State Hygienic Laboratory

The University of Iowa

Accession Number	18407 ***Revision 1***
Date Sample Finalized	2012-03-14 11:42
Date Received	2012-02-29 12:25
Sample Source	Non-Drinking Water
Project	04WQFS
Date Collected	2012-02-29 10:02
Collection Site	#1 liberty tire drive culvert
Collection Town	
Sample Description	
Client Reference	
Collector	gibbons bill
Phone	515/725-0335

BILL GIBBONS
IDNR-FO 5
401 SW 7TH ST STE I
DES MOINES, IA 50309-4611

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

Metals Qualitative Scan, EPA 200.7

Units		Analyzed In	Ankeny
Date Analyzed	2012-03-02 11:34	Date Verified	2012-03-14 11:42
Analyst	MC, BW	Verifier	BW

Analyte	Result
Aluminum	Present
Barium	Present
Calcium	Present
Copper	Present
Iron	Present
Potassium	Present
Magnesium	Present
Manganese	Present
Sodium	Present
Zinc	Present
Strontium	Present

Volatile Petroleum Hydrocarbons, Iowa OA-1

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-02 08:20	Date Verified	2012-03-05 11:58
Analyst	LL	Verifier	TC

Analyte	Result	Quant Limit
Methyl-t-butyl ether (MtBE)	<2	2
Benzene	19	5
Toluene	8	5
Ethylbenzene	<5	5
Total Xylenes	<5	5

Note: Acetone, 4-methyl-2-pentanone, 2-butanone, and acrylonitrile were observed in the analysis of this sample at concentrations of 400, 390, 16 and 43 ug/L, respectively. A number of compounds were

Michael D. Wichman, Ph.D.
Michael A. Pentella, Ph.D.
Associate Directors
http://www.shl.uiowa.edu

University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642

tentatively identified via mass spectral library search in the analysis of this sample including cyclopentanone.

GCMS Semivolatiles, EPA 625

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-01 18:20	Date Verified	2012-03-05 11:38
Analyst	SES, TC	Verifier	TC
Analysis Prep	Prep by Separatory Funnel, EPA 625		

Analyte	Result	Quant Limit
Phenol	43	5
2-Methylphenol	33	5
Naphthalene	<5	5
2-Methylnaphthalene	<5	5
Acenaphthylene	<5	5
Acenaphthene	<5	5
Dibenzofuran	<5	5
Fluorene	<5	5
Phenanthrene	<5	5
Carbazole	<5	5
Anthracene	<5	5
Fluoranthene	<5	5
Pyrene	<5	5
Benzo(a)anthracene	<5	5
Chrysene	<5	5
Benzo(b)fluoranthene	<5	5
Benzo(k)fluoranthene	<5	5
Benzo(a)pyrene	<5	5
Indeno(1,2,3-cd)pyrene	<5	5
Dibenzo(a,h)anthracene	<5	5
Benzo(g,h,i)perylene	<5	5
Aniline	110	5

Note: A number of compounds were tentatively identified via mass spectral library search in the analysis of this sample including hexa(methoxymethyl)melamine, and a number of ketones, cellosolves, and hydrocarbons.

Prep by Separatory Funnel, EPA 625

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-01 08:30	Date Verified	2012-03-02 11:10
Analyst	KB	Verifier	GJ

Description of Units used within this report

ug/L = Micrograms per Liter

Michael D. Wichman, Ph.D.
Michael A. Pentella, Ph.D.
Associate Directors
http://www.shl.uiowa.edu

University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642

Accession Number | 18407 ***Revision 1***

The result(s) of this report relate only to the items analyzed. This report shall not be reproduced except in full without the written approval of the laboratory.

Iowa Environmental Laboratory IDs are: Ankeny #397, Iowa City/Coralville #027, Lakeside #393.

If you have any questions, please call Client Services at 800/421-IOWA (4692) or 319/335-4500. Thank you.

Michael D. Wichman, Ph.D.
Michael A. Pentella, Ph.D.
Associate Directors
http://www.shl.uiowa.edu

University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642

State Hygienic Laboratory

The University of Iowa

Accession Number	18408 ***Revision 1***
Date Sample Finalized	2012-03-14 11:42
Date Received	2012-02-29 12:25
Sample Source	Non-Drinking Water
Project	04WQFS
Date Collected	2012-02-29 10:12
Collection Site	#2 gordmans
Collection Town	
Sample Description	
Client Reference	
Collector	gibbons bill
Phone	515/725-0335

BILL GIBBONS
IDNR-FO 5
401 SW 7TH ST STE I
DES MOINES, IA 50309-4611

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

Metals Qualitative Scan, EPA 200.7

Units		Analyzed In	Ankeny
Date Analyzed	2012-03-02 11:34	Date Verified	2012-03-14 11:42
Analyst	MC, BW	Verifier	BW

Analyte	Result
Aluminum	Present
Barium	Present
Calcium	Present
Iron	Present
Potassium	Present
Magnesium	Present
Manganese	Present
Sodium	Present
Zinc	Present
Strontium	Present

Volatile Petroleum Hydrocarbons, Iowa OA-1

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-02 09:23	Date Verified	2012-03-05 11:59
Analyst	LL	Verifier	TC

Analyte	Result	Quant Limit
Methyl-t-butyl ether (MtBE)	<2	2
Benzene	<5	5
Toluene	<5	5
Ethylbenzene	<5	5
Total Xylenes	<5	5

Michael D. Wichman, Ph.D.
Michael A. Pentella, Ph.D.
Associate Directors
http://www.shl.uiowa.edu

University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642

Accession Number | 18408 ***Revision 1***

GCMS Semivolatiles, EPA 625

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-01 16:21	Date Verified	2012-03-05 11:43
Analyst	SES, TC	Verifier	TC
Analysis Prep	Prep by Separatory Funnel, EPA 625		

Analyte	Result	Quant Limit
Naphthalene	<5	5
2-Methylnaphthalene	<5	5
Acenaphthylene	<5	5
Acenaphthene	<5	5
Dibenzofuran	<5	5
Fluorene	<5	5
Phenanthrene	<5	5
Carbazole	<5	5
Anthracene	<5	5
Fluoranthene	<5	5
Pyrene	<5	5
Benzo(a)anthracene	<5	5
Chrysene	<5	5
Benzo(b)fluoranthene	<5	5
Benzo(k)fluoranthene	<5	5
Benzo(a)pyrene	<5	5
Indeno(1,2,3-cd)pyrene	<5	5
Dibenzo(a,h)anthracene	<5	5
Benzo(g,h,i)perylene	<5	5

Note: A number of compounds were tentatively identified via mass spectral library search in the analysis of this sample including cellosolves and hydrocarbons.

Prep by Separatory Funnel, EPA 625

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-01 08:30	Date Verified	2012-03-05 11:43 ***Revision 1***
Analyst	KB	Verifier	TC

Description of Units used within this report

ug/L = Micrograms per Liter

The result(s) of this report relate only to the items analyzed. This report shall not be reproduced except in full without the written approval of the laboratory.

Iowa Environmental Laboratory IDs are: Ankeny #397, Iowa City/Coralville #027, Lakeside #393.

If you have any questions, please call Client Services at 800/421-IOWA (4692) or 319/335-4500. Thank you.

Michael D. Wichman, Ph.D.
Michael A. Pentella, Ph.D.
Associate Directors
http://www.shl.uiowa.edu

University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642

State Hygienic Laboratory

The University of Iowa

Accession Number	18409 ***Revision 1***
Date Sample Finalized	2012-03-14 11:48
Date Received	2012-02-29 12:25
Sample Source	Non-Drinking Water
Project	04WQFS
Date Collected	2012-02-29 10:27
Collection Site	#3 scott street bridge
Collection Town	
Sample Description	
Client Reference	
Collector	gibbons bill
Phone	515/725-0335

BILL GIBBONS
IDNR-FO 5
401 SW 7TH ST STE I
DES MOINES, IA 50309-4611

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

Metals Qualitative Scan, EPA 200.7

Units		Analyzed In	Ankeny
Date Analyzed	2012-03-02 11:34	Date Verified	2012-03-14 11:48
Analyst	MC, BW	Verifier	BW

Analyte	Result
Aluminum	Present
Barium	Present
Calcium	Present
Iron	Present
Potassium	Present
Magnesium	Present
Manganese	Present
Sodium	Present
Zinc	Present
Strontium	Present

Volatile Petroleum Hydrocarbons, Iowa OA-1

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-02 09:54	Date Verified	2012-03-05 12:01
Analyst	LL	Verifier	TC

Analyte	Result	Quant Limit
Methyl-t-butyl ether (MtBE)	<2	2
Benzene	<5	5
Toluene	<5	5
Ethylbenzene	<5	5
Total Xylenes	<5	5

Michael D. Wichman, Ph.D.
Michael A. Pentella, Ph.D.
Associate Directors
http://www.shl.uiowa.edu

University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642

Accession Number | 18409 ***Revision 1***

GCMS Semivolatiles, EPA 625

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-02 10:59	Date Verified	2012-03-05 11:47
Analyst	SES, TC	Verifier	TC
Analysis Prep	Prep by Separatory Funnel, EPA 625		

Analyte	Result	Quant Limit
Naphthalene	<5	5
2-Methylnaphthalene	<5	5
Acenaphthylene	<5	5
Acenaphthene	<5	5
Dibenzofuran	<5	5
Fluorene	<5	5
Phenanthrene	<5	5
Carbazole	<5	5
Anthracene	<5	5
Fluoranthene	<5	5
Pyrene	<5	5
Benzo(a)anthracene	<5	5
Chrysene	<5	5
Benzo(b)fluoranthene	<5	5
Benzo(k)fluoranthene	<5	5
Benzo(a)pyrene	<5	5
Indeno(1,2,3-cd)pyrene	<5	5
Dibenzo(a,h)anthracene	<5	5
Benzo(g,h,i)perylene	<5	5

Note: A number of compounds were tentatively identified via mass spectral library search in the analysis of this sample including cellosolves and hydrocarbons.

Prep by Separatory Funnel, EPA 625

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-01 08:30	Date Verified	2012-03-02 11:10
Analyst	KB	Verifier	GJ

Description of Units used within this report

ug/L = Micrograms per Liter

The result(s) of this report relate only to the items analyzed. This report shall not be reproduced except in full without the written approval of the laboratory.

Iowa Environmental Laboratory IDs are: Ankeny #397, Iowa City/Coralville #027, Lakeside #393.

If you have any questions, please call Client Services at 800/421-IOWA (4692) or 319/335-4500. Thank you.

Michael D. Wichman, Ph.D.
Michael A. Pentella, Ph.D.
Associate Directors
http://www.shl.uiowa.edu

University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642

State Hygienic Laboratory

The University of Iowa

Accession Number	18410 ***Revision 1***
Date Sample Finalized	2012-03-14 11:48
Date Received	2012-02-29 12:25
Sample Source	Non-Drinking Water
Project	04WQFS
Date Collected	2012-02-29 10:55
Collection Site	#4 upstream liberty tire
Collection Town	
Sample Description	
Client Reference	
Collector	gibbons bill
Phone	515/725-0335

BILL GIBBONS
IDNR-FO 5
401 SW 7TH ST STE I
DES MOINES, IA 50309-4611

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

Metals Qualitative Scan, EPA 200.7

Units		Analyzed In	Ankeny
Date Analyzed	2012-03-02 11:34	Date Verified	2012-03-14 11:48
Analyst	MC, BW	Verifier	BW

Analyte	Result
Aluminum	Present
Barium	Present
Calcium	Present
Iron	Present
Potassium	Present
Magnesium	Present
Manganese	Present
Sodium	Present
Zinc	Present
Strontium	Present

Volatile Petroleum Hydrocarbons, Iowa OA-1

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-02 10:25	Date Verified	2012-03-05 12:02
Analyst	LL	Verifier	TC

Analyte	Result	Quant Limit
Methyl-t-butyl ether (MtBE)	<2	2
Benzene	<5	5
Toluene	<5	5
Ethylbenzene	<5	5
Total Xylenes	<5	5

Michael D. Wichman, Ph.D.
Michael A. Pentella, Ph.D.
Associate Directors
http://www.shl.uiowa.edu

University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642

Accession Number | 18410 ***Revision 1***

GCMS Semivolatiles, EPA 625

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-01 18:20	Date Verified	2012-03-05 11:51
Analyst	SES, TC	Verifier	TC
Analysis Prep	Prep by Separatory Funnel, EPA 625		

Analyte	Result	Quant Limit
Naphthalene	<5	5
2-Methylnaphthalene	<5	5
Acenaphthylene	<5	5
Acenaphthene	<5	5
Dibenzofuran	<5	5
Fluorene	<5	5
Phenanthrene	<5	5
Carbazole	<5	5
Anthracene	<5	5
Fluoranthene	<5	5
Pyrene	<5	5
Benzo(a)anthracene	<5	5
Chrysene	<5	5
Benzo(b)fluoranthene	<5	5
Benzo(k)fluoranthene	<5	5
Benzo(a)pyrene	<5	5
Indeno(1,2,3-cd)pyrene	<5	5
Dibenzo(a,h)anthracene	<5	5
Benzo(g,h,i)perylene	<5	5

Note: A number of hydrocarbons were tentatively identified via mass spectral library search in the analysis of this sample.

Prep by Separatory Funnel, EPA 625

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-01 08:30	Date Verified	2012-03-02 11:11
Analyst	KB	Verifier	GJ

Description of Units used within this report

ug/L = Micrograms per Liter

The result(s) of this report relate only to the items analyzed. This report shall not be reproduced except in full without the written approval of the laboratory.

Iowa Environmental Laboratory IDs are: Ankeny #397, Iowa City/Coralville #027, Lakeside #393.

If you have any questions, please call Client Services at 800/421-IOWA (4692) or 319/335-4500. Thank you.

Michael D. Wichman, Ph.D.
Michael A. Pentella, Ph.D.
Associate Directors
http://www.shl.uiowa.edu

University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642

State Hygienic Laboratory

The University of Iowa

Accession Number	18502 ***Revision 1***
Date Sample Finalized	2012-03-14 12:22
Date Received	2012-03-01 09:49
Sample Source	Non-Drinking Water
Project	04WQFS
Date Collected	2012-03-01 09:10
Collection Site	liberty tire hull ave basin
Collection Town	
Sample Description	
Client Reference	
Collector	gibbons bill
Phone	515/725-0335

BILL GIBBONS
IDNR-FO 5
401 SW 7TH ST STE I
DES MOINES, IA 50309-4611

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

Metals Qualitative Scan, EPA 200.7

Units		Analyzed In	Ankeny
Date Analyzed	2012-03-06 11:51	Date Verified	2012-03-14 12:22
Analyst	MC, BW	Verifier	BW

Analyte	Result
Aluminum	Present
Barium	Present
Calcium	Present
Copper	Present
Iron	Present
Potassium	Present
Magnesium	Present
Manganese	Present
Sodium	Present
Zinc	Present
Strontium	Present

Volatile Petroleum Hydrocarbons, Iowa OA-1

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-02 09:47	Date Verified	2012-03-05 11:08
Analyst	LL	Verifier	TC

Analyte	Result	Quant Limit
Methyl-t-butyl ether (MtBE)	<2	2
Benzene	11	2
Toluene	4	2
Ethylbenzene	<2	2
Total Xylenes	<2	5

Note: Acetone, 4-methyl-2-pentanone, 2-butanone, and acrylonitrile were observed in the analysis of this sample at concentrations of 400, 290, 78, and 20 ug/L, respectively. A number of compounds were

Michael D. Wichman, Ph.D.
Michael A. Pentella, Ph.D.
Associate Directors
http://www.shl.uiowa.edu

University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642

tentatively identified via mass spectral library search in the analysis of this sample including acetaldehyde and cyclopentanone.

GCMS Semivolatiles, EPA 625

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-02 12:19	Date Verified	2012-03-05 11:02
Analyst	SES, TC	Verifier	TC
Analysis Prep	Prep by Separatory Funnel, EPA 625		

Analyte	Result	Quant Limit
Phenol	29	5
2-Methylphenol	32	5
Naphthalene	<5	5
2-Methylnaphthalene	<5	5
Acenaphthylene	<5	5
Acenaphthene	<5	5
Dibenzofuran	<5	5
Fluorene	<5	5
Phenanthrene	<5	5
Carbazole	<5	5
Anthracene	<5	5
Fluoranthene	<5	5
Pyrene	<5	5
Benzo(a)anthracene	<5	5
Chrysene	<5	5
Benzo(b)fluoranthene	<5	5
Benzo(k)fluoranthene	<5	5
Benzo(a)pyrene	<5	5
Indeno(1,2,3-cd)pyrene	<5	5
Dibenzo(a,h)anthracene	<5	5
Benzo(g,h,i)perylene	<5	5
Aniline	69	5

Note: A number of compounds were tentatively identified via mass spectral library search in the analysis of this sample including hexa(methoxymethyl)melamine, and a number of ketones and cellosolves.

Prep by Separatory Funnel, EPA 625

Units	ug/L	Analyzed In	Iowa City
Date Analyzed	2012-03-02 08:30	Date Verified	2012-03-02 11:11
Analyst	KB	Verifier	GJ

Description of Units used within this report

ug/L = Micrograms per Liter

The result(s) of this report relate only to the items analyzed. This report shall not be reproduced except in full without the written approval of the laboratory.

Iowa Environmental Laboratory IDs are: Ankeny #397, Iowa City/Coralville #027, Lakeside #393.

If you have any questions, please call Client Services at 800/421-IOWA (4692) or 319/335-4500. Thank you.

Michael D. Wichman, Ph.D.
Michael A. Pentella, Ph.D.
Associate Directors
http://www.shl.uiowa.edu

University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642