEX	ppb		5,610

Bold type indicates a WQCC exceedance.

This letter serves as written notification of groundwater impact at the Wilmerding #1M. 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

Maureen Gannon
Project Manager

Attachment

cc: Colin Adams, PNM
Denny Foust, OCD-Aztec Office
Ingrid Deklau, WFS
Kathy Juckes, PNM
Toni Ristau, PNM
Bill von Drehle, WFS
Buddy Shaw, Amoco

s:\gaspits\wilmer1Mltr

Unlined Surface Impoundment Assessment Form

Site Information:

Well Name:	Wilmer Ding 1M (DK/MV)	Vulnerable Area	☑ Original ☐ Expanded ☐ Extended ☐ Other	
Operator:	SOCO Snyder O.1 Corp	Date: 12/12/95 Time: 1:50 AM/PM	Well Pad Dimensions: L 300 W 100	GCL Data Sheet #: 281
Legal Description:	Sec 10 Twn 31N Rng 13W Unit C	Canyon: La plata	Site: ☑ Active ☐ Abandoned ☐ P & A ☐ Temp. Disconnected	Dehydrator/Separator/Drip: ☑ Dehydrator ☐ Drip ☑ Separator ☐ None Other Discharges
Meter #:	485730 4856-21 PNM ☐ Y ☐ N	Quad Map (#): La plata		

Pit Information:

PNM Pit #1: ☑ Yes ☐ No

Pit Dimensions: Aband — DH ☐ SEP ☐ DR ☐ — L 20 W 20 D 4

Ref: WH ☒ Other ____ Distance from Ref. 75 Degrees: 45° N of N

VDW 60 HDW 1000

Water Sources: ☐ Water Well ☐ Listed Canyon ☐ Stock Pond ☐ Other ____

OCD Rank:	Score
Depth to Water	10
W/H Prot. Area	0
Dist to Surf. Water	10
Total	20

OVM 1200 ppm — Testhole Depth 1' — Soil Desc. Dark Brown Clay/Sand — ☐ Active ☑ SAT ☐ Inactive ☐ Inaccessible

Fenced ☐ Yes ☐ No — Birdcones ☐ Yes ☐ No — Netting ☐ Yes ☐ No

Other Pits:

Pit #	Fence	Net	OVM	Inacc.	Tank

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 ____

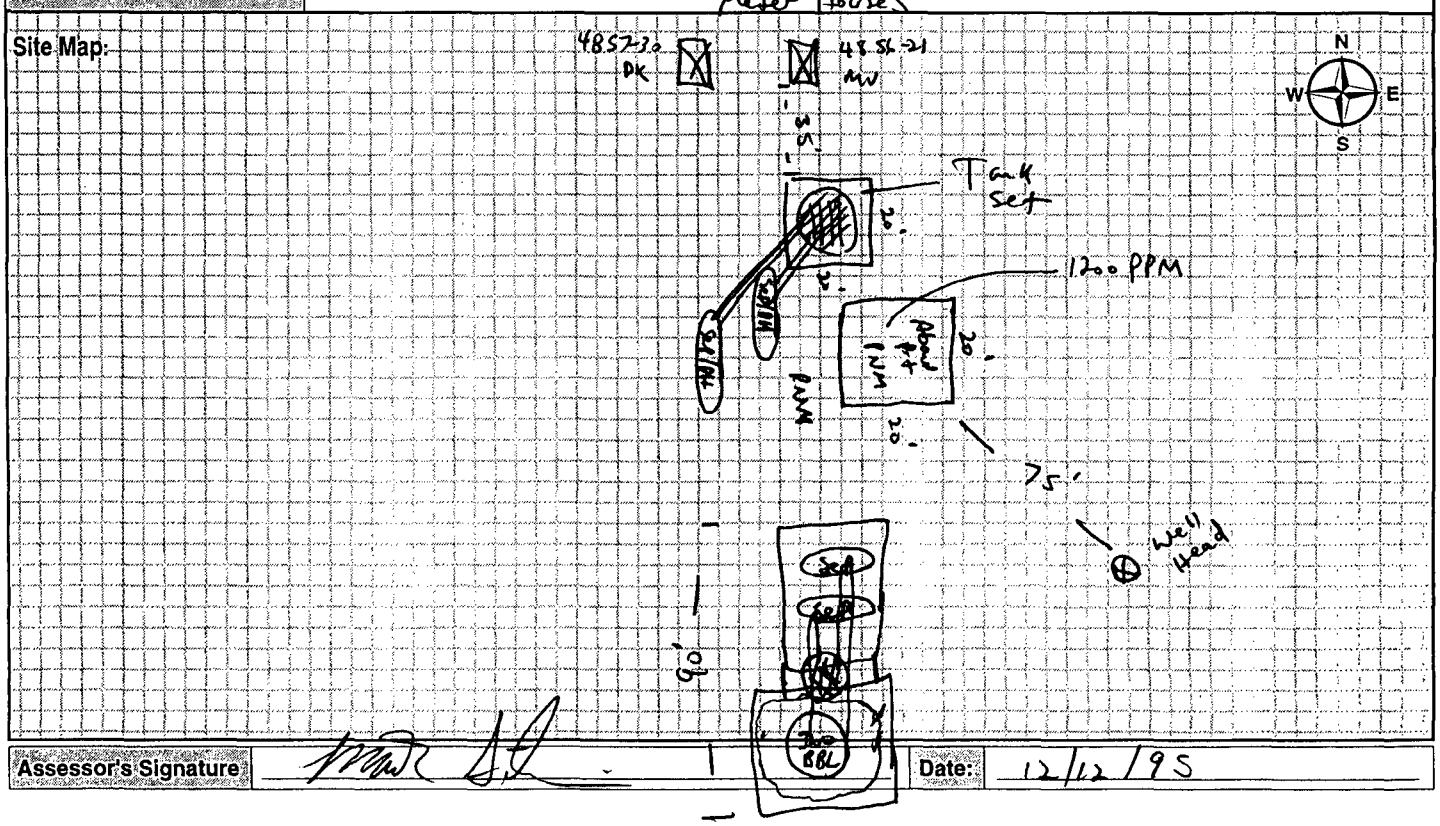
Land Use: ☑ Grazing ☐ Residential ☐ Recreation ☐ Other ____

Land Type: ☐ BLM ☐ State ☑ Fee ☐ Other ____

Vegetation: Well Pad ☐ Area ☐ — ☐ Normal ☐ — ☐ Stressed ☐ — ☐ None ☐

General Comments: Tank Set for PNM Equip Aband Pit
meter houses

Site Map:



Assessor's Signature: ____ Date: 12/12/95

District I
P O Box 1980, Hobbs, NM

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 (Chatean) **Telephone:** 324-3764

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Wilmerding #1m

Location: Unit: C Sec. 10 T. 31 N R. 13 W County San Juan

Pit Type: Separator ___ Dehydrator X Other ___

Land Type: BLM ___ State ___ Fee X Other ___

Pit Location: Pit dimensions: length 20' width 20' depth 3'

(Attach diagram) Reference: wellhead X other ___

Footage from reference: 75'

Direction from reference: 45° Degrees ___ East North X of X 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)	10
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)	0
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)	0
RANKING SCORE (TOTAL POINTS):			10

Date Remediation Started: 5/21/98 **Date Completed:** 6-4-98

Remediation Method: (Check all appropriate sections)
Excavation ✓ Approx. Cubic Yard 2804
Landfarmed Tierra Amount Landfarmed (cubic yds) 2300
Other

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

Backfill Material Location: Borrow pit

General Description of Remedial Action:
Excavated pit 52 x 91 x 16 water at 6' depth

Ground Water Encountered: No ☐ Yes ☒ Depth 6'

Final Pit Closure Sampling: (if multiple samples, attach sample result and diagram of sample locations and depths.)
Sample Location middle of pit
Sample depth surface water 6' depth
Sample date 5/22/98 Sample time 0845
Sample Results
Benzene (ppm)
Total BTEX (ppm)
Field headspace (ppm)
TPH Method
Vertical Extent (ft) Risk Assessment form attached Yes ☐ No ☐

Ground Water Sample: Yes ☒ No ☐ (If yes, attach sample results)

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

DATE 6/4/98
SIGNATURE
PRINTED NAME AND TITLE Denver Bearden Administrator III

Excavation Work Sheet

Date	Vertical Extent
5/21/98	

Well Name	Operator	S	T	R	UI
Wilmerding # 1m	Chatean	10	31N	13W	C

Pit Dimensions at Start	Excavation Dimensions at End
	52 X 91 X 16

Excavated Cu. Yds.	Overburden Cu. Yds.	Spoil Cu. Yds.
2824	0	2300

PIT PID READINGS

Feet	Center	Soil Type	N. Wall	S. Wall	E. Wall	W. Wall
5'	964	Blk/Gry clay				
6~~10~~'	water	cobbles Blk/Gry				
15'						
20'						
25'						

~~Bottom~~ ~~Walls~~

Composite Sample #: Water 9805220845

Location	Depth	PID Reading
North Wall		
South Wall	6' Water	2
East Wall		
West Wall		
Pit Bottom		

Land Farm Location: ~~On location~~ Tierra Environmental

Back Fill Location: ~~Put it into open pit~~. Clean Borrow pit

Comments: Strong glycol odor.
water at 6' depth. Have clay layer to 6-7' depth then cobbles. Excavated to 16' depth. Lots of water

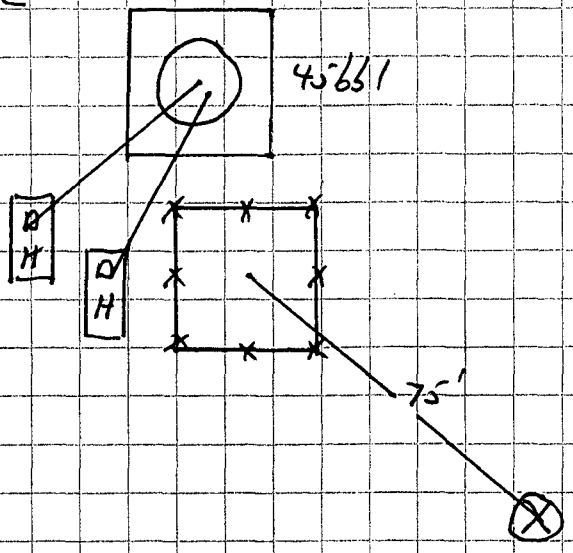
Chatean Oil
632-8056

Albert Hamblin 325-7022
Landowner

Wilmerding #1M
Chateau
Sec. 10, 31N, 13W, C

5/21/98

Start:



End of excavation:

NO SOIL SAMPLES DUE TO RAPID INFILTRATION OF GROUNDWATER

EXCAVATED SOIL SENT TO TIERRA LAND FARM

BACKFILL W/ IMPORTED FILL