2002 Water Analysis

The following are the most recent water analysis of the Upper Leon River MWD as required by the Texas Natural Resource Conservation Commission and the Federal EPA.

Analysis Type	Collection Date	Analysis Date
SOC	02/27/02	03/02/02
VOC	02/27/02	03/05/02
Metals	02/27/02	03/13/02
Minerals	02/27/02	03/20/02
SOC	04/29/02	05/03/02
VOC	08/01/02	08/05/02

TEXAS DEPARTMENT OF HEALTH
WATER ANALYSIS RESULTS by GC/MS

Submitter Number:	0470015	Date Collected:	2/27/02
TDH Sample Number:	ep02-03777	Date Extracted:	3/1/02
Method:	525.2 Rev 1.0 SOC5	Date Analyzed:	3/2/02
Data File Number.	B5944.D	Analyst:	dhardin
QC Batch:	o02s0301	Dilution Factor:	1.02
Sample Type:	water	Conc. Units:	µg/L

Pesticides	Result:
• Alachlor	<0.20
Aldrin	<0.20
• Atrazine	<0.20
Bromacil	<0.20
Butachlor	<0.20
• Chlordane (alpha-chlordane)	<0.20
• Chlordane (gamma-chlordane)	<0.20
• Chlordane (trans-nonachlor)	<0.20
Dieldrin	<0.20
• Endrin	<0.20
• Heptachlor	<0.20
• Heptachlor epoxide	<0.20
• Hexachlorobenzene	<0.20
• Hexachlorocyclopentadiene*	<1.02
• Lindane	<0.20
• Methoxychlor	<0.20
Metolachlor	<0.20
Metribuzin	<0.20
Parathion, ethyl	<0.20
Parathion, methyl	<0.20
• Pentachlorophenol	<1.02
Prometon ##	<0.20
Propachlor	<0.20
• Simazine	<0.20
Trifluralin	<0.20

PAHs	Result:
Acenaphthene	<0.20
Acenaphthylene	<0.20
Anthracene	<0.20

PAHs (cont).	Result:
Benzo[a]anthracene	<0.20
• Benzo[a]pyrene	<0.20
Benzo[b]fluoranthene	<0.20
Benzo[g,h,i]perylene	<0.20
Benzo[k]fluoranthene	<0.20
Chrysene	<0.20
Dibenz[a,h]anthracene	<0.20
Fluorene	<0.20
Indeno[1,2,3,c,d]pyrene	<0.20
Naphthalene	<0.20
Phenanthrene	<0.20
Pyrene	<0.20

PCBs	Result:
2-Chlorobiphenyl	<0.20
2,3-Dichlorobiphenyl	<0.20
2,4,5-Trichlorobiphenyl	<0.20
2,2',4,4'-Tetrachlorobiphenyl	<0.20
2,2',3',4,6-Pentachlorobiphenyl	<0.20
2,2',4,4',5,6'-Hexachlorobiphenyl	<0.20
2,2',3,3',4,4',6-Heptachlorobiphenyl	<0.51
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	<0.51

Phthalates**	Result:
• Di-(2-ethylhexyl)adipate	<2.04
• Di-(2-ethylhexyl)phthalate	<2.04
Butylbenzylphthalate	<2.04
Di-n-butylphthalate	<2.04
Diethylphthalate	<2.04
Dimethylphthalate	<2.04

* This analyte is of known instability and quantitation should be considered approximate

** Phthalate contamination is unavoidable with this method's extraction technique Consequently, phthalate levels cannot be accurately measured below 2.0 µg/L.

Analyte detected below the quantitation limit.

This analyte is known for extraction instability and quantitation should be considered approximate

• Regulated compounds

Comments:

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Rev. 7, 12/01

Approval:

TEXAS DEPARTMENT OF HEALTH
VOLATILE ORGANIC COMPOUNDS by GC/MS

Submitter Number	TX 0470015	Date Collected:	02/27/2002
TDH Sample Number	EP02-03748	Date Extracted:	03/05/2002
Method:	EPA 524.2 rev. 4.1	Date Analyzed:	03/05/2002
Data File Number:	0305-05.D	Analyst:	J. Obare
Q.C. File:	OV020305.S	Dilution Factor:	1
Sample Type:	water	Concentration Units:	µg/l

Regulated Cmpds. [40 CFR §141.61(a)]	Result
Benzene	<0.5
Carbon tetrachloride	<0.5
Chlorobenzene	<0.5
1,2-Dichlorobenzene	<0.5
1,4-Dichlorobenzene	<0.5
1,2-Dichloroethane	<0.5
1,1-Dichloroethene	<0.5
cis-1,2-Dichloroethene	<0.5
trans-1,2-Dichloroethene	<0.5
1,2-Dichloropropane	<0.5
Methylene chloride (DCM)	<0.5
Ethylbenzene	<0.5
Styrene	<0.5
Tetrachloroethene	<0.5
Toluene	<0.5
1,2,4-Trichlorobenzene	<0.5
1,1,1-Trichloroethane	<0.5
1,1,2-Trichloroethane	<0.5
Trichloroethene	<0.5
Vinyl chloride	<0.5
m&p-Xylene	<1.0
o-Xylene	<0.5

Monitored Cmpds. [40 CFR §141.40(e)]	
Chloroform	**4.8**
Bromodichloromethane	**13**
Dibromochloromethane	**17**
Bromoform	**7.3**
Dibromomethane	<1.0
1,3-Dichlorobenzene	<1.0
1,1-Dichloropropene	<1.0
1,1-Dichloroethane	<1.0
1,1,2,2- Tetrachloroethane	<1.0
1,3-Dichloropropane	<1.0
Chloromethane	<2.0
Bromomethane	<2.0
1,2,3-Trichloropropane	<1.0
1,1,1,2-Tetrachloroethane	<1.0
Chloroethane	<2.0
2,2-Dichloropropane	<1.0
2-Chlorotoluene	<1.0
4-Chlorotoluene	<1.0
Bromobenzene	<1.0
cis-1,3-Dichloropropene	<1.0
trans-1,3-Dichloropropene	<1.0

* Screened Compounds	
1,2-Dibromo-3-chloropropane	<1.0
1,2-Dibromoethane	<1.0

* EPA 524.2 is not the approved method for analysis of these compounds. Compounds are listed per TNRCC request.

Monitored Cmpds. [40 CFR §141.40(j)]	Result
1,2,4-Trimethylbenzene	<1.0
1,2,3-Trichlorobenzene	<1.0
n-Propylbenzene	<1.0
n-Butylbenzene	<1.0
Naphthalene	<1.0
Hexachlorobutadiene	<1.0
1,3,5-Trimethylbenzene	<1.0
4-Isopropyltoluene	<1.0
Isopropylbenzene	<1.0
t-Butylbenzene	<1.0
s-Butylbenzene	<1.0
Trichlorofluoromethane	<2.0
Dichlorodifluoromethane	<2.0
Bromochloromethane	<1.0

Other Compounds	
Acetone	<10
Acrylonitrile	<10
2-Butanone (MEK)	<10
Carbon disulfide	<1.0
Ethyl methacrylate	<1.0
2-Hexanone	<1.0
Iodomethane	<2.0
Methyl methacrylate	<1.0
4-Methyl-2-pentanone (MIBK)	<2.0
Methyl-t-butyl ether (MTBE)	<2.0
Tetrahydrofuran	<2.0
Vinyl acetate	<10

Tentative identification of the largest non-priority pollutant peaks is provided by comparison with the EPA/NIH mass spectral library. Approximate quantitation is performed using internal standards and an assumed response factor of one.

Tentative Compound ID	Result
none	

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Comments:

Approval: George A. Nesbitt

MAR 12 2002

Texas Department of Health

1100 WEST 49TH STREET
AUSTIN, TEXAS 78756-3194
(512) 458-7318

BUREAU OF LABORATORIES
CLIA #45D0660644

CONFIDENTIAL LABORATORY REPORT

WATER ANALYSIS REPORT
METALS -

Submitter Identification Number: 0470015

UPPER LEON R MUNICIPAL WATER DIST
GYALE PIRKLE-PRESIDENT
PO BOX 67
COMANCHE, TX 76442-0067

Laboratory Number: EP203803
Sample Type:
Sample Source:
Entry Points: 001
Collector Remarks:

Date Collected: 02/27/2002
Date Received: 02/28/2002
Date Reported: 03/13/2002

Constituent Name		Result	Units	+/-
Aluminum		0.058	mg/l	
Arsenic		0.0040	mg/l	
Barium		0.085	mg/l	
Cadmium	<	0.0012	mg/l	
Calcium		63.60	mg/l	
Chromium	<	0.02	mg/l	
Copper		0.053	mg/l	
Iron	<	0.010	mg/l	
Lead	<	0.0011	mg/l	
Magnesium		18.30	mg/l	
Manganese		0.010	mg/l	
Mercury	<	0.0004	mg/l	
Nickel	<	0.02	mg/l	
Selenium		0.0113	mg/l	
Silver	<	0.01	mg/l	
Sodium		48.10	mg/l	
Antimony	<	0.0040	mg/l	
Beryllium	<	0.001	mg/l	
Thallium	<	0.0010	mg/l	
Zinc	<	0.02	mg/l	
Total Hardness as CaCO3		234.	mg/l	

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Texas Department of Health

1100 WEST 49TH STREET
AUSTIN, TEXAS 78756-3194
(512) 458-7318

BUREAU OF LABORATORIES
CLIA #45D0660644

CONFIDENTIAL LABORATORY REPORT

WATER ANALYSIS REPORT
MINERALS

Submitter Identification Number: 0470015

UPPER LEON R MUNICIPAL WATER DIST
GYALE PIRKLE-PRESIDENT
PO BOX 67
COMANCHE, TX 76442-0067

Laboratory Number: EP203782
Sample Type:
Sample Source:
Entry Points: 001
Collector Remarks:

Date Collected: 02/27/2002
Date Received: 02/27/2002
Date Reported: 03/20/2002

Constituent Name	Result	Units	+/-
Chloride	87	mg/l	
Fluoride	0.1	mg/l	
Nitrate	0.06	mg/l	
Sulfate	91	mg/l	
pH	7.2		
Dil.Conduct(umhos/cm)	750		
Tot. Alka. as CaCO3	122	mg/l	
Bicarbonate	149	mg/l	
Carbonate	0	mg/l	
Dissolved solids	251	mg/l	
P. Alkalinity as CaCO3	0	mg/l	

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TEXAS DEPARTMENT OF HEALTH
WATER ANALYSIS RESULTS by GC/MS

Submitter Number:	0470015	Date Collected:	4/29/02
TDH Sample Number:	ep02-7990	Date Extracted:	5/3/02
Method:	525.2 Rev 1.0 SOC5	Date Analyzed:	5/3/02
Data File Number:	B6472.D	Analyst:	dhardin
QC Batch:	o02s0503	Dilution Factor:	1.02
Sample Type:	water	Conc. Units:	µg/L

Pesticides	Result:
• Alachlor	<0.20
Aldrin	<0.20
• Atrazine	<0.20
Bromacil	<0.20
Butachlor	<0.20
• Chlordane (alpha-chlordane)	<0.20
• Chlordane (gamma-chlordane)	<0.20
• Chlordane (trans-nonachlor)	<0.20
Dieldrin	<0.20
• Endrin	<0.20
• Heptachlor	<0.20
• Heptachlor epoxide	<0.20
• Hexachlorobenzene	<0.20
• Hexachlorocyclopentadiene*	<1.02
• Lindane	<0.20
• Methoxychlor	<0.20
Metolachlor	<0.20
Metribuzin	<0.20
Parathion, ethyl	<0.20
Parathion, methyl	<0.20
• Pentachlorophenol	<1.02
Prometon ##	<0.20
Propachlor	<0.20
• Simazine	<0.20
Trifluralin	<0.20

PAHs	Result:
Acenaphthene	<0.20
Acenaphthylene	<0.20
Anthracene	<0.20

PAHs (cont).	Result:
Benzo[a]anthracene	<0.20
• Benzo[a]pyrene	<0.20
Benzo[b]fluoranthene	<0.20
Benzo[g,h,i]perylene	<0.20
Benzo[k]fluoranthene	<0.20
Chrysene	<0.20
Dibenz[a,h]anthracene	<0.20
Fluorene	<0.20
Indeno[1,2,3,c,d]pyrene	<0.20
Naphthalene	<0.20
Phenanthrene	<0.20
Pyrene	<0.20

PCBs	Result:
2-Chlorobiphenyl	<0.20
2,3-Dichlorobiphenyl	<0.20
2,4,5-Trichlorobiphenyl	<0.20
2,2',4,4'-Tetrachlorobiphenyl	<0.20
2,2',3',4,6-Pentachlorobiphenyl	<0.20
2,2',4,4',5,6'-Hexachlorobiphenyl	<0.20
2,2',3,3',4,4',6-Heptachlorobiphenyl	<0.51
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	<0.51

Phthalates**	Result:
• Di-(2-ethylhexyl)adipate	<2.04
• Di-(2-ethylhexyl)phthalate	<2.04
Butylbenzylphthalate	<2.04
Di-n-butylphthalate	<2.04
Diethylphthalate	<2.04
Dimethylphthalate	<2.04

* This analyte is of known instability and quantitation should be considered approximate

** Phthalate contamination is unavoidable with this method's extraction technique. Consequently, phthalate levels cannot be accurately measured below 2.0 µg/L.

Analyte detected below the quantitation limit.

This analyte is known for extraction instability and quantitation should be considered approximate

• Regulated compounds

Comments:

Return to Index

Approval: MAY 0 6 2002

TEXAS DEPARTMENT OF HEALTH
VOLATILE ORGANIC COMPOUNDS by GC/MS

Submitter Number	TX 0470015	Date Collected:	08/01/2002
TDH Sample Number	**EP02-12515**	Date Extracted:	08/05/2002
Method:	EPA 524.2 rev. 4.1	Date Analyzed:	08/05/2002
Data File Number:	0805-05.D	Analyst:	J. Obare
Q.C. File:	OV020805.S	Dilution Factor:	1
Sample Type:	water	Concentration Units:	µg/l

Regulated Cmpds. [40 CFR §141.61(a)]	Result
Benzene	<0.5
Carbon tetrachloride	<0.5
Chlorobenzene	<0.5
1,2-Dichlorobenzene	<0.5
1,4-Dichlorobenzene	<0.5
1,2-Dichloroethane	<0.5
1,1-Dichloroethene	<0.5
cis-1,2-Dichloroethene	<0.5
trans-1,2-Dichloroethene	<0.5
1,2-Dichloropropane	<0.5
Methylene chloride (DCM)	<0.5
Ethylbenzene	<0.5
Styrene	<0.5
Tetrachloroethene	<0.5
Toluene	<0.5
1,2,4-Trichlorobenzene	<0.5
1,1,1-Trichloroethane	<0.5
1,1,2-Trichloroethane	<0.5
Trichloroethene	<0.5
Vinyl chloride	<0.5
m&p-Xylene	<1.0
o-Xylene	<0.5

Monitored Cmpds. [40 CFR §141.40(e)]	
Chloroform	**14**
Bromodichloromethane	**21**
Dibromochloromethane	**15**
Bromoform	**3.2**
Dibromomethane	<1.0
1,3-Dichlorobenzene	<1.0
1,1-Dichloropropene	<1.0
1,1-Dichloroethane	<1.0
1,1,2,2- Tetrachloroethane	<1.0
1,3-Dichloropropane	<1.0
Chloromethane	<2.0
Bromomethane	<2.0
1,2,3-Trichloropropane	<1.0
1,1,1,2-Tetrachloroethane	<1.0
Chloroethane	<2.0
2,2-Dichloropropane	<1.0
2-Chlorotoluene	<1.0
4-Chlorotoluene	<1.0
Bromobenzene	<1.0
cis-1,3-Dichloropropene	<1.0
trans-1,3-Dichloropropene	<1.0

* Screened Compounds	
1,2-Dibromo-3-chloropropane	<1.0
1,2-Dibromoethane	<1.0

* **EPA 524.2 is not the approved method for analysis of these compounds. Compounds are listed per TNRCC request.**

Monitored Cmpds. [40 CFR §141.40(j)]	Result
1,2,4-Trimethylbenzene	<1.0
1,2,3-Trichlorobenzene	<1.0
n-Propylbenzene	<1.0
n-Butylbenzene	<1.0
Naphthalene	<1.0
Hexachlorobutadiene	<1.0
1,3,5-Trimethylbenzene	<1.0
4-Isopropyltoluene	<1.0
Isopropylbenzene	<1.0
t-Butylbenzene	<1.0
s-Butylbenzene	<1.0
Trichlorofluoromethane	<2.0
Dichlorodifluoromethane	<2.0
Bromochloromethane	<1.0

Other Compounds	
Acetone	<10
Acrylonitrile	<10
2-Butanone (MEK)	<10
Carbon disulfide	<1.0
Ethyl methacrylate	<1.0
2-Hexanone	<1.0
Iodomethane	<2.0
Methyl methacrylate	<1.0
4-Methyl-2-pentanone (MIBK)	<2.0
Methyl-t-butyl ether (MTBE)	<2.0
Tetrahydrofuran	<2.0
Vinyl acetate	<10

Tentative identification of the largest non-priority pollutant peaks is provided by comparison with the EPA/NIH mass spectral library. Approximate quantitation is performed using internal standards and an assumed response factor of one.

Tentative Compound ID	Result
none	

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Comments:

Approval: George A. Nesbitt

AUG 13 2002