

3RP-308

Reports

Date: 2002

Done
10-23-15KC



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
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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: Chamberlain 1

Reporting Period: 2002

Location: Unit F, Sec 14, Twn 32N, Rng 12W

Canyon: Jaquez Flat

Operator: Burlington

Vulnerable Class: extended

OCD Ranking: 0

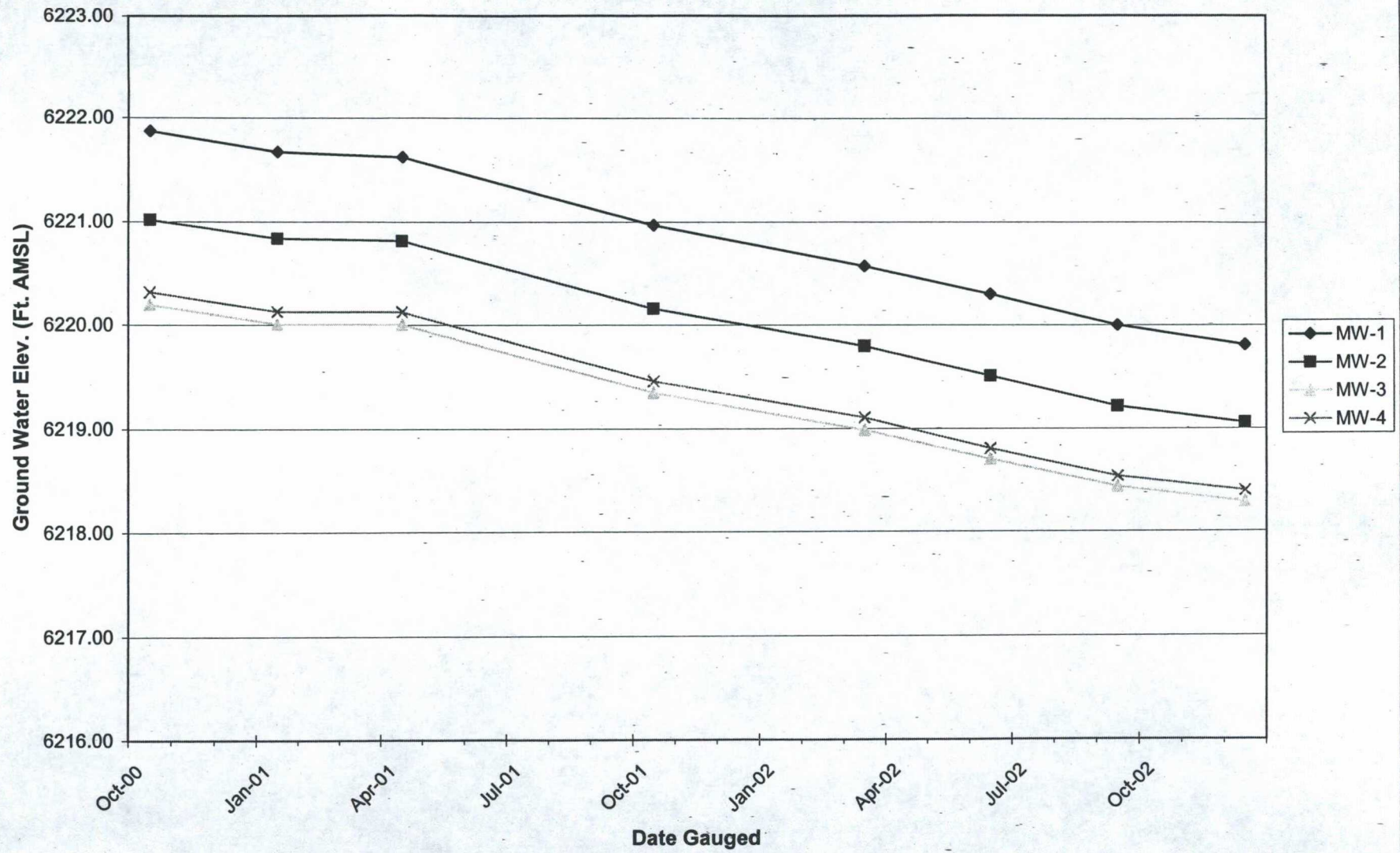
Lead Agency: NMOCD

Status Narrative

Eleven quarters of water quality data have been collected from the four monitoring wells located at this site. Currently, only monitoring well MW-2 (located in the source area) contains contaminant concentrations in excess of NMWQCC standards. The total BTEX level in MW-2 was 2710 ppb in the first quarter. This level decreased to 183.7 and 167.6 ppb in the second and third quarters, respectively. The fourth quarter showed an increase in total BTEX to 2185 ppb. Laboratory analytical reports are enclosed along with a table summarizing the results.

Ground water flows to the west-southwest with an average hydraulic gradient of 0.012. No significant seasonal variations in flow direction or gradient occur. Figure 2 shows the potentiometric surface for each of the quarterly sampling events. The hydrograph does not indicate any significant seasonal fluctuations in water table elevation. On the whole, water table elevations have decreased at the site over the past two years.

Chamberlain #1 Hydrograph



Analytical Data Summary

Site Name:
Chamberlain 1

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						
	3/12/02	130012MAR02	ND	ND	ND	ND
	6/14/02	122114JUN02	ND	ND	ND	ND
	9/10/02	123310SEP02	ND	ND	ND	ND
	12/10/02	125410DEC02	ND	ND	ND	ND
MW-2						
	3/12/02	131312MAR02	2100	140	100	370
	6/14/02	124014JUN02	140	18.	6.7	19.
	9/10/02	125910SEP02	120	23.	6.6	18.
	12/10/02	131810DEC02	1800	97.	68.	220
MW-3						
	3/12/02	132212MAR02	ND	ND	ND	ND
	6/14/02	123414JUN02	ND	ND	ND	ND
	9/10/02	125210SEP02	ND	ND	ND	ND
	12/10/02	131010DEC02	ND	ND	ND	ND
MW-4						
	3/12/02	133212MAR02	ND	ND	ND	ND
	6/14/02	122814JUN02	ND	ND	ND	ND
	9/10/02	124310SEP02	ND	ND	ND	ND
	12/10/02	130210DEC02	ND	ND	ND	ND



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

March 27, 2002

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

RE: Lab Project Number: 6057266
Client Project ID: SJB-GW PRJ CNMB1

Dear Mr. Struhs:

Enclosed are the analytical results for sample(s) received by the laboratory on March 20, 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

This report shall not be reproduced, except in full,
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MILE HIGH ENVIRONMENTAL
187 C.R. 4980
Bloomfield, NM 87413

Lab Project Number: 6057266
Client Project ID: SJB-GW PRJ CNMB1

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

Lab Sample No: 604988006 Project Sample Number: 6057266-001 Date Collected: 03/12/02 13:22
Client Sample ID: 132212MAR02 Matrix: Water Date Received: 03/20/02 10:35

Parameters	Results	Units	Report Limit	Analyzed	by	CAS No.	Footnote	Reg Limit
GC Volatiles								
Aromatic Volatile Organics	Prep/Method: EPA 8021 / EPA 8021							
Benzene	ND	ug/l	2.0	03/25/02 17:47	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	03/25/02 17:47	SHF	100-41-4		
Toluene	ND	ug/l	2.0	03/25/02 17:47	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	03/25/02 17:47	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		03/25/02 17:47	SHF	2164-17-2		

Date: 03/27/02

Page: 1

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6057266
Client Project ID: SJB-GW PRJ CNMB1

Lab Sample No: 604988014 Project Sample Number: 6057266-002 Date Collected: 03/12/02 13:32
Client Sample ID: 133212MAR02 Matrix: Water Date Received: 03/20/02 10:35

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	03/25/02 18:16	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	03/25/02 18:16	SHF	100-41-4		
Toluene	ND	ug/l	2.0	03/25/02 18:16	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	03/25/02 18:16	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		03/25/02 18:16	SHF	2164-17-2		

Date: 03/27/02

Page: 2

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6057266

Client Project ID: SJB-GW PRJ CNMB1

Lab Sample No: 604988022
Client Sample ID: 130012MAR02

Project Sample Number: 6057266-003

Matrix: Water

Date Collected: 03/12/02 13:00

Date Received: 03/20/02 10:35

Parameters	Results	Units	Report Limit	Analyzed	by	CAS No.	Ftnote	Reg Limit
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GC Volatiles

Aromatic Volatile Organics

Prep/Method: EPA 8021 / EPA 8021

Benzene	ND	ug/l	2.0	03/25/02 18:45	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	03/25/02 18:45	SHF	100-41-4		
Toluene	ND	ug/l	2.0	03/25/02 18:45	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	03/25/02 18:45	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		03/25/02 18:45	SHF	2164-17-2		

Date: 03/27/02

Page: 3

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6057266
Client Project ID: SJB-GW PRJ CNMB1

Lab Sample No: 604988030 Project Sample Number: 6057266-004 Date Collected: 03/12/02 13:13
Client Sample ID: 131312MAR02 Matrix: Water Date Received: 03/20/02 10:35

Parameters	Results	Units	Report Limit	Analyzed	by	CAS No.	Ftnote	Reg Limit
GC Volatiles								
Aromatic Volatile Organics	Prep/Method: EPA 8021 / EPA 8021							
Benzene	2100	ug/l	40.	03/26/02 15:22	SHF	71-43-2	1	
Ethylbenzene	100	ug/l	10.	03/26/02 15:22	SHF	100-41-4		
Toluene	140	ug/l	10.	03/26/02 15:22	SHF	108-88-3		
Xylene (Total)	370	ug/l	25.	03/26/02 15:22	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	103	%		03/26/02 15:22	SHF	2164-17-2	2	

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Lab Project Number: 6057266
Client Project ID: SJB-GW PRJ CNMB1

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 1:20 dilution on 3-26-02.
- [2] Elevated quantitation limits resulting from a dilution.

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6057266

Client Project ID: SJB-GW PRJ CNMB1

QC Batch: 119682

Analysis Method: EPA 8021

QC Batch Method: EPA 8021

Analysis Description: Aromatic Volatile Organics

Associated Lab Samples:

604988006

604988014

604988022

604988030

METHOD BLANK: 604997049

Associated Lab Samples:

604988006

604988014

604988022

604988030

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
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)	%	104		

LABORATORY CONTROL SAMPLE: 604997056

Parameter	Units	Spike	LCS	LCS	Footnotes
		Conc.	Result	% Rec	
Benzene	ug/l	20	22.56	113	
Ethylbenzene	ug/l	20	22.20	111	
Toluene	ug/l	20	22.39	112	
Xylene (Total)	ug/l	60	70.10	117	
a,a,a-Trifluorotoluene (S)				103	1

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6057266
Client Project ID: SJB-GW PRJ CNMB1

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

[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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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

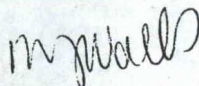
RE: Lab Project Number: 6059955
Client Project ID: CHMR

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: 6059955

Client Project ID: CHMR

<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>
6059955-001	605212885	122114JUN02	Water	06/14/02 12:21	06/20/02 09:00
6059955-002	605212893	124014JUN02	Water	06/14/02 12:40	06/20/02 09:00
6059955-003	605212901	123414JUN02	Water	06/14/02 12:34	06/20/02 09:00
6059955-004	605212919	122814JUN02	Water	06/14/02 12:28	06/20/02 09:00

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6059955
Client Project ID: CHMR

Lab Sample No: 605212885
Client Sample ID: 122114JUN02

Project Sample Number: 6059955-001
Matrix: Water

Date Collected: 06/14/02 12:21
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	06/21/02 19:20		71-43-2		
Ethylbenzene	ND	ug/l	2.0	06/21/02 19:20		100-41-4		
Toluene	ND	ug/l	2.0	06/21/02 19:20		108-88-3		
Xylene (Total)	ND	ug/l	5.0	06/21/02 19:20		1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		06/21/02 19:20		98-08-8		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6059955

Client Project ID: CHMR

Lab Sample No: 605212893
Client Sample ID: 124014JUN02Project Sample Number: 6059955-002
Matrix: WaterDate Collected: 06/14/02 12:40
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	140	ug/l	2.0	06/21/02 19:48		71-43-2		
Ethylbenzene	6.7	ug/l	2.0	06/21/02 19:48		100-41-4		
Toluene	18.	ug/l	2.0	06/21/02 19:48		108-88-3		
Xylene (Total)	19.	ug/l	5.0	06/21/02 19:48		1330-20-7		
a,a,a-Trifluorotoluene (S)	107	%		06/21/02 19:48		98-08-8		

Date: 06/24/02

Page: 2

REPORT OF LABORATORY ANALYSISThis report shall not be reproduced, except in full,
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Lab Project Number: 6059955

Client Project ID: CHMR

Lab Sample No: 605212901

Client Sample ID: 123414JUN02

Project Sample Number: 6059955-003

Matrix: Water

Date Collected: 06/14/02 12:34

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	06/21/02 20:44		71-43-2		
Ethylbenzene	ND	ug/l	2.0	06/21/02 20:44		100-41-4		
Toluene	ND	ug/l	2.0	06/21/02 20:44		108-88-3		
Xylene (Total)	ND	ug/l	5.0	06/21/02 20:44		1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		06/21/02 20:44		98-08-8		

Date: 06/24/02

Page: 3

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6059955

Client Project ID: CHMR

Lab Sample No: 605212919

Project Sample Number: 6059955-004

Date Collected: 06/14/02 12:28

Client Sample ID: 122814JUN02

Matrix: Water

Date Received: 06/20/02 09:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
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GC Volatiles

Aromatic Volatile Organics

Method: EPA 8021

Benzene	ND	ug/l	2.0	06/21/02 21:12		71-43-2		
Ethylbenzene	ND	ug/l	2.0	06/21/02 21:12		100-41-4		
Toluene	ND	ug/l	2.0	06/21/02 21:12		108-88-3		
Xylene (Total)	ND	ug/l	5.0	06/21/02 21:12		1330-20-7		
a,a,a-Trifluorotoluene (S)	104	%		06/21/02 21:12		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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Lab Project Number: 6059955

Client Project ID: CHMR

QC Batch: 124756

Analysis Method: EPA 8021

QC Batch Method: EPA 8021

Analysis Description: Aromatic Volatile Organics

Associated Lab Samples:

605212885

605212893

605212901

605212919

METHOD BLANK: 605213867

Associated Lab Samples:

605212885

605212893

605212901

605212919

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
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	LCS	LCS	% Rec	Footnotes
		Conc.	Result	% Rec	Limits	
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	Spike	MS	MSD	MS	MSD	% Rec	Max	Footnotes
		Result	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
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

September 19, 2002

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

RE: Lab Project Number: 6062688
Client Project ID: CHMB

Dear Mr. Struhs:

Enclosed are the analytical results for sample(s) received by the laboratory on September 13, 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: 6062688

Client Project ID: CHMB

<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>
6062688-001	605429760	123310SEP02	Water	09/10/02 12:33	09/13/02 09:30
6062688-002	605429778	124310SEP02	Water	09/10/02 12:43	09/13/02 09:30
6062688-003	605429786	125210SEP02	Water	09/10/02 12:52	09/13/02 09:30
6062688-004	605429794	125910SEP02	Water	09/10/02 12:59	09/13/02 09:30

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6062688

Client Project ID: CHMB

Project			Analysis		Analysis Description	Analytes Reported
Sample Number	Sample No	Client Sample ID	Code			
6062688-001	605429760	123310SEP02	8020	WPAC	Aromatic Volatile Organics	5
6062688-002	605429778	124310SEP02	8020	WPAC	Aromatic Volatile Organics	5
6062688-003	605429786	125210SEP02	8020	WPAC	Aromatic Volatile Organics	5
6062688-004	605429794	125910SEP02	8020	WPAC	Aromatic Volatile Organics	5

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6062688
Client Project ID: CHMB

Lab Sample No: 605429760
Client Sample ID: 123310SEP02

Project Sample Number: 6062688-001
Matrix: Water

Date Collected: 09/10/02 12:33
Date Received: 09/13/02 09:30

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 09/18/02 02:25 SHF		71-43-2		
Ethylbenzene	ND	ug/l	2.0		1.0 09/18/02 02:25 SHF		100-41-4		
Toluene	ND	ug/l	2.0		1.0 09/18/02 02:25 SHF		108-88-3		
Xylene (Total)	ND	ug/l	5.0		1.0 09/18/02 02:25 SHF		1330-20-7		
a,a,a-Trifluorotoluene (S)	98	%			1.0 09/18/02 02:25 SHF		98-08-8		

Date: 09/19/02

Page: 1

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6062688
Client Project ID: CHMB

Lab Sample No: 605429778
Client Sample ID: 124310SEP02

Project Sample Number: 6062688-002
Matrix: Water

Date Collected: 09/10/02 12:43
Date Received: 09/13/02 09:30

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	09/18/02 02:54	SHF	71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	09/18/02 02:54	SHF	100-41-4		
Toluene	ND	ug/l	2.0	1.0	09/18/02 02:54	SHF	108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	09/18/02 02:54	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	99	%		1.0	09/18/02 02:54	SHF	98-08-8		

Date: 09/19/02

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REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6062688
Client Project ID: CHMB

Lab Sample No: 605429786
Client Sample ID: 125210SEP02

Project Sample Number: 6062688-003
Matrix: Water

Date Collected: 09/10/02 12:52
Date Received: 09/13/02 09:30

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	09/18/02 05:48 SHF		71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	09/18/02 05:48 SHF		100-41-4		
Toluene	ND	ug/l	2.0	1.0	09/18/02 05:48 SHF		108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	09/18/02 05:48 SHF		1330-20-7		
a,a,a-Trifluorotoluene (S)	98	%		1.0	09/18/02 05:48 SHF		98-08-8		

Date: 09/19/02

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REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6062688
Client Project ID: CHMB

Lab Sample No: 605429794
Client Sample ID: 125910SEP02

Project Sample Number: 6062688-004
Matrix: Water

Date Collected: 09/10/02 12:59
Date Received: 09/13/02 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	120	ug/l	2.0		1.0 09/18/02 06:16 SHF		71-43-2		
Ethylbenzene	6.6	ug/l	2.0		1.0 09/18/02 06:16 SHF		100-41-4		
Toluene	23.	ug/l	2.0		1.0 09/18/02 06:16 SHF		108-88-3		
Xylene (Total)	18.	ug/l	5.0		1.0 09/18/02 06:16 SHF		1330-20-7		
a,a,a-Trifluorotoluene (S)	97	%			1.0 09/18/02 06:16 SHF		98-08-8		

Date: 09/19/02

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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

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: 6062688
Client Project ID: CHMB

QC Batch: 129934 Analysis Method: EPA 8021
QC Batch Method: EPA 8021 Analysis Description: Aromatic Volatile Organics
Associated Lab Samples: 605429760 605429778 605429786 605429794

METHOD BLANK: 605437227
Associated Lab Samples: 605429760 605429778 605429786 605429794

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)	%	100		

LABORATORY CONTROL SAMPLE: 605437235

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Benzene	ug/l	20.00	22.13	111	84-122	
Ethylbenzene	ug/l	20.00	21.49	107	85-117	
Toluene	ug/l	20.00	21.88	109	87-117	
Xylene (Total)	ug/l	60.00	66.64	111	85-119	
a,a,a-Trifluorotoluene (S)				98	83-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 605438290 605438308

Parameter	Units	605419928 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Footnotes
Benzene	ug/l	0	20.00	23.79	23.00	119	115	82-123	3	10	
Ethylbenzene	ug/l	0.6860	20.00	22.53	21.14	109	102	84-118	6	10	
Toluene	ug/l	0	20.00	23.56	22.30	118	112	82-117	5	10	1
Xylene (Total)	ug/l	0.5736	60.00	66.52	65.62	110	108	84-121	1	13	
a,a,a-Trifluorotoluene (S)						98	98	83-115			

Date: 09/19/02

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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
[1]	Matrix (MS) and or surrogate spike recovery (S) was affected by the sample matrix. Refer to the batch QC recoveries (Blank and LCS) to demonstrate that the analytical system was operating in control.

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

December 23, 2002

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

RE: Lab Project Number: 6065823
Client Project ID: SJB-GW CHMB-1

Dear Mr. Struhs:

Enclosed are the analytical results for sample(s) received by the laboratory on December 17, 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,

For: 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: 6065823

Client Project ID: SJB-GW CHMB-1

<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>
6065823-001	605680909	131810DEC02	Water	12/10/02 13:18	12/17/02 08:00
6065823-002	605680917	125410DEC02	Water	12/10/02 12:54	12/17/02 08:00
6065823-003	605680925	131010DEC02	Water	12/10/02 13:10	12/17/02 08:00
6065823-004	605680933	130210DEC02	Water	12/10/02 13:02	12/17/02 08:00

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6065823
Client Project ID: SJB-GW CHMB-1

Lab Sample No: 605680909
Client Sample ID: 131810DEC02

Project Sample Number: 6065823-001
Matrix: Water
Date Collected: 12/10/02 13:18
Date Received: 12/17/02 08:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	1800	ug/l	20.	10.0	12/20/02 12:00	SHF	71-43-2		
Ethylbenzene	68.	ug/l	4.0	2.0	12/19/02 21:16	SHF	100-41-4		
Toluene	97.	ug/l	4.0	2.0	12/19/02 21:16	SHF	108-88-3		
Xylene (Total)	220	ug/l	10.	2.0	12/19/02 21:16	SHF	1330-20-7		
a,a,a-Trifluorotoluene (S)	97	%		1.0	12/19/02 21:16	SHF	98-08-8	1	

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6065823
Client Project ID: SJB-GW CHMB-1

Lab Sample No: 605680917
Client Sample ID: 125410DEC02

Project Sample Number: 6065823-002
Matrix: Water

Date Collected: 12/10/02 12:54
Date Received: 12/17/02 08:00

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	12/19/02 22:42 SHF		71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	12/19/02 22:42 SHF		100-41-4		
Toluene	ND	ug/l	2.0	1.0	12/19/02 22:42 SHF		108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	12/19/02 22:42 SHF		1330-20-7		
a,a,a-Trifluorotoluene (S)	96	%		1.0	12/19/02 22:42 SHF		98-08-8		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6065823
Client Project ID: SJB-GW CHMB-1

Lab Sample No: 605680925
Client Sample ID: 131010DEC02

Project Sample Number: 6065823-003
Matrix: Water

Date Collected: 12/10/02 13:10
Date Received: 12/17/02 08:00

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 12/19/02 23:10 SHF		71-43-2		
Ethylbenzene	ND	ug/l	2.0		1.0 12/19/02 23:10 SHF		100-41-4		
Toluene	ND	ug/l	2.0		1.0 12/19/02 23:10 SHF		108-88-3		
Xylene (Total)	ND	ug/l	5.0		1.0 12/19/02 23:10 SHF		1330-20-7		
a,a,a-Trifluorotoluene (S)	98	%			1.0 12/19/02 23:10 SHF		98-08-8		

Date: 12/23/02

Page: 3 of 7

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6065823
Client Project ID: SJB-GW CHMB-1

Lab Sample No: 605680933
Client Sample ID: 130210DEC02

Project Sample Number: 6065823-004
Matrix: Water

Date Collected: 12/10/02 13:02
Date Received: 12/17/02 08:00

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	12/19/02 23:39 SHF		71-43-2		
Ethylbenzene	ND	ug/l	2.0	1.0	12/19/02 23:39 SHF		100-41-4		
Toluene	ND	ug/l	2.0	1.0	12/19/02 23:39 SHF		108-88-3		
Xylene (Total)	ND	ug/l	5.0	1.0	12/19/02 23:39 SHF		1330-20-7		
a,a,a-Trifluorotoluene (S)	99	%		1.0	12/19/02 23:39 SHF		98-08-8		

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 levels of target analytes.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Lab Project Number: 6065823
Client Project ID: SJB-GW CHMB-1

QC Batch: 135909 Analysis Method: EPA 8021
QC Batch Method: EPA 8021 Analysis Description: Aromatic Volatile Organics
Associated Lab Samples: 605680909 605680917 605680925 605680933

METHOD BLANK: 605687649
Associated Lab Samples: 605680909 605680917 605680925 605680933

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
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: 605687656

Parameter	Units	Spike	LCS	LCS	% Rec	Footnotes
		Conc.	Result	% Rec	Limits	
Benzene	ug/l	20.00	19.84	99	84-122	
Ethylbenzene	ug/l	20.00	20.44	102	85-117	
Toluene	ug/l	20.00	23.03	115	87-117	
Xylene (Total)	ug/l	60.00	65.34	109	85-119	
a,a,a-Trifluorotoluene (S)				94	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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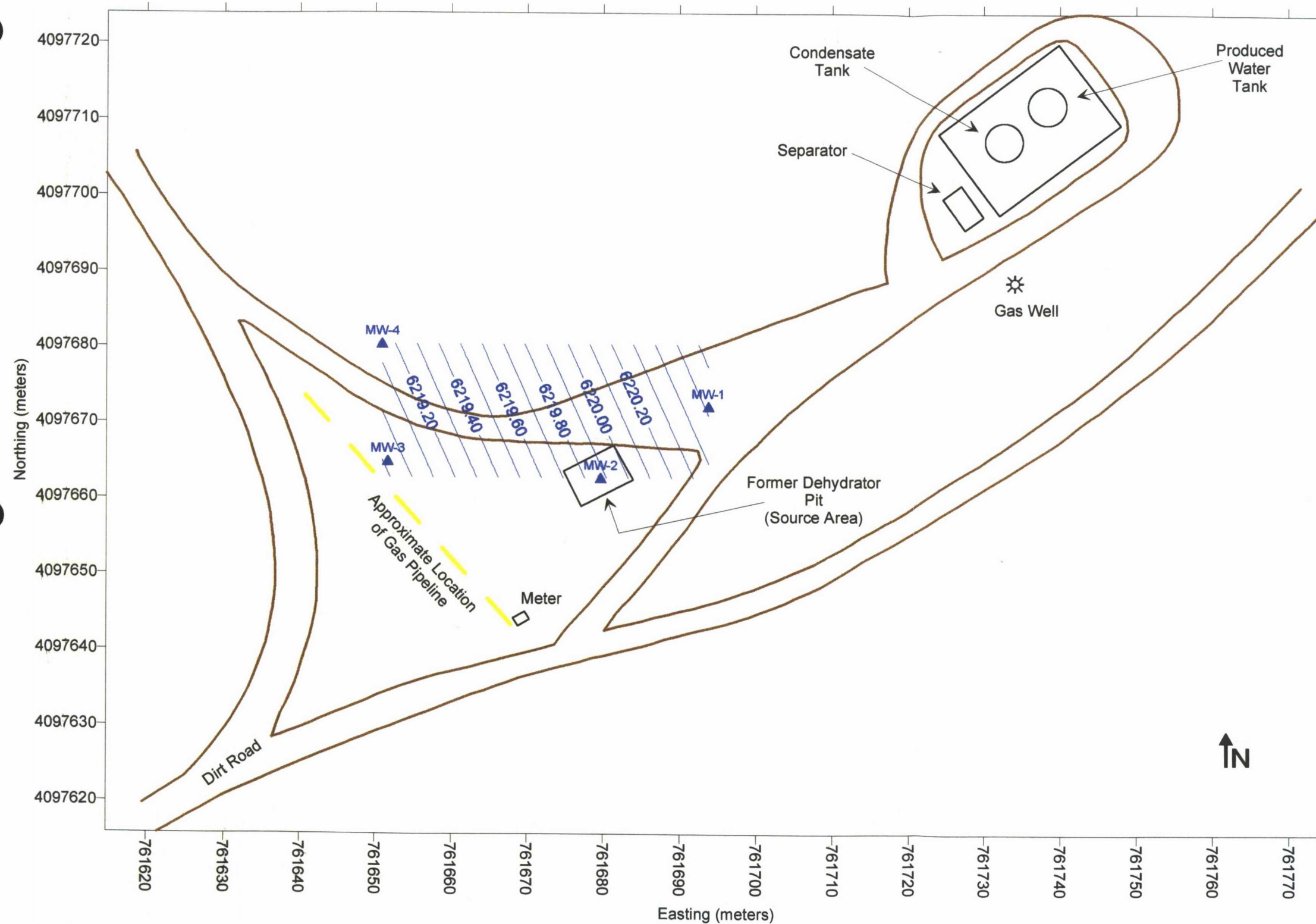


Figure 2
Potentiometric
Surface Map
Chamberlain #1
(March 12, 2002)

LEGEND

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

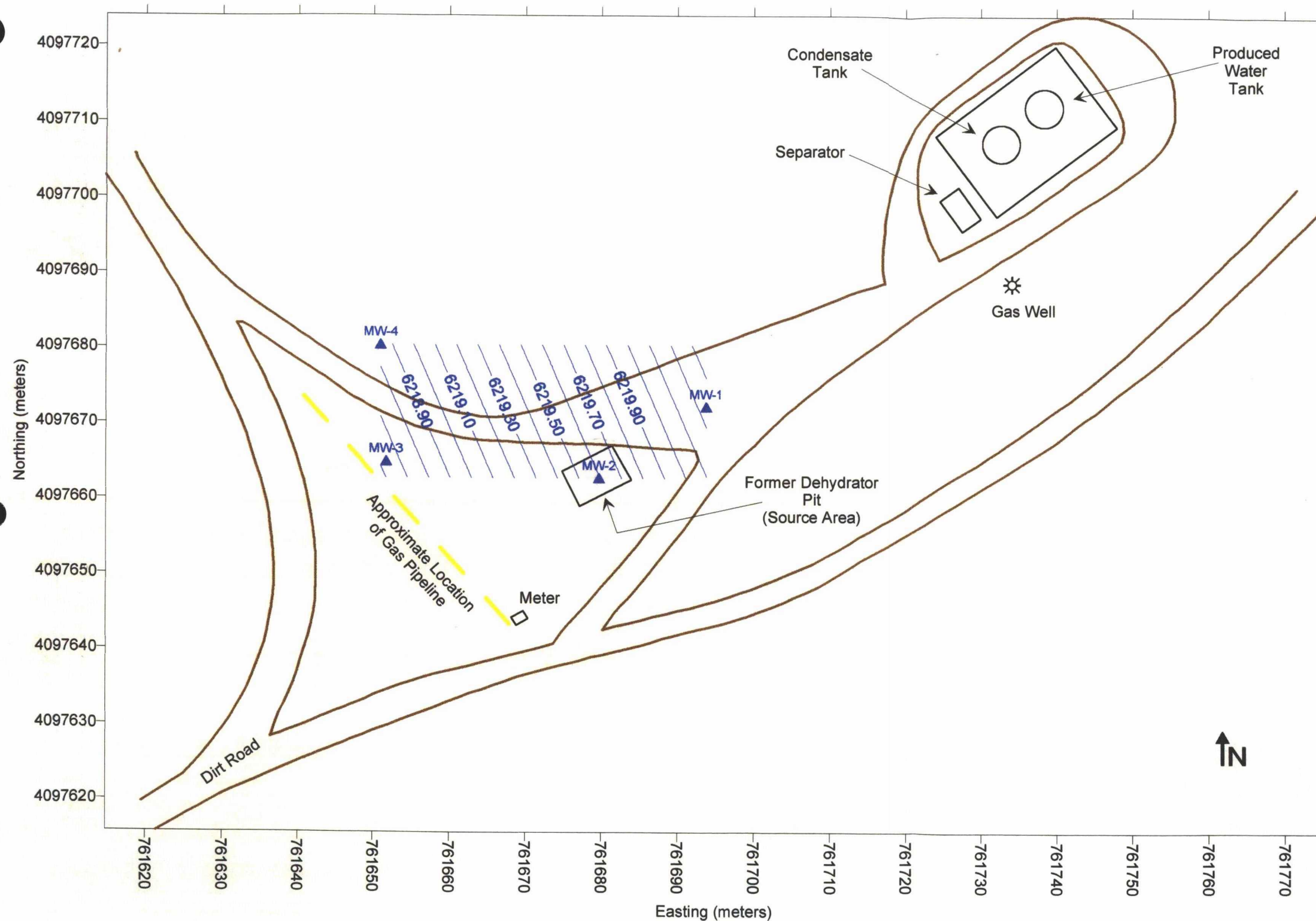


Figure 2
Potentiometric
Surface Map
Chamberlain #1
(June 14, 2002)

LEGEND

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

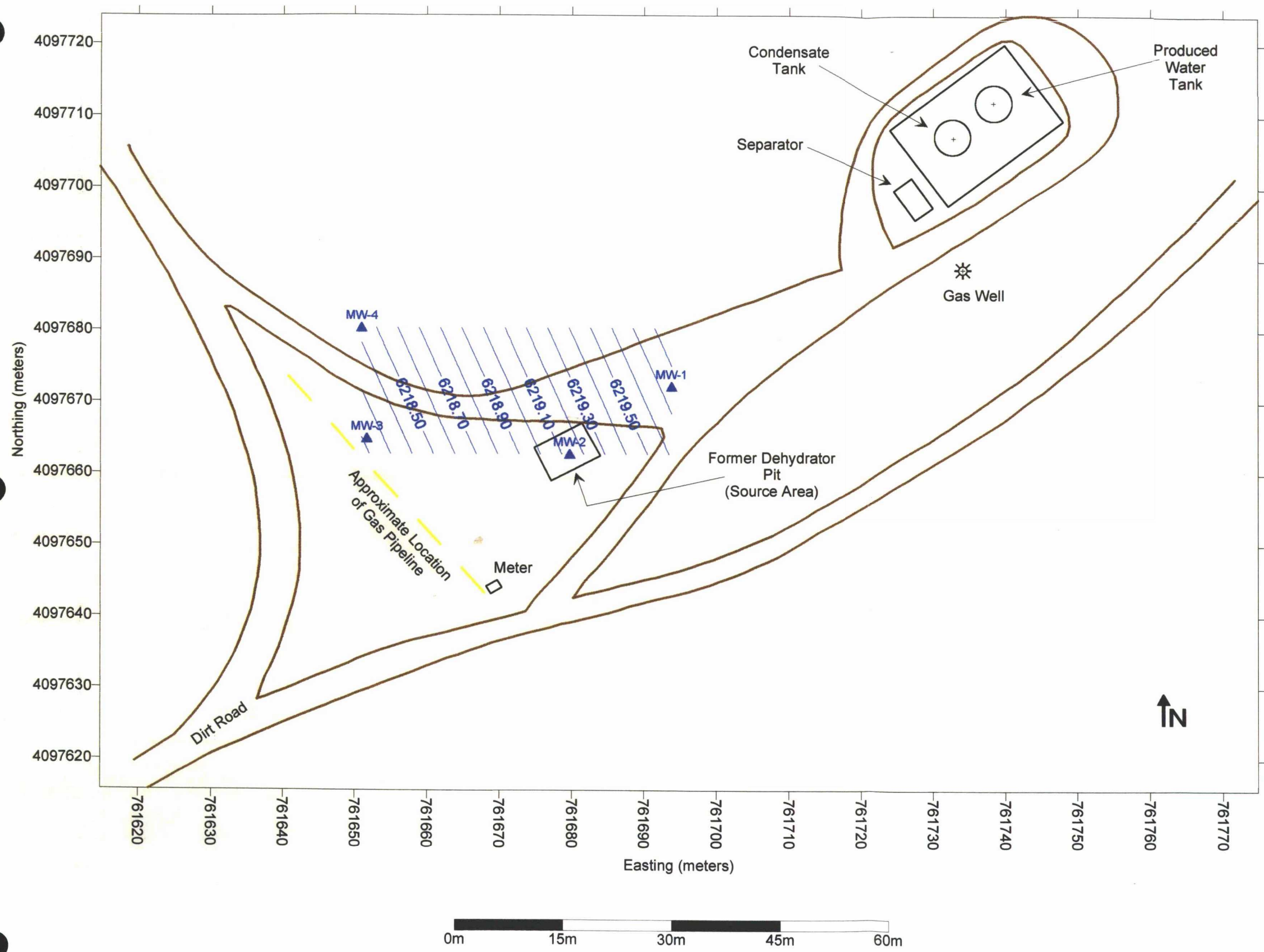


Figure 2
Potentiometric
Surface Map
Chamberlain #1
(December 10, 2002)

