

3RP-317

Reports

Date: 2002

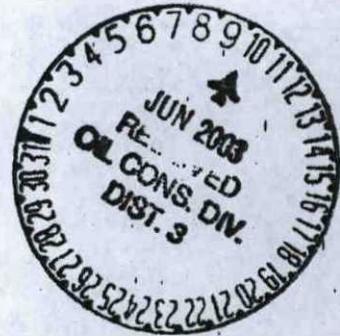


Environmental Services
188 County Road 4900
Bloomfield, New Mexico 87413
(505) 634-4956 (office)
(505) 632-4781 (fax)

June 6, 2003

Mr. William Olson
Hydrologist
Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

District Copy
For Scanning Only
Has NOT been processed.



RE: 2002 GROUND WATER SUMMARY REPORT

Dear Mr. Olson:

Enclosed for your review is the 2002 Ground Water Summary Report. The report presents monitoring data for eleven sites having petroleum hydrocarbon impacted ground water, which resulted from the past use of unlined surface impoundments. The sites included in the report are listed in Table 1.

In 2002, seven sites achieved four or more consecutive quarters of water quality data meeting NMWQCC standards for BTEX. Williams submitted final closure reports for four of these sites and has received OCD closure approval on three of the sites. At your request, Williams has submitted a revised potentiometric surface map for the fourth site to allow completion of the OCD review. Final closure reports for the remaining three sites are currently being prepared and will be submitted soon. Table 2 lists the sites that have met the cleanup objectives in 2002.

Of the eleven active sites, seven have accumulations of LNAPL in one or more monitoring well. In 2002, passive collection devices were deployed in all wells containing measurable accumulations of LNAPL. Periodic emptying of the collection devices along with active bailing of LNAPL during the quarterly sampling events continues.

The remaining four active sites consist of three sites with concentrations of dissolved BTEX in excess of cleanup standards. At each of these sites, only the source area well exceeds the standards. The fourth site, Wilmerding 1M, has had dry wells since May 2001. The samples collected at that time contained no detectable BTEX. The hay field surrounding this site is being irrigated this season and it is anticipated that ground water levels will rise sufficiently to allow sample collection.

Thank you for your time to review this submittal. If you have any questions regarding the report, you may call me at (505) 634-4956.

Respectfully,

James P. Struhs 6/6/03
JAMES P. STRUHS
(FOR MARK B. HARVEY)

Mark B. Harvey
Project Manager

Attachments
Enclosure

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

Table 1. List of Active Sites for 2002 Report

Count	Site Name	Unit Letter	Section	Township	Range	Longitude	Latitude	OCD Initial Notification
1	Chamberlain 1	F	14	32N	12W	-108.068853	36.990549	30-Sep-99
2	Davis 1	E	11	31N	12W	-108.068919	36.916257	2-Mar-99
3	Dogie East Pit	D	4	25N	6W	-107.478874	36.434196	7-Jul-97
4	Florance 40	G	21	30N	8W	-107.67775	36.800088	27-Jan-97
5	Florance M 47X	G	5	30N	9W	-107.799823	36.843166	27-Jan-97
6	Honolulu Drip	B	15	26N	4W	-107.238469	36.492341	18-Jun-96
7	Ice Canyon Drip	J	13	26N	7W	-107.52226	36.484972	1-Dec-97
8	Jicarilla Contract 147-6	C	6	25N	5W	-107.402363	36.433963	13-Aug-98
9	Patterson A Com A1	G	2	31N	12W	-108.061165	36.930755	2-Mar-99
10	Pritchard 2	J	6	30N	8W	-107.712068	36.837817	22-Feb-99
11	Wilmerding 1M	C	10	31N	13W	-108.193158	36.91846	5-Jun-98

Table 2. List of Sites Closed in 2002

Count	Site Name	Unit Letter	Section	Township	Range	Longitude	Latitude	OCD Initial Notification	Status
1	Blanco Wash Drip	J	31	27N	8W	-107.721574	36.530995	19-Feb-99	Approved
2	Dogie North Pit	D	4	25N	6W	-107.479158	36.435784	7-Jul-97	Report Pending
3	Florance 124	C	27	29N	9W	-107.76698	36.70209	12-Aug-96	Pending Approval
4	Grenier 4A	M	7	31N	11W	-108.036001	36.910167	18-Oct-99	Report Pending
5	Kaufman 1	H	33	31N	13W	-108.202128	36.860121	9-Mar-00	Approved
6	O' Shea 1M	F	3	31N	13W	-108.193596	36.932228	6-Jun-98	Report Pending
7	Zachry 18E	O	11	28N	10W	-107.860007	36.670885	6-Sep-96	Approved

Site Summary Report

Site Name: Florance 47X

Reporting Period: 2002

Location: Unit G, Sec 5, Twn 30N, Rng 8W
Canyon: Crow
Operator: Amoco

Vulnerable Class: original
OCD Ranking: 10
Lead Agency: NMOCD

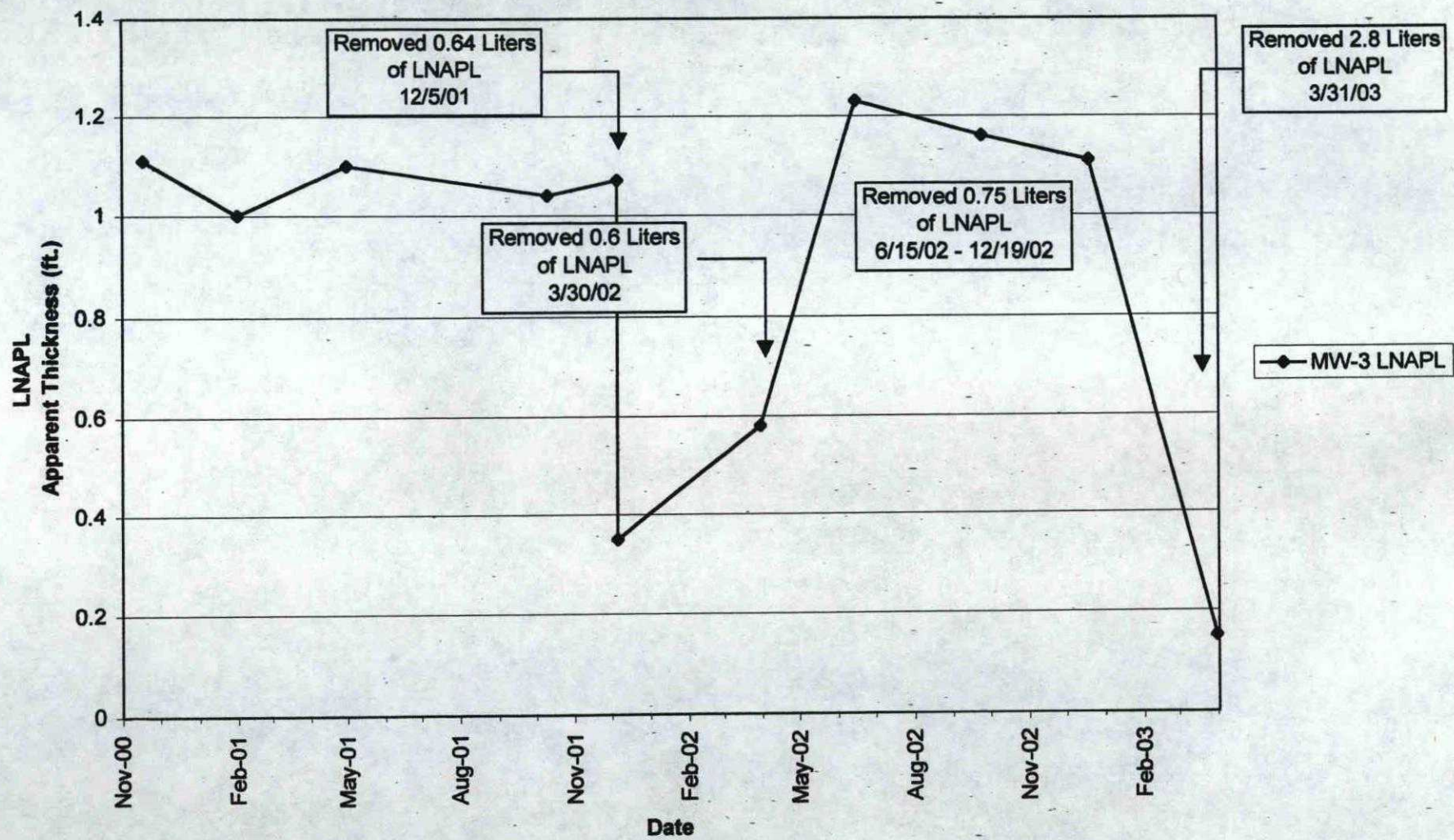
Status Narrative

Twenty-one quarters of water quality data have been collected from the five monitoring wells located at this site. Monitoring well MW-3 is currently the only well with accumulations of LNAPL. A plot of the changes in LNAPL thickness in the well over time is enclosed. In addition, quantities of LNAPL recovered from the well are noted on the chart. Concentrations of dissolved BTEX in upgradient well MW-1 remained below WQCC standards during the first three quarters. In the fourth quarter, benzene was measured at 16 ppb, exceeding the standard of 10 ppb. The presence of benzene in MW-1 at levels in excess of WQCC standards is not new, although it is the first occurrence since Williams began site management in the fourth quarter of 2000. Concentrations of total BTEX in source area well MW-2 have increased from 7,080 ppb in the first quarter to 21,725 ppb in the fourth quarter. Downgradient well MW-5 has demonstrated a decrease in total BTEX over the reporting period from 864 ppb to 160.9 ppb in the first and fourth quarters, respectively. In down and cross-gradient well MW-4 benzene was below the WQCC standard during the first and second quarters. In the third and fourth quarters benzene was measured at 10 and 11 ppb, respectively.

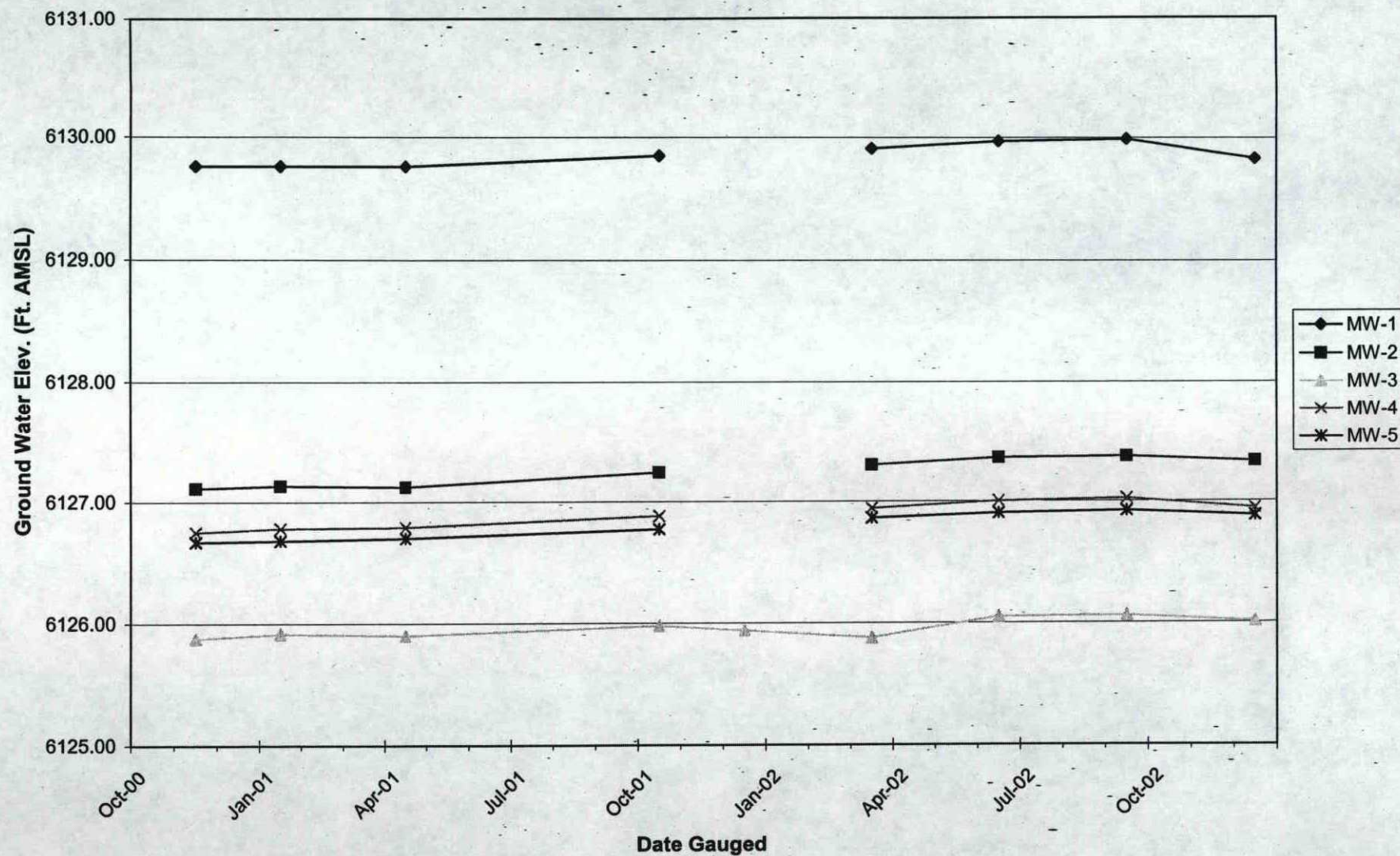
Potentiometric surface maps (Figure 2) depict ground water flow to the south-southeast at an average hydraulic gradient of 0.02. No significant seasonal variations in flow direction or gradient are evident. The enclosed hydrograph illustrates a stable ground water elevation pattern over the past two years.



Florance 47X
LNAPL Thickness



Florance M 47X Hydrograph



Analytical Data Summary

Site Name:

Florance M 47X

Reporting Period:

1/1/02 To 12/31/02

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-1						
	3/30/02	101330MAR02	ND	ND	ND	ND
	6/15/02	141315JUN02	2.4	ND	ND	ND
	9/24/02	135324SEP02	ND	ND	ND	ND
	12/19/02	125019DEC02	16.	2.3	ND	ND
MW-2						
	3/30/02	105430MAR02	4600	270	510	1700
	6/15/02	151215JUN02	6000	520	510	4500
	9/24/02	141124SEP02	12000	410	680	8200
	12/19/02	125819DEC02	14000	45.	680	7000
MW-4						
	3/30/02	102930MAR02	9.3	7.3	ND	16.
	6/15/02	144715JUN02	7.5	9.5	ND	14.
	9/24/02	142324SEP02	10.	7.6	ND	14.
	12/19/02	130519DEC02	11.	8.6	ND	17.
MW-5						
	3/30/02	104230MAR02	550	140	14.	160
	6/15/02	150415JUN02	39.	18.	2.6	20.
	9/24/02	143324SEP02	170	21.	9.5	39.
	12/19/02	131419DEC02	130	6.9	9.0	15.

January 03, 2003

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

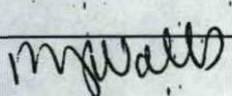
RE: Lab Project Number: 6066148
Client Project ID: SJB-GW/FLRN-47X

Dear Mr. Struhs:

Enclosed are the analytical results for sample(s) received by the laboratory on December 26, 2002. Results reported herein conform to the most current NELAP 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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SAMPLE SUMMARY**Pace Analytical Services, Inc.**

9608 Loiret Blvd.

Lenexa, KS 66219

Phone: 913.599.5665

Fax: 913.599.1759

Lab Project Number: 6066148

Client Project ID: SJB-GW/FLRN-47X

<u>Project</u> <u>Sample Number</u>	<u>Sample</u> <u>Number</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
6066148-001	605710151	130519DEC02	Water	12/19/02 13:05	12/26/02 08:55
6066148-002	605710169	131419DEC02	Water	12/19/02 13:14	12/26/02 08:55
6066148-003	605710177	125019DEC02	Water	12/19/02 12:50	12/26/02 08:55
6066148-004	605710185	125819DEC02	Water	12/19/02 12:58	12/26/02 08:55

REPORT OF LABORATORY ANALYSIS

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Lab Sample No: 605710151
Client Sample ID: 130519DEC02

Project Sample Number: 6066148-001
Matrix: Water

Date Collected: 12/19/02 13:05
Date Received: 12/26/02 08:55

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	11.	ug/l	2.0	1.0	12/30/02 17:13 SHF		71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	12/30/02 17:13 SHF		100-41-4		
Toluene	8.6	ug/l	2.0	1.0	12/30/02 17:13 SHF		108-88-3		
Xylene (Total)	17.	ug/l	5.0	1.0	12/30/02 17:13 SHF		1330-20-7		
a,a,a-Trifluorotoluene (S)	109	%		1.0	12/30/02 17:13 SHF		98-08-8		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6066148
Client Project ID: SJB-GW/FLRN-47X

Lab Sample No: 605710169
Client Sample ID: 131419DEC02

Project Sample Number: 6066148-002
Matrix: Water

Date Collected: 12/19/02 13:14
Date Received: 12/26/02 08:55

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	130	ug/l	2.0	1.0	12/30/02 17:41 SHF		71-43-2		
Ethylbenzene	9.0	ug/l	2.0	1.0	12/30/02 17:41 SHF		100-41-4		
Toluene	6.9	ug/l	2.0	1.0	12/30/02 17:41 SHF		108-88-3		
Xylene (Total)	15.	ug/l	5.0	1.0	12/30/02 17:41 SHF		1330-20-7		
a,a,a-Trifluorotoluene (S)	106	%		1.0	12/30/02 17:41 SHF		98-08-8		

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Lab Project Number: 6066148

Client Project ID: SJB-GW/FLRN-47X

Lab Sample No: 605710177

Project Sample Number: 6066148-003

Date Collected: 12/19/02 12:50

Client Sample ID: 125019DEC02

Matrix: Water

Date Received: 12/26/02 08:55

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	16.	ug/l	2.0	1.0	12/30/02 18:10 SHF		71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	12/30/02 18:10 SHF		100-41-4		
Toluene	2.3	ug/l	2.0	1.0	12/30/02 18:10 SHF		108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	12/30/02 18:10 SHF		1330-20-7		
a,a,a-Trifluorotoluene (S)	102	%		1.0	12/30/02 18:10 SHF		98-08-8		

Date: 01/03/03

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REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6066148

Client Project ID: SJB-GW/FLRN-47X

Lab Sample No: 605710185
Client Sample ID: 125819DEC02

Project Sample Number: 6066148-004
Matrix: Water

Date Collected: 12/19/02 12:58
Date Received: 12/26/02 08:55

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	14000	ug/l	400	200	12/30/02 18:38 SHF	71-43-2			
Ethylbenzene	680	ug/l	40.	20.0	12/30/02 18:38 SHF	100-41-4			
Toluene	45.	ug/l	40.	20.0	12/30/02 18:38 SHF	108-88-3			
Xylene (Total)	7000	ug/l	100	20.0	12/30/02 18:38 SHF	1330-20-7			
a,a,a-Trifluorotoluene (S)	104	%		1.0	12/30/02 18:38 SHF	98-08-8		1	

Date: 01/03/03

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REPORT OF LABORATORY ANALYSIS

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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
- [1] The sample was diluted due to the presence of high target analytes.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

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

Lab Project Number: 6066148
Client Project ID: SJB-GW/FLRN-47X

QC Batch: 136428 Analysis Method: EPA 8021
QC Batch Method: EPA 8021 Analysis Description: Aromatic Volatile Organics
Associated Lab Samples: 605710151 605710169 605710177 605710185

METHOD BLANK: 605712934
Associated Lab Samples: 605710151 605710169 605710177 605710185

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)	%	96		

LABORATORY CONTROL SAMPLE: 605712942

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Benzene	ug/l	20.00	22.95	115	84-122	
Ethylbenzene	ug/l	20.00	20.21	101	85-117	
Toluene	ug/l	20.00	20.62	103	87-117	
Xylene (Total)	ug/l	60.00	61.00	102	85-119	
a,a,a-Trifluorotoluene (S)				101	83-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605712991 605713007

Parameter	Units	605691906 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Footnotes
Benzene	ug/l	0.3015	20.00	22.72	22.56	112	111	82-123	1	10	
Ethylbenzene	ug/l	0.3460	20.00	19.99	19.73	98	97	84-118	1	10	
Toluene	ug/l	0.3426	20.00	20.53	20.18	101	99	82-117	2	10	
Xylene (Total)	ug/l	0.8121	60.00	60.52	59.21	100	97	84-121	2	13	
a,a,a-Trifluorotoluene (S)						100	99	83-115			

Date: 01/03/03

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REPORT OF LABORATORY ANALYSIS

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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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Pace Analytical Services, Inc.

9608 Loiret Blvd.

Lenexa, KS 66219

Phone: 913.599.5665

Fax: 913.599.1759

October 07, 2002

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

RE: Lab Project Number: 6063157
Client Project ID: FLR47X

Dear Mr. Struhs:

Enclosed are the analytical results for sample(s) received by the laboratory on September 26, 2002. 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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SAMPLE SUMMARY

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

Lab Project Number: 6063157
Client Project ID: FLR47X

Project	Sample				
<u>Sample Number</u>	<u>Number</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
6063157-001	605467992	135324SEP02	Water	09/24/02 13:53	09/26/02 09:15
6063157-002	605468008	141124SEP02	Water	09/24/02 14:11	09/26/02 09:15
6063157-003	605468016	142324SEP02	Water	09/24/02 14:23	09/26/02 09:15
6063157-004	605468024	143324SEP02	Water	09/24/02 14:33	09/26/02 09:15

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6063157
Client Project ID: FLR47X

Lab Sample No: 605467992
Client Sample ID: 135324SEP02

Project Sample Number: 6063157-001
Matrix: Water

Date Collected: 09/24/02 13:53
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 16:29		71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	10/03/02 16:29		100-41-4		
Toluene	ND	ug/l	2.0	1.0	10/03/02 16:29		108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	10/03/02 16:29		1330-20-7		
a,a,a-Trifluorotoluene (S)	102	%		1.0	10/03/02 16:29		98-08-8		

Date: 10/07/02

Page: 1

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6063157
Client Project ID: FLR47X

Lab Sample No: 605468008
Client Sample ID: 141124SEP02

Project Sample Number: 6063157-002
Matrix: Water

Date Collected: 09/24/02 14:11
Date Received: 09/26/02 09:15

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	ReqLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	12000	ug/l	200	100	10/04/02		71-43-2		
Ethylbenzene	680	ug/l	100	50.0	10/03/02 16:59		100-41-4		
Toluene	410	ug/l	100	50.0	10/03/02 16:59		108-88-3		
Xylene (Total)	8200	ug/l	250	50.0	10/03/02 16:59		1330-20-7		
a,a,a-Trifluorotoluene (S)	100	%		1.0	10/03/02 16:59		98-08-8	1	

Date: 10/07/02

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REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6063157
Client Project ID: FLR47X

Lab Sample No: 605468016
Client Sample ID: 142324SEP02

Project Sample Number: 6063157-003
Matrix: Water

Date Collected: 09/24/02 14:23
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	10.	ug/l	2.0	1.0	10/03/02 17:29		71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	10/03/02 17:29		100-41-4		
Toluene	7.6	ug/l	2.0	1.0	10/03/02 17:29		108-88-3		
Xylene (Total)	14.	ug/l	5.0	1.0	10/03/02 17:29		1330-20-7		
a,a,a-Trifluorotoluene (S)	98	%		1.0	10/03/02 17:29		98-08-8		

Date: 10/07/02

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REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6063157
Client Project ID: FLR47X

Lab Sample No: 605468024
Client Sample ID: 143324SEP02

Project Sample Number: 6063157-004
Matrix: Water

Date Collected: 09/24/02 14:33
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	170	ug/l	2.0	1.0	10/03/02 17:59		71-43-2		
Ethylbenzene	9.5	ug/l	2.0	1.0	10/03/02 17:59		100-41-4		
Toluene	21.	ug/l	2.0	1.0	10/03/02 17:59		108-88-3		
Xylene (Total)	39.	ug/l	5.0	1.0	10/03/02 17:59		1330-20-7		
a,a,a-Trifluorotoluene (S)	102	%		1.0	10/03/02 17:59		98-08-8		

Date: 10/07/02

Page: 4

REPORT OF LABORATORY ANALYSIS

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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
- [1] Elevated quantitation limits resulting from a dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Lab Project Number: 6063157
Client Project ID: FLR47X

QC Batch: 130969 Analysis Method: EPA 8021
QC Batch Method: EPA 8021 Analysis Description: Aromatic Volatile Organics
Associated Lab Samples: 605467992 605468008 605468016 605468024

METHOD BLANK: 605485416
Associated Lab Samples: 605467992 605468008 605468016 605468024

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)	%	102		

LABORATORY CONTROL SAMPLE: 605485424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Benzene	ug/l	20.00	22.31	112	84-122	
Ethylbenzene	ug/l	20.00	19.84	99	85-117	
Toluene	ug/l	20.00	20.22	101	87-117	
Xylene (Total)	ug/l	60.00	62.25	104	85-119	
a,a,a-Trifluorotoluene (S)				101	83-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605487255 605487263

Parameter	Units	605451343 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Footnotes
Benzene	ug/l	0	20.00	20.82	21.15	104	106	82-123	2	10	
Ethylbenzene	ug/l	0	20.00	19.56	19.64	98	98	84-118	0	10	
Toluene	ug/l	0	20.00	20.14	20.45	101	102	82-117	2	10	
Xylene (Total)	ug/l	0	60.00	59.82	60.35	100	101	84-121	1	13	
a,a,a-Trifluorotoluene (S)						101	100	83-115			

Date: 10/07/02

Page: 6

REPORT OF LABORATORY ANALYSIS

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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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Pace Analytical Services, Inc.

9608 Loiret Blvd.
Lenexa, KS 66219

Phone: 913.599.5665
Fax: 913.599.1759

June 24, 2002

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

RE: Lab Project Number: 6059944
Client Project ID: FLR47X

Dear Mr. Struhs:

Enclosed are the analytical results for sample(s) received by the laboratory on June 20, 2002. 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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SAMPLE SUMMARY

Pace Analytical Services, Inc.

9608 Loiret Blvd.
Lenexa, KS 66219

Phone: 913.599.5665
Fax: 913.599.1759

Lab Project Number: 6059944

Client Project ID: FLR47X

<u>Project</u>	<u>Sample</u>				
<u>Sample Number</u>	<u>Number</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
6059944-001	605212372	141315JUNE02	Water	06/15/02 14:13	06/20/02 14:39
6059944-002	605212380	151215JUNE02	Water	06/15/02 15:12	06/20/02 14:39
6059944-003	605212398	144715JUNE02	Water	06/15/02 14:47	06/20/02 14:39
6059944-004	605212406	150415JUNE02	Water	06/15/02 15:04	06/20/02 14:39

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6059944
Client Project ID: FLR47X

Lab Sample No: 605212372
Client Sample ID: 141315JUNE02

Project Sample Number: 6059944-001
Matrix: Water

Date Collected: 06/15/02 14:13
Date Received: 06/20/02 14:39

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles								
Aromatic Volatile Organics	Method: EPA 8021							
Benzene	2.4	ug/l	2.0	06/21/02 18:22		71-43-2		
Ethylbenzene	ND	ug/l	2.0	06/21/02 18:22		100-41-4		
Toluene	ND	ug/l	2.0	06/21/02 18:22		108-88-3		
Xylene (Total)	ND	ug/l	5.0	06/21/02 18:22		1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		06/21/02 18:22		98-08-8		

Date: 06/24/02

Page: 1

REPORT OF LABORATORY ANALYSIS

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30

Lab Project Number: 6059944

Client Project ID: FLR47X

Lab Sample No: 605212380
Client Sample ID: 151215JUNE02

Project Sample Number: 6059944-002
Matrix: Water

Date Collected: 06/15/02 15:12
Date Received: 06/20/02 14:39

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
GC Volatiles								
Aromatic Volatile Organics	Method: EPA 8021							
Benzene	6000	ug/l	100	06/21/02 21:40		71-43-2		
Ethylbenzene	510	ug/l	100	06/21/02 21:40		100-41-4		
Toluene	520	ug/l	100	06/21/02 21:40		108-88-3		
Xylene (Total)	4500	ug/l	250	06/21/02 21:40		1330-20-7		
a,a,a-Trifluorotoluene (S)	106	%		06/21/02 21:40		98-08-8	1	

Date: 06/24/02

Page: 2

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6059944

Client Project ID: FLR47X

Lab Sample No: 605212398
Client Sample ID: 144715JUNE02

Project Sample Number: 6059944-003
Matrix: Water

Date Collected: 06/15/02 14:47
Date Received: 06/20/02 14:39

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles								
Aromatic Volatile Organics	Method: EPA 8021							
Benzene	7.5	ug/l	2.0	06/21/02 22:09		71-43-2		
Ethylbenzene	ND	ug/l	2.0	06/21/02 22:09		100-41-4		
Toluene	9.5	ug/l	2.0	06/21/02 22:09		108-88-3		
Xylene (Total)	14.	ug/l	5.0	06/21/02 22:09		1330-20-7		
a,a,a-Trifluorotoluene (S)	103	%		06/21/02 22:09		98-08-8		

Date: 06/24/02

Page: 3

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6059944

Client Project ID: FLR47X

Lab Sample No: 605212406
Client Sample ID: 150415JUNE02

Project Sample Number: 6059944-004
Matrix: Water

Date Collected: 06/15/02 15:04
Date Received: 06/20/02 14:39

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles								
Aromatic Volatile Organics	Method: EPA 8021							
Benzene	39.	ug/l	2.0	06/21/02 22:37		71-43-2		
Ethylbenzene	2.6	ug/l	2.0	06/21/02 22:37		100-41-4		
Toluene	18.	ug/l	2.0	06/21/02 22:37		108-88-3		
Xylene (Total)	20.	ug/l	5.0	06/21/02 22:37		1330-20-7		
a,a,a-Trifluorotoluene (S)	105	%		06/21/02 22:37		98-08-8		

Date: 06/24/02

Page: 4

REPORT OF LABORATORY ANALYSIS

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PARAMETER FOOTNOTES

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
[1]	Elevated quantitation limits resulting from a dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

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

Lab Project Number: 6059944
Client Project ID: FLR47X

QC Batch: 124756 Analysis Method: EPA 8021
QC Batch Method: EPA 8021 Analysis Description: Aromatic Volatile Organics
Associated Lab Samples: 605212372 605212380 605212398 605212406

METHOD BLANK: 605213867
Associated Lab Samples: 605212372 605212380 605212398 605212406

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: 605213875

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Benzene	ug/l	20.00	20.84	104	84-122	
Ethylbenzene	ug/l	20.00	19.43	97	85-117	
Toluene	ug/l	20.00	20.90	104	87-117	
Xylene (Total)	ug/l	60.00	61.51	103	85-119	
a,a,a-Trifluorotoluene (S)				105	83-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605214295 605214303

Parameter	Units	605212448 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Footnotes
Benzene	ug/l	0	20.00	20.87	20.86	104	104	82-123	0	10	
Ethylbenzene	ug/l	0.6632	20.00	19.57	19.59	94	95	84-118	0	10	
Toluene	ug/l	0.1954	20.00	20.97	20.92	104	104	82-117	0	10	
Xylene (Total)	ug/l	0.3424	60.00	61.58	61.48	102	102	84-121	0	13	
a,a,a-Trifluorotoluene (S)						104	106	83-115			

REPORT OF LABORATORY ANALYSIS

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

April 10, 2002

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

RE: Lab Project Number: 6057617
Client Project ID: SJB-GW/ FLRN-47X

Dear Mr. Struhs:

Enclosed are the analytical results for sample(s) received by the laboratory on April 2, 2002. 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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SAMPLE SUMMARY**Pace Analytical Services, Inc.**9608 Loiret Blvd.
Lenexa, KS 66219

Phone: 913.599.5665

Fax: 913.599.1759

Lab Project Number: 6057617

Client Project ID: SJB-GW/ FLRN-47X

<u>Project</u>	<u>Sample</u>				
<u>Sample Number</u>	<u>Number</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
6057617-001	605018522	101330MAR02	Water	03/30/02 10:13	04/02/02 09:00
6057617-002	605018530	102930MAR02	Water	03/30/02 10:29	04/02/02 09:00
6057617-003	605018548	104230MAR02	Water	03/30/02 10:42	04/02/02 09:00
6057617-004	605018555	105430MAR02	Water	03/30/02 10:54	04/02/02 09:00

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Lab Project Number: 6057617

Client Project ID: SJB-GW/ FLRN-47X

Project			Analysis		Analysis Description	Analytes	
Sample Number	Sample No	Client Sample ID	Code			Reported	
6057617-001	605018522	101330MAR02	8020	WPAC	Aromatic Volatile Organics	5	
6057617-002	605018530	102930MAR02	8020	WPAC	Aromatic Volatile Organics	5	
6057617-003	605018548	104230MAR02	8020	WPAC	Aromatic Volatile Organics	5	
6057617-004	605018555	105430MAR02	8020	WPAC	Aromatic Volatile Organics	5	

REPORT OF LABORATORY ANALYSIS

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

Lab Project Number: 6057617
Client Project ID: SJB-GW/ FLRN-47X

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

Lab Sample No: 605018522
Client Sample ID: 101330MAR02

Project Sample Number: 6057617-001
Matrix: Water

Date Collected: 03/30/02 10:13
Date Received: 04/02/02 09:00

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	04/04/02 15:32	71-43-2		
Ethylbenzene	ND	ug/l	2.0	04/04/02 15:32	100-41-4		
Toluene	ND	ug/l	2.0	04/04/02 15:32	108-88-3		
Xylene (Total)	ND	ug/l	5.0	04/04/02 15:32	1330-20-7		
a,a,a-Trifluorotoluene (S)	100	%		04/04/02 15:32	2164-17-2		

Date: 04/10/02

Page: 1

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6057617

Client Project ID: SJB-GW/ FLRN-47X

Lab Sample No: 605018530

Project Sample Number: 6057617-002

Date Collected: 03/30/02 10:29

Client Sample ID: 102930MAR02

Matrix: Water

Date Received: 04/02/02 09:00

Parameters	Results	Units	Report Limit	Analyzed	by	CAS No.	Footnote	Reg Limit
------------	---------	-------	--------------	----------	----	---------	----------	-----------

GC Volatiles

Aromatic Volatile Organics

Prep/Method: EPA 8021 / EPA 8021

Benzene	9.3	ug/l	2.0	04/09/02 12:54	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	04/09/02 12:54	SHF	100-41-4		
Toluene	7.3	ug/l	2.0	04/09/02 12:54	SHF	108-88-3		
Xylene (Total)	16.	ug/l	5.0	04/09/02 12:54	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	100	%		04/09/02 12:54	SHF	2164-17-2		

Date: 04/10/02

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REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6057617

Client Project ID: SJB-GW/ FLRN-47X

Lab Sample No: 605018548
Client Sample ID: 104230MAR02

Project Sample Number: 6057617-003
Matrix: Water

Date Collected: 03/30/02 10:42
Date Received: 04/02/02 09:00

Parameters	Results	Units	Report Limit	Analyzed	by	CAS No.	Ftnote	Reg Limit
GC Volatiles								
Aromatic Volatile Organics	Prep/Method: EPA 8021 / EPA 8021							
Benzene	550	ug/l	20.	04/08/02 16:10	SHF	71-43-2	1	
Ethylbenzene	14.	ug/l	2.0	04/08/02 16:10	SHF	100-41-4		
Toluene	140	ug/l	2.0	04/08/02 16:10	SHF	108-88-3		
Xylene (Total)	160	ug/l	5.0	04/08/02 16:10	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	100	%		04/08/02 16:10	SHF	2164-17-2		

Date: 04/10/02

Page: 3

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6057617
Client Project ID: SJB-GW/ FLRN-47X

Lab Sample No: 605018555 Project Sample Number: 6057617-004 Date Collected: 03/30/02 10:54
Client Sample ID: 105430MAR02 Matrix: Water Date Received: 04/02/02 09:00

Parameters	Results	Units	Report Limit	Analized	by	CAS No.	Ftnote	Reg Limit
GC Volatiles								
Aromatic Volatile Organics	Prep/Method: EPA 8021 / EPA 8021							
Benzene	4600	ug/l	200	04/08/02 20:07	SHF	71-43-2		
Ethylbenzene	510	ug/l	200	04/08/02 20:07	SHF	100-41-4		
Toluene	270	ug/l	200	04/08/02 20:07	SHF	108-88-3		
Xylene (Total)	1700	ug/l	500	04/08/02 20:07	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	100	%		04/08/02 20:07	SHF	2164-17-2	2	

Date: 04/10/02

Page: 4

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6057617
Client Project ID: SJB-GW/ FLRN-47X

PARAMETER FOOTNOTES

- 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
(S) Surrogate
[1] Result from a 1:10 dilution on 4-9-02.
[2] Elevated quantitation limits resulting from a dilution.

Date: 04/10/02

Page: 5

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

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

Lab Project Number: 6057617
Client Project ID: SJB-GW/ FLRN-47X

QC Batch: 120300 Analysis Method: EPA 8021
QC Batch Method: EPA 8021 Analysis Description: Aromatic Volatile Organics
Associated Lab Samples: 605018522 605018530 605018548 605018555

METHOD BLANK: 605022995
Associated Lab Samples: 605018522 605018530 605018548 605018555

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)	%	101		

LABORATORY CONTROL SAMPLE: 605023027

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Benzene	ug/l	20	20.14	101	84-122	
Ethylbenzene	ug/l	20	19.50	98	85-117	
Toluene	ug/l	20	20.31	102	87-117	
Xylene (Total)	ug/l	60	62.20	104	85-119	
a,a,a-Trifluorotoluene (S)				100	83-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605023134 605023142

Parameter	Units	605018654 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Footnotes
Benzene	ug/l	0	20.00	19.42	19.96	97	100	82-123	3	10	
Ethylbenzene	ug/l	0.8044	20.00	19.21	19.46	92	93	84-118	1	10	
Toluene	ug/l	0.1659	20.00	19.83	20.20	98	100	82-117	2	10	
Xylene (Total)	ug/l	0.7264	60.00	60.46	61.97	100	102	84-121	2	13	
a,a,a-Trifluorotoluene (S)						99	99	83-115			

Date: 04/10/02

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REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6057617
Client Project ID: SJB-GW/ FLRN-47X

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

RPD Relative Percent Difference

(S) Surrogate

Date: 04/10/02

Page: 7

REPORT OF LABORATORY ANALYSIS

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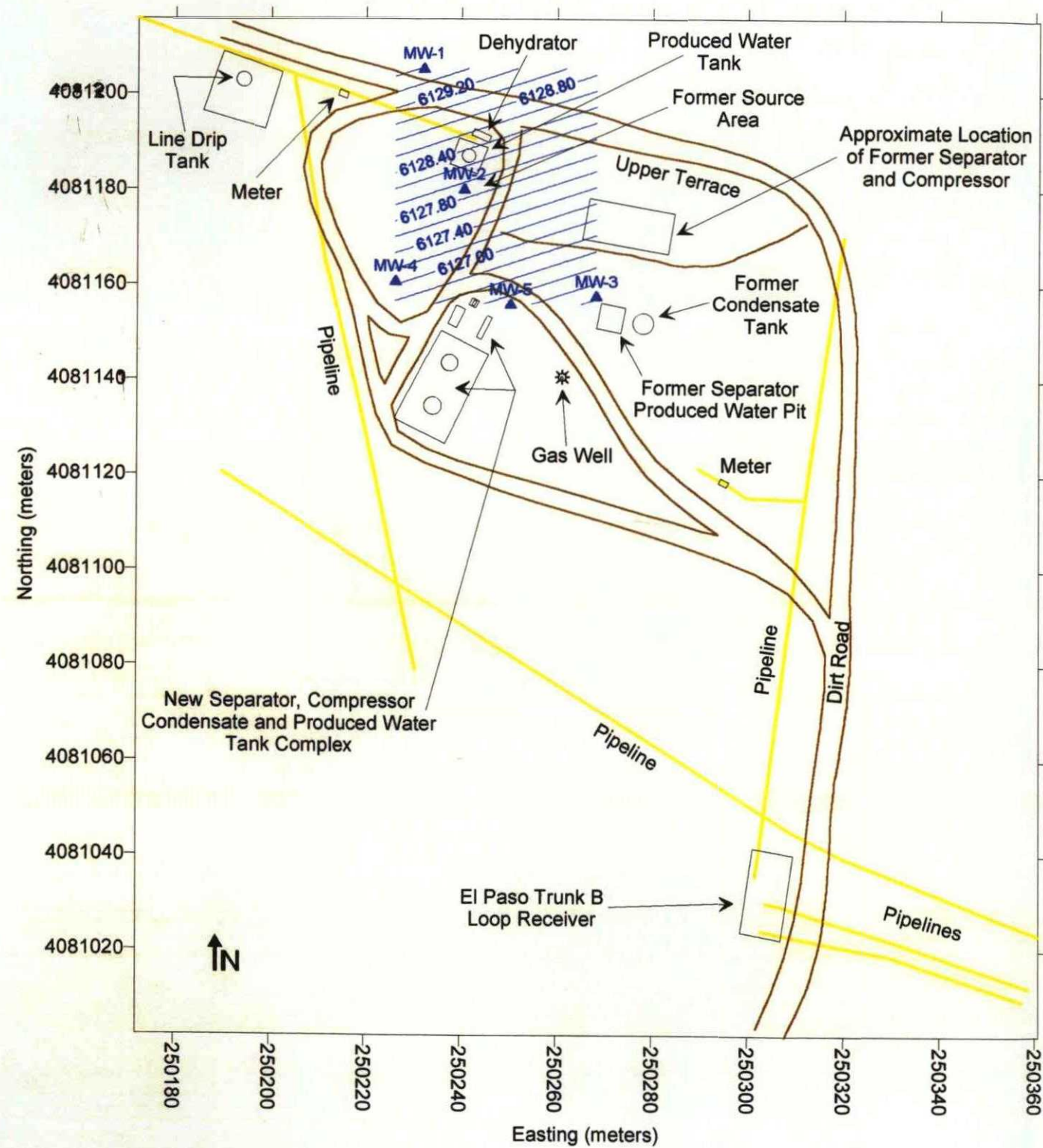


Figure 2
Potentiometric
Surface Map
Florance 47X
(March 30, 2002)

LEGEND

- MW-2
▲ Monitoring Well
- 5585.20 — Ground Water Elevation (ft. AMSL)

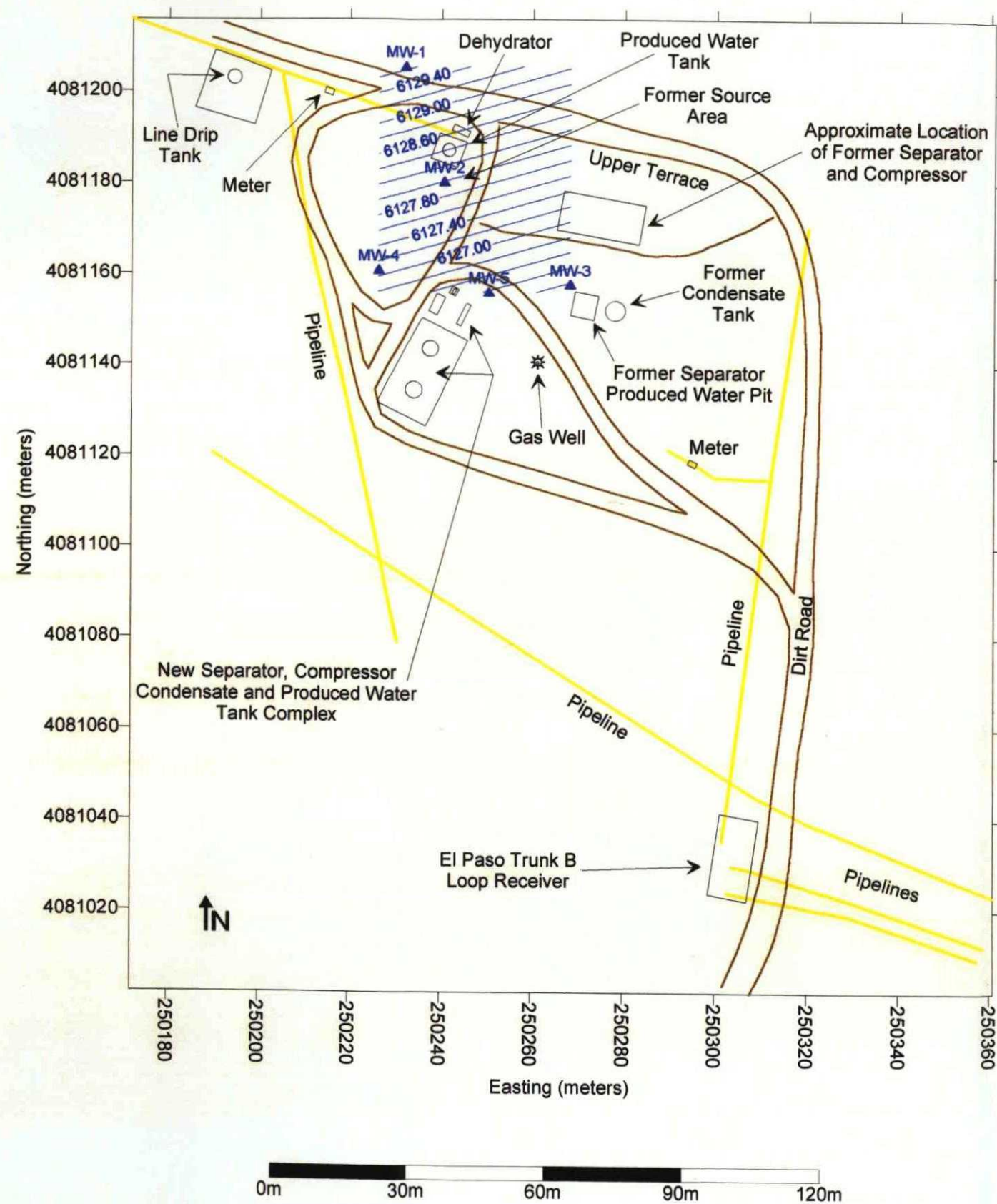


Figure 2
Potentiometric
Surface Map
Florance 47X
(June 15, 2002)

LEGEND

MW-2



Monitoring Well

5585.20

Ground Water Elevation (ft. AMSL)

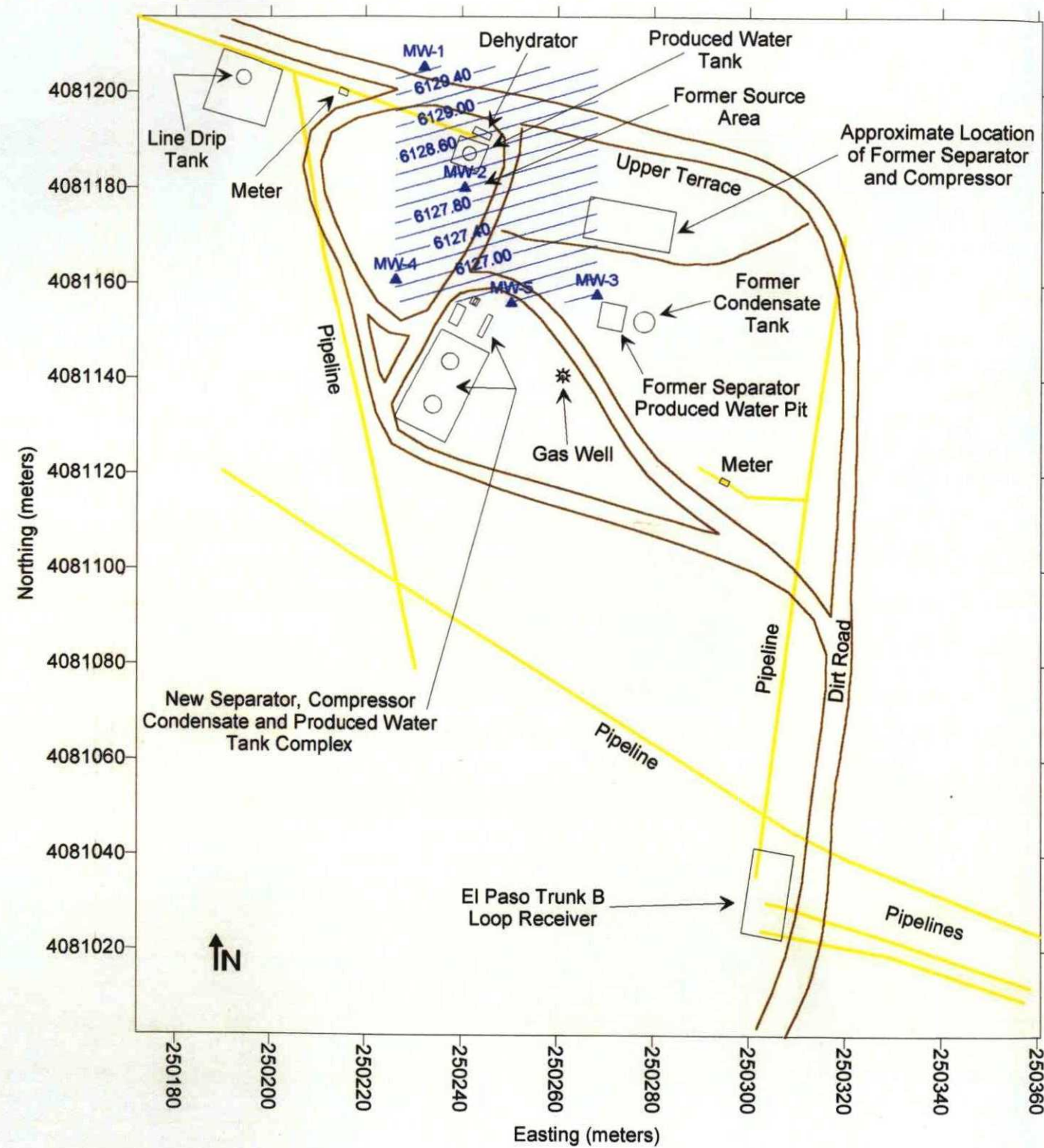


Figure 2
Potentiometric
Surface Map
Florance 47X
(September 24, 2002)

LEGEND

MW-2



Monitoring Well

— 5585.20 —

Ground Water Elevation (ft. AMSL)

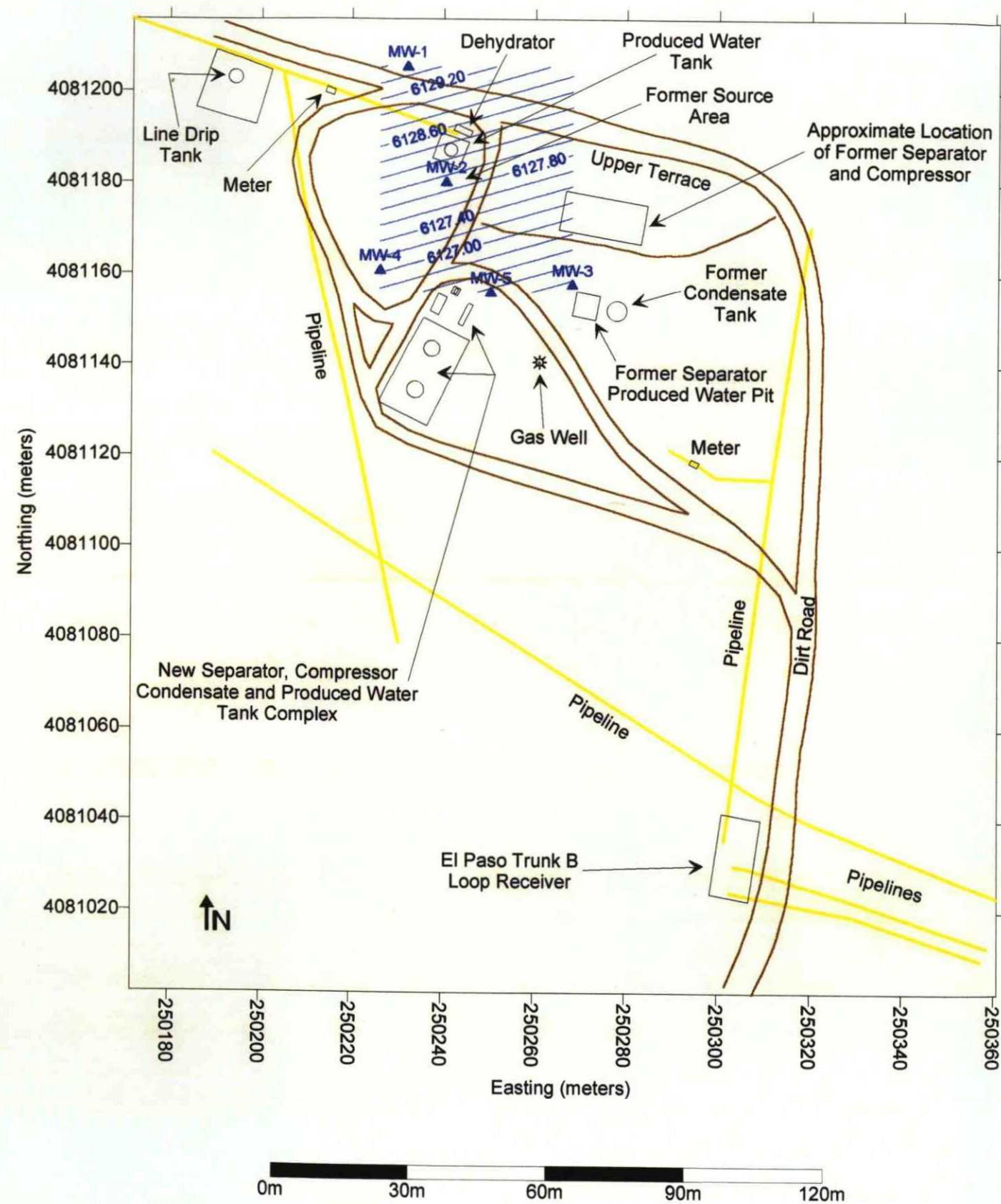


Figure 2
Potentiometric
Surface Map
Florance 47X
(December 19, 2002)

LEGEND

MW-2



Monitoring Well

— 5585.20 —

Ground Water Elevation (ft. AMSL)