

# 2004 Water Analysis



*The following are water analysis of the Upper Leon River MWD, for the year indicated, as required by the Texas Commission on Environmental Quality (TCEQ) and the Federal EPA.*

Analysis Type	Collection Date	Analysis Date
Trihalomethanes (THM)	2/16/04	2/18/04
Haloacetic Acids (HAA5)	2/16/04	2/24/04
Minerals	2/16/04	3/17/04
SOC <sub>5</sub>	2/16/04	2/24/04
Trihalomethanes (THM)	6/01/04	6/05/04
Haloacetic Acids (HAA5)	6/01/04	6/10/04
Trihalomethanes (THM)	7/08/04	7/09/04
Haloacetic Acids (HAA5)	7/08/04	7/14/04
VOC	7/08/04	7/15/04
Trihalomethanes (THM)	12/16/04	12/21/04
Haloacetic Acids (HAA5)	12/16/04	12/23/04

1100 W. 49th Street  
Austin, TX 78756

# Texas Department of Health Trihalomethanes by GC-ELCD

Contact: Gary Fest  
(512)458-7552

Submitter ID: 0470015  
TDH Lab ID: EP04-03386  
Method: EPA 502.2 Rev. 2.1 (THM)  
Data File: 02180017.D  
QC File: D:\HPCHEM\1\DATA\001G0218  
Sample Type: Water

Date Collected: 2/16/04  
Date Prepared: 2/18/04  
Date Analyzed: 2/18/2004 6:54  
Analyst: MGerlach  
Dilution Factor: 1  
Concentration Units: µg/l

## Compound:

## Result:

Chloroform

< 2.0

Bromodichloromethane

6.3

Dibromochloromethane

11.0

Bromoform

9.6

Total THM's

26.9

## COMMENTS:

Approval: Charles W. Sherman

# Texas Department of Health Haloacetic Acids GC Results

Submitter Sample Number 0470015  
 TDH Sample Name EP04-03410  
 Method 552.2  
 Data File Name 02230030.D  
 QC File D:\HPCHEM3\DATA\O04P0223\  
 Sample Type Water

Date Collected 2/16/04  
 Date Extracted 2/19/04  
 Date Analyzed 2/24/2004 2:31  
 Analyst NGrice  
 Dilution Factor 1  
 Concentration Units µg/L

Regulated Compounds:	Result:
Monochloroacetic acid	<2.0
Dichloroacetic acid	8.8
Trichloroacetic acid	<1.0
Monobromoacetic acid	<1.0
<u>Dibromoacetic acid</u>	<u>13.3</u>
Total:	22.1

### Monitor Compounds:

Bromochloroacetic acid	12.3
Dalapon	<1.0

Comments:

---



---

BUREAU OF LABORATORIES  
CLIA #45D0660644

**CONFIDENTIAL LABORATORY REPORT**  
**WATER ANALYSIS REPORT**  
**MINERALS**

Submitter Identification Number: 0470015

UPPER LEON RIVER MWD

PO BOX 67  
COMANCHE, TX 76442-0067

Laboratory Number: EP403470  
Sample Type:  
Sample Source: MAP 1  
Entry Points: 001  
Collector Remarks:

Date Collected: 02/16/2004  
Date Received: 02/18/2004  
Date Reported: 03/17/2004

Constituent Name	Result	Units	+/-
Chloride	102	mg/l	
Fluoride	0.2	mg/l	
Nitrate	0.07	mg/l	
Sulfate	81	mg/l	
pH	7.5		
Dil. Conduct (umhos/cm)	730		
Tot. Alka. as CaCO3	108	mg/l	
Bicarbonate	132	mg/l	
Carbonate	0	mg/l	
Dissolved solids	410	mg/l	
P. Alkalinity as CaCO3	0	mg/l	

# TEXAS DEPARTMENT OF HEALTH

## WATER ANALYSIS RESULTS by GC/MS

Submitter Number: 0470015  
 TDH Sample Number: ep403440  
 Method: 525.2 Rev 1.0 SOC5  
 Data File Number: A0953.D  
 QC Batch: o01s0224  
 Sample Type: water

Date Collected: 2/16/04  
 Date Extracted: 2/23/04  
 Date Analyzed: 2/24/04  
 Analyst: dhardin  
 Dilution Factor: 1.02  
 Conc. Units: µg/L

<b>Pesticides</b>	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
<del>Parathion, ethyl</del>	<del>&lt;0.20</del>
Parathion, methyl	<0.20
• Pentachlorophenol	<1.02
Prometon #	<0.20
Propachlor	<0.20
• Simazine	<0.20
Trifluralin	<0.20
<b>PAHs</b>	Result:
Acenaphthene	<0.20
Acenaphthylene	<0.20
Anthracene	<0.20
Benzo[a]anthracene	<0.20
• Benzo[a]pyrene	<0.20

<b>PAHs (cont.)</b>	Result:
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

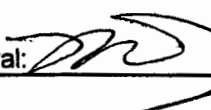
<b>PCBs</b>	Result:
2-Chlorobiphenyl	<0.20
2,3-Dichlorobiphenyl	<0.20
2,4,5-Trichlorobiphenyl	<0.20
2,2',4,4'-Tetrachlorobiphenyl	<0.20
2,2',3',4,6-Pentachlorobiphenyl	<0.20
2,2',4,4',5,6'-Hexachlorobiphenyl	<0.20
2,2',3,3',4,4',6-Heptachlorobiphenyl	<0.51
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	<0.51

<b>Phthalates</b>	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

**Tentatively Identified Cmpds\*\***      Result:  
 None

\* This analyte is of known instability and quantitation should be considered approximate  
 \*\* Significant nontarget peaks are tentatively identified using a mass spectral library search and quantitated using an assumed response factor of one.  
 J Analyte detected below the quantitation limit.  
 # This analyte is known for extraction instability and quantitation should be considered approximate.

• Regulated compounds  
 Comments:

Approval:  FEB 25 2004

1100 W. 49th Street  
Austin, TX 78756

# Texas Department of Health Trihalomethanes by GC-ELCD

Contact: Gary Fest  
(512)458-7552

Submitter ID: 0470015  
TDH Lab ID: EP04-13241  
Method: EPA 502.2 Rev. 2.1 (THM)  
Data File: 06040018.D  
QC File: D:\HPCHEM\1\DATA\001G0604  
Sample Type: Water

Date Collected: 06/01/2004  
Date Prepared: 06/04/2004  
Date Analyzed: 06/05/2004 12:10  
Analyst: M. Gerlach  
Dilution Factor: 1  
Concentration Units: µg/l

Compound:	Result:
Chloroform	2.5
Bromodichloromethane	5.6
Dibromochloromethane	6.4
Bromoform	3.9
Total THM's	18.4

COMMENTS:

**Texas Department of Health  
Haloacetic Acids GC Results**

Submitter Sample Number 0470015  
TDH Sample Name EP4-13214  
Method 552.2  
Data File Name 06090021.D  
QC File D:\HPCHEM\1\DATA\O12P0608\  
Sample Type Water

Date Collected 6/1/2004  
Date Extracted 6/8/2004  
Date Analyzed 6/10/2004 12:54  
Analyst FBabazadeh  
Dilution Factor 1  
Concentration Units µg/L

Regulated Compounds:	Result:
Monochloroacetic acid	<2.0
Dichloroacetic acid	11.4
Trichloroacetic acid	1.1
Monobromoacetic acid	1.3
Dibromoacetic acid	16.0
<u>Total:</u>	<u>29.8</u>

**Monitor Compounds:**

Bromochloroacetic acid	14.3
Dalapon	<1.0

Comments:

Approval: 

JUN 15 2004

1100 W. 49th Street  
Austin, TX 78756

# Texas Department of Health Trihalomethanes by GC-ELCD

Contact: Gary Fest  
(512)458-7552

Submitter ID: 0470015  
TDH Lab ID: EP04-15491  
Method: EPA 502.2 Rev. 2.1 (THM)  
Data File: 07090022.D  
QC File: D:\HPCHEM1\DATA\001\00709  
Sample Type: Water

Date Collected: 07/08/2004  
Date Prepared: 07/09/2004  
Date Analyzed: 07/09/2004 8:58  
Analyst: J. Obare/MGerlach  
Dilution Factor: 1  
Concentration Units: µg/l

Compound:	Result:
Chloroform	4.0
Bromodichloromethane	9.5
Dibromochloromethane	10.8
Bromoform	6.5
Total THM's	30.8

COMMENTS:

*Hossein Hajipour*

JUL 13 2004



**Texas Department of Health  
Haloacetic Acids GC Results**

Submitter Sample Number 0470015  
TDH Sample Name EP4-15467  
Method 552.2  
Data File Name 0714011.D  
QC File C:\MSDCHEM\1\DATA\IO19P0714\  
Sample Type Water

Date Collected 7/8/2004  
Date Extracted 7/13/2004  
Date Analyzed 7/14/2004 21:14  
Analyst M. Kabay  
Dilution Factor 1  
Concentration Units µg/L

Regulated Compounds:	Result:
Monochloroacetic acid	<2.0
Dichloroacetic acid	14.6
Trichloroacetic acid	2.0
Monobromoacetic acid	<1.0
<u>Dibromoacetic acid</u>	<u>18.9</u>
<b>Total:</b>	<b>35.5</b>

**Monitor Compounds:**

Bromochloroacetic acid	18.8
Dalapon	<1.0

Comments:

Approval: **JUL 16 2004**

**TEXAS DEPARTMENT OF HEALTH**  
**VOLATILE ORGANIC COMPOUNDS by GC/MS**

Submitter Number	TX0470015	Date Collected:	07/08/2004
TDH Sample Number	EP415640	Date Extracted:	07/15/2004
Method:	EPA 524.2 rev. 4.1	Date Analyzed:	07/15/2004
Data File Number:	0715-206.D	Analyst:	GNesbitt
Q.C. File:	OV020715.S	Dilution Factor:	1
Sample Type:	water	Concentration Units:	µg/l

<u>Regulated Cmpds. [40 CFR §141.61(a)]</u>	<u>Result</u>
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

<u>Monitored Cmpds. [40 CFR §141.40(e)]</u>	<u>Result</u>
<b>Chloroform</b>	<b>3.6</b>
<b>Bromodichloromethane</b>	<b>7.6</b>
<b>Dibromochloromethane</b>	<b>7.1</b>
<b>Bromoform</b>	<b>3.7</b>
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

<u>* Screened Compounds</u>	<u>Result</u>
1,2-Dibromo-3-chloropropane	<1.0
1,2-Dibromoethane	<1.0

<u>Monitored Cmpds. [40 CFR §141.40(j)]</u>	<u>Result</u>
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

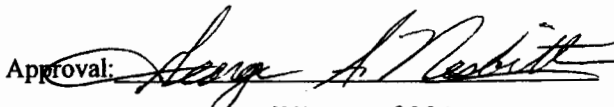
<u>Other Compounds</u>	<u>Result</u>
Acetone	<10
Acrylonitrile	<10
2-Butanone (MEK)	<10
Carbon disulfide	<1.0
Ethyl methacrylate	<1.0
2-Hexanone	<1.0
Iodomethane	<2.0
Methyl methacrylate	<1.0
4-Methyl-2-pentanone (MIBK)	<2.0
Methyl-t-butyl ether (MTBE)	<2.0
Tetrahydrofuran	<2.0
Vinyl acetate	<10

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.

<u>Tentative Compound ID</u>	<u>Result</u>
None	

comments:

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

Approval:   
JUL 19 2004

1100 W. 49th Street  
Austin, TX 78756

# Department of State Health Services

## Trihalomethanes by GC-ELCD

Contact: Carl Hogberg  
(512)458-7552

Submitter ID: 0470015  
DSHS Lab ID: EP04-27457  
Method: EPA 502.2 Rev. 2.1 (THM)  
Data File: 12210004.D  
QC File: D:\HPCHEM\1\DATA\O02G1221  
Sample Type: Water

Date Collected: 12/16/2004  
Date Prepared: 12/21/2004  
Date Analyzed: 12/21/2004 3:28  
Analyst: C. Sawyer/L.Zhong  
Dilution Factor: 1  
Concentration Units: µg/l

Compound:	Result:
Chloroform	4.4
Bromodichloromethane	9.5
Dibromochloromethane	11.2
Bromoform	5.5
Total THM's	30.6

COMMENTS:

Approval: \_\_\_\_\_



DEC 23 2004

**Texas Department of State Health Services  
Haloacetic Acids GC Results**

Submitter Sample Number	0470015	Date Collected	12/16/2004
TDH Sample Name	EP4-27500	Date Extracted	12/21/2004
Method	552.2	Date Analyzed	12/23/2004 14:25
Data File Name	12220030.D	Analyst	NGrice
QC File	C:\MSDCHEM\2\DATA\O15P1222\	Dilution Factor	1
Sample Type	Water	Concentration Units	µg/L

Regulated Compounds:	Result:
Monochloroacetic acid	<2.0
Dichloroacetic acid	15.0
Trichloroacetic acid	1.8
Monobromoacetic acid	1.3
<u>Dibromoacetic acid</u>	<u>12.3</u>
Total:	30.4

Monitor Compounds:	
Bromochloroacetic acid	16.5
Dalapon	<1.0

Comments: