

**Appendix 2-B – Analytical Results for SNMOC at Sites S-1 through S-5**



## CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
**ATTN:** Brain Boerner  
**PHONE:** na

**FAX:** na

**FILE #:** 3786.02.002.001

**REPORTED:** 05/24/11 11:34

**SUBMITTED:** 09/08/10 to 11/02/10

**AQS SITE CODE:**

**SITE CODE:** Natural Gas Air Quality Study

### ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
S1-P-09-04-10	0090802-01	Air	09/04/10 23:49	09/08/10 12:05
S4-P-09-04-10	0090802-02	Air	09/04/10 23:50	09/08/10 12:05
S1-P-09-07-10	0090906-01	Air	09/07/10 23:54	09/09/10 12:17
S2-P-09-07-10	0090906-02	Air	09/07/10 23:49	09/09/10 12:17
S4-P-09-07-10	0090906-03	Air	09/07/10 23:59	09/09/10 12:17
S4-D-09-07-10	0090906-04	Air	09/07/10 23:09	09/09/10 12:17
S5-P-09-07-10	0090906-05	Air	09/07/10 23:59	09/09/10 12:17
S5-D-09-07-10	0090906-06	Air	09/07/10 23:59	09/09/10 12:17
S1-P-09-10-10	0091501-01	Air	09/10/10 23:49	09/14/10 16:01
S4-P-09-10-10	0091501-02	Air	09/10/10 23:49	09/14/10 16:01
S5-P-09-10-10	0091501-03	Air	09/10/10 23:49	09/14/10 16:01
S1-P-09-13-10	0091614-01	Air	09/13/10 23:59	09/16/10 12:42
S2-P-09-13-10	0091614-02	Air	09/13/10 23:59	09/16/10 12:42
S4-P-09-13-10	0091614-03	Air	09/13/10 23:59	09/16/10 12:42
S5-P-09-13-10	0091614-04	Air	09/13/10 23:59	09/16/10 12:42
S1-P-09-16-10	0092120-01	Air	09/16/10 23:49	09/21/10 13:32
S1-P-09-19-10	0092120-02	Air	09/19/10 23:49	09/21/10 13:32
S2-P-09-16-10	0092120-03	Air	09/16/10 23:49	09/21/10 13:32
S2-P-09-19-10	0092120-04	Air	09/19/10 23:49	09/21/10 13:32

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PHONE: na	FAX: na		SITE CODE:	Natural Gas Air Quality Study
S3-P-09-16-10	0092120-05	Air	09/16/10 23:49	09/21/10 13:32
S3-P-09-19-10	0092120-06	Air	09/19/10 23:49	09/21/10 13:32
S4-P-09-16-10	0092120-07	Air	09/16/10 23:54	09/21/10 13:32
S4-P-09-19-10	0092120-09	Air	09/19/10 23:54	09/21/10 13:32
S4-D-09-19-10	0092120-10	Air	09/19/10 23:54	09/21/10 13:32
S5-P-09-16-10	0092120-13	Air	09/16/10 23:54	09/21/10 13:32
S5-P-09-19-10	0092120-15	Air	09/19/10 23:54	09/21/10 13:32
S5-D-09-19-10	0092120-16	Air	09/19/10 23:54	09/21/10 13:32
S1-P-09-22-10	0092403-01	Air	09/22/10 23:59	09/24/10 10:22
S2-P-09-22-10	0092403-02	Air	09/22/10 23:59	09/24/10 10:22
S3-P-09-22-10	0092403-03	Air	09/22/10 23:59	09/24/10 10:22
S4-P-09-22-10	0092403-05	Air	09/22/10 23:59	09/24/10 10:22
S5-P-09-22-10	0092403-07	Air	09/22/10 23:59	09/24/10 10:22
S1-P-09-25-10	0092901-01	Air	09/25/10 23:49	09/28/10 16:00
S2-P-09-25-10	0092901-02	Air	09/25/10 23:49	09/28/10 16:00
S3-P-09-25-10	0092901-03	Air	09/25/10 23:49	09/28/10 16:00
S4-P-09-25-10	0092901-04	Air	09/25/10 23:49	09/28/10 16:00
S5-P-09-25-10	0092901-05	Air	09/25/10 23:49	09/28/10 16:00
S1-P-09-28-10	0093008-01	Air	09/28/10 23:49	09/30/10 14:35
S2-P-09-28-10	0093008-02	Air	09/28/10 23:49	09/30/10 14:35
S3-P-09-28-10	0093008-03	Air	09/28/10 23:49	09/30/10 14:35
S4-P-09-28-10	0093008-04	Air	09/28/10 23:49	09/30/10 14:35
S5-P-09-28-10	0093008-05	Air	09/28/10 23:49	09/30/10 14:35
S1-P-10-1-10	0100501-01	Air	10/01/10 23:59	10/05/10 13:09

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PHONE: na	FAX: na		SITE CODE:	Natural Gas Air Quality Study
S2-P-10-1-10	0100501-02	Air	10/01/10 23:59	10/05/10 13:09
S3-P-10-1-10	0100501-03	Air	10/01/10 23:59	10/05/10 13:09
S4-P-10-1-10	0100501-04	Air	10/01/10 23:59	10/05/10 13:09
S5-P-10-1-10	0100501-05	Air	10/01/10 23:59	10/05/10 13:09
S1-P-10-4-10	0100601-01	Air	10/04/10 23:59	10/06/10 10:58
S2-P-10-4-10	0100601-02	Air	10/04/10 23:59	10/06/10 10:58
S3-P-10-4-10	0100601-03	Air	10/04/10 23:59	10/06/10 10:58
S4-D-10-4-10	0100601-04	Air	10/04/10 23:59	10/06/10 10:58
S4-P-10-4-10	0100601-05	Air	10/04/10 23:59	10/06/10 10:58
S5-P-10-4-10	0100601-06	Air	10/04/10 23:59	10/06/10 10:58
S5-D-10-4-10	0100601-07	Air	10/04/10 23:59	10/06/10 10:58
S1-P-10-7-10	0101208-01	Air	10/07/10 23:59	10/12/10 10:29
S2-P-10-7-10	0101208-02	Air	10/07/10 23:59	10/12/10 10:29
S3-P-10-7-10	0101208-03	Air	10/07/10 23:59	10/12/10 10:29
S4-P-10-7-10	0101208-04	Air	10/07/10 23:59	10/12/10 10:29
S5-P-10-7-10	0101208-05	Air	10/07/10 23:59	10/12/10 10:29
S1-P-10-10-10	0101208-08	Air	10/10/10 23:59	10/12/10 10:29
S2-P-10-10-10	0101208-09	Air	10/10/10 23:59	10/12/10 10:29
S3-P-10-10-10	0101208-10	Air	10/10/10 23:59	10/12/10 10:29
S4-P-10-10-10	0101208-11	Air	10/10/10 23:59	10/12/10 10:29
S5-P-10-10-10	0101208-12	Air	10/10/10 23:59	10/12/10 10:29
S1-P-10-13-10	0101514-01	Air	10/13/10 23:59	10/15/10 10:47
S2-P-10-13-10	0101514-02	Air	10/13/10 23:59	10/15/10 10:47
S3-P-10-13-10	0101514-03	Air	10/13/10 23:59	10/15/10 10:47

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PHONE: na	FAX: na		SITE CODE:	Natural Gas Air Quality Study
S4-P-10-13-10	0101514-04	Air	10/13/10 23:59	10/15/10 10:47
S4-D-10-13-10	0101514-05	Air	10/13/10 23:59	10/15/10 10:47
S5-P-10-13-10	0101514-06	Air	10/13/10 23:59	10/15/10 10:47
S5-D-10-13-10	0101514-07	Air	10/13/10 23:59	10/15/10 10:47
S1-P-10-16-10	0102001-01	Air	10/16/10 23:59	10/19/10 15:32
S2-P-10-16-10	0102001-02	Air	10/16/10 23:59	10/19/10 15:32
S3-P-10-16-10	0102001-03	Air	10/16/10 23:59	10/19/10 15:32
S4-P-10-16-10	0102001-04	Air	10/16/10 23:59	10/19/10 15:32
S5-P-10-16-10	0102001-05	Air	10/16/10 23:59	10/19/10 15:32
S1-P-10-19-10	0102116-01	Air	10/19/10 23:59	10/21/10 10:37
S2-P-10-19-10	0102116-02	Air	10/19/10 23:59	10/21/10 10:37
S3-P-10-19-10	0102116-03	Air	10/19/10 23:59	10/21/10 10:37
S4-P-10-19-10	0102116-04	Air	10/19/10 23:59	10/21/10 10:37
S5-P-10-19-10	0102207-01	Air	10/19/10 23:59	10/22/10 14:54
S1-P-10-22-10	0102621-01	Air	10/22/10 23:59	10/26/10 12:26
S2-P-10-22-10	0102621-02	Air	10/22/10 23:59	10/26/10 12:26
S3-P-10-22-10	0102621-03	Air	10/22/10 23:59	10/26/10 12:26
S4-P-10-22-10	0102621-04	Air	10/22/10 23:59	10/26/10 12:26
S5-P-10-22-10	0102621-05	Air	10/22/10 23:59	10/26/10 12:26
S1-P-10-25-10	0102801-01	Air	10/25/10 23:59	10/27/10 15:42
S2-P-10-25-10	0102801-02	Air	10/25/10 23:59	10/27/10 15:42
S3-P-10-25-10	0102801-03	Air	10/25/10 23:59	10/27/10 15:42
S4-P-10-25-10	0102801-04	Air	10/25/10 23:59	10/27/10 15:42
S5-P-10-25-10	0102801-05	Air	10/25/10 23:59	10/27/10 15:42

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**SITE CODE:** Natural Gas Air Quality Study

S1-P-10-28-10	0110212-01	Air	10/28/10 23:59	11/02/10 13:32
S1-P-10-31-10	0110212-02	Air	10/31/10 23:59	11/02/10 13:32
S2-P-10-28-10	0110212-03	Air	10/28/10 23:59	11/02/10 13:32
S2-P-10-31-10	0110212-04	Air	10/31/10 23:59	11/02/10 13:32
S3-P-10-28-10	0110212-05	Air	10/28/10 23:59	11/02/10 13:32
S4-P-10-28-10	0110212-06	Air	10/28/10 23:59	11/02/10 13:32
S4-D-10-28-10	0110212-07	Air	10/28/10 23:59	11/02/10 13:32
S4-P-10-31-10	0110212-08	Air	10/31/10 23:59	11/02/10 13:32
S5-P-10-28-10	0110212-09	Air	10/28/10 23:59	11/02/10 13:32
S5-D-10-28-10	0110212-10	Air	10/28/10 23:59	11/02/10 13:32
S5-P-10-31-10	0110212-11	Air	10/31/10 23:59	11/02/10 13:32



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 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-04-10

Lab ID: 0090802-01

Sampled: 09/04/10 23:49

Pressure @ Receipt: 5.5" Hg

Canister #: 5094

Received: 09/08/10 12:05

Comments: Site 1

Analyzed: 09/14/10 02:39

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.91	0.96	1.10		0.380
Ethane	5.47	2.74	3.37		0.120
Propane	4.77	1.59	2.87		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	0.944	0.24	0.56		0.130
Isobutene/1-Butene	0.631	0.16	0.36		0.150
n-Butane	1.34	0.34	0.80		0.170
trans-2-Butene	0.0900	0.02	0.05	U	0.140
cis-2-Butene	0.154	0.04	0.09	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.07	0.61	1.82		0.190
1-Pentene	0.215	0.04	0.12		0.120
2-Methyl-1-butene	0.105	0.02	0.06	U	0.240
n-Pentane	1.51	0.30	0.89		0.0900
Isoprene	1.58	0.32	0.88		0.240
trans-2-Pentene	0.136	0.03	0.08	U	0.140
cis-2-Pentene	0.0980	0.02	0.06	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.719	0.12	0.42		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.240	0.05	0.14		0.120
2,3-Dimethylbutane	0.477	0.08	0.28		0.200
2-Methylpentane	1.12	0.19	0.66		0.140
3-Methylpentane	0.678	0.11	0.40		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.236	0.04	0.14	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.534	0.09	0.31		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	0.223	0.04	0.13	U	0.360
Methylcyclopentane	0.850	0.14	0.49		0.140
2,4-Dimethylpentane	0.228	0.03	0.13	U	0.230
Cyclohexane	0.267	0.04	0.15		0.190
2-Methylhexane	0.404	0.06	0.24		0.110
2,3-Dimethylpentane	0.690	0.10	0.41		0.370
3-Methylhexane	0.988	0.14	0.58		0.150
1-Heptene	ND	ND	ND	U	0.370

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 REPORTED: 05/24/11 11:34  
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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-04-10 Lab ID: 0090802-01 Sampled: 09/04/10 23:49  
 Pressure @ Receipt: 5.5" Hg Canister #: 5094 Received: 09/08/10 12:05  
 Comments: Site 1 Analyzed: 09/14/10 02:39

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>1.04</b>	<b>0.13</b>	<b>0.61</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.277</b>	<b>0.04</b>	<b>0.16</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.460</b>	<b>0.07</b>	<b>0.26</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.156	0.02	0.09	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.439</b>	<b>0.05</b>	<b>0.26</b>		<b>0.140</b>
2-Methylheptane	0.150	0.02	0.09	U	0.170
<b>3-Methylheptane</b>	<b>0.152</b>	<b>0.02</b>	<b>0.09</b>		<b>0.110</b>
1-Octene	0.125	0.02	0.07	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.207</b>	<b>0.02</b>	<b>0.12</b>		<b>0.180</b>
Isopropylbenzene	0.103	0.01	0.06	U	0.210
<b>a-Pinene</b>	<b>0.325</b>	<b>0.04</b>	<b>0.23</b>		<b>0.240</b>
n-Propylbenzene	0.178	0.02	0.10	U	0.200
m-Ethyltoluene	0.145	0.02	0.08	U	0.150
p-Ethyltoluene	0.193	0.02	0.11	U	0.240
<b>1,3,5-Trimethylbenzene</b>	<b>0.205</b>	<b>0.02</b>	<b>0.11</b>		<b>0.170</b>
o-Ethyltoluene	0.113	0.01	0.06	U	0.180
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.300</b>	<b>0.03</b>	<b>0.16</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.488</b>	<b>0.05</b>	<b>0.29</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	0.120	0.01	0.07	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.672</b>	<b>0.06</b>	<b>0.39</b>		<b>0.220</b>
1-Dodecene	0.111	0.01	0.06	U	0.290
<b>n-Dodecane</b>	<b>0.511</b>	<b>0.04</b>	<b>0.30</b>		<b>0.290</b>
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>36.2</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>48.8</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>84.9</b>	<b>ND</b>	<b>ND</b>		





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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

PHONE: na FAX: na

Description: S4-P-09-04-10 Lab ID: 0090802-02 Sampled: 09/04/10 23:50  
 Pressure @ Receipt: 7.5" Hg Canister #: 5005 Received: 09/08/10 12:05  
 Comments: Site 4 Analyzed: 09/14/10 03:44

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	9.51	4.76	5.47		0.380
Ethane	31.8	15.90	19.60		0.120
Propane	50.4	16.80	30.40		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	5.05	1.26	3.01		0.130
Isobutene/1-Butene	2.38	0.60	1.37		0.150
n-Butane	10.5	2.63	6.25		0.170
trans-2-Butene	0.751	0.19	0.43		0.140
cis-2-Butene	0.787	0.20	0.45		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	51.6	10.30	30.50		0.190
1-Pentene	1.27	0.25	0.73		0.120
2-Methyl-1-butene	0.530	0.11	0.31		0.240
n-Pentane	19.8	3.96	11.70		0.0900
Isoprene	1.06	0.21	0.59		0.240
trans-2-Pentene	4.25	0.85	2.44		0.140
cis-2-Pentene	1.48	0.30	0.85		0.190
2-Methyl-2-butene	4.74	0.95	2.73		0.240
2,2-Dimethylbutane	1.48	0.25	0.87		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	1.93	0.39	1.11		0.120
2,3-Dimethylbutane	5.03	0.84	2.96		0.200
2-Methylpentane	20.4	3.40	12.00		0.140
3-Methylpentane	6.64	1.11	3.91		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.336	0.06	0.19	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	5.88	0.98	3.46		0.240
trans-2-Hexene	0.618	0.10	0.36		0.360
cis-2-Hexene	0.188	0.03	0.11	U	0.360
Methylcyclopentane	4.16	0.69	2.39		0.140
2,4-Dimethylpentane	1.95	0.28	1.14		0.230
Cyclohexane	1.57	0.26	0.90		0.190
2-Methylhexane	2.42	0.35	1.42		0.110
2,3-Dimethylpentane	2.27	0.32	1.33		0.370
3-Methylhexane	3.66	0.52	2.15		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	8.01	1.00	4.69		0.170

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-04-10 Lab ID: 0090802-02 Sampled: 09/04/10 23:50  
 Pressure @ Receipt: 7.5" Hg Canister #: 5005 Received: 09/08/10 12:05  
 Comments: Site 4 Analyzed: 09/14/10 03:44

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	1.75	0.25	1.03		0.180
Methylcyclohexane	1.91	0.27	1.10		0.190
2,2,3-Trimethylpentane	1.18	0.15	0.69		0.280
2,3,4-Trimethylpentane	2.28	0.29	1.33		0.140
2-Methylheptane	0.675	0.08	0.40		0.170
3-Methylheptane	0.779	0.10	0.46		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.546	0.06	0.32		0.180
Isopropylbenzene	0.146	0.02	0.09	U	0.210
a-Pinene	0.943	0.12	0.66		0.240
n-Propylbenzene	0.374	0.04	0.21		0.200
m-Ethyltoluene	0.551	0.06	0.30		0.150
p-Ethyltoluene	0.392	0.04	0.22		0.240
1,3,5-Trimethylbenzene	0.559	0.06	0.31		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.884	0.10	0.48		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.594	0.06	0.35		0.230
1,2,3-Trimethylbenzene	0.926	0.10	0.51		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.182	0.02	0.10		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.685	0.06	0.40		0.220
1-Dodecene	0.448	0.04	0.26		0.290
n-Dodecane	0.453	0.04	0.26		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	279	ND	ND		
Sum of Unknowns	2130	ND	ND		
TNMOC	2410	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-07-10 Lab ID: 0090906-01 Sampled: 09/07/10 23:54  
 Pressure @ Receipt: 6.5" Hg Canister #: 5017 Received: 09/09/10 12:17  
 Comments: Site 1 Analyzed: 09/14/10 04:50

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.43	1.22	1.40		0.380
Ethane	4.27	2.14	2.63		0.120
Propane	7.74	2.58	4.66		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.26	0.32	0.75		0.130
Isobutene/1-Butene	0.884	0.22	0.51		0.150
n-Butane	1.80	0.45	1.07		0.170
trans-2-Butene	0.115	0.03	0.07	U	0.140
cis-2-Butene	0.161	0.04	0.09	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.36	0.67	1.99		0.190
1-Pentene	0.225	0.05	0.13		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	1.75	0.35	1.03		0.0900
Isoprene	1.03	0.21	0.58		0.240
trans-2-Pentene	ND	ND	ND	U	0.140
cis-2-Pentene	0.135	0.03	0.08	U	0.190
2-Methyl-2-butene	0.0900	0.02	0.05	U	0.240
2,2-Dimethylbutane	0.385	0.06	0.23		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.222	0.04	0.13		0.120
2,3-Dimethylbutane	0.544	0.09	0.32		0.200
2-Methylpentane	1.22	0.20	0.72		0.140
3-Methylpentane	0.756	0.13	0.45		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.281	0.05	0.16	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.723	0.12	0.43		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	0.194	0.03	0.11	U	0.360
Methylcyclopentane	0.755	0.13	0.43		0.140
2,4-Dimethylpentane	0.315	0.05	0.19		0.230
Cyclohexane	0.285	0.05	0.16		0.190
2-Methylhexane	0.548	0.08	0.32		0.110
2,3-Dimethylpentane	1.04	0.15	0.61		0.370
3-Methylhexane	1.12	0.16	0.66		0.150
1-Heptene	ND	ND	ND	U	0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-07-10 Lab ID: 0090906-01 Sampled: 09/07/10 23:54  
 Pressure @ Receipt: 6.5" Hg Canister #: 5017 Received: 09/09/10 12:17  
 Comments: Site 1 Analyzed: 09/14/10 04:50

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>1.10</b>	<b>0.14</b>	<b>0.64</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.416</b>	<b>0.06</b>	<b>0.24</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.542</b>	<b>0.08</b>	<b>0.31</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.211	0.03	0.12	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.469</b>	<b>0.06</b>	<b>0.27</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.241</b>	<b>0.03</b>	<b>0.14</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.155</b>	<b>0.02</b>	<b>0.09</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	0.124	0.01	0.07	U	0.240
<b>n-Nonane</b>	<b>0.260</b>	<b>0.03</b>	<b>0.15</b>		<b>0.180</b>
Isopropylbenzene	0.109	0.01	0.07	U	0.210
<b>a-Pinene</b>	<b>0.633</b>	<b>0.08</b>	<b>0.44</b>		<b>0.240</b>
n-Propylbenzene	0.130	0.01	0.07	U	0.200
<b>m-Ethyltoluene</b>	<b>0.266</b>	<b>0.03</b>	<b>0.15</b>		<b>0.150</b>
p-Ethyltoluene	0.184	0.02	0.10	U	0.240
1,3,5-Trimethylbenzene	0.121	0.01	0.07	U	0.170
<b>o-Ethyltoluene</b>	<b>0.208</b>	<b>0.02</b>	<b>0.11</b>		<b>0.180</b>
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.356</b>	<b>0.04</b>	<b>0.20</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.743</b>	<b>0.07</b>	<b>0.43</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>1.47</b>	<b>0.13</b>	<b>0.86</b>		<b>0.220</b>
<b>1-Dodecene</b>	<b>0.322</b>	<b>0.03</b>	<b>0.19</b>		<b>0.290</b>
<b>n-Dodecane</b>	<b>1.41</b>	<b>0.12</b>	<b>0.82</b>		<b>0.290</b>
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>43.1</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>74.9</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>118</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-07-10

Lab ID: 0090906-02

Sampled: 09/07/10 23:49

Pressure @ Receipt: 5" Hg

Canister #: 5008

Received: 09/09/10 12:17

Comments: Site 2

Analyzed: 09/14/10 05:57

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.01	1.51	1.73		0.380
Ethane	7.98	3.99	4.92		0.120
Propane	7.11	2.37	4.28		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.85	0.71	1.70		0.130
Isobutene/1-Butene	0.992	0.25	0.57		0.150
n-Butane	4.82	1.21	2.87		0.170
trans-2-Butene	0.174	0.04	0.10		0.140
cis-2-Butene	0.263	0.07	0.15		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	15.5	3.10	9.17		0.190
1-Pentene	0.337	0.07	0.19		0.120
2-Methyl-1-butene	0.309	0.06	0.18		0.240
n-Pentane	8.02	1.60	4.74		0.0900
Isoprene	1.22	0.24	0.68		0.240
trans-2-Pentene	0.803	0.16	0.46		0.140
cis-2-Pentene	0.270	0.05	0.16		0.190
2-Methyl-2-butene	0.405	0.08	0.23		0.240
2,2-Dimethylbutane	0.687	0.12	0.40		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.765	0.15	0.44		0.120
2,3-Dimethylbutane	1.30	0.22	0.77		0.200
2-Methylpentane	2.09	0.35	1.23		0.140
3-Methylpentane	1.78	0.30	1.05		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.350	0.06	0.20	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.54	0.26	0.91		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	0.184	0.03	0.11	U	0.360
Methylcyclopentane	1.05	0.18	0.60		0.140
2,4-Dimethylpentane	0.589	0.08	0.35		0.230
Cyclohexane	0.959	0.16	0.55		0.190
2-Methylhexane	0.806	0.12	0.47		0.110
2,3-Dimethylpentane	1.45	0.21	0.85		0.370
3-Methylhexane	1.25	0.18	0.73		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-07-10 Lab ID: 0090906-02 Sampled: 09/07/10 23:49  
 Pressure @ Receipt: 5" Hg Canister #: 5008 Received: 09/09/10 12:17  
 Comments: Site 2 Analyzed: 09/14/10 05:57

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	2.13	0.27	1.25		0.170
n-Heptane	0.646	0.09	0.38		0.180
Methylcyclohexane	0.864	0.12	0.50		0.190
2,2,3-Trimethylpentane	0.333	0.04	0.20		0.280
2,3,4-Trimethylpentane	0.657	0.08	0.38		0.140
2-Methylheptane	0.323	0.04	0.19		0.170
3-Methylheptane	0.241	0.03	0.14		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	0.158	0.02	0.09	U	0.240
n-Nonane	0.463	0.05	0.27		0.180
Isopropylbenzene	0.110	0.01	0.07	U	0.210
a-Pinene	0.413	0.05	0.29		0.240
n-Propylbenzene	0.165	0.02	0.09	U	0.200
m-Ethyltoluene	0.397	0.04	0.22		0.150
p-Ethyltoluene	0.257	0.03	0.14		0.240
1,3,5-Trimethylbenzene	0.342	0.04	0.19		0.170
o-Ethyltoluene	0.353	0.04	0.19		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.471	0.05	0.26		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	1.21	0.12	0.71		0.230
1,2,3-Trimethylbenzene	0.131	0.01	0.07	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	1.62	0.15	0.94		0.220
1-Dodecene	0.283	0.02	0.16	U	0.290
n-Dodecane	1.02	0.09	0.59		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>81.5</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>108</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>189</b>	<b>ND</b>	<b>ND</b>		



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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-07-10 Lab ID: 0090906-03 Sampled: 09/07/10 23:59  
 Pressure @ Receipt: 9.5" Hg Canister #: 5025 Received: 09/09/10 12:17  
 Comments: Dup1 Site 4 Analyzed: 09/13/10 17:58

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.23	1.62	1.86		0.380
Ethane	8.12	4.06	5.00		0.120
Propane	8.91	2.97	5.37		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.52	0.38	0.91		0.130
Isobutene/1-Butene	0.908	0.23	0.52		0.150
n-Butane	3.92	0.98	2.33		0.170
trans-2-Butene	0.328	0.08	0.19		0.140
cis-2-Butene	0.374	0.09	0.22		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	12.6	2.52	7.45		0.190
1-Pentene	0.464	0.09	0.27		0.120
2-Methyl-1-butene	0.547	0.11	0.31		0.240
n-Pentane	5.31	1.06	3.14		0.0900
Isoprene	0.627	0.13	0.35		0.240
trans-2-Pentene	0.806	0.16	0.46		0.140
cis-2-Pentene	0.451	0.09	0.26		0.190
2-Methyl-2-butene	0.832	0.17	0.48		0.240
2,2-Dimethylbutane	0.570	0.10	0.34		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.536	0.11	0.31		0.120
2,3-Dimethylbutane	1.34	0.22	0.79		0.200
2-Methylpentane	4.70	0.78	2.77		0.140
3-Methylpentane	2.02	0.34	1.19		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.290	0.05	0.17	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.86	0.31	1.09		0.240
trans-2-Hexene	0.156	0.03	0.09	U	0.360
cis-2-Hexene	0.0870	0.01	0.05	U	0.360
Methylcyclopentane	1.64	0.27	0.94		0.140
2,4-Dimethylpentane	0.654	0.09	0.38		0.230
Cyclohexane	0.992	0.17	0.57		0.190
2-Methylhexane	0.977	0.14	0.57		0.110
2,3-Dimethylpentane	0.655	0.09	0.38		0.370
3-Methylhexane	1.71	0.24	1.00		0.150
1-Heptene	ND	ND	ND	U	0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-07-10 Lab ID: 0090906-03 Sampled: 09/07/10 23:59  
 Pressure @ Receipt: 9.5" Hg Canister #: 5025 Received: 09/09/10 12:17  
 Comments: Dup1 Site 4 Analyzed: 09/13/10 17:58

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	2.94	0.37	1.72		0.170
n-Heptane	0.687	0.10	0.40		0.180
Methylcyclohexane	1.01	0.14	0.58		0.190
2,2,3-Trimethylpentane	0.536	0.07	0.31		0.280
2,3,4-Trimethylpentane	0.924	0.12	0.54		0.140
2-Methylheptane	0.400	0.05	0.23		0.170
3-Methylheptane	0.304	0.04	0.18		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	0.108	0.01	0.06	U	0.240
n-Nonane	0.301	0.03	0.18		0.180
Isopropylbenzene	0.117	0.01	0.07	U	0.210
a-Pinene	0.238	0.03	0.17	U	0.240
n-Propylbenzene	0.169	0.02	0.09	U	0.200
m-Ethyltoluene	0.345	0.04	0.19		0.150
p-Ethyltoluene	0.222	0.02	0.12	U	0.240
1,3,5-Trimethylbenzene	0.337	0.04	0.18		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.473	0.05	0.26		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.396	0.04	0.23		0.230
1,2,3-Trimethylbenzene	0.152	0.02	0.08	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.515	0.05	0.30		0.220
1-Dodecene	0.872	0.07	0.50		0.290
n-Dodecane	0.353	0.03	0.21		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	78.6	ND	ND		
Sum of Unknowns	102	ND	ND		
TNMOC	180	ND	ND		





# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-D-09-07-10 Lab ID: 0090906-04 **Sampled:** 09/07/10 23:09  
 Pressure @ Receipt: 9.5" Hg Canister #: 5148 **Received:** 09/09/10 12:17  
 Comments: Dup2 Site 4 **Analyzed:** 09/13/10 19:03

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.07	1.54	1.76		0.380
Ethane	8.02	4.01	4.94		0.120
Propane	8.76	2.92	5.28		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.45	0.36	0.86		0.130
Isobutene/1-Butene	0.837	0.21	0.48		0.150
n-Butane	3.78	0.95	2.25		0.170
trans-2-Butene	0.263	0.07	0.15		0.140
cis-2-Butene	0.353	0.09	0.20		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	12.1	2.42	7.16		0.190
1-Pentene	0.419	0.08	0.24		0.120
2-Methyl-1-butene	0.547	0.11	0.31		0.240
n-Pentane	5.12	1.02	3.03		0.0900
Isoprene	0.644	0.13	0.36		0.240
trans-2-Pentene	0.771	0.15	0.44		0.140
cis-2-Pentene	0.431	0.09	0.25		0.190
2-Methyl-2-butene	0.791	0.16	0.46		0.240
2,2-Dimethylbutane	0.475	0.08	0.28		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.488	0.10	0.28		0.120
2,3-Dimethylbutane	1.26	0.21	0.74		0.200
2-Methylpentane	3.73	0.62	2.20		0.140
3-Methylpentane	1.91	0.32	1.12		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.221	0.04	0.13	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.82	0.30	1.07		0.240
trans-2-Hexene	0.135	0.02	0.08	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.47	0.25	0.85		0.140
2,4-Dimethylpentane	0.609	0.09	0.36		0.230
Cyclohexane	0.512	0.09	0.29		0.190
2-Methylhexane	0.951	0.14	0.56		0.110
2,3-Dimethylpentane	1.18	0.17	0.69		0.370
3-Methylhexane	1.95	0.28	1.14		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-D-09-07-10 Lab ID: 0090906-04 Sampled: 09/07/10 23:09  
 Pressure @ Receipt: 9.5" Hg Canister #: 5148 Received: 09/09/10 12:17  
 Comments: Dup2 Site 4 Analyzed: 09/13/10 19:03

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	2.89	0.36	1.69		0.170
n-Heptane	0.671	0.10	0.39		0.180
Methylcyclohexane	0.884	0.13	0.51		0.190
2,2,3-Trimethylpentane	0.499	0.06	0.29		0.280
2,3,4-Trimethylpentane	0.924	0.12	0.54		0.140
2-Methylheptane	0.311	0.04	0.18		0.170
3-Methylheptane	0.250	0.03	0.15		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.279	0.03	0.16		0.180
Isopropylbenzene	0.133	0.02	0.08	U	0.210
a-Pinene	0.382	0.05	0.27		0.240
n-Propylbenzene	0.220	0.02	0.12		0.200
m-Ethyltoluene	0.304	0.03	0.17		0.150
p-Ethyltoluene	0.240	0.03	0.13		0.240
1,3,5-Trimethylbenzene	0.318	0.04	0.17		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.478	0.05	0.26		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.357	0.04	0.21		0.230
1,2,3-Trimethylbenzene	0.147	0.02	0.08	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.590	0.05	0.34		0.220
1-Dodecene	2.25	0.19	1.29		0.290
n-Dodecane	0.574	0.05	0.33		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	76.8	ND	ND		
Sum of Unknowns	68.8	ND	ND		
TNMOOC	146	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-07-10 Lab ID: 0090906-05 Sampled: 09/07/10 23:59  
 Pressure @ Receipt: 11" Hg Canister #: 5079 Received: 09/09/10 12:17  
 Comments: Dup1 Site 5 Analyzed: 09/13/10 22:15

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.99	1.00	1.14		0.380
Ethane	9.01	4.51	5.55		0.120
Propane	4.77	1.59	2.87		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.69	0.42	1.01		0.130
Isobutene/1-Butene	0.573	0.14	0.33		0.150
n-Butane	6.59	1.65	3.92		0.170
trans-2-Butene	0.0900	0.02	0.05	U	0.140
cis-2-Butene	0.159	0.04	0.09	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	1.55	0.31	0.92		0.190
1-Pentene	0.247	0.05	0.14		0.120
2-Methyl-1-butene	0.113	0.02	0.07	U	0.240
n-Pentane	1.63	0.33	0.96		0.0900
Isoprene	0.516	0.10	0.29		0.240
trans-2-Pentene	0.152	0.03	0.09		0.140
cis-2-Pentene	0.134	0.03	0.08	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.285	0.05	0.17		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.189	0.04	0.11		0.120
2,3-Dimethylbutane	0.312	0.05	0.18		0.200
2-Methylpentane	ND	ND	ND	U	0.140
3-Methylpentane	0.509	0.08	0.30		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.281	0.05	0.16	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.568	0.09	0.33		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.454	0.08	0.26		0.140
2,4-Dimethylpentane	0.195	0.03	0.11	U	0.230
Cyclohexane	0.236	0.04	0.14		0.190
2-Methylhexane	0.448	0.06	0.26		0.110
2,3-Dimethylpentane	0.655	0.09	0.38		0.370
3-Methylhexane	0.856	0.12	0.50		0.150
1-Heptene	0.155	0.02	0.09	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-07-10 Lab ID: 0090906-05 Sampled: 09/07/10 23:59  
 Pressure @ Receipt: 11" Hg Canister #: 5079 Received: 09/09/10 12:17  
 Comments: Dup1 Site 5 Analyzed: 09/13/10 22:15

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.573	0.07	0.34		0.170
n-Heptane	0.312	0.04	0.18		0.180
Methylcyclohexane	0.361	0.05	0.21		0.190
2,2,3-Trimethylpentane	0.127	0.02	0.07	U	0.280
2,3,4-Trimethylpentane	0.281	0.04	0.16		0.140
2-Methylheptane	0.244	0.03	0.14		0.170
3-Methylheptane	0.202	0.03	0.12		0.110
1-Octene	0.224	0.03	0.13	U	0.280
1-Nonene	0.146	0.02	0.08	U	0.240
n-Nonane	0.230	0.03	0.13		0.180
Isopropylbenzene	0.171	0.02	0.11	U	0.210
a-Pinene	0.735	0.09	0.51		0.240
n-Propylbenzene	0.160	0.02	0.09	U	0.200
m-Ethyltoluene	0.311	0.03	0.17		0.150
p-Ethyltoluene	0.188	0.02	0.10	U	0.240
1,3,5-Trimethylbenzene	0.195	0.02	0.11		0.170
o-Ethyltoluene	0.104	0.01	0.06	U	0.180
b-Pinene	0.0940	0.01	0.07	U	0.240
1,2,4-Trimethylbenzene	0.290	0.03	0.16		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.328	0.03	0.19		0.230
1,2,3-Trimethylbenzene	0.108	0.01	0.06	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.192	0.02	0.11		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.437	0.04	0.25		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.337	0.03	0.20		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	40.7	ND	ND		
Sum of Unknowns	75.5	ND	ND		
TNMOC	116	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S5-D-09-07-10 Lab ID: 0090906-06 Sampled: 09/07/10 23:59  
 Pressure @ Receipt: 11" Hg Canister #: 5016 Received: 09/09/10 12:17  
 Comments: Dup2 Site 5 Analyzed: 09/13/10 23:21

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.74	0.87	1.00		0.380
Ethane	9.12	4.56	5.62		0.120
Propane	4.79	1.60	2.89		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.72	0.43	1.02		0.130
Isobutene/1-Butene	0.549	0.14	0.32		0.150
n-Butane	1.88	0.47	1.12		0.170
trans-2-Butene	0.114	0.03	0.07	U	0.140
cis-2-Butene	0.147	0.04	0.08	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	1.57	0.31	0.93		0.190
1-Pentene	0.178	0.04	0.10		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	1.40	0.28	0.83		0.0900
Isoprene	0.460	0.09	0.26		0.240
trans-2-Pentene	0.139	0.03	0.08	U	0.140
cis-2-Pentene	0.121	0.02	0.07	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.258	0.04	0.15		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.237	0.04	0.14	U	0.360
Cyclopentane	0.214	0.04	0.12		0.120
2,3-Dimethylbutane	0.305	0.05	0.18		0.200
2-Methylpentane	0.702	0.12	0.41		0.140
3-Methylpentane	0.576	0.10	0.34		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.220	0.04	0.13	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.518	0.09	0.31		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.422	0.07	0.24		0.140
2,4-Dimethylpentane	0.182	0.03	0.11	U	0.230
Cyclohexane	0.272	0.05	0.16		0.190
2-Methylhexane	0.332	0.05	0.20		0.110
2,3-Dimethylpentane	0.700	0.10	0.41		0.370
3-Methylhexane	0.790	0.11	0.46		0.150
1-Heptene	ND	ND	ND	U	0.370

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 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-D-09-07-10 Lab ID: 0090906-06 Sampled: 09/07/10 23:59  
 Pressure @ Receipt: 11" Hg Canister #: 5016 Received: 09/09/10 12:17  
 Comments: Dup2 Site 5 Analyzed: 09/13/10 23:21

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.605	0.08	0.35		0.170
n-Heptane	0.263	0.04	0.15		0.180
Methylcyclohexane	0.427	0.06	0.25		0.190
2,2,3-Trimethylpentane	ND	ND	ND	U	0.280
2,3,4-Trimethylpentane	0.200	0.03	0.12		0.140
2-Methylheptane	0.287	0.04	0.17		0.170
3-Methylheptane	0.148	0.02	0.09		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.273	0.03	0.16		0.180
Isopropylbenzene	0.131	0.02	0.08	U	0.210
a-Pinene	0.689	0.09	0.48		0.240
n-Propylbenzene	0.178	0.02	0.10	U	0.200
m-Ethyltoluene	0.289	0.03	0.16		0.150
p-Ethyltoluene	0.167	0.02	0.09	U	0.240
1,3,5-Trimethylbenzene	0.172	0.02	0.09		0.170
o-Ethyltoluene	0.205	0.02	0.11		0.180
b-Pinene	0.216	0.03	0.15	U	0.240
1,2,4-Trimethylbenzene	0.244	0.03	0.13		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.215	0.02	0.13	U	0.230
1,2,3-Trimethylbenzene	0.106	0.01	0.06	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.247	0.02	0.14		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.410	0.04	0.24		0.220
1-Dodecene	0.226	0.02	0.13	U	0.290
n-Dodecane	0.359	0.03	0.21		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	35.7	ND	ND		
Sum of Unknowns	52.7	ND	ND		
TNMOC	88.4	ND	ND		



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FILE #: 3786.02.002.001  
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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-10-10

Lab ID: 0091501-01

Sampled: 09/10/10 23:49

Pressure @ Receipt: 6" Hg

Canister #: 5023

Received: 09/14/10 16:01

Comments: Site 1

Analyzed: 09/21/10 23:42

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.10	0.55	0.63		0.380
Ethane	4.16	2.08	2.56		0.120
Propane	4.73	1.58	2.85		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.94	0.74	1.75		0.130
Isobutene/1-Butene	0.721	0.18	0.42		0.150
n-Butane	1.31	0.33	0.78		0.170
trans-2-Butene	0.153	0.04	0.09		0.140
cis-2-Butene	0.200	0.05	0.12		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.61	0.52	1.54		0.190
1-Pentene	0.217	0.04	0.13		0.120
2-Methyl-1-butene	0.104	0.02	0.06	U	0.240
n-Pentane	1.42	0.28	0.84		0.0900
Isoprene	2.49	0.50	1.39		0.240
trans-2-Pentene	0.165	0.03	0.09		0.140
cis-2-Pentene	0.131	0.03	0.08	U	0.190
2-Methyl-2-butene	0.0810	0.02	0.05	U	0.240
2,2-Dimethylbutane	0.321	0.05	0.19		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.221	0.04	0.13		0.120
2,3-Dimethylbutane	0.353	0.06	0.21		0.200
2-Methylpentane	1.14	0.19	0.67		0.140
3-Methylpentane	0.605	0.10	0.36		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.243	0.04	0.14	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.473	0.08	0.28		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	0.142	0.02	0.08	U	0.360
Methylcyclopentane	0.805	0.13	0.46		0.140
2,4-Dimethylpentane	0.209	0.03	0.12	U	0.230
Cyclohexane	0.258	0.04	0.15		0.190
2-Methylhexane	0.335	0.05	0.20		0.110
2,3-Dimethylpentane	0.899	0.13	0.53		0.370
3-Methylhexane	1.32	0.19	0.77		0.150
1-Heptene	ND	ND	ND	U	0.370

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
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 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-10-10 Lab ID: 0091501-01 Sampled: 09/10/10 23:49  
 Pressure @ Receipt: 6" Hg Canister #: 5023 Received: 09/14/10 16:01  
 Comments: Site 1 Analyzed: 09/21/10 23:42

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.850	0.11	0.50		0.170
n-Heptane	0.358	0.05	0.21		0.180
Methylcyclohexane	0.526	0.08	0.30		0.190
2,2,3-Trimethylpentane	0.135	0.02	0.08	U	0.280
2,3,4-Trimethylpentane	0.300	0.04	0.18		0.140
2-Methylheptane	0.233	0.03	0.14		0.170
3-Methylheptane	0.150	0.02	0.09		0.110
1-Octene	0.173	0.02	0.10	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.262	0.03	0.15		0.180
Isopropylbenzene	0.142	0.02	0.09	U	0.210
a-Pinene	0.699	0.09	0.49		0.240
n-Propylbenzene	0.164	0.02	0.09	U	0.200
m-Ethyltoluene	0.292	0.03	0.16		0.150
p-Ethyltoluene	0.187	0.02	0.10	U	0.240
1,3,5-Trimethylbenzene	0.199	0.02	0.11		0.170
o-Ethyltoluene	0.147	0.02	0.08	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.371	0.04	0.20		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.343	0.03	0.20		0.230
1,2,3-Trimethylbenzene	0.119	0.01	0.07	U	0.170
m-Diethylbenzene	0.174	0.02	0.10	U	0.240
p-Diethylbenzene	0.322	0.03	0.18		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.460	0.04	0.27		0.220
1-Dodecene	0.461	0.04	0.27		0.290
n-Dodecane	0.459	0.04	0.27		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	44.3	ND	ND		
Sum of Unknowns	65.4	ND	ND		
TNMOC	110	ND	ND		





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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-10-10 Lab ID: 0091501-02 Sampled: 09/10/10 23:49  
 Pressure @ Receipt: 8" Hg Canister #: 5074 Received: 09/14/10 16:01  
 Comments: Site 4 Analyzed: 09/22/10 00:44

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.28	0.64	0.74		0.380
Ethane	7.62	3.81	4.70		0.120
Propane	4.56	1.52	2.75		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.28	0.32	0.76		0.130
Isobutene/1-Butene	0.714	0.18	0.41		0.150
n-Butane	1.35	0.34	0.80		0.170
trans-2-Butene	0.208	0.05	0.12		0.140
cis-2-Butene	0.204	0.05	0.12		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	5.52	1.10	3.26		0.190
1-Pentene	0.308	0.06	0.18		0.120
2-Methyl-1-butene	0.243	0.05	0.14		0.240
n-Pentane	2.23	0.45	1.32		0.0900
Isoprene	1.19	0.24	0.66		0.240
trans-2-Pentene	0.409	0.08	0.24		0.140
cis-2-Pentene	0.240	0.05	0.14		0.190
2-Methyl-2-butene	0.292	0.06	0.17		0.240
2,2-Dimethylbutane	0.545	0.09	0.32		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.348	0.07	0.20		0.120
2,3-Dimethylbutane	0.716	0.12	0.42		0.200
2-Methylpentane	1.29	0.22	0.76		0.140
3-Methylpentane	1.14	0.19	0.67		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.397	0.07	0.23		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.896	0.15	0.53		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.35	0.23	0.78		0.140
2,4-Dimethylpentane	0.504	0.07	0.30		0.230
Cyclohexane	0.378	0.06	0.22		0.190
2-Methylhexane	0.665	0.10	0.39		0.110
2,3-Dimethylpentane	0.519	0.07	0.31		0.370
3-Methylhexane	1.94	0.28	1.14		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	1.55	0.19	0.91		0.170

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-10-10 Lab ID: 0091501-02 Sampled: 09/10/10 23:49  
 Pressure @ Receipt: 8" Hg Canister #: 5074 Received: 09/14/10 16:01  
 Comments: Site 4 Analyzed: 09/22/10 00:44

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	0.508	0.07	0.30		0.180
Methylcyclohexane	0.788	0.11	0.45		0.190
2,2,3-Trimethylpentane	0.278	0.03	0.16	U	0.280
2,3,4-Trimethylpentane	0.484	0.06	0.28		0.140
2-Methylheptane	0.357	0.04	0.21		0.170
3-Methylheptane	0.201	0.03	0.12		0.110
1-Octene	0.148	0.02	0.09	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.214	0.02	0.13		0.180
Isopropylbenzene	0.207	0.03	0.13	U	0.210
a-Pinene	0.384	0.05	0.27		0.240
n-Propylbenzene	0.224	0.02	0.12		0.200
m-Ethyltoluene	0.270	0.03	0.15		0.150
p-Ethyltoluene	0.249	0.03	0.14		0.240
1,3,5-Trimethylbenzene	0.205	0.02	0.11		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.371	0.04	0.20		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.223	0.02	0.13	U	0.230
1,2,3-Trimethylbenzene	0.169	0.02	0.09	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.238	0.02	0.13		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.435	0.04	0.25		0.220
1-Dodecene	0.237	0.02	0.14	U	0.290
n-Dodecane	0.327	0.03	0.19		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	56.8	ND	ND		
Sum of Unknowns	73.9	ND	ND		
TNMOC	131	ND	ND		

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-10-10 Lab ID: 0091501-03 Sampled: 09/10/10 23:49  
 Pressure @ Receipt: 13.5" Hg Canister #: 5032 Received: 09/14/10 16:01  
 Comments: Site 5 Analyzed: 09/22/10 01:45

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.35	0.68	0.78		0.380
Ethane	9.60	4.80	5.92		0.120
Propane	6.19	2.06	3.73		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.77	0.69	1.65		0.130
Isobutene/1-Butene	0.521	0.13	0.30		0.150
n-Butane	1.72	0.43	1.02		0.170
trans-2-Butene	0.159	0.04	0.09		0.140
cis-2-Butene	0.227	0.06	0.13		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	1.76	0.35	1.04		0.190
1-Pentene	0.227	0.05	0.13		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	1.63	0.33	0.96		0.0900
Isoprene	1.18	0.24	0.66		0.240
trans-2-Pentene	0.234	0.05	0.14		0.140
cis-2-Pentene	0.188	0.04	0.11	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.640	0.11	0.38		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.323	0.06	0.19		0.120
2,3-Dimethylbutane	0.359	0.06	0.21		0.200
2-Methylpentane	ND	ND	ND	A-01, U	0.140
3-Methylpentane	0.667	0.11	0.39		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.314	0.05	0.18	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.584	0.10	0.34		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.701	0.12	0.40		0.140
2,4-Dimethylpentane	0.232	0.03	0.14		0.230
Cyclohexane	0.309	0.05	0.18		0.190
2-Methylhexane	0.439	0.06	0.26		0.110
2,3-Dimethylpentane	0.930	0.13	0.55		0.370
3-Methylhexane	1.32	0.19	0.77		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-10-10 Lab ID: 0091501-03 Sampled: 09/10/10 23:49  
 Pressure @ Receipt: 13.5" Hg Canister #: 5032 Received: 09/14/10 16:01  
 Comments: Site 5 Analyzed: 09/22/10 01:45

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.589	0.07	0.35		0.170
n-Heptane	0.382	0.05	0.22		0.180
Methylcyclohexane	0.498	0.07	0.29		0.190
2,2,3-Trimethylpentane	ND	ND	ND	U	0.280
2,3,4-Trimethylpentane	0.287	0.04	0.17		0.140
2-Methylheptane	0.316	0.04	0.19		0.170
3-Methylheptane	0.199	0.02	0.12		0.110
1-Octene	0.219	0.03	0.13	U	0.280
1-Nonene	0.221	0.02	0.13	U	0.240
n-Nonane	0.298	0.03	0.17		0.180
Isopropylbenzene	0.151	0.02	0.09	U	0.210
a-Pinene	0.331	0.04	0.23		0.240
n-Propylbenzene	0.233	0.03	0.13		0.200
m-Ethyltoluene	0.215	0.02	0.12		0.150
p-Ethyltoluene	0.203	0.02	0.11	U	0.240
1,3,5-Trimethylbenzene	0.234	0.03	0.13		0.170
o-Ethyltoluene	0.144	0.02	0.08	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.372	0.04	0.20		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.203	0.02	0.12	U	0.230
1,2,3-Trimethylbenzene	0.0980	0.01	0.05	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.238	0.02	0.13		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.426	0.04	0.25		0.220
1-Dodecene	0.159	0.01	0.09	U	0.290
n-Dodecane	0.403	0.03	0.23		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	47.9	ND	ND		
Sum of Unknowns	59.5	ND	ND		
TNMOC	107	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-13-10 Lab ID: 0091614-01 Sampled: 09/13/10 23:59  
 Pressure @ Receipt: 6.5" Hg Canister #: 5004 Received: 09/16/10 12:42  
 Comments: Site 1 Analyzed: 09/22/10 05:50

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.98	0.99	1.14		0.380
Ethane	7.89	3.95	4.86		0.120
Propane	8.71	2.90	5.25		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.90	0.48	1.13		0.130
Isobutene/1-Butene	0.749	0.19	0.43		0.150
n-Butane	2.78	0.70	1.66		0.170
trans-2-Butene	0.163	0.04	0.09		0.140
cis-2-Butene	0.243	0.06	0.14		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	4.04	0.81	2.39		0.190
1-Pentene	0.260	0.05	0.15		0.120
2-Methyl-1-butene	0.142	0.03	0.08	U	0.240
n-Pentane	3.15	0.63	1.86		0.0900
Isoprene	2.39	0.48	1.33		0.240
trans-2-Pentene	0.195	0.04	0.11		0.140
cis-2-Pentene	0.146	0.03	0.08	U	0.190
2-Methyl-2-butene	0.0740	0.01	0.04	U	0.240
2,2-Dimethylbutane	0.442	0.07	0.26		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.288	0.06	0.17		0.120
2,3-Dimethylbutane	0.556	0.09	0.33		0.200
2-Methylpentane	ND	ND	ND	A-01, U	0.140
3-Methylpentane	0.934	0.16	0.55		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.283	0.05	0.16	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.940	0.16	0.55		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.863	0.14	0.50		0.140
2,4-Dimethylpentane	0.298	0.04	0.18		0.230
Cyclohexane	0.290	0.05	0.17		0.190
2-Methylhexane	0.533	0.08	0.31		0.110
2,3-Dimethylpentane	0.313	0.04	0.18	U	0.370
3-Methylhexane	1.46	0.21	0.86		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-13-10 Lab ID: 0091614-01 Sampled: 09/13/10 23:59  
 Pressure @ Receipt: 6.5" Hg Canister #: 5004 Received: 09/16/10 12:42  
 Comments: Site 1 Analyzed: 09/22/10 05:50

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.18	0.15	0.69		0.170
n-Heptane	0.523	0.07	0.31		0.180
Methylcyclohexane	0.770	0.11	0.44		0.190
2,2,3-Trimethylpentane	0.242	0.03	0.14	U	0.280
2,3,4-Trimethylpentane	0.449	0.06	0.26		0.140
2-Methylheptane	0.333	0.04	0.20		0.170
3-Methylheptane	0.240	0.03	0.14		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.237	0.03	0.14		0.180
Isopropylbenzene	0.172	0.02	0.11	U	0.210
a-Pinene	0.516	0.06	0.36		0.240
n-Propylbenzene	0.161	0.02	0.09	U	0.200
m-Ethyltoluene	0.303	0.03	0.17		0.150
p-Ethyltoluene	0.232	0.03	0.13	U	0.240
1,3,5-Trimethylbenzene	0.253	0.03	0.14		0.170
o-Ethyltoluene	0.311	0.03	0.17		0.180
b-Pinene	0.278	0.03	0.19		0.240
1,2,4-Trimethylbenzene	0.384	0.04	0.21		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.247	0.02	0.14		0.230
1,2,3-Trimethylbenzene	0.129	0.01	0.07	U	0.170
m-Diethylbenzene	0.104	0.01	0.06	U	0.240
p-Diethylbenzene	0.104	0.01	0.06	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.272	0.02	0.16		0.220
1-Dodecene	0.158	0.01	0.09	U	0.290
n-Dodecane	0.201	0.02	0.12	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	58.5	ND	ND		
Sum of Unknowns	74.4	ND	ND		
TNMOC	133	ND	ND		



# CERTIFICATE OF ANALYSIS

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-13-10 Lab ID: 0091614-02 Sampled: 09/13/10 23:59  
 Pressure @ Receipt: 8.5" Hg Canister #: 5066 Received: 09/16/10 12:42  
 Comments: Site 2 Analyzed: 09/22/10 03:47

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.60	1.30	1.49		0.380
Ethane	8.92	4.46	5.50		0.120
Propane	6.64	2.21	4.00		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.69	0.42	1.01		0.130
Isobutene/1-Butene	0.819	0.21	0.47		0.150
n-Butane	2.49	0.62	1.48		0.170
trans-2-Butene	0.167	0.04	0.10		0.140
cis-2-Butene	0.222	0.06	0.13		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.85	0.77	2.28		0.190
1-Pentene	0.311	0.06	0.18		0.120
2-Methyl-1-butene	0.205	0.04	0.12	U	0.240
n-Pentane	2.74	0.55	1.62		0.0900
Isoprene	1.54	0.31	0.86		0.240
trans-2-Pentene	0.280	0.06	0.16		0.140
cis-2-Pentene	0.220	0.04	0.13		0.190
2-Methyl-2-butene	0.181	0.04	0.10	U	0.240
2,2-Dimethylbutane	0.543	0.09	0.32		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.290	0.06	0.17		0.120
2,3-Dimethylbutane	0.657	0.11	0.39		0.200
2-Methylpentane	1.90	0.32	1.12		0.140
3-Methylpentane	1.01	0.17	0.60		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.267	0.04	0.15	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.942	0.16	0.56		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.946	0.16	0.54		0.140
2,4-Dimethylpentane	0.326	0.05	0.19		0.230
Cyclohexane	0.338	0.06	0.19		0.190
2-Methylhexane	0.689	0.10	0.40		0.110
2,3-Dimethylpentane	1.04	0.15	0.61		0.370
3-Methylhexane	1.39	0.20	0.82		0.150
1-Heptene	ND	ND	ND	U	0.370

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 REPORTED: 05/24/11 11:34  
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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-13-10 Lab ID: 0091614-02 Sampled: 09/13/10 23:59  
 Pressure @ Receipt: 8.5" Hg Canister #: 5066 Received: 09/16/10 12:42  
 Comments: Site 2 Analyzed: 09/22/10 03:47

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.77	0.22	1.04		0.170
n-Heptane	0.455	0.07	0.27		0.180
Methylcyclohexane	0.633	0.09	0.36		0.190
2,2,3-Trimethylpentane	0.352	0.04	0.21		0.280
2,3,4-Trimethylpentane	0.535	0.07	0.31		0.140
2-Methylheptane	0.313	0.04	0.18		0.170
3-Methylheptane	0.338	0.04	0.20		0.110
1-Octene	0.151	0.02	0.09	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.288	0.03	0.17		0.180
Isopropylbenzene	0.138	0.02	0.09	U	0.210
a-Pinene	0.268	0.03	0.19		0.240
n-Propylbenzene	0.185	0.02	0.10	U	0.200
m-Ethyltoluene	0.315	0.04	0.17		0.150
p-Ethyltoluene	0.273	0.03	0.15		0.240
1,3,5-Trimethylbenzene	0.284	0.03	0.16		0.170
o-Ethyltoluene	0.322	0.04	0.18		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.513	0.06	0.28		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.307	0.03	0.18		0.230
1,2,3-Trimethylbenzene	0.170	0.02	0.09		0.170
m-Diethylbenzene	0.166	0.02	0.09	U	0.240
p-Diethylbenzene	0.162	0.02	0.09		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.425	0.04	0.25		0.220
1-Dodecene	0.114	0.01	0.07	U	0.290
n-Dodecane	0.394	0.03	0.23		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	60.2	ND	ND		
Sum of Unknowns	61.6	ND	ND		
TNMOC	122	ND	ND		





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 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-13-10 Lab ID: 0091614-03 Sampled: 09/13/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5006 Received: 09/16/10 12:42  
 Comments: Site 4 Analyzed: 09/22/10 04:49

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.60	1.30	1.49		0.380
Ethane	15.3	7.65	9.43		0.120
Propane	8.28	2.76	4.99		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.70	0.43	1.01		0.130
Isobutene/1-Butene	1.09	0.27	0.63		0.150
n-Butane	2.41	0.60	1.44		0.170
trans-2-Butene	0.203	0.05	0.12		0.140
cis-2-Butene	0.274	0.07	0.16		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	8.93	1.79	5.28		0.190
1-Pentene	0.427	0.09	0.25		0.120
2-Methyl-1-butene	0.288	0.06	0.17		0.240
n-Pentane	3.33	0.67	1.97		0.0900
Isoprene	0.858	0.17	0.48		0.240
trans-2-Pentene	0.402	0.08	0.23		0.140
cis-2-Pentene	0.256	0.05	0.15		0.190
2-Methyl-2-butene	0.396	0.08	0.23		0.240
2,2-Dimethylbutane	0.649	0.11	0.38		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.362	0.07	0.21		0.120
2,3-Dimethylbutane	1.31	0.22	0.77		0.200
2-Methylpentane	2.45	0.41	1.44		0.140
3-Methylpentane	1.93	0.32	1.14		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.362	0.06	0.21		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.38	0.23	0.81		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	2.98	0.50	1.71		0.140
2,4-Dimethylpentane	1.04	0.15	0.61		0.230
Cyclohexane	1.53	0.26	0.88		0.190
2-Methylhexane	0.730	0.10	0.43		0.110
2,3-Dimethylpentane	0.987	0.14	0.58		0.370
3-Methylhexane	3.03	0.43	1.78		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	3.43	0.43	2.01		0.170

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-13-10 Lab ID: 0091614-03 Sampled: 09/13/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5006 Received: 09/16/10 12:42  
 Comments: Site 4 Analyzed: 09/22/10 04:49

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	0.641	0.09	0.38		0.180
Methylcyclohexane	1.21	0.17	0.70		0.190
2,2,3-Trimethylpentane	0.634	0.08	0.37		0.280
2,3,4-Trimethylpentane	1.04	0.13	0.61		0.140
2-Methylheptane	0.486	0.06	0.28		0.170
3-Methylheptane	0.347	0.04	0.20		0.110
1-Octene	0.278	0.03	0.16	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.405	0.05	0.24		0.180
Isopropylbenzene	0.211	0.03	0.13		0.210
a-Pinene	0.511	0.06	0.36		0.240
n-Propylbenzene	0.264	0.03	0.15		0.200
m-Ethyltoluene	0.464	0.05	0.25		0.150
p-Ethyltoluene	0.412	0.05	0.23		0.240
1,3,5-Trimethylbenzene	0.488	0.05	0.27		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.763	0.08	0.42		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.376	0.04	0.22		0.230
1,2,3-Trimethylbenzene	0.296	0.03	0.16		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.464	0.04	0.27		0.220
1-Dodecene	0.475	0.04	0.27		0.290
n-Dodecane	0.348	0.03	0.20		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	94.3	ND	ND		
Sum of Unknowns	177	ND	ND		
TNMOC	271	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-13-10 Lab ID: 0091614-04 Sampled: 09/13/10 23:59  
 Pressure @ Receipt: 14" Hg Canister #: 5015 Received: 09/16/10 12:42  
 Comments: Site 5 Analyzed: 09/22/10 02:46

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.49	1.25	1.43		0.380
Ethane	14.8	7.40	9.12		0.120
Propane	7.60	2.53	4.58		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.07	0.52	1.23		0.130
Isobutene/1-Butene	1.45	0.36	0.83		0.150
n-Butane	ND	ND	ND	A-01, U	0.170
trans-2-Butene	0.210	0.05	0.12		0.140
cis-2-Butene	0.315	0.08	0.18		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.36	0.67	1.99		0.190
1-Pentene	0.461	0.09	0.27		0.120
2-Methyl-1-butene	0.117	0.02	0.07	U	0.240
n-Pentane	2.38	0.48	1.41		0.0900
Isoprene	0.720	0.14	0.40		0.240
trans-2-Pentene	0.248	0.05	0.14		0.140
cis-2-Pentene	0.197	0.04	0.11		0.190
2-Methyl-2-butene	0.115	0.02	0.07	U	0.240
2,2-Dimethylbutane	1.04	0.17	0.61		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.317	0.06	0.18		0.120
2,3-Dimethylbutane	0.529	0.09	0.31		0.200
2-Methylpentane	1.75	0.29	1.03		0.140
3-Methylpentane	0.958	0.16	0.56		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.547	0.09	0.31		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.991	0.17	0.58		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	0.592	0.10	0.34		0.360
Methylcyclopentane	2.91	0.49	1.67		0.140
2,4-Dimethylpentane	0.262	0.04	0.15		0.230
Cyclohexane	0.301	0.05	0.17		0.190
2-Methylhexane	0.524	0.07	0.31		0.110
2,3-Dimethylpentane	0.484	0.07	0.28		0.370
3-Methylhexane	4.51	0.64	2.65		0.150
1-Heptene	ND	ND	ND	U	0.370

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 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-13-10 Lab ID: 0091614-04 Sampled: 09/13/10 23:59  
 Pressure @ Receipt: 14" Hg Canister #: 5015 Received: 09/16/10 12:42  
 Comments: Site 5 Analyzed: 09/22/10 02:46

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.42	0.18	0.83		0.170
n-Heptane	0.504	0.07	0.30		0.180
Methylcyclohexane	1.05	0.15	0.60		0.190
2,2,3-Trimethylpentane	0.414	0.05	0.24		0.280
2,3,4-Trimethylpentane	0.626	0.08	0.37		0.140
2-Methylheptane	0.515	0.06	0.30		0.170
3-Methylheptane	0.241	0.03	0.14		0.110
1-Octene	0.437	0.05	0.25		0.280
1-Nonene	0.193	0.02	0.11	U	0.240
n-Nonane	0.368	0.04	0.22		0.180
Isopropylbenzene	0.223	0.03	0.14		0.210
a-Pinene	0.758	0.09	0.53		0.240
n-Propylbenzene	0.438	0.05	0.24		0.200
m-Ethyltoluene	0.423	0.05	0.23		0.150
p-Ethyltoluene	0.320	0.04	0.18		0.240
1,3,5-Trimethylbenzene	0.430	0.05	0.24		0.170
o-Ethyltoluene	0.215	0.02	0.12		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.773	0.09	0.42		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.305	0.03	0.18		0.230
1,2,3-Trimethylbenzene	0.170	0.02	0.09		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.445	0.04	0.25		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.723	0.07	0.42		0.220
1-Dodecene	0.195	0.02	0.11	U	0.290
n-Dodecane	0.511	0.04	0.30		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	77.4	ND	ND		
Sum of Unknowns	150	ND	ND		
TNMOC	227	ND	ND		



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 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-16-10 Lab ID: 0092120-01 Sampled: 09/16/10 23:49  
 Pressure @ Receipt: 6.5" Hg Canister #: 5131 Received: 09/21/10 13:32  
 Comments: Site 1 Analyzed: 09/28/10 05:40

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.36	1.18	1.36		0.380
Ethane	7.85	3.93	4.84		0.120
Propane	8.30	2.77	5.00		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.87	0.47	1.11		0.130
Isobutene/1-Butene	0.716	0.18	0.41		0.150
n-Butane	1.58	0.40	0.94		0.170
trans-2-Butene	0.151	0.04	0.09		0.140
cis-2-Butene	0.164	0.04	0.09	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.90	0.58	1.72		0.190
1-Pentene	0.248	0.05	0.14		0.120
2-Methyl-1-butene	0.123	0.02	0.07	U	0.240
n-Pentane	1.78	0.36	1.05		0.0900
Isoprene	1.98	0.40	1.11		0.240
trans-2-Pentene	0.147	0.03	0.08		0.140
cis-2-Pentene	ND	ND	ND	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.356	0.06	0.21		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.312	0.06	0.18		0.120
2,3-Dimethylbutane	0.491	0.08	0.29		0.200
2-Methylpentane	2.57	0.43	1.51		0.140
3-Methylpentane	0.759	0.13	0.45		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.305	0.05	0.18	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.739	0.12	0.44		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.783	0.13	0.45		0.140
2,4-Dimethylpentane	0.263	0.04	0.15		0.230
Cyclohexane	0.316	0.05	0.18		0.190
2-Methylhexane	0.556	0.08	0.33		0.110
2,3-Dimethylpentane	0.730	0.10	0.43		0.370
3-Methylhexane	1.42	0.20	0.83		0.150
1-Heptene	ND	ND	ND	U	0.370

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-16-10 Lab ID: 0092120-01 Sampled: 09/16/10 23:49  
 Pressure @ Receipt: 6.5" Hg Canister #: 5131 Received: 09/21/10 13:32  
 Comments: Site 1 Analyzed: 09/28/10 05:40

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.20	0.15	0.70		0.170
n-Heptane	0.498	0.07	0.29		0.180
Methylcyclohexane	0.536	0.08	0.31		0.190
2,2,3-Trimethylpentane	0.220	0.03	0.13	U	0.280
2,3,4-Trimethylpentane	0.415	0.05	0.24		0.140
2-Methylheptane	0.239	0.03	0.14		0.170
3-Methylheptane	0.166	0.02	0.10		0.110
1-Octene	0.186	0.02	0.11	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.245	0.03	0.14		0.180
Isopropylbenzene	0.126	0.02	0.08	U	0.210
a-Pinene	0.317	0.04	0.22		0.240
n-Propylbenzene	0.151	0.02	0.08	U	0.200
m-Ethyltoluene	0.269	0.03	0.15		0.150
p-Ethyltoluene	0.222	0.02	0.12	U	0.240
1,3,5-Trimethylbenzene	0.181	0.02	0.10		0.170
o-Ethyltoluene	0.207	0.02	0.11		0.180
b-Pinene	0.256	0.03	0.18		0.240
1,2,4-Trimethylbenzene	0.370	0.04	0.20		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.345	0.03	0.20		0.230
1,2,3-Trimethylbenzene	0.127	0.01	0.07	U	0.170
m-Diethylbenzene	0.105	0.01	0.06	U	0.240
p-Diethylbenzene	0.137	0.01	0.08	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.298	0.03	0.17		0.220
1-Dodecene	0.0850	0.01	0.05	U	0.290
n-Dodecane	0.261	0.02	0.15	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	54.8	ND	ND		
Sum of Unknowns	50.7	ND	ND		
TNMOC	106	ND	ND		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-19-10 Lab ID: 0092120-02 Sampled: 09/19/10 23:49  
 Pressure @ Receipt: 7" Hg Canister #: 5088 Received: 09/21/10 13:32  
 Comments: Site 1 Analyzed: 09/28/10 06:41

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.22	1.11	1.28		0.380
Ethane	18.6	9.30	11.50		0.120
Propane	9.09	3.03	5.48		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	3.73	0.93	2.22		0.130
Isobutene/1-Butene	0.907	0.23	0.52		0.150
n-Butane	5.08	1.27	3.03		0.170
trans-2-Butene	0.213	0.05	0.12		0.140
cis-2-Butene	0.289	0.07	0.17		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	14.5	2.90	8.58		0.190
1-Pentene	0.392	0.08	0.23		0.120
2-Methyl-1-butene	0.348	0.07	0.20		0.240
n-Pentane	5.49	1.10	3.25		0.0900
Isoprene	2.41	0.48	1.35		0.240
trans-2-Pentene	0.594	0.12	0.34		0.140
cis-2-Pentene	0.231	0.05	0.13		0.190
2-Methyl-2-butene	0.227	0.05	0.13	U	0.240
2,2-Dimethylbutane	0.717	0.12	0.42		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.213	0.04	0.12	U	0.360
Cyclopentane	0.434	0.09	0.25		0.120
2,3-Dimethylbutane	1.45	0.24	0.85		0.200
2-Methylpentane	4.69	0.78	2.76		0.140
3-Methylpentane	2.02	0.34	1.19		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.293	0.05	0.17	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.22	0.20	0.72		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.12	0.19	0.64		0.140
2,4-Dimethylpentane	0.879	0.13	0.52		0.230
Cyclohexane	0.487	0.08	0.28		0.190
2-Methylhexane	0.683	0.10	0.40		0.110
2,3-Dimethylpentane	1.30	0.19	0.76		0.370
3-Methylhexane	1.73	0.25	1.02		0.150
1-Heptene	ND	ND	ND	U	0.370

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City of Fort Worth  
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 ATTN: Brain Boerner  
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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-19-10 Lab ID: 0092120-02 Sampled: 09/19/10 23:49  
 Pressure @ Receipt: 7" Hg Canister #: 5088 Received: 09/21/10 13:32  
 Comments: Site 1 Analyzed: 09/28/10 06:41

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	2.55	0.32	1.49		0.170
n-Heptane	0.554	0.08	0.33		0.180
Methylcyclohexane	0.843	0.12	0.49		0.190
2,2,3-Trimethylpentane	0.426	0.05	0.25		0.280
2,3,4-Trimethylpentane	0.594	0.07	0.35		0.140
2-Methylheptane	0.282	0.04	0.17		0.170
3-Methylheptane	0.228	0.03	0.13		0.110
1-Octene	0.222	0.03	0.13	U	0.280
1-Nonene	0.158	0.02	0.09	U	0.240
n-Nonane	0.279	0.03	0.16		0.180
Isopropylbenzene	0.118	0.01	0.07	U	0.210
a-Pinene	0.822	0.10	0.57		0.240
n-Propylbenzene	0.220	0.02	0.12		0.200
m-Ethyltoluene	0.391	0.04	0.21		0.150
p-Ethyltoluene	0.246	0.03	0.14		0.240
1,3,5-Trimethylbenzene	0.237	0.03	0.13		0.170
o-Ethyltoluene	0.319	0.04	0.18		0.180
b-Pinene	0.225	0.03	0.16	U	0.240
1,2,4-Trimethylbenzene	0.435	0.05	0.24		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	1.03	0.10	0.60		0.230
1,2,3-Trimethylbenzene	0.150	0.02	0.08	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	1.74	0.16	1.01		0.220
1-Dodecene	0.171	0.01	0.10	U	0.290
n-Dodecane	1.43	0.12	0.83		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	104	ND	ND		
Sum of Unknowns	80.0	ND	ND		
TNMO	184	ND	ND		





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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-16-10 Lab ID: 0092120-03 Sampled: 09/16/10 23:49  
 Pressure @ Receipt: 8" Hg Canister #: 5078 Received: 09/21/10 13:32  
 Comments: Site 2 Analyzed: 09/28/10 04:39

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.96	1.48	1.70		0.380
Ethane	8.69	4.35	5.35		0.120
Propane	5.07	1.69	3.05		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.23	0.31	0.73		0.130
Isobutene/1-Butene	1.18	0.30	0.68		0.150
n-Butane	8.46	2.12	5.04		0.170
trans-2-Butene	0.169	0.04	0.10		0.140
cis-2-Butene	0.233	0.06	0.13		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.61	0.72	2.13		0.190
1-Pentene	0.272	0.05	0.16		0.120
2-Methyl-1-butene	0.167	0.03	0.10	U	0.240
n-Pentane	2.05	0.41	1.21		0.0900
Isoprene	1.29	0.26	0.72		0.240
trans-2-Pentene	0.231	0.05	0.13		0.140
cis-2-Pentene	0.215	0.04	0.12		0.190
2-Methyl-2-butene	0.185	0.04	0.11	U	0.240
2,2-Dimethylbutane	0.427	0.07	0.25		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.296	0.06	0.17		0.120
2,3-Dimethylbutane	0.665	0.11	0.39		0.200
2-Methylpentane	4.10	0.68	2.41		0.140
3-Methylpentane	0.948	0.16	0.56		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.307	0.05	0.18	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.924	0.15	0.54		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	0.135	0.02	0.08	U	0.360
Methylcyclopentane	1.12	0.19	0.64		0.140
2,4-Dimethylpentane	0.384	0.05	0.23		0.230
Cyclohexane	0.358	0.06	0.21		0.190
2-Methylhexane	0.614	0.09	0.36		0.110
2,3-Dimethylpentane	0.974	0.14	0.57		0.370
3-Methylhexane	1.45	0.21	0.85		0.150
1-Heptene	ND	ND	ND	U	0.370

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-16-10 Lab ID: 0092120-03 Sampled: 09/16/10 23:49  
 Pressure @ Receipt: 8" Hg Canister #: 5078 Received: 09/21/10 13:32  
 Comments: Site 2 Analyzed: 09/28/10 04:39

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.76	0.22	1.03		0.170
n-Heptane	0.553	0.08	0.32		0.180
Methylcyclohexane	0.551	0.08	0.32		0.190
2,2,3-Trimethylpentane	0.289	0.04	0.17		0.280
2,3,4-Trimethylpentane	0.571	0.07	0.33		0.140
2-Methylheptane	0.305	0.04	0.18		0.170
3-Methylheptane	0.237	0.03	0.14		0.110
1-Octene	0.183	0.02	0.11	U	0.280
1-Nonene	0.155	0.02	0.09	U	0.240
n-Nonane	0.514	0.06	0.30		0.180
Isopropylbenzene	0.0930	0.01	0.06	U	0.210
a-Pinene	0.204	0.03	0.14	U	0.240
n-Propylbenzene	0.205	0.02	0.11		0.200
m-Ethyltoluene	0.326	0.04	0.18		0.150
p-Ethyltoluene	0.287	0.03	0.16		0.240
1,3,5-Trimethylbenzene	0.327	0.04	0.18		0.170
o-Ethyltoluene	0.209	0.02	0.11		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.491	0.05	0.27		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.729	0.07	0.43		0.230
1,2,3-Trimethylbenzene	0.155	0.02	0.08	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.458	0.04	0.27		0.220
1-Dodecene	0.104	0.01	0.06	U	0.290
n-Dodecane	0.347	0.03	0.20		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>65.6</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>71.6</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>137</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-19-10 Lab ID: 0092120-04 Sampled: 09/19/10 23:49  
 Pressure @ Receipt: 8" Hg Canister #: 5147 Received: 09/21/10 13:32  
 Comments: Site 2 Analyzed: 09/28/10 07:43

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.42	1.71	1.97		0.380
Ethane	21.9	11.00	13.50		0.120
Propane	11.3	3.77	6.81		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.90	0.73	1.73		0.130
Isobutene/1-Butene	1.21	0.30	0.70		0.150
n-Butane	9.35	2.34	5.57		0.170
trans-2-Butene	0.199	0.05	0.11		0.140
cis-2-Butene	0.248	0.06	0.14		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	6.49	1.30	3.84		0.190
1-Pentene	0.384	0.08	0.22		0.120
2-Methyl-1-butene	0.221	0.04	0.13	U	0.240
n-Pentane	3.74	0.75	2.21		0.0900
Isoprene	1.79	0.36	1.00		0.240
trans-2-Pentene	0.548	0.11	0.32		0.140
cis-2-Pentene	0.225	0.05	0.13		0.190
2-Methyl-2-butene	0.224	0.04	0.13	U	0.240
2,2-Dimethylbutane	0.538	0.09	0.32		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.421	0.08	0.24		0.120
2,3-Dimethylbutane	0.981	0.16	0.58		0.200
2-Methylpentane	5.97	1.00	3.51		0.140
3-Methylpentane	1.78	0.30	1.05		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.381	0.06	0.22		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.89	0.32	1.11		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	2.12	0.35	1.22		0.140
2,4-Dimethylpentane	0.580	0.08	0.34		0.230
Cyclohexane	0.676	0.11	0.39		0.190
2-Methylhexane	1.19	0.17	0.70		0.110
2,3-Dimethylpentane	1.83	0.26	1.07		0.370
3-Methylhexane	3.66	0.52	2.15		0.150
1-Heptene	ND	ND	ND	U	0.370

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-19-10 Lab ID: 0092120-04 Sampled: 09/19/10 23:49  
 Pressure @ Receipt: 8" Hg Canister #: 5147 Received: 09/21/10 13:32  
 Comments: Site 2 Analyzed: 09/28/10 07:43

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	2.81	0.35	1.64		0.170
n-Heptane	1.02	0.15	0.60		0.180
Methylcyclohexane	1.21	0.17	0.70		0.190
2,2,3-Trimethylpentane	0.586	0.07	0.34		0.280
2,3,4-Trimethylpentane	0.824	0.10	0.48		0.140
2-Methylheptane	0.558	0.07	0.33		0.170
3-Methylheptane	0.417	0.05	0.24		0.110
1-Octene	0.383	0.05	0.22		0.280
1-Nonene	0.336	0.04	0.19		0.240
n-Nonane	1.79	0.20	1.05		0.180
Isopropylbenzene	0.299	0.04	0.18		0.210
a-Pinene	0.462	0.06	0.32		0.240
n-Propylbenzene	0.587	0.07	0.32		0.200
m-Ethyltoluene	0.863	0.10	0.47		0.150
p-Ethyltoluene	0.858	0.10	0.47		0.240
1,3,5-Trimethylbenzene	1.14	0.13	0.62		0.170
o-Ethyltoluene	0.934	0.10	0.51		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	1.37	0.15	0.75		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	2.63	0.26	1.53		0.230
1,2,3-Trimethylbenzene	0.686	0.08	0.38		0.170
m-Diethylbenzene	0.109	0.01	0.06	U	0.240
p-Diethylbenzene	0.333	0.03	0.18		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	1.51	0.14	0.88		0.220
1-Dodecene	0.121	0.01	0.07	U	0.290
n-Dodecane	0.494	0.04	0.29		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	122	ND	ND		
Sum of Unknowns	105	ND	ND		
TNMOC	227	ND	ND		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S3-P-09-16-10

Lab ID: 0092120-05

Sampled: 09/16/10 23:49

Pressure @ Receipt: 6.5" Hg

Canister #: 5123

Received: 09/21/10 13:32

Comments: Site 3

Analyzed: 09/28/10 02:37

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.50	1.25	1.44		0.380
Ethane	10.2	5.10	6.29		0.120
Propane	4.82	1.61	2.90		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.26	0.32	0.75		0.130
Isobutene/1-Butene	1.14	0.29	0.66		0.150
n-Butane	ND	ND	ND	A-01, U	0.170
trans-2-Butene	0.169	0.04	0.10		0.140
cis-2-Butene	0.237	0.06	0.14		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	5.09	1.02	3.01		0.190
1-Pentene	0.341	0.07	0.20		0.120
2-Methyl-1-butene	0.186	0.04	0.11	U	0.240
n-Pentane	2.31	0.46	1.37		0.0900
Isoprene	0.963	0.19	0.54		0.240
trans-2-Pentene	0.434	0.09	0.25		0.140
cis-2-Pentene	0.211	0.04	0.12		0.190
2-Methyl-2-butene	0.245	0.05	0.14		0.240
2,2-Dimethylbutane	0.351	0.06	0.21		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.264	0.05	0.15		0.120
2,3-Dimethylbutane	0.644	0.11	0.38		0.200
2-Methylpentane	3.88	0.65	2.28		0.140
3-Methylpentane	0.966	0.16	0.57		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.374	0.06	0.22		0.360
2-Ethyl-1-butene	0.362	0.06	0.21		0.360
n-Hexane	0.798	0.13	0.47		0.240
trans-2-Hexene	0.0910	0.02	0.05	U	0.360
cis-2-Hexene	0.212	0.04	0.12	U	0.360
Methylcyclopentane	1.70	0.28	0.98		0.140
2,4-Dimethylpentane	0.319	0.05	0.19		0.230
Cyclohexane	0.514	0.09	0.30		0.190
2-Methylhexane	0.519	0.07	0.31		0.110
2,3-Dimethylpentane	0.892	0.13	0.52		0.370
3-Methylhexane	2.30	0.33	1.35		0.150
1-Heptene	0.213	0.03	0.12	U	0.370

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-09-16-10 Lab ID: 0092120-05 Sampled: 09/16/10 23:49  
 Pressure @ Receipt: 6.5" Hg Canister #: 5123 Received: 09/21/10 13:32  
 Comments: Site 3 Analyzed: 09/28/10 02:37

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.46	0.18	0.85		0.170
n-Heptane	0.390	0.06	0.23		0.180
Methylcyclohexane	0.656	0.09	0.38		0.190
2,2,3-Trimethylpentane	0.237	0.03	0.14	U	0.280
2,3,4-Trimethylpentane	0.467	0.06	0.27		0.140
2-Methylheptane	0.263	0.03	0.15		0.170
3-Methylheptane	0.211	0.03	0.12		0.110
1-Octene	0.350	0.04	0.20		0.280
1-Nonene	0.148	0.02	0.09	U	0.240
n-Nonane	0.192	0.02	0.11		0.180
Isopropylbenzene	0.133	0.02	0.08	U	0.210
a-Pinene	0.167	0.02	0.12	U	0.240
n-Propylbenzene	0.163	0.02	0.09	U	0.200
m-Ethyltoluene	0.393	0.04	0.22		0.150
p-Ethyltoluene	0.186	0.02	0.10	U	0.240
1,3,5-Trimethylbenzene	0.199	0.02	0.11		0.170
o-Ethyltoluene	0.374	0.04	0.21		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.328	0.04	0.18		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.375	0.04	0.22		0.230
1,2,3-Trimethylbenzene	0.260	0.03	0.14		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.587	0.05	0.34		0.220
1-Dodecene	0.146	0.01	0.08	U	0.290
n-Dodecane	0.593	0.05	0.35		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	59.3	ND	ND		
Sum of Unknowns	152	ND	ND		
TNMOC	211	ND	ND		



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City of Fort Worth  
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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-09-19-10 Lab ID: 0092120-06 Sampled: 09/19/10 23:49  
 Pressure @ Receipt: 7" Hg Canister #: 5058 Received: 09/21/10 13:32  
 Comments: Site 3 Analyzed: 09/28/10 03:38

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.72	1.36	1.56		0.380
Ethane	23.5	11.80	14.50		0.120
Propane	11.0	3.67	6.63		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.68	0.67	1.60		0.130
Isobutene/1-Butene	0.847	0.21	0.49		0.150
n-Butane	4.01	1.00	2.39		0.170
trans-2-Butene	0.126	0.03	0.07	U	0.140
cis-2-Butene	0.174	0.04	0.10	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	5.39	1.08	3.19		0.190
1-Pentene	0.280	0.06	0.16		0.120
2-Methyl-1-butene	0.178	0.04	0.10	U	0.240
n-Pentane	3.35	0.67	1.98		0.0900
Isoprene	1.28	0.26	0.72		0.240
trans-2-Pentene	0.352	0.07	0.20		0.140
cis-2-Pentene	0.163	0.03	0.09	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.488	0.08	0.29		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.364	0.07	0.21		0.120
2,3-Dimethylbutane	0.801	0.13	0.47		0.200
2-Methylpentane	4.42	0.74	2.60		0.140
3-Methylpentane	1.26	0.21	0.74		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.321	0.05	0.19	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.27	0.21	0.75		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.06	0.18	0.61		0.140
2,4-Dimethylpentane	0.420	0.06	0.25		0.230
Cyclohexane	0.433	0.07	0.25		0.190
2-Methylhexane	0.741	0.11	0.44		0.110
2,3-Dimethylpentane	1.08	0.15	0.63		0.370
3-Methylhexane	1.46	0.21	0.86		0.150
1-Heptene	ND	ND	ND	U	0.370

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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-09-19-10 Lab ID: 0092120-06 Sampled: 09/19/10 23:49  
 Pressure @ Receipt: 7" Hg Canister #: 5058 Received: 09/21/10 13:32  
 Comments: Site 3 Analyzed: 09/28/10 03:38

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.95	0.24	1.14		0.170
n-Heptane	0.605	0.09	0.36		0.180
Methylcyclohexane	0.750	0.11	0.43		0.190
2,2,3-Trimethylpentane	0.378	0.05	0.22		0.280
2,3,4-Trimethylpentane	0.562	0.07	0.33		0.140
2-Methylheptane	0.425	0.05	0.25		0.170
3-Methylheptane	0.261	0.03	0.15		0.110
1-Octene	0.181	0.02	0.10	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.241	0.03	0.14		0.180
Isopropylbenzene	0.135	0.02	0.08	U	0.210
a-Pinene	1.59	0.20	1.11		0.240
n-Propylbenzene	0.165	0.02	0.09	U	0.200
m-Ethyltoluene	0.367	0.04	0.20		0.150
p-Ethyltoluene	0.273	0.03	0.15		0.240
1,3,5-Trimethylbenzene	0.234	0.03	0.13		0.170
o-Ethyltoluene	0.260	0.03	0.14		0.180
b-Pinene	0.193	0.02	0.14	U	0.240
1,2,4-Trimethylbenzene	0.410	0.05	0.22		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.235	0.02	0.14		0.230
1,2,3-Trimethylbenzene	0.155	0.02	0.08	U	0.170
m-Diethylbenzene	0.0910	0.01	0.05	U	0.240
p-Diethylbenzene	0.131	0.01	0.07	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.305	0.03	0.18		0.220
1-Dodecene	0.222	0.02	0.13	U	0.290
n-Dodecane	0.340	0.03	0.20		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	88.9	ND	ND		
Sum of Unknowns	54.5	ND	ND		
TNMOC	143	ND	ND		





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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-16-10 Lab ID: 0092120-07 Sampled: 09/16/10 23:54  
 Pressure @ Receipt: 9" Hg Canister #: 5059 Received: 09/21/10 13:32  
 Comments: Site 4 Analyzed: 09/28/10 01:35

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.60	1.30	1.49		0.380
Ethane	11.7	5.85	7.21		0.120
Propane	7.59	2.53	4.57		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.75	0.44	1.04		0.130
Isobutene/1-Butene	0.762	0.19	0.44		0.150
n-Butane	8.99	2.25	5.35		0.170
trans-2-Butene	0.344	0.09	0.20		0.140
cis-2-Butene	0.371	0.09	0.21		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	23.6	4.72	14.00		0.190
1-Pentene	0.649	0.13	0.37		0.120
2-Methyl-1-butene	0.911	0.18	0.52		0.240
n-Pentane	8.36	1.67	4.94		0.0900
Isoprene	0.849	0.17	0.47		0.240
trans-2-Pentene	1.26	0.25	0.72		0.140
cis-2-Pentene	0.674	0.14	0.39		0.190
2-Methyl-2-butene	1.34	0.27	0.77		0.240
2,2-Dimethylbutane	0.888	0.15	0.52		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.731	0.15	0.42		0.120
2,3-Dimethylbutane	2.33	0.39	1.37		0.200
2-Methylpentane	5.99	1.00	3.53		0.140
3-Methylpentane	3.03	0.51	1.78		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.251	0.04	0.14	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.10	0.35	1.24		0.240
trans-2-Hexene	0.184	0.03	0.11	U	0.360
cis-2-Hexene	0.122	0.02	0.07	U	0.360
Methylcyclopentane	1.89	0.32	1.09		0.140
2,4-Dimethylpentane	1.08	0.15	0.63		0.230
Cyclohexane	0.557	0.09	0.32		0.190
2-Methylhexane	1.10	0.16	0.65		0.110
2,3-Dimethylpentane	1.62	0.23	0.95		0.370
3-Methylhexane	1.66	0.24	0.97		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-16-10 Lab ID: 0092120-07 Sampled: 09/16/10 23:54  
 Pressure @ Receipt: 9" Hg Canister #: 5059 Received: 09/21/10 13:32  
 Comments: Site 4 Analyzed: 09/28/10 01:35

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	4.02	0.50	2.35		0.170
n-Heptane	0.646	0.09	0.38		0.180
Methylcyclohexane	0.974	0.14	0.56		0.190
2,2,3-Trimethylpentane	0.543	0.07	0.32		0.280
2,3,4-Trimethylpentane	0.956	0.12	0.56		0.140
2-Methylheptane	0.319	0.04	0.19		0.170
3-Methylheptane	0.263	0.03	0.15		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.214	0.02	0.13		0.180
Isopropylbenzene	0.0960	0.01	0.06	U	0.210
a-Pinene	0.397	0.05	0.28		0.240
n-Propylbenzene	0.164	0.02	0.09	U	0.200
m-Ethyltoluene	0.274	0.03	0.15		0.150
p-Ethyltoluene	0.191	0.02	0.11	U	0.240
1,3,5-Trimethylbenzene	0.217	0.02	0.12		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.392	0.04	0.22		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.191	0.02	0.11	U	0.230
1,2,3-Trimethylbenzene	0.132	0.01	0.07	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.327	0.03	0.19		0.220
1-Dodecene	0.115	0.01	0.07	U	0.290
n-Dodecane	0.211	0.02	0.12	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	117	ND	ND		
Sum of Unknowns	53.1	ND	ND		
TNMOC	170	ND	ND		



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City of Fort Worth  
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 Fort Worth, TX 76102-6311  
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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-19-10 Lab ID: 0092120-09 Sampled: 09/19/10 23:54  
 Pressure @ Receipt: 9.5" Hg Canister #: 5063 Received: 09/21/10 13:32  
 Comments: Dup1 Site 4 Analyzed: 09/27/10 16:24

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.21	1.61	1.85		0.380
Ethane	41.1	20.60	25.30		0.120
Propane	41.5	13.80	25.00		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	5.87	1.47	3.50		0.130
Isobutene/1-Butene	1.31	0.33	0.75		0.150
n-Butane	20.5	5.13	12.20		0.170
trans-2-Butene	0.714	0.18	0.41		0.140
cis-2-Butene	0.693	0.17	0.40		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	59.3	11.90	35.10		0.190
1-Pentene	1.66	0.33	0.95		0.120
2-Methyl-1-butene	2.57	0.51	1.48		0.240
n-Pentane	24.3	4.86	14.40		0.0900
Isoprene	1.11	0.22	0.62		0.240
trans-2-Pentene	3.47	0.69	1.99		0.140
cis-2-Pentene	1.76	0.35	1.01		0.190
2-Methyl-2-butene	4.12	0.82	2.37		0.240
2,2-Dimethylbutane	1.78	0.30	1.05		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.328	0.05	0.19	U	0.360
Cyclopentane	2.03	0.41	1.17		0.120
2,3-Dimethylbutane	5.71	0.95	3.36		0.200
2-Methylpentane	15.5	2.58	9.12		0.140
3-Methylpentane	8.82	1.47	5.19		0.200
2-Methyl-1-pentene	0.555	0.09	0.32		0.360
1-Hexene	0.406	0.07	0.23		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	8.55	1.43	5.03		0.240
trans-2-Hexene	0.675	0.11	0.39		0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	5.22	0.87	3.00		0.140
2,4-Dimethylpentane	2.42	0.35	1.42		0.230
Cyclohexane	1.80	0.30	1.03		0.190
2-Methylhexane	3.39	0.48	1.99		0.110
2,3-Dimethylpentane	2.94	0.42	1.72		0.370
3-Methylhexane	3.84	0.55	2.25		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	9.94	1.24	5.82		0.170

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-19-10 Lab ID: 0092120-09 Sampled: 09/19/10 23:54  
 Pressure @ Receipt: 9.5" Hg Canister #: 5063 Received: 09/21/10 13:32  
 Comments: Dup1 Site 4 Analyzed: 09/27/10 16:24

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	2.13	0.30	1.25		0.180
Methylcyclohexane	2.20	0.31	1.26		0.190
2,2,3-Trimethylpentane	1.68	0.21	0.98		0.280
2,3,4-Trimethylpentane	2.32	0.29	1.36		0.140
2-Methylheptane	0.914	0.11	0.54		0.170
3-Methylheptane	0.699	0.09	0.41		0.110
1-Octene	0.145	0.02	0.08	U	0.280
1-Nonene	0.146	0.02	0.08	U	0.240
n-Nonane	0.419	0.05	0.25		0.180
Isopropylbenzene	0.110	0.01	0.07	U	0.210
a-Pinene	0.576	0.07	0.40		0.240
n-Propylbenzene	0.269	0.03	0.15		0.200
m-Ethyltoluene	0.631	0.07	0.35		0.150
p-Ethyltoluene	0.387	0.04	0.21		0.240
1,3,5-Trimethylbenzene	0.456	0.05	0.25		0.170
o-Ethyltoluene	0.280	0.03	0.15		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.860	0.10	0.47		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.495	0.05	0.29		0.230
1,2,3-Trimethylbenzene	0.201	0.02	0.11		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.446	0.04	0.26		0.220
1-Dodecene	0.268	0.02	0.15	U	0.290
n-Dodecane	0.332	0.03	0.19		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	323	ND	ND		
Sum of Unknowns	74.8	ND	ND		
TNMOC	397	ND	ND		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-D-09-19-10 Lab ID: 0092120-10 Sampled: 09/19/10 23:54  
 Pressure @ Receipt: 9.5" Hg Canister #: 5124 Received: 09/21/10 13:32  
 Comments: Dup2 Site 4 Analyzed: 09/27/10 17:25

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.37	1.69	1.94		0.380
Ethane	40.9	20.50	25.20		0.120
Propane	41.6	13.90	25.10		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	5.88	1.47	3.50		0.130
Isobutene/1-Butene	1.39	0.35	0.80		0.150
n-Butane	20.9	5.23	12.40		0.170
trans-2-Butene	0.728	0.18	0.42		0.140
cis-2-Butene	0.739	0.19	0.43		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	59.2	11.80	35.00		0.190
1-Pentene	1.56	0.31	0.90		0.120
2-Methyl-1-butene	2.64	0.53	1.52		0.240
n-Pentane	24.7	4.94	14.60		0.0900
Isoprene	1.13	0.23	0.63		0.240
trans-2-Pentene	3.54	0.71	2.04		0.140
cis-2-Pentene	1.83	0.37	1.05		0.190
2-Methyl-2-butene	4.26	0.85	2.45		0.240
2,2-Dimethylbutane	1.79	0.30	1.05		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.334	0.06	0.19	U	0.360
Cyclopentane	2.03	0.41	1.17		0.120
2,3-Dimethylbutane	5.83	0.97	3.43		0.200
2-Methylpentane	15.9	2.65	9.36		0.140
3-Methylpentane	9.17	1.53	5.40		0.200
2-Methyl-1-pentene	0.548	0.09	0.32		0.360
1-Hexene	0.423	0.07	0.24		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	8.90	1.48	5.24		0.240
trans-2-Hexene	0.675	0.11	0.39		0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	5.42	0.90	3.12		0.140
2,4-Dimethylpentane	2.49	0.36	1.46		0.230
Cyclohexane	1.80	0.30	1.03		0.190
2-Methylhexane	3.52	0.50	2.07		0.110
2,3-Dimethylpentane	2.86	0.41	1.68		0.370
3-Methylhexane	4.44	0.63	2.60		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	10.6	1.33	6.20		0.170

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-D-09-19-10 Lab ID: 0092120-10 Sampled: 09/19/10 23:54  
 Pressure @ Receipt: 9.5" Hg Canister #: 5124 Received: 09/21/10 13:32  
 Comments: Dup2 Site 4 Analyzed: 09/27/10 17:25

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	2.25	0.32	1.32		0.180
Methylcyclohexane	1.98	0.28	1.14		0.190
2,2,3-Trimethylpentane	1.94	0.24	1.14		0.280
2,3,4-Trimethylpentane	2.51	0.31	1.47		0.140
2-Methylheptane	0.945	0.12	0.55		0.170
3-Methylheptane	0.748	0.09	0.44		0.110
1-Octene	0.127	0.02	0.07	U	0.280
1-Nonene	0.102	0.01	0.06	U	0.240
n-Nonane	0.444	0.05	0.26		0.180
Isopropylbenzene	0.135	0.02	0.08	U	0.210
a-Pinene	0.589	0.07	0.41		0.240
n-Propylbenzene	0.293	0.03	0.16		0.200
m-Ethyltoluene	0.646	0.07	0.35		0.150
p-Ethyltoluene	0.462	0.05	0.25		0.240
1,3,5-Trimethylbenzene	0.482	0.05	0.26		0.170
o-Ethyltoluene	0.313	0.03	0.17		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	1.00	0.11	0.55		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.436	0.04	0.25		0.230
1,2,3-Trimethylbenzene	0.310	0.03	0.17		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.444	0.04	0.26		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.295	0.02	0.17		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	328	ND	ND		
Sum of Unknowns	78.2	ND	ND		
TNMOC	406	ND	ND		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-16-10 Lab ID: 0092120-13 Sampled: 09/16/10 23:54  
 Pressure @ Receipt: 14" Hg Canister #: 5062 Received: 09/21/10 13:32  
 Comments: Site 5 Analyzed: 09/28/10 00:33

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.19	1.10	1.26		0.380
Ethane	16.1	8.05	9.92		0.120
Propane	7.86	2.62	4.74		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.66	0.42	0.99		0.130
Isobutene/1-Butene	0.577	0.14	0.33		0.150
n-Butane	7.48	1.87	4.45		0.170
trans-2-Butene	0.141	0.04	0.08		0.140
cis-2-Butene	0.198	0.05	0.11		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.49	0.50	1.47		0.190
1-Pentene	0.238	0.05	0.14		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	2.01	0.40	1.19		0.0900
Isoprene	0.452	0.09	0.25		0.240
trans-2-Pentene	0.189	0.04	0.11		0.140
cis-2-Pentene	0.170	0.03	0.10	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.432	0.07	0.25		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.264	0.04	0.15	U	0.360
Cyclopentane	0.522	0.10	0.30		0.120
2,3-Dimethylbutane	0.438	0.07	0.26		0.200
2-Methylpentane	2.36	0.39	1.39		0.140
3-Methylpentane	0.730	0.12	0.43		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.362	0.06	0.21		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.720	0.12	0.42		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.717	0.12	0.41		0.140
2,4-Dimethylpentane	0.280	0.04	0.16		0.230
Cyclohexane	0.323	0.05	0.19		0.190
2-Methylhexane	0.544	0.08	0.32		0.110
2,3-Dimethylpentane	0.823	0.12	0.48		0.370
3-Methylhexane	1.16	0.17	0.68		0.150
1-Heptene	ND	ND	ND	U	0.370

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# CERTIFICATE OF ANALYSIS

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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-16-10 Lab ID: 0092120-13 Sampled: 09/16/10 23:54  
 Pressure @ Receipt: 14" Hg Canister #: 5062 Received: 09/21/10 13:32  
 Comments: Site 5 Analyzed: 09/28/10 00:33

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.01	0.13	0.59		0.170
n-Heptane	0.459	0.07	0.27		0.180
Methylcyclohexane	0.488	0.07	0.28		0.190
2,2,3-Trimethylpentane	0.166	0.02	0.10	U	0.280
2,3,4-Trimethylpentane	0.407	0.05	0.24		0.140
2-Methylheptane	0.314	0.04	0.18		0.170
3-Methylheptane	0.231	0.03	0.14		0.110
1-Octene	0.138	0.02	0.08	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.237	0.03	0.14		0.180
Isopropylbenzene	0.163	0.02	0.10	U	0.210
a-Pinene	0.288	0.04	0.20		0.240
n-Propylbenzene	0.132	0.01	0.07	U	0.200
m-Ethyltoluene	0.256	0.03	0.14		0.150
p-Ethyltoluene	0.198	0.02	0.11	U	0.240
1,3,5-Trimethylbenzene	0.159	0.02	0.09	U	0.170
o-Ethyltoluene	0.154	0.02	0.08	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.314	0.03	0.17		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.288	0.03	0.17		0.230
1,2,3-Trimethylbenzene	0.111	0.01	0.06	U	0.170
m-Diethylbenzene	0.163	0.02	0.09	U	0.240
p-Diethylbenzene	0.155	0.02	0.09		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.300	0.03	0.18		0.220
1-Dodecene	0.132	0.01	0.08	U	0.290
n-Dodecane	0.206	0.02	0.12	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	65.3	ND	ND		
Sum of Unknowns	49.4	ND	ND		
TNMOC	115	ND	ND		





# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-19-10 Lab ID: 0092120-15 Sampled: 09/19/10 23:54  
 Pressure @ Receipt: 10.5" Hg Canister #: 5003 Received: 09/21/10 13:32  
 Comments: Dup1 Site 5 Analyzed: 09/27/10 20:29

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.13	1.57	1.80		0.380
Ethane	33.9	17.00	20.90		0.120
Propane	15.8	5.27	9.52		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	4.52	1.13	2.69		0.130
Isobutene/1-Butene	0.654	0.16	0.38		0.150
n-Butane	ND	ND	ND	A-01, U	0.170
trans-2-Butene	0.111	0.03	0.06	U	0.140
cis-2-Butene	0.160	0.04	0.09	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.66	0.73	2.16		0.190
1-Pentene	0.217	0.04	0.13		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	3.20	0.64	1.89		0.0900
Isoprene	0.738	0.15	0.41		0.240
trans-2-Pentene	0.259	0.05	0.15		0.140
cis-2-Pentene	0.166	0.03	0.10	U	0.190
2-Methyl-2-butene	0.0960	0.02	0.06	U	0.240
2,2-Dimethylbutane	0.352	0.06	0.21		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.292	0.06	0.17		0.120
2,3-Dimethylbutane	0.471	0.08	0.28		0.200
2-Methylpentane	3.21	0.54	1.89		0.140
3-Methylpentane	0.908	0.15	0.54		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.215	0.04	0.12	U	0.360
2-Ethyl-1-butene	0.479	0.08	0.28		0.360
n-Hexane	1.15	0.19	0.68		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.64	0.27	0.94		0.140
2,4-Dimethylpentane	0.268	0.04	0.16		0.230
Cyclohexane	1.58	0.26	0.91		0.190
2-Methylhexane	0.593	0.08	0.35		0.110
2,3-Dimethylpentane	1.40	0.20	0.82		0.370
3-Methylhexane	2.63	0.38	1.54		0.150
1-Heptene	ND	ND	ND	U	0.370

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 REPORTED: 05/24/11 11:34  
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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-19-10 Lab ID: 0092120-15 Sampled: 09/19/10 23:54  
 Pressure @ Receipt: 10.5" Hg Canister #: 5003 Received: 09/21/10 13:32  
 Comments: Dup1 Site 5 Analyzed: 09/27/10 20:29

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.03	0.13	0.60		0.170
n-Heptane	0.610	0.09	0.36		0.180
Methylcyclohexane	0.914	0.13	0.53		0.190
2,2,3-Trimethylpentane	0.213	0.03	0.13	U	0.280
2,3,4-Trimethylpentane	0.290	0.04	0.17		0.140
2-Methylheptane	0.361	0.05	0.21		0.170
3-Methylheptane	0.226	0.03	0.13		0.110
1-Octene	0.214	0.03	0.12	U	0.280
1-Nonene	0.0950	0.01	0.05	U	0.240
n-Nonane	0.266	0.03	0.16		0.180
Isopropylbenzene	0.164	0.02	0.10	U	0.210
a-Pinene	0.154	0.02	0.11	U	0.240
n-Propylbenzene	0.224	0.02	0.12		0.200
m-Ethyltoluene	0.436	0.05	0.24		0.150
p-Ethyltoluene	0.227	0.03	0.12	U	0.240
1,3,5-Trimethylbenzene	0.268	0.03	0.15		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.305	0.03	0.17		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.287	0.03	0.17		0.230
1,2,3-Trimethylbenzene	0.372	0.04	0.20		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	0.114	0.01	0.07	U	0.220
n-Undecane	0.366	0.03	0.21		0.220
1-Dodecene	0.244	0.02	0.14	U	0.290
n-Dodecane	0.310	0.03	0.18		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	97.7	ND	ND		
Sum of Unknowns	123	ND	ND		
TNMOC	221	ND	ND		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 Fort Worth, TX 76102-6311  
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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-D-09-19-10 Lab ID: 0092120-16 Sampled: 09/19/10 23:54  
 Pressure @ Receipt: 10.5" Hg Canister #: 5072 Received: 09/21/10 13:32  
 Comments: Dup2 Site 5 Analyzed: 09/27/10 21:30

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.25	1.13	1.29		0.380
Ethane	32.9	16.50	20.30		0.120
Propane	14.7	4.90	8.86		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	3.15	0.79	1.88		0.130
Isobutene/1-Butene	0.637	0.16	0.37		0.150
n-Butane	ND	ND	ND	A-01, U	0.170
trans-2-Butene	0.133	0.03	0.08	U	0.140
cis-2-Butene	0.200	0.05	0.12		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.46	0.69	2.05		0.190
1-Pentene	0.177	0.04	0.10		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	2.83	0.57	1.67		0.0900
Isoprene	0.591	0.12	0.33		0.240
trans-2-Pentene	0.264	0.05	0.15		0.140
cis-2-Pentene	0.184	0.04	0.11	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.477	0.08	0.28		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.274	0.05	0.16		0.120
2,3-Dimethylbutane	0.444	0.07	0.26		0.200
2-Methylpentane	2.70	0.45	1.59		0.140
3-Methylpentane	0.945	0.16	0.56		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.247	0.04	0.14	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.21	0.20	0.71		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.34	0.22	0.77		0.140
2,4-Dimethylpentane	0.312	0.04	0.18		0.230
Cyclohexane	0.490	0.08	0.28		0.190
2-Methylhexane	0.699	0.10	0.41		0.110
2,3-Dimethylpentane	1.10	0.16	0.65		0.370
3-Methylhexane	1.75	0.25	1.03		0.150
1-Heptene	ND	ND	ND	U	0.370

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

**Description:** S5-D-09-19-10 **Lab ID:** 0092120-16 **Sampled:** 09/19/10 23:54  
**Pressure @ Receipt:** 10.5" Hg **Canister #:** 5072 **Received:** 09/21/10 13:32  
**Comments:** Dup2 Site 5 **Analyzed:** 09/27/10 21:30

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.998</b>	<b>0.13</b>	<b>0.58</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.645</b>	<b>0.09</b>	<b>0.38</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.812</b>	<b>0.12</b>	<b>0.47</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.255	0.03	0.15	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.372</b>	<b>0.05</b>	<b>0.22</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.445</b>	<b>0.06</b>	<b>0.26</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.299</b>	<b>0.04</b>	<b>0.18</b>		<b>0.110</b>
1-Octene	0.237	0.03	0.14	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.275</b>	<b>0.03</b>	<b>0.16</b>		<b>0.180</b>
Isopropylbenzene	0.128	0.02	0.08	U	0.210
<b>a-Pinene</b>	<b>0.522</b>	<b>0.07</b>	<b>0.36</b>		<b>0.240</b>
n-Propylbenzene	0.162	0.02	0.09	U	0.200
<b>m-Ethyltoluene</b>	<b>0.293</b>	<b>0.03</b>	<b>0.16</b>		<b>0.150</b>
p-Ethyltoluene	0.217	0.02	0.12	U	0.240
<b>1,3,5-Trimethylbenzene</b>	<b>0.184</b>	<b>0.02</b>	<b>0.10</b>		<b>0.170</b>
o-Ethyltoluene	0.131	0.01	0.07	U	0.180
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.298</b>	<b>0.03</b>	<b>0.16</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.202	0.02	0.12	U	0.230
1,2,3-Trimethylbenzene	0.108	0.01	0.06	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.297</b>	<b>0.03</b>	<b>0.17</b>		<b>0.220</b>
1-Dodecene	0.209	0.02	0.12	U	0.290
n-Dodecane	0.271	0.02	0.16	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>87.4</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>72.4</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>160</b>	<b>ND</b>	<b>ND</b>		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-22-10 Lab ID: 0092403-01 Sampled: 09/22/10 23:59  
 Pressure @ Receipt: 8" Hg Canister #: 5098 Received: 09/24/10 10:22  
 Comments: Site 1 Analyzed: 09/28/10 22:00

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.69	0.85	0.97		0.380
Ethane	5.95	2.98	3.67		0.120
Propane	6.66	2.22	4.01		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	3.18	0.80	1.89		0.130
Isobutene/1-Butene	0.516	0.13	0.30		0.150
n-Butane	2.16	0.54	1.29		0.170
trans-2-Butene	0.106	0.03	0.06	U	0.140
cis-2-Butene	0.135	0.03	0.08	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.91	0.58	1.72		0.190
1-Pentene	0.164	0.03	0.09		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	2.76	0.55	1.63		0.0900
Isoprene	1.29	0.26	0.72		0.240
trans-2-Pentene	0.114	0.02	0.07	U	0.140
cis-2-Pentene	0.120	0.02	0.07	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.280	0.05	0.17		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.223	0.04	0.13		0.120
2,3-Dimethylbutane	0.391	0.07	0.23		0.200
2-Methylpentane	0.839	0.14	0.49		0.140
3-Methylpentane	0.673	0.11	0.40		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.157	0.03	0.09	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.601	0.10	0.35		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.434	0.07	0.25		0.140
2,4-Dimethylpentane	0.239	0.03	0.14		0.230
Cyclohexane	0.287	0.05	0.17		0.190
2-Methylhexane	0.393	0.06	0.23		0.110
2,3-Dimethylpentane	0.444	0.06	0.26		0.370
3-Methylhexane	0.598	0.09	0.35		0.150
1-Heptene	0.167	0.02	0.10	U	0.370

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 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-22-10 Lab ID: 0092403-01 Sampled: 09/22/10 23:59  
 Pressure @ Receipt: 8" Hg Canister #: 5098 Received: 09/24/10 10:22  
 Comments: Site 1 Analyzed: 09/28/10 22:00

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.699</b>	<b>0.09</b>	<b>0.41</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.278</b>	<b>0.04</b>	<b>0.16</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.419</b>	<b>0.06</b>	<b>0.24</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.0970	0.01	0.06	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.241</b>	<b>0.03</b>	<b>0.14</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.236</b>	<b>0.03</b>	<b>0.14</b>		<b>0.170</b>
3-Methylheptane	0.0990	0.01	0.06	U	0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.175	0.02	0.10	U	0.180
Isopropylbenzene	ND	ND	ND	U	0.210
<b>a-Pinene</b>	<b>0.468</b>	<b>0.06</b>	<b>0.33</b>		<b>0.240</b>
n-Propylbenzene	0.138	0.02	0.08	U	0.200
<b>m-Ethyltoluene</b>	<b>0.157</b>	<b>0.02</b>	<b>0.09</b>		<b>0.150</b>
p-Ethyltoluene	0.132	0.01	0.07	U	0.240
1,3,5-Trimethylbenzene	0.103	0.01	0.06	U	0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	0.199	0.02	0.14	U	0.240
1,2,4-Trimethylbenzene	0.201	0.02	0.11	U	0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.223	0.02	0.13	U	0.230
1,2,3-Trimethylbenzene	0.0780	0.01	0.04	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.208	0.02	0.12	U	0.220
<b>1-Dodecene</b>	<b>0.643</b>	<b>0.05</b>	<b>0.37</b>		<b>0.290</b>
n-Dodecane	0.205	0.02	0.12	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>43.2</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>41.7</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>84.9</b>	<b>ND</b>	<b>ND</b>		



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 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-22-10 Lab ID: 0092403-02 Sampled: 09/22/10 23:59  
 Pressure @ Receipt: 6.5" Hg Canister #: 5128 Received: 09/24/10 10:22  
 Comments: Site 2 Analyzed: 09/28/10 23:02

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.52	1.26	1.45		0.380
Ethane	8.03	4.02	4.95		0.120
Propane	5.61	1.87	3.38		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.61	0.40	0.96		0.130
Isobutene/1-Butene	0.809	0.20	0.47		0.150
n-Butane	2.73	0.68	1.63		0.170
trans-2-Butene	0.132	0.03	0.08	U	0.140
cis-2-Butene	0.179	0.04	0.10	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	4.22	0.84	2.50		0.190
1-Pentene	0.271	0.05	0.16		0.120
2-Methyl-1-butene	0.248	0.05	0.14		0.240
n-Pentane	2.18	0.44	1.29		0.0900
Isoprene	1.04	0.21	0.58		0.240
trans-2-Pentene	0.231	0.05	0.13		0.140
cis-2-Pentene	0.155	0.03	0.09	U	0.190
2-Methyl-2-butene	0.236	0.05	0.14	U	0.240
2,2-Dimethylbutane	0.360	0.06	0.21		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.208	0.03	0.12	U	0.360
Cyclopentane	0.277	0.06	0.16		0.120
2,3-Dimethylbutane	0.587	0.10	0.35		0.200
2-Methylpentane	1.60	0.27	0.94		0.140
3-Methylpentane	0.955	0.16	0.56		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.245	0.04	0.14	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.868	0.15	0.51		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.776	0.13	0.45		0.140
2,4-Dimethylpentane	0.325	0.05	0.19		0.230
Cyclohexane	0.289	0.05	0.17		0.190
2-Methylhexane	0.646	0.09	0.38		0.110
2,3-Dimethylpentane	0.798	0.11	0.47		0.370
3-Methylhexane	1.21	0.17	0.71		0.150
1-Heptene	ND	ND	ND	U	0.370

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Description: S2-P-09-22-10 Lab ID: 0092403-02 Sampled: 09/22/10 23:59  
 Pressure @ Receipt: 6.5" Hg Canister #: 5128 Received: 09/24/10 10:22  
 Comments: Site 2 Analyzed: 09/28/10 23:02

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.28	0.16	0.75		0.170
n-Heptane	0.370	0.05	0.22		0.180
Methylcyclohexane	0.478	0.07	0.28		0.190
2,2,3-Trimethylpentane	0.254	0.03	0.15	U	0.280
2,3,4-Trimethylpentane	0.494	0.06	0.29		0.140
2-Methylheptane	0.206	0.03	0.12		0.170
3-Methylheptane	0.213	0.03	0.13		0.110
1-Octene	0.200	0.03	0.12	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.203	0.02	0.12		0.180
Isopropylbenzene	0.115	0.01	0.07	U	0.210
a-Pinene	0.236	0.03	0.17	U	0.240
n-Propylbenzene	0.140	0.02	0.08	U	0.200
m-Ethyltoluene	0.228	0.03	0.13		0.150
p-Ethyltoluene	0.180	0.02	0.10	U	0.240
1,3,5-Trimethylbenzene	0.191	0.02	0.11		0.170
o-Ethyltoluene	0.162	0.02	0.09	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.362	0.04	0.20		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.331	0.03	0.19		0.230
1,2,3-Trimethylbenzene	0.112	0.01	0.06	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.288	0.03	0.17		0.220
1-Dodecene	0.148	0.01	0.09	U	0.290
n-Dodecane	0.322	0.03	0.19		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	52.2	ND	ND		
Sum of Unknowns	48.0	ND	ND		
TNMOC	100	ND	ND		





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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-09-22-10 Lab ID: 0092403-03 Sampled: 09/22/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5075 Received: 09/24/10 10:22  
 Comments: Site 3 Analyzed: 09/29/10 00:03

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.96	0.98	1.13		0.380
Ethane	14.3	7.15	8.81		0.120
Propane	6.38	2.13	3.84		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.52	0.38	0.91		0.130
Isobutene/1-Butene	0.523	0.13	0.30		0.150
n-Butane	2.31	0.58	1.38		0.170
trans-2-Butene	0.0970	0.02	0.06	U	0.140
cis-2-Butene	0.129	0.03	0.07	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.68	0.54	1.58		0.190
1-Pentene	0.208	0.04	0.12		0.120
2-Methyl-1-butene	0.113	0.02	0.07	U	0.240
n-Pentane	1.64	0.33	0.97		0.0900
Isoprene	0.821	0.16	0.46		0.240
trans-2-Pentene	0.145	0.03	0.08		0.140
cis-2-Pentene	0.123	0.02	0.07	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.330	0.06	0.19		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.241	0.05	0.14		0.120
2,3-Dimethylbutane	0.389	0.06	0.23		0.200
2-Methylpentane	1.18	0.20	0.70		0.140
3-Methylpentane	0.673	0.11	0.40		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.196	0.03	0.11	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.663	0.11	0.39		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.643	0.11	0.37		0.140
2,4-Dimethylpentane	0.237	0.03	0.14		0.230
Cyclohexane	0.274	0.05	0.16		0.190
2-Methylhexane	0.401	0.06	0.24		0.110
2,3-Dimethylpentane	0.736	0.11	0.43		0.370
3-Methylhexane	1.27	0.18	0.75		0.150
1-Heptene	ND	ND	ND	U	0.370

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 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-09-22-10 Lab ID: 0092403-03 Sampled: 09/22/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5075 Received: 09/24/10 10:22  
 Comments: Site 3 Analyzed: 09/29/10 00:03

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.935</b>	<b>0.12</b>	<b>0.55</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.312</b>	<b>0.04</b>	<b>0.18</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.449</b>	<b>0.06</b>	<b>0.26</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.131	0.02	0.08	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.312</b>	<b>0.04</b>	<b>0.18</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.253</b>	<b>0.03</b>	<b>0.15</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.157</b>	<b>0.02</b>	<b>0.09</b>		<b>0.110</b>
<b>1-Octene</b>	<b>0.324</b>	<b>0.04</b>	<b>0.19</b>		<b>0.280</b>
1-Nonene	0.0890	0.01	0.05	U	0.240
n-Nonane	0.150	0.02	0.09	U	0.180
Isopropylbenzene	0.0750	0.01	0.05	U	0.210
<b>a-Pinene</b>	<b>1.45</b>	<b>0.18</b>	<b>1.01</b>		<b>0.240</b>
n-Propylbenzene	0.126	0.01	0.07	U	0.200
<b>m-Ethyltoluene</b>	<b>0.246</b>	<b>0.03</b>	<b>0.14</b>		<b>0.150</b>
p-Ethyltoluene	0.127	0.01	0.07	U	0.240
1,3,5-Trimethylbenzene	0.108	0.01	0.06	U	0.170
o-Ethyltoluene	0.173	0.02	0.09	U	0.180
b-Pinene	0.147	0.02	0.10	U	0.240
1,2,4-Trimethylbenzene	0.236	0.03	0.13	U	0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.217	0.02	0.13	U	0.230
1,2,3-Trimethylbenzene	0.0920	0.01	0.05	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.318</b>	<b>0.03</b>	<b>0.19</b>		<b>0.220</b>
1-Dodecene	0.262	0.02	0.15	U	0.290
<b>n-Dodecane</b>	<b>0.347</b>	<b>0.03</b>	<b>0.20</b>		<b>0.290</b>
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>52.8</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>39.5</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>92.4</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-22-10 Lab ID: 0092403-05 Sampled: 09/22/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5108 Received: 09/24/10 10:22  
 Comments: Site 4 Analyzed: 09/29/10 01:05

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.75	1.38	1.58		0.380
Ethane	11.2	5.60	6.90		0.120
Propane	6.22	2.07	3.75		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.55	0.39	0.92		0.130
Isobutene/1-Butene	0.756	0.19	0.44		0.150
n-Butane	2.91	0.73	1.73		0.170
trans-2-Butene	0.169	0.04	0.10		0.140
cis-2-Butene	0.245	0.06	0.14		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	5.97	1.19	3.53		0.190
1-Pentene	0.298	0.06	0.17		0.120
2-Methyl-1-butene	0.421	0.08	0.24		0.240
n-Pentane	3.13	0.63	1.85		0.0900
Isoprene	0.549	0.11	0.31		0.240
trans-2-Pentene	0.554	0.11	0.32		0.140
cis-2-Pentene	0.288	0.06	0.17		0.190
2-Methyl-2-butene	0.458	0.09	0.26		0.240
2,2-Dimethylbutane	0.409	0.07	0.24		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.340	0.06	0.20	U	0.360
Cyclopentane	0.368	0.07	0.21		0.120
2,3-Dimethylbutane	0.788	0.13	0.46		0.200
2-Methylpentane	2.83	0.47	1.67		0.140
3-Methylpentane	1.24	0.21	0.73		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.312	0.05	0.18	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.21	0.20	0.71		0.240
trans-2-Hexene	0.0800	0.01	0.05	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.970	0.16	0.56		0.140
2,4-Dimethylpentane	0.394	0.06	0.23		0.230
Cyclohexane	0.356	0.06	0.21		0.190
2-Methylhexane	0.739	0.11	0.43		0.110
2,3-Dimethylpentane	0.741	0.11	0.44		0.370
3-Methylhexane	1.42	0.20	0.83		0.150
1-Heptene	ND	ND	ND	U	0.370

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Description: S4-P-09-22-10 Lab ID: 0092403-05 Sampled: 09/22/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5108 Received: 09/24/10 10:22  
 Comments: Site 4 Analyzed: 09/29/10 01:05

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.74	0.22	1.02		0.170
n-Heptane	0.478	0.07	0.28		0.180
Methylcyclohexane	0.504	0.07	0.29		0.190
2,2,3-Trimethylpentane	0.285	0.04	0.17		0.280
2,3,4-Trimethylpentane	0.559	0.07	0.33		0.140
2-Methylheptane	0.251	0.03	0.15		0.170
3-Methylheptane	0.221	0.03	0.13		0.110
1-Octene	0.129	0.02	0.07	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.202	0.02	0.12		0.180
Isopropylbenzene	0.108	0.01	0.07	U	0.210
a-Pinene	0.313	0.04	0.22		0.240
n-Propylbenzene	0.182	0.02	0.10	U	0.200
m-Ethyltoluene	0.331	0.04	0.18		0.150
p-Ethyltoluene	0.239	0.03	0.13	U	0.240
1,3,5-Trimethylbenzene	0.213	0.02	0.12		0.170
o-Ethyltoluene	0.191	0.02	0.11		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.439	0.05	0.24		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.187	0.02	0.11	U	0.230
1,2,3-Trimethylbenzene	0.163	0.02	0.09	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.308	0.03	0.18		0.220
1-Dodecene	0.0910	0.01	0.05	U	0.290
n-Dodecane	0.179	0.01	0.10	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	67.0	ND	ND		
Sum of Unknowns	40.8	ND	ND		
TNMOC	108	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-22-10 Lab ID: 0092403-07 Sampled: 09/22/10 23:59  
 Pressure @ Receipt: 14" Hg Canister #: 5053 Received: 09/24/10 10:22  
 Comments: Site 5 Analyzed: 09/29/10 02:06

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.07	1.04	1.19		0.380
Ethane	10.6	5.30	6.53		0.120
Propane	5.57	1.86	3.36		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.28	0.32	0.76		0.130
Isobutene/1-Butene	0.646	0.16	0.37		0.150
n-Butane	1.86	0.47	1.11		0.170
trans-2-Butene	0.193	0.05	0.11		0.140
cis-2-Butene	0.213	0.05	0.12		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.22	0.44	1.31		0.190
1-Pentene	0.232	0.05	0.13		0.120
2-Methyl-1-butene	0.149	0.03	0.09	U	0.240
n-Pentane	1.90	0.38	1.12		0.0900
Isoprene	0.375	0.08	0.21		0.240
trans-2-Pentene	0.148	0.03	0.09		0.140
cis-2-Pentene	0.161	0.03	0.09	U	0.190
2-Methyl-2-butene	0.0740	0.01	0.04	U	0.240
2,2-Dimethylbutane	0.365	0.06	0.22		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.253	0.05	0.15		0.120
2,3-Dimethylbutane	0.348	0.06	0.21		0.200
2-Methylpentane	ND	ND	ND	A-01, U	0.140
3-Methylpentane	0.780	0.13	0.46		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.318	0.05	0.18	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.602	0.10	0.35		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.811	0.14	0.47		0.140
2,4-Dimethylpentane	0.248	0.04	0.15		0.230
Cyclohexane	0.307	0.05	0.18		0.190
2-Methylhexane	0.354	0.05	0.21		0.110
2,3-Dimethylpentane	1.30	0.19	0.76		0.370
3-Methylhexane	1.11	0.16	0.65		0.150
1-Heptene	ND	ND	ND	U	0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-22-10 Lab ID: 0092403-07 Sampled: 09/22/10 23:59  
 Pressure @ Receipt: 14" Hg Canister #: 5053 Received: 09/24/10 10:22  
 Comments: Site 5 Analyzed: 09/29/10 02:06

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.839</b>	<b>0.11</b>	<b>0.49</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.342</b>	<b>0.05</b>	<b>0.20</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.522</b>	<b>0.07</b>	<b>0.30</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.142	0.02	0.08	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.335</b>	<b>0.04</b>	<b>0.20</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.403</b>	<b>0.05</b>	<b>0.24</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.163</b>	<b>0.02</b>	<b>0.10</b>		<b>0.110</b>
1-Octene	0.0900	0.01	0.05	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.186</b>	<b>0.02</b>	<b>0.11</b>		<b>0.180</b>
Isopropylbenzene	0.162	0.02	0.10	U	0.210
<b>a-Pinene</b>	<b>0.300</b>	<b>0.04</b>	<b>0.21</b>		<b>0.240</b>
n-Propylbenzene	0.171	0.02	0.09	U	0.200
<b>m-Ethyltoluene</b>	<b>0.250</b>	<b>0.03</b>	<b>0.14</b>		<b>0.150</b>
p-Ethyltoluene	0.208	0.02	0.11	U	0.240
1,3,5-Trimethylbenzene	0.161	0.02	0.09	U	0.170
o-Ethyltoluene	0.119	0.01	0.07	U	0.180
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.316</b>	<b>0.04</b>	<b>0.17</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.185	0.02	0.11	U	0.230
1,2,3-Trimethylbenzene	0.152	0.02	0.08	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
<b>p-Diethylbenzene</b>	<b>0.226</b>	<b>0.02</b>	<b>0.12</b>		<b>0.140</b>
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.401</b>	<b>0.04</b>	<b>0.23</b>		<b>0.220</b>
1-Dodecene	0.0970	0.01	0.06	U	0.290
n-Dodecane	0.259	0.02	0.15	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>47.4</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>56.7</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>104</b>	<b>ND</b>	<b>ND</b>		



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City of Fort Worth  
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 Fort Worth, TX 76102-6311  
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 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-25-10 Lab ID: 0092901-01 Sampled: 09/25/10 23:49  
 Pressure @ Receipt: 4.5" Hg Canister #: 5127 Received: 09/28/10 16:00  
 Comments: Site 1 Analyzed: 10/04/10 16:40

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.64	1.32	1.52		0.380
Ethane	4.32	2.16	2.66		0.120
Propane	4.49	1.50	2.71		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.14	0.29	0.68		0.130
Isobutene/1-Butene	0.903	0.23	0.52		0.150
n-Butane	1.67	0.42	0.99		0.170
trans-2-Butene	0.126	0.03	0.07	U	0.140
cis-2-Butene	0.128	0.03	0.07	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.31	0.46	1.37		0.190
1-Pentene	0.255	0.05	0.15		0.120
2-Methyl-1-butene	0.155	0.03	0.09	U	0.240
n-Pentane	1.25	0.25	0.74		0.0900
Isoprene	1.29	0.26	0.72		0.240
trans-2-Pentene	0.145	0.03	0.08		0.140
cis-2-Pentene	0.149	0.03	0.09	U	0.190
2-Methyl-2-butene	0.0990	0.02	0.06	U	0.240
2,2-Dimethylbutane	0.731	0.12	0.43		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.227	0.05	0.13		0.120
2,3-Dimethylbutane	0.370	0.06	0.22		0.200
2-Methylpentane	2.16	0.36	1.27		0.140
3-Methylpentane	0.625	0.10	0.37		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.289	0.05	0.17	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.526	0.09	0.31		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.938	0.16	0.54		0.140
2,4-Dimethylpentane	0.198	0.03	0.12	U	0.230
Cyclohexane	0.183	0.03	0.11	U	0.190
2-Methylhexane	0.419	0.06	0.25		0.110
2,3-Dimethylpentane	1.06	0.15	0.62		0.370
3-Methylhexane	1.63	0.23	0.96		0.150
1-Heptene	ND	ND	ND	U	0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-25-10 Lab ID: 0092901-01 Sampled: 09/25/10 23:49  
 Pressure @ Receipt: 4.5" Hg Canister #: 5127 Received: 09/28/10 16:00  
 Comments: Site 1 Analyzed: 10/04/10 16:40

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.896</b>	<b>0.11</b>	<b>0.52</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.316</b>	<b>0.05</b>	<b>0.19</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.445</b>	<b>0.06</b>	<b>0.26</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.212	0.03	0.12	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.403</b>	<b>0.05</b>	<b>0.24</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.236</b>	<b>0.03</b>	<b>0.14</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.163</b>	<b>0.02</b>	<b>0.10</b>		<b>0.110</b>
1-Octene	0.168	0.02	0.10	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.264</b>	<b>0.03</b>	<b>0.15</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
<b>a-Pinene</b>	<b>0.810</b>	<b>0.10</b>	<b>0.57</b>		<b>0.240</b>
<b>n-Propylbenzene</b>	<b>0.219</b>	<b>0.02</b>	<b>0.12</b>		<b>0.200</b>
<b>m-Ethyltoluene</b>	<b>0.245</b>	<b>0.03</b>	<b>0.13</b>		<b>0.150</b>
p-Ethyltoluene	0.207	0.02	0.11	U	0.240
1,3,5-Trimethylbenzene	ND	ND	ND	U	0.170
<b>o-Ethyltoluene</b>	<b>0.207</b>	<b>0.02</b>	<b>0.11</b>		<b>0.180</b>
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.322</b>	<b>0.04</b>	<b>0.18</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.233</b>	<b>0.02</b>	<b>0.14</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.199	0.02	0.12	U	0.220
1-Dodecene	0.107	0.01	0.06	U	0.290
<b>n-Dodecane</b>	<b>0.332</b>	<b>0.03</b>	<b>0.19</b>		<b>0.290</b>
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>42.5</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>67.6</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>110</b>	<b>ND</b>	<b>ND</b>		





# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-25-10 Lab ID: 0092901-02 Sampled: 09/25/10 23:49  
 Pressure @ Receipt: 5" Hg Canister #: 5126 Received: 09/28/10 16:00  
 Comments: Site 2 Analyzed: 10/04/10 17:42

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.92	1.46	1.68		0.380
Ethane	7.21	3.61	4.44		0.120
Propane	4.97	1.66	2.99		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.90	0.48	1.13		0.130
Isobutene/1-Butene	1.04	0.26	0.60		0.150
n-Butane	2.88	0.72	1.72		0.170
trans-2-Butene	0.170	0.04	0.10		0.140
cis-2-Butene	ND	ND	ND	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	6.37	1.27	3.77		0.190
1-Pentene	0.328	0.07	0.19		0.120
2-Methyl-1-butene	0.344	0.07	0.20		0.240
n-Pentane	3.10	0.62	1.83		0.0900
Isoprene	0.866	0.17	0.48		0.240
trans-2-Pentene	0.414	0.08	0.24		0.140
cis-2-Pentene	0.259	0.05	0.15		0.190
2-Methyl-2-butene	0.377	0.08	0.22		0.240
2,2-Dimethylbutane	0.834	0.14	0.49		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.368	0.07	0.21		0.120
2,3-Dimethylbutane	1.05	0.18	0.62		0.200
2-Methylpentane	3.58	0.60	2.11		0.140
3-Methylpentane	1.83	0.31	1.08		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.338	0.06	0.19	U	0.360
2-Ethyl-1-butene	0.291	0.05	0.17	U	0.360
n-Hexane	1.53	0.26	0.90		0.240
trans-2-Hexene	0.101	0.02	0.06	U	0.360
cis-2-Hexene	0.348	0.06	0.20	U	0.360
Methylcyclopentane	1.14	0.19	0.66		0.140
2,4-Dimethylpentane	0.510	0.07	0.30		0.230
Cyclohexane	0.482	0.08	0.28		0.190
2-Methylhexane	1.26	0.18	0.74		0.110
2,3-Dimethylpentane	0.921	0.13	0.54		0.370
3-Methylhexane	2.02	0.29	1.19		0.150
1-Heptene	ND	ND	ND	U	0.370

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 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-25-10 Lab ID: 0092901-02 Sampled: 09/25/10 23:49  
 Pressure @ Receipt: 5" Hg Canister #: 5126 Received: 09/28/10 16:00  
 Comments: Site 2 Analyzed: 10/04/10 17:42

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	2.63	0.33	1.54		0.170
n-Heptane	1.41	0.20	0.83		0.180
Methylcyclohexane	2.22	0.32	1.28		0.190
2,2,3-Trimethylpentane	0.731	0.09	0.43		0.280
2,3,4-Trimethylpentane	0.811	0.10	0.48		0.140
2-Methylheptane	1.24	0.16	0.73		0.170
3-Methylheptane	0.995	0.12	0.58		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	0.613	0.07	0.35		0.240
n-Nonane	5.46	0.61	3.19		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	1.08	0.12	0.59		0.200
m-Ethyltoluene	1.52	0.17	0.83		0.150
p-Ethyltoluene	1.32	0.15	0.72		0.240
1,3,5-Trimethylbenzene	2.31	0.26	1.26		0.170
o-Ethyltoluene	1.80	0.20	0.99		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	2.75	0.31	1.51		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	7.28	0.73	4.25		0.230
1,2,3-Trimethylbenzene	0.834	0.09	0.46		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.673	0.07	0.37		0.140
1-Undecene	0.495	0.05	0.29		0.220
n-Undecane	3.28	0.30	1.91		0.220
1-Dodecene	0.320	0.03	0.18		0.290
n-Dodecane	0.686	0.06	0.40		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	125	ND	ND		
Sum of Unknowns	103	ND	ND		
TNMOC	228	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-09-25-10 Lab ID: 0092901-03 Sampled: 09/25/10 23:49  
 Pressure @ Receipt: 7" Hg Canister #: 5042 Received: 09/28/10 16:00  
 Comments: Site 3 Analyzed: 10/04/10 18:43

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.88	0.94	1.08		0.380
Ethane	12.2	6.10	7.52		0.120
Propane	4.88	1.63	2.94		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.53	0.38	0.91		0.130
Isobutene/1-Butene	0.828	0.21	0.48		0.150
n-Butane	1.77	0.44	1.05		0.170
trans-2-Butene	3.67	0.92	2.11		0.140
cis-2-Butene	ND	ND	ND	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.38	0.68	2.00		0.190
1-Pentene	0.216	0.04	0.12		0.120
2-Methyl-1-butene	0.141	0.03	0.08	U	0.240
n-Pentane	2.00	0.40	1.18		0.0900
Isoprene	0.901	0.18	0.50		0.240
trans-2-Pentene	0.311	0.06	0.18		0.140
cis-2-Pentene	0.154	0.03	0.09	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.296	0.05	0.17		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.250	0.05	0.14		0.120
2,3-Dimethylbutane	0.509	0.08	0.30		0.200
2-Methylpentane	ND	ND	ND	A-01, U	0.140
3-Methylpentane	0.753	0.13	0.44		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.275	0.05	0.16	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.704	0.12	0.41		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	0.150	0.03	0.09	U	0.360
Methylcyclopentane	0.755	0.13	0.43		0.140
2,4-Dimethylpentane	0.260	0.04	0.15		0.230
Cyclohexane	0.297	0.05	0.17		0.190
2-Methylhexane	0.612	0.09	0.36		0.110
2,3-Dimethylpentane	0.769	0.11	0.45		0.370
3-Methylhexane	1.12	0.16	0.66		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-09-25-10 Lab ID: 0092901-03 Sampled: 09/25/10 23:49  
 Pressure @ Receipt: 7" Hg Canister #: 5042 Received: 09/28/10 16:00  
 Comments: Site 3 Analyzed: 10/04/10 18:43

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>1.14</b>	<b>0.14</b>	<b>0.67</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.361</b>	<b>0.05</b>	<b>0.21</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.552</b>	<b>0.08</b>	<b>0.32</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.228	0.03	0.13	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.447</b>	<b>0.06</b>	<b>0.26</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.198</b>	<b>0.02</b>	<b>0.12</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.208</b>	<b>0.03</b>	<b>0.12</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.253</b>	<b>0.03</b>	<b>0.15</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
<b>a-Pinene</b>	<b>4.23</b>	<b>0.53</b>	<b>2.95</b>		<b>0.240</b>
n-Propylbenzene	0.135	0.02	0.07	U	0.200
<b>m-Ethyltoluene</b>	<b>0.558</b>	<b>0.06</b>	<b>0.31</b>		<b>0.150</b>
p-Ethyltoluene	0.200	0.02	0.11	U	0.240
<b>1,3,5-Trimethylbenzene</b>	<b>0.181</b>	<b>0.02</b>	<b>0.10</b>		<b>0.170</b>
<b>o-Ethyltoluene</b>	<b>0.256</b>	<b>0.03</b>	<b>0.14</b>		<b>0.180</b>
<b>b-Pinene</b>	<b>0.385</b>	<b>0.05</b>	<b>0.27</b>		<b>0.240</b>
<b>1,2,4-Trimethylbenzene</b>	<b>0.372</b>	<b>0.04</b>	<b>0.20</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.327</b>	<b>0.03</b>	<b>0.19</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.307</b>	<b>0.03</b>	<b>0.18</b>		<b>0.220</b>
1-Dodecene	0.145	0.01	0.08	U	0.290
n-Dodecane	0.273	0.02	0.16	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>58.6</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>43.3</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>102</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-25-10

Lab ID: 0092901-04

Sampled: 09/25/10 23:49

Pressure @ Receipt: 8" Hg

Canister #: 5067

Received: 09/28/10 16:00

Comments: Site 4

Analyzed: 10/04/10 19:44

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.93	0.97	1.11		0.380
Ethane	13.8	6.90	8.50		0.120
Propane	24.2	8.07	14.60		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	7.46	1.87	4.44		0.130
Isobutene/1-Butene	2.91	0.73	1.67		0.150
n-Butane	42.1	10.50	25.10		0.170
trans-2-Butene	1.46	0.37	0.84		0.140
cis-2-Butene	1.43	0.36	0.82		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	97.7	19.50	57.80	E	0.190
1-Pentene	2.88	0.58	1.66		0.120
2-Methyl-1-butene	4.91	0.98	2.82		0.240
n-Pentane	32.9	6.58	19.50		0.0900
Isoprene	0.861	0.17	0.48		0.240
trans-2-Pentene	6.50	1.30	3.74		0.140
cis-2-Pentene	3.38	0.68	1.94		0.190
2-Methyl-2-butene	8.39	1.68	4.82		0.240
2,2-Dimethylbutane	2.20	0.37	1.30		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.525	0.09	0.30		0.360
Cyclopentane	2.85	0.57	1.64		0.120
2,3-Dimethylbutane	8.24	1.37	4.85		0.200
2-Methylpentane	23.3	3.88	13.70		0.140
3-Methylpentane	12.1	2.02	7.12		0.200
2-Methyl-1-pentene	0.996	0.17	0.57		0.360
1-Hexene	0.672	0.11	0.39		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	9.22	1.54	5.43		0.240
trans-2-Hexene	1.40	0.23	0.81		0.360
cis-2-Hexene	1.57	0.26	0.90		0.360
Methylcyclopentane	7.74	1.29	4.45		0.140
2,4-Dimethylpentane	3.56	0.51	2.09		0.230
Cyclohexane	2.34	0.39	1.35		0.190
2-Methylhexane	12.5	1.79	7.33		0.110
2,3-Dimethylpentane	3.53	0.50	2.07		0.370
3-Methylhexane	4.74	0.68	2.78		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	13.7	1.71	8.02		0.170

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 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-25-10 Lab ID: 0092901-04 Sampled: 09/25/10 23:49  
 Pressure @ Receipt: 8" Hg Canister #: 5067 Received: 09/28/10 16:00  
 Comments: Site 4 Analyzed: 10/04/10 19:44

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	2.22	0.32	1.30		0.180
Methylcyclohexane	4.05	0.58	2.33		0.190
2,2,3-Trimethylpentane	1.91	0.24	1.12		0.280
2,3,4-Trimethylpentane	2.99	0.37	1.75		0.140
2-Methylheptane	2.36	0.30	1.38		0.170
3-Methylheptane	0.744	0.09	0.44		0.110
1-Octene	0.154	0.02	0.09	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.564	0.06	0.33		0.180
Isopropylbenzene	0.450	0.06	0.28		0.210
a-Pinene	0.876	0.11	0.61		0.240
n-Propylbenzene	0.384	0.04	0.21		0.200
m-Ethyltoluene	0.744	0.08	0.41		0.150
p-Ethyltoluene	0.381	0.04	0.21		0.240
1,3,5-Trimethylbenzene	0.402	0.04	0.22		0.170
o-Ethyltoluene	0.426	0.05	0.23		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	1.14	0.13	0.62		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.569	0.06	0.33		0.230
1,2,3-Trimethylbenzene	0.344	0.04	0.19		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.200	0.02	0.11		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.504	0.05	0.29		0.220
1-Dodecene	0.221	0.02	0.13	U	0.290
n-Dodecane	0.398	0.03	0.23		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	409	ND	ND		
Sum of Unknowns	180	ND	ND		
TNMOC	589	ND	ND		



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 Fort Worth, TX 76102-6311  
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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-25-10 Lab ID: 0092901-05 Sampled: 09/25/10 23:49  
 Pressure @ Receipt: 13.5" Hg Canister #: 5000 Received: 09/28/10 16:00  
 Comments: Site 5 Analyzed: 10/04/10 20:46

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.30	1.15	1.32		0.380
Ethane	24.2	12.10	14.90		0.120
Propane	10.3	3.43	6.21		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.27	0.57	1.35		0.130
Isobutene/1-Butene	0.805	0.20	0.46		0.150
n-Butane	8.73	2.18	5.20		0.170
trans-2-Butene	ND	ND	ND	U	0.140
cis-2-Butene	0.235	0.06	0.14		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.80	0.56	1.66		0.190
1-Pentene	0.344	0.07	0.20		0.120
2-Methyl-1-butene	0.124	0.02	0.07	U	0.240
n-Pentane	2.10	0.42	1.24		0.0900
Isoprene	0.545	0.11	0.30		0.240
trans-2-Pentene	0.283	0.06	0.16		0.140
cis-2-Pentene	0.195	0.04	0.11		0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.436	0.07	0.26		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.327	0.07	0.19		0.120
2,3-Dimethylbutane	0.531	0.09	0.31		0.200
2-Methylpentane	2.47	0.41	1.45		0.140
3-Methylpentane	0.850	0.14	0.50		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.429	0.07	0.25		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.973	0.16	0.57		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.02	0.17	0.59		0.140
2,4-Dimethylpentane	0.299	0.04	0.18		0.230
Cyclohexane	0.463	0.08	0.27		0.190
2-Methylhexane	0.542	0.08	0.32		0.110
2,3-Dimethylpentane	1.43	0.20	0.84		0.370
3-Methylhexane	2.27	0.32	1.33		0.150
1-Heptene	0.209	0.03	0.12	U	0.370

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 REPORTED: 05/24/11 11:34  
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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-25-10 Lab ID: 0092901-05 Sampled: 09/25/10 23:49  
 Pressure @ Receipt: 13.5" Hg Canister #: 5000 Received: 09/28/10 16:00  
 Comments: Site 5 Analyzed: 10/04/10 20:46

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.766	0.10	0.45		0.170
n-Heptane	0.557	0.08	0.33		0.180
Methylcyclohexane	0.761	0.11	0.44		0.190
2,2,3-Trimethylpentane	0.218	0.03	0.13	U	0.280
2,3,4-Trimethylpentane	0.371	0.05	0.22		0.140
2-Methylheptane	0.400	0.05	0.23		0.170
3-Methylheptane	0.285	0.04	0.17		0.110
1-Octene	0.180	0.02	0.10	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.415	0.05	0.24		0.180
Isopropylbenzene	0.162	0.02	0.10	U	0.210
a-Pinene	1.43	0.18	1.00		0.240
n-Propylbenzene	0.232	0.03	0.13		0.200
m-Ethyltoluene	0.513	0.06	0.28		0.150
p-Ethyltoluene	0.278	0.03	0.15		0.240
1,3,5-Trimethylbenzene	0.242	0.03	0.13		0.170
o-Ethyltoluene	0.211	0.02	0.12		0.180
b-Pinene	0.400	0.05	0.28		0.240
1,2,4-Trimethylbenzene	0.437	0.05	0.24		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.372	0.04	0.22		0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.260	0.03	0.14		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.445	0.04	0.26		0.220
1-Dodecene	0.142	0.01	0.08	U	0.290
n-Dodecane	0.254	0.02	0.15	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>84.2</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>72.6</b>	<b>ND</b>	<b>ND</b>		
<b>TNMO</b>	<b>157</b>	<b>ND</b>	<b>ND</b>		





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SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-28-10 Lab ID: 0093008-01 Sampled: 09/28/10 23:49  
 Pressure @ Receipt: 7" Hg Canister #: 5125 Received: 09/30/10 14:35  
 Comments: Site 1 Analyzed: 10/04/10 21:48

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	4.38	2.19	2.52		0.380
Ethane	59.6	29.80	36.70		0.120
Propane	29.4	9.80	17.70		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	10.9	2.73	6.49		0.130
Isobutene/1-Butene	3.55	0.89	2.04		0.150
n-Butane	31.8	7.95	18.90		0.170
trans-2-Butene	1.45	0.36	0.83		0.140
cis-2-Butene	1.33	0.33	0.77		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	47.6	9.52	28.20		0.190
1-Pentene	1.30	0.26	0.75		0.120
2-Methyl-1-butene	2.04	0.41	1.17		0.240
n-Pentane	19.3	3.86	11.40		0.0900
Isoprene	2.14	0.43	1.19		0.240
trans-2-Pentene	2.51	0.50	1.44		0.140
cis-2-Pentene	1.24	0.25	0.71		0.190
2-Methyl-2-butene	3.01	0.60	1.73		0.240
2,2-Dimethylbutane	1.34	0.22	0.79		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	1.39	0.28	0.80		0.120
2,3-Dimethylbutane	3.18	0.53	1.87		0.200
2-Methylpentane	9.56	1.59	5.63		0.140
3-Methylpentane	4.82	0.80	2.84		0.200
2-Methyl-1-pentene	0.296	0.05	0.17	U	0.360
1-Hexene	0.415	0.07	0.24		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	4.60	0.77	2.71		0.240
trans-2-Hexene	0.355	0.06	0.20	U	0.360
cis-2-Hexene	0.147	0.02	0.08	U	0.360
Methylcyclopentane	3.15	0.53	1.81		0.140
2,4-Dimethylpentane	1.20	0.17	0.70		0.230
Cyclohexane	1.36	0.23	0.78		0.190
2-Methylhexane	1.92	0.27	1.13		0.110
2,3-Dimethylpentane	1.45	0.21	0.85		0.370
3-Methylhexane	2.72	0.39	1.60		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	6.01	0.75	3.52		0.170

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-09-28-10 Lab ID: 0093008-01 Sampled: 09/28/10 23:49  
 Pressure @ Receipt: 7" Hg Canister #: 5125 Received: 09/30/10 14:35  
 Comments: Site 1 Analyzed: 10/04/10 21:48

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	1.64	0.23	0.96		0.180
Methylcyclohexane	2.12	0.30	1.22		0.190
2,2,3-Trimethylpentane	1.03	0.13	0.60		0.280
2,3,4-Trimethylpentane	1.64	0.21	0.96		0.140
2-Methylheptane	0.738	0.09	0.43		0.170
3-Methylheptane	0.585	0.07	0.34		0.110
1-Octene	0.393	0.05	0.23		0.280
1-Nonene	0.231	0.03	0.13	U	0.240
n-Nonane	0.689	0.08	0.40		0.180
Isopropylbenzene	0.163	0.02	0.10	U	0.210
a-Pinene	1.54	0.19	1.07		0.240
n-Propylbenzene	0.305	0.03	0.17		0.200
m-Ethyltoluene	0.757	0.08	0.41		0.150
p-Ethyltoluene	0.461	0.05	0.25		0.240
1,3,5-Trimethylbenzene	0.597	0.07	0.33		0.170
o-Ethyltoluene	0.580	0.06	0.32		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	1.07	0.12	0.59		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.709	0.07	0.41		0.230
1,2,3-Trimethylbenzene	0.342	0.04	0.19		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.508	0.05	0.30		0.220
1-Dodecene	0.186	0.02	0.11	U	0.290
n-Dodecane	0.347	0.03	0.20		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	302	ND	ND		
Sum of Unknowns	73.5	ND	ND		
TNMOC	375	ND	ND		



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 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-28-10

Lab ID: 0093008-02

Sampled: 09/28/10 23:49

Pressure @ Receipt: 7" Hg

Canister #: 5044

Received: 09/30/10 14:35

Comments: Site 2

Analyzed: 10/04/10 22:49

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.40	1.20	1.38		0.380
Ethane	60.4	30.20	37.20		0.120
Propane	34.8	11.60	21.00		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	8.70	2.18	5.18		0.130
Isobutene/1-Butene	1.83	0.46	1.05		0.150
n-Butane	20.2	5.05	12.00		0.170
trans-2-Butene	0.317	0.08	0.18		0.140
cis-2-Butene	0.402	0.10	0.23		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	15.0	3.00	8.87		0.190
1-Pentene	0.469	0.09	0.27		0.120
2-Methyl-1-butene	0.578	0.12	0.33		0.240
n-Pentane	9.59	1.92	5.67		0.0900
Isoprene	1.41	0.28	0.79		0.240
trans-2-Pentene	0.745	0.15	0.43		0.140
cis-2-Pentene	0.428	0.09	0.25		0.190
2-Methyl-2-butene	0.684	0.14	0.39		0.240
2,2-Dimethylbutane	0.864	0.14	0.51		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.765	0.15	0.44		0.120
2,3-Dimethylbutane	1.75	0.29	1.03		0.200
2-Methylpentane	7.28	1.21	4.29		0.140
3-Methylpentane	3.47	0.58	2.04		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.488	0.08	0.28		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	4.03	0.67	2.37		0.240
trans-2-Hexene	0.149	0.02	0.09	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.95	0.33	1.12		0.140
2,4-Dimethylpentane	0.884	0.13	0.52		0.230
Cyclohexane	1.07	0.18	0.62		0.190
2-Methylhexane	1.98	0.28	1.16		0.110
2,3-Dimethylpentane	1.44	0.21	0.85		0.370
3-Methylhexane	2.45	0.35	1.44		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	4.49	0.56	2.63		0.170

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-09-28-10 Lab ID: 0093008-02 Sampled: 09/28/10 23:49  
 Pressure @ Receipt: 7" Hg Canister #: 5044 Received: 09/30/10 14:35  
 Comments: Site 2 Analyzed: 10/04/10 22:49

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	1.94	0.28	1.14		0.180
Methylcyclohexane	2.24	0.32	1.29		0.190
2,2,3-Trimethylpentane	0.906	0.11	0.53		0.280
2,3,4-Trimethylpentane	1.35	0.17	0.79		0.140
2-Methylheptane	0.997	0.13	0.58		0.170
3-Methylheptane	0.760	0.10	0.45		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	0.493	0.05	0.28		0.240
n-Nonane	2.06	0.23	1.20		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.317	0.04	0.22		0.240
n-Propylbenzene	0.494	0.05	0.27		0.200
m-Ethyltoluene	1.01	0.11	0.55		0.150
p-Ethyltoluene	0.785	0.09	0.43		0.240
1,3,5-Trimethylbenzene	1.19	0.13	0.65		0.170
o-Ethyltoluene	0.952	0.11	0.52		0.180
b-Pinene	0.418	0.05	0.29		0.240
1,2,4-Trimethylbenzene	1.69	0.19	0.93		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	3.10	0.31	1.81		0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.297	0.03	0.16		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	1.64	0.15	0.96		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.492	0.04	0.29		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	240	ND	ND		
Sum of Unknowns	70.5	ND	ND		
TNMOC	311	ND	ND		



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SITE CODE: Natural Gas Air Quality Study

Description: S3-P-09-28-10 Lab ID: 0093008-03 Sampled: 09/28/10 23:49  
 Pressure @ Receipt: 6.5" Hg Canister #: 5103 Received: 09/30/10 14:35  
 Comments: Site 3 Analyzed: 10/04/10 23:50

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	4.10	2.05	2.36		0.380
Ethane	79.5	39.80	49.00		0.120
Propane	42.5	14.20	25.60		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	10.3	2.58	6.13		0.130
Isobutene/1-Butene	1.64	0.41	0.94		0.150
n-Butane	19.4	4.85	11.60		0.170
trans-2-Butene	0.327	0.08	0.19		0.140
cis-2-Butene	0.365	0.09	0.21		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	15.2	3.04	8.99		0.190
1-Pentene	0.480	0.10	0.28		0.120
2-Methyl-1-butene	0.477	0.10	0.27		0.240
n-Pentane	10.4	2.08	6.15		0.0900
Isoprene	0.717	0.14	0.40		0.240
trans-2-Pentene	0.665	0.13	0.38		0.140
cis-2-Pentene	0.361	0.07	0.21		0.190
2-Methyl-2-butene	0.584	0.12	0.34		0.240
2,2-Dimethylbutane	0.889	0.15	0.52		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.690	0.14	0.40		0.120
2,3-Dimethylbutane	1.62	0.27	0.95		0.200
2-Methylpentane	6.53	1.09	3.84		0.140
3-Methylpentane	3.14	0.52	1.85		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.400	0.07	0.23		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	4.06	0.68	2.39		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.84	0.31	1.06		0.140
2,4-Dimethylpentane	0.794	0.11	0.47		0.230
Cyclohexane	1.23	0.21	0.71		0.190
2-Methylhexane	1.92	0.27	1.13		0.110
2,3-Dimethylpentane	1.22	0.17	0.72		0.370
3-Methylhexane	2.38	0.34	1.40		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	3.80	0.48	2.22		0.170

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-09-28-10 Lab ID: 0093008-03 Sampled: 09/28/10 23:49  
 Pressure @ Receipt: 6.5" Hg Canister #: 5103 Received: 09/30/10 14:35  
 Comments: Site 3 Analyzed: 10/04/10 23:50

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	1.77	0.25	1.04		0.180
Methylcyclohexane	1.88	0.27	1.08		0.190
2,2,3-Trimethylpentane	0.762	0.10	0.45		0.280
2,3,4-Trimethylpentane	1.23	0.15	0.72		0.140
2-Methylheptane	0.825	0.10	0.48		0.170
3-Methylheptane	0.597	0.07	0.35		0.110
1-Octene	0.199	0.02	0.11	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.546	0.06	0.32		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	1.43	0.18	1.00		0.240
n-Propylbenzene	0.345	0.04	0.19		0.200
m-Ethyltoluene	0.721	0.08	0.40		0.150
p-Ethyltoluene	0.450	0.05	0.25		0.240
1,3,5-Trimethylbenzene	0.493	0.05	0.27		0.170
o-Ethyltoluene	0.474	0.05	0.26		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	1.00	0.11	0.55		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.534	0.05	0.31		0.230
1,2,3-Trimethylbenzene	0.232	0.03	0.13		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.466	0.04	0.27		0.220
1-Dodecene	0.150	0.01	0.09	U	0.290
n-Dodecane	0.450	0.04	0.26		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	250	ND	ND		
Sum of Unknowns	46.1	ND	ND		
TNMOC	296	ND	ND		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-28-10 Lab ID: 0093008-04 Sampled: 09/28/10 23:49  
 Pressure @ Receipt: 8" Hg Canister #: 5149 Received: 09/30/10 14:35  
 Comments: Site 4 Analyzed: 10/05/10 00:51

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.23	1.12	1.28		0.380
Ethane	87.3	43.70	53.80		0.120
Propane	89.6	29.90	54.00		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	24.3	6.08	14.50		0.130
Isobutene/1-Butene	5.54	1.39	3.18		0.150
n-Butane	95.7	23.90	57.00	E	0.170
trans-2-Butene	3.91	0.98	2.25		0.140
cis-2-Butene	3.23	0.81	1.86		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	168	33.60	99.40	E	0.190
1-Pentene	4.26	0.85	2.45		0.120
2-Methyl-1-butene	7.60	1.52	4.37		0.240
n-Pentane	74.0	14.80	43.80		0.0900
Isoprene	1.06	0.21	0.59		0.240
trans-2-Pentene	9.89	1.98	5.69		0.140
cis-2-Pentene	4.99	1.00	2.87		0.190
2-Methyl-2-butene	13.1	2.62	7.53		0.240
2,2-Dimethylbutane	4.11	0.69	2.42		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	5.42	1.08	3.12		0.120
2,3-Dimethylbutane	13.2	2.20	7.77		0.200
2-Methylpentane	36.2	6.03	21.30		0.140
3-Methylpentane	21.1	3.52	12.40		0.200
2-Methyl-1-pentene	1.23	0.21	0.71		0.360
1-Hexene	0.819	0.14	0.47		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	20.6	3.43	12.10		0.240
trans-2-Hexene	1.85	0.31	1.06		0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	12.0	2.00	6.90		0.140
2,4-Dimethylpentane	4.97	0.71	2.92		0.230
Cyclohexane	4.23	0.71	2.43		0.190
2-Methylhexane	7.13	1.02	4.18		0.110
2,3-Dimethylpentane	4.75	0.68	2.79		0.370
3-Methylhexane	7.80	1.11	4.58		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	18.6	2.33	10.90		0.170

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-09-28-10 Lab ID: 0093008-04 Sampled: 09/28/10 23:49  
 Pressure @ Receipt: 8" Hg Canister #: 5149 Received: 09/30/10 14:35  
 Comments: Site 4 Analyzed: 10/05/10 00:51

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	4.93	0.70	2.89		0.180
Methylcyclohexane	4.84	0.69	2.78		0.190
2,2,3-Trimethylpentane	2.80	0.35	1.64		0.280
2,3,4-Trimethylpentane	4.22	0.53	2.47		0.140
2-Methylheptane	1.64	0.21	0.96		0.170
3-Methylheptane	1.36	0.17	0.80		0.110
1-Octene	0.302	0.04	0.17		0.280
1-Nonene	0.406	0.05	0.23		0.240
n-Nonane	1.06	0.12	0.62		0.180
Isopropylbenzene	0.172	0.02	0.11	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	0.426	0.05	0.23		0.200
m-Ethyltoluene	1.29	0.14	0.71		0.150
p-Ethyltoluene	0.682	0.08	0.37		0.240
1,3,5-Trimethylbenzene	0.856	0.10	0.47		0.170
o-Ethyltoluene	0.369	0.04	0.20		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	1.61	0.18	0.88		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	1.37	0.14	0.80		0.230
1,2,3-Trimethylbenzene	0.394	0.04	0.22		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.294	0.03	0.16		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.814	0.07	0.47		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.542	0.05	0.32		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	825	ND	ND		
Sum of Unknowns	127	ND	ND		
TNMOC	952	ND	ND		





# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-28-10

Lab ID: 0093008-05

Sampled: 09/28/10 23:49

Pressure @ Receipt: 14" Hg

Canister #: 5093

Received: 09/30/10 14:35

Comments: Site 5

Analyzed: 10/05/10 01:53

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.46	0.73	0.84		0.380
Ethane	59.8	29.90	36.80		0.120
Propane	42.1	14.00	25.40		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	6.86	1.72	4.09		0.130
Isobutene/1-Butene	0.727	0.18	0.42		0.150
n-Butane	19.2	4.80	11.40		0.170
trans-2-Butene	0.151	0.04	0.09		0.140
cis-2-Butene	0.181	0.05	0.10		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	6.97	1.39	4.12		0.190
1-Pentene	0.241	0.05	0.14		0.120
2-Methyl-1-butene	0.124	0.02	0.07	U	0.240
n-Pentane	7.06	1.41	4.18		0.0900
Isoprene	0.561	0.11	0.31		0.240
trans-2-Pentene	0.322	0.06	0.19		0.140
cis-2-Pentene	0.164	0.03	0.09	U	0.190
2-Methyl-2-butene	0.136	0.03	0.08	U	0.240
2,2-Dimethylbutane	0.492	0.08	0.29		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.438	0.09	0.25		0.120
2,3-Dimethylbutane	0.681	0.11	0.40		0.200
2-Methylpentane	3.68	0.61	2.17		0.140
3-Methylpentane	1.59	0.27	0.94		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.270	0.05	0.16	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.36	0.39	1.39		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.07	0.18	0.62		0.140
2,4-Dimethylpentane	0.349	0.05	0.21		0.230
Cyclohexane	1.10	0.18	0.63		0.190
2-Methylhexane	1.08	0.15	0.63		0.110
2,3-Dimethylpentane	1.04	0.15	0.61		0.370
3-Methylhexane	1.34	0.19	0.79		0.150
1-Heptene	ND	ND	ND	U	0.370

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 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-P-09-28-10

Lab ID: 0093008-05

Sampled: 09/28/10 23:49

Pressure @ Receipt: 14" Hg

Canister #: 5093

Received: 09/30/10 14:35

Comments: Site 5

Analyzed: 10/05/10 01:53

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.869</b>	<b>0.11</b>	<b>0.51</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>1.12</b>	<b>0.16</b>	<b>0.66</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>1.29</b>	<b>0.18</b>	<b>0.74</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.243	0.03	0.14	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.372</b>	<b>0.05</b>	<b>0.22</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.493</b>	<b>0.06</b>	<b>0.29</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.316</b>	<b>0.04</b>	<b>0.19</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.276</b>	<b>0.03</b>	<b>0.16</b>		<b>0.180</b>
Isopropylbenzene	0.128	0.02	0.08	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	ND	ND	ND	U	0.200
<b>m-Ethyltoluene</b>	<b>0.477</b>	<b>0.05</b>	<b>0.26</b>		<b>0.150</b>
p-Ethyltoluene	0.171	0.02	0.09	U	0.240
<b>1,3,5-Trimethylbenzene</b>	<b>0.231</b>	<b>0.03</b>	<b>0.13</b>		<b>0.170</b>
o-Ethyltoluene	0.166	0.02	0.09	U	0.180
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.347</b>	<b>0.04</b>	<b>0.19</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.316</b>	<b>0.03</b>	<b>0.18</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.383</b>	<b>0.03</b>	<b>0.22</b>		<b>0.220</b>
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.227	0.02	0.13	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>177</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>42.3</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>219</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-1-10 Lab ID: 0100501-01 Sampled: 10/01/10 23:59  
 Pressure @ Receipt: 8" Hg Canister #: 5122 Received: 10/05/10 13:09  
 Comments: Site 1 Analyzed: 10/07/10 20:31

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.26	1.13	1.30		0.380
Ethane	5.43	2.72	3.35		0.120
Propane	4.12	1.37	2.48		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.01	0.25	0.60		0.130
Isobutene/1-Butene	0.821	0.21	0.47		0.150
n-Butane	3.40	0.85	2.02		0.170
trans-2-Butene	0.201	0.05	0.12		0.140
cis-2-Butene	0.206	0.05	0.12		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	4.19	0.84	2.48		0.190
1-Pentene	0.234	0.05	0.14		0.120
2-Methyl-1-butene	0.168	0.03	0.10	U	0.240
n-Pentane	1.99	0.40	1.18		0.0900
Isoprene	1.02	0.20	0.57		0.240
trans-2-Pentene	0.229	0.05	0.13		0.140
cis-2-Pentene	0.191	0.04	0.11		0.190
2-Methyl-2-butene	0.202	0.04	0.12	U	0.240
2,2-Dimethylbutane	0.384	0.06	0.23		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.251	0.04	0.14	U	0.360
Cyclopentane	0.280	0.06	0.16		0.120
2,3-Dimethylbutane	0.514	0.09	0.30		0.200
2-Methylpentane	2.21	0.37	1.30		0.140
3-Methylpentane	0.746	0.12	0.44		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.265	0.04	0.15	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.717	0.12	0.42		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.752	0.13	0.43		0.140
2,4-Dimethylpentane	0.285	0.04	0.17		0.230
Cyclohexane	0.282	0.05	0.16		0.190
2-Methylhexane	0.530	0.08	0.31		0.110
2,3-Dimethylpentane	0.598	0.09	0.35		0.370
3-Methylhexane	0.979	0.14	0.57		0.150
1-Heptene	ND	ND	ND	U	0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-1-10 Lab ID: 0100501-01 Sampled: 10/01/10 23:59  
 Pressure @ Receipt: 8" Hg Canister #: 5122 Received: 10/05/10 13:09  
 Comments: Site 1 Analyzed: 10/07/10 20:31

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>1.02</b>	<b>0.13</b>	<b>0.60</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.363</b>	<b>0.05</b>	<b>0.21</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.406</b>	<b>0.06</b>	<b>0.23</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.171	0.02	0.10	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.299</b>	<b>0.04</b>	<b>0.18</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.173</b>	<b>0.02</b>	<b>0.10</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.143</b>	<b>0.02</b>	<b>0.08</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.234</b>	<b>0.03</b>	<b>0.14</b>		<b>0.180</b>
Isopropylbenzene	0.103	0.01	0.06	U	0.210
a-Pinene	0.210	0.03	0.15	U	0.240
n-Propylbenzene	0.127	0.01	0.07	U	0.200
<b>m-Ethyltoluene</b>	<b>0.254</b>	<b>0.03</b>	<b>0.14</b>		<b>0.150</b>
p-Ethyltoluene	0.155	0.02	0.08	U	0.240
1,3,5-Trimethylbenzene	0.146	0.02	0.08	U	0.170
o-Ethyltoluene	0.171	0.02	0.09	U	0.180
b-Pinene	0.122	0.02	0.09	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.291</b>	<b>0.03</b>	<b>0.16</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.266</b>	<b>0.03</b>	<b>0.16</b>		<b>0.230</b>
<b>1,2,3-Trimethylbenzene</b>	<b>0.217</b>	<b>0.02</b>	<b>0.12</b>		<b>0.170</b>
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.432</b>	<b>0.04</b>	<b>0.25</b>		<b>0.220</b>
1-Dodecene	ND	ND	ND	U	0.290
<b>n-Dodecane</b>	<b>0.352</b>	<b>0.03</b>	<b>0.21</b>		<b>0.290</b>
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>45.6</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>27.7</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>73.3</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 Fort Worth, TX 76102-6311  
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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-1-10 Lab ID: 0100501-02 Sampled: 10/01/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5148 Received: 10/05/10 13:09  
 Comments: Site 2 Analyzed: 10/07/10 21:32

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.46	1.23	1.41		0.380
Ethane	12.1	6.05	7.46		0.120
Propane	7.53	2.51	4.54		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.32	0.58	1.38		0.130
Isobutene/1-Butene	0.992	0.25	0.57		0.150
n-Butane	11.7	2.93	6.97		0.170
trans-2-Butene	0.308	0.08	0.18		0.140
cis-2-Butene	0.363	0.09	0.21		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	12.1	2.42	7.16		0.190
1-Pentene	0.464	0.09	0.27		0.120
2-Methyl-1-butene	0.599	0.12	0.34		0.240
n-Pentane	5.38	1.08	3.18		0.0900
Isoprene	0.728	0.15	0.41		0.240
trans-2-Pentene	0.829	0.17	0.48		0.140
cis-2-Pentene	0.477	0.10	0.27		0.190
2-Methyl-2-butene	0.948	0.19	0.55		0.240
2,2-Dimethylbutane	0.790	0.13	0.47		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.642	0.13	0.37		0.120
2,3-Dimethylbutane	2.04	0.34	1.20		0.200
2-Methylpentane	7.41	1.24	4.36		0.140
3-Methylpentane	3.55	0.59	2.09		0.200
2-Methyl-1-pentene	0.197	0.03	0.11	U	0.360
1-Hexene	0.273	0.05	0.16	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	3.14	0.52	1.85		0.240
trans-2-Hexene	0.200	0.03	0.12	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	2.17	0.36	1.25		0.140
2,4-Dimethylpentane	1.06	0.15	0.62		0.230
Cyclohexane	0.959	0.16	0.55		0.190
2-Methylhexane	3.16	0.45	1.85		0.110
2,3-Dimethylpentane	1.87	0.27	1.10		0.370
3-Methylhexane	4.02	0.57	2.36		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
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 AQS SITE CODE:  
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Description: S2-P-10-1-10 Lab ID: 0100501-02 Sampled: 10/01/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5148 Received: 10/05/10 13:09  
 Comments: Site 2 Analyzed: 10/07/10 21:32

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	5.06	0.63	2.96		0.170
n-Heptane	3.02	0.43	1.77		0.180
Methylcyclohexane	4.25	0.61	2.44		0.190
2,2,3-Trimethylpentane	1.27	0.16	0.74		0.280
2,3,4-Trimethylpentane	1.24	0.16	0.73		0.140
2-Methylheptane	1.72	0.22	1.01		0.170
3-Methylheptane	1.42	0.18	0.83		0.110
1-Octene	0.209	0.03	0.12	U	0.280
1-Nonene	2.22	0.25	1.28		0.240
n-Nonane	11.5	1.28	6.72		0.180
Isopropylbenzene	0.293	0.04	0.18		0.210
a-Pinene	1.01	0.13	0.71		0.240
n-Propylbenzene	1.94	0.22	1.06		0.200
m-Ethyltoluene	2.71	0.30	1.48		0.150
p-Ethyltoluene	3.06	0.34	1.67		0.240
1,3,5-Trimethylbenzene	5.26	0.58	2.88		0.170
o-Ethyltoluene	3.47	0.39	1.90		0.180
b-Pinene	2.11	0.26	1.47		0.240
1,2,4-Trimethylbenzene	6.59	0.73	3.61		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	14.4	1.44	8.40		0.230
1,2,3-Trimethylbenzene	2.52	0.28	1.38		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.965	0.10	0.53		0.140
1-Undecene	0.182	0.02	0.11	U	0.220
n-Undecane	6.93	0.63	4.04		0.220
1-Dodecene	0.172	0.01	0.10	U	0.290
n-Dodecane	1.20	0.10	0.70		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	234	ND	ND		
Sum of Unknowns	168	ND	ND		
TNMOC	402	ND	ND		



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 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-1-10 Lab ID: 0100501-03 Sampled: 10/01/10 23:59  
 Pressure @ Receipt: 6" Hg Canister #: 5106 Received: 10/05/10 13:09  
 Comments: Site 3 Analyzed: 10/07/10 22:33

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.95	0.98	1.12		0.380
Ethane	18.6	9.30	11.50		0.120
Propane	8.08	2.69	4.87		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.62	0.41	0.97		0.130
Isobutene/1-Butene	0.573	0.14	0.33		0.150
n-Butane	ND	ND	ND	A-01, U	0.170
trans-2-Butene	0.153	0.04	0.09		0.140
cis-2-Butene	0.189	0.05	0.11		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	4.74	0.95	2.80		0.190
1-Pentene	0.291	0.06	0.17		0.120
2-Methyl-1-butene	0.141	0.03	0.08	U	0.240
n-Pentane	2.92	0.58	1.73		0.0900
Isoprene	0.453	0.09	0.25		0.240
trans-2-Pentene	0.237	0.05	0.14		0.140
cis-2-Pentene	0.156	0.03	0.09	U	0.190
2-Methyl-2-butene	0.106	0.02	0.06	U	0.240
2,2-Dimethylbutane	0.320	0.05	0.19		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.303	0.06	0.17		0.120
2,3-Dimethylbutane	0.534	0.09	0.31		0.200
2-Methylpentane	2.12	0.35	1.25		0.140
3-Methylpentane	0.919	0.15	0.54		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.242	0.04	0.14	U	0.360
2-Ethyl-1-butene	2.76	0.46	1.59		0.360
n-Hexane	1.08	0.18	0.64		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.688	0.12	0.40		0.140
2,4-Dimethylpentane	0.305	0.04	0.18		0.230
Cyclohexane	0.371	0.06	0.21		0.190
2-Methylhexane	0.646	0.09	0.38		0.110
2,3-Dimethylpentane	0.547	0.08	0.32		0.370
3-Methylhexane	0.914	0.13	0.54		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-1-10 Lab ID: 0100501-03 Sampled: 10/01/10 23:59  
 Pressure @ Receipt: 6" Hg Canister #: 5106 Received: 10/05/10 13:09  
 Comments: Site 3 Analyzed: 10/07/10 22:33

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.36	0.17	0.80		0.170
n-Heptane	0.520	0.07	0.31		0.180
Methylcyclohexane	0.545	0.08	0.31		0.190
2,2,3-Trimethylpentane	0.265	0.03	0.16	U	0.280
2,3,4-Trimethylpentane	0.394	0.05	0.23		0.140
2-Methylheptane	0.194	0.02	0.11		0.170
3-Methylheptane	0.178	0.02	0.10		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.197	0.02	0.12		0.180
Isopropylbenzene	0.0810	0.01	0.05	U	0.210
a-Pinene	0.183	0.02	0.13	U	0.240
n-Propylbenzene	0.121	0.01	0.07	U	0.200
m-Ethyltoluene	0.320	0.04	0.18		0.150
p-Ethyltoluene	0.153	0.02	0.08	U	0.240
1,3,5-Trimethylbenzene	0.186	0.02	0.10		0.170
o-Ethyltoluene	0.258	0.03	0.14		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.349	0.04	0.19		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.264	0.03	0.15		0.230
1,2,3-Trimethylbenzene	0.105	0.01	0.06	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.221	0.02	0.13		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.149	0.01	0.09	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	64.9	ND	ND		
Sum of Unknowns	41.8	ND	ND		
TNMOC	107	ND	ND		





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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-1-10 Lab ID: 0100501-04 Sampled: 10/01/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5025 Received: 10/05/10 13:09  
 Comments: Site 4 Analyzed: 10/08/10 13:33

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.86	1.43	1.64		0.380
Ethane	15.0	7.50	9.24		0.120
Propane	18.8	6.27	11.30		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	18.9	4.73	11.30		0.130
Isobutene/1-Butene	3.94	0.99	2.27		0.150
n-Butane	96.1	24.00	57.20	E	0.170
trans-2-Butene	3.36	0.84	1.93		0.140
cis-2-Butene	2.60	0.65	1.49		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	153	30.60	90.50	E	0.190
1-Pentene	3.26	0.65	1.87		0.120
2-Methyl-1-butene	6.00	1.20	3.45		0.240
n-Pentane	64.0	12.80	37.80		0.0900
Isoprene	0.656	0.13	0.37		0.240
trans-2-Pentene	8.68	1.74	4.99		0.140
cis-2-Pentene	4.26	0.85	2.45		0.190
2-Methyl-2-butene	11.2	2.24	6.44		0.240
2,2-Dimethylbutane	2.85	0.48	1.68		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.530	0.09	0.31		0.360
Cyclopentane	4.72	0.94	2.71		0.120
2,3-Dimethylbutane	12.9	2.15	7.59		0.200
2-Methylpentane	29.6	4.93	17.40		0.140
3-Methylpentane	16.5	2.75	9.71		0.200
2-Methyl-1-pentene	1.19	0.20	0.68		0.360
1-Hexene	0.543	0.09	0.31		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	15.4	2.57	9.07		0.240
trans-2-Hexene	1.63	0.27	0.94		0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	9.64	1.61	5.54		0.140
2,4-Dimethylpentane	4.50	0.64	2.64		0.230
Cyclohexane	2.91	0.49	1.67		0.190
2-Methylhexane	4.87	0.70	2.86		0.110
2,3-Dimethylpentane	3.74	0.53	2.19		0.370
3-Methylhexane	5.33	0.76	3.13		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	17.9	2.24	10.50		0.170

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-1-10 Lab ID: 0100501-04 Sampled: 10/01/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5025 Received: 10/05/10 13:09  
 Comments: Site 4 Analyzed: 10/08/10 13:33

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	3.21	0.46	1.88		0.180
Methylcyclohexane	2.91	0.42	1.67		0.190
2,2,3-Trimethylpentane	2.84	0.36	1.66		0.280
2,3,4-Trimethylpentane	4.10	0.51	2.40		0.140
2-Methylheptane	1.06	0.13	0.62		0.170
3-Methylheptane	0.873	0.11	0.51		0.110
1-Octene	0.173	0.02	0.10	U	0.280
1-Nonene	0.476	0.05	0.27		0.240
n-Nonane	2.34	0.26	1.37		0.180
Isopropylbenzene	0.127	0.02	0.08	U	0.210
a-Pinene	0.156	0.02	0.11	U	0.240
n-Propylbenzene	0.519	0.06	0.28		0.200
m-Ethyltoluene	0.709	0.08	0.39		0.150
p-Ethyltoluene	0.635	0.07	0.35		0.240
1,3,5-Trimethylbenzene	1.09	0.12	0.60		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	0.376	0.05	0.26		0.240
1,2,4-Trimethylbenzene	1.25	0.14	0.68		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	2.91	0.29	1.70		0.230
1,2,3-Trimethylbenzene	0.299	0.03	0.16		0.170
m-Diethylbenzene	0.815	0.08	0.45		0.240
p-Diethylbenzene	0.352	0.04	0.19		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.886	0.08	0.52		0.220
1-Dodecene	0.176	0.01	0.10	U	0.290
n-Dodecane	0.262	0.02	0.15	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	600	ND	ND		
Sum of Unknowns	115	ND	ND		
TNMOC	715	ND	ND		



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 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-1-10 Lab ID: 0100501-05 Sampled: 10/01/10 23:59  
 Pressure @ Receipt: 15" Hg Canister #: 5132 Received: 10/05/10 13:09  
 Comments: Site 5 Analyzed: 10/08/10 14:34

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.77	0.89	1.02		0.380
Ethane	46.1	23.10	28.40		0.120
Propane	17.0	5.67	10.20		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	3.50	0.88	2.08		0.130
Isobutene/1-Butene	0.623	0.16	0.36		0.150
n-Butane	ND	ND	ND	A-01, U	0.170
trans-2-Butene	0.126	0.03	0.07	U	0.140
cis-2-Butene	0.193	0.05	0.11		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.86	0.77	2.28		0.190
1-Pentene	0.169	0.03	0.10		0.120
2-Methyl-1-butene	0.0890	0.02	0.05	U	0.240
n-Pentane	3.88	0.78	2.29		0.0900
Isoprene	0.382	0.08	0.21		0.240
trans-2-Pentene	0.175	0.04	0.10		0.140
cis-2-Pentene	0.169	0.03	0.10	U	0.190
2-Methyl-2-butene	0.0840	0.02	0.05	U	0.240
2,2-Dimethylbutane	0.419	0.07	0.25		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.183	0.03	0.11	U	0.360
Cyclopentane	0.346	0.07	0.20		0.120
2,3-Dimethylbutane	0.506	0.08	0.30		0.200
2-Methylpentane	2.59	0.43	1.52		0.140
3-Methylpentane	1.08	0.18	0.64		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.277	0.05	0.16	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.55	0.26	0.91		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.836	0.14	0.48		0.140
2,4-Dimethylpentane	0.260	0.04	0.15		0.230
Cyclohexane	0.567	0.09	0.33		0.190
2-Methylhexane	0.679	0.10	0.40		0.110
2,3-Dimethylpentane	0.698	0.10	0.41		0.370
3-Methylhexane	1.22	0.17	0.72		0.150
1-Heptene	0.197	0.03	0.11	U	0.370

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*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-1-10 Lab ID: 0100501-05 Sampled: 10/01/10 23:59  
 Pressure @ Receipt: 15" Hg Canister #: 5132 Received: 10/05/10 13:09  
 Comments: Site 5 Analyzed: 10/08/10 14:34

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.638	0.08	0.37		0.170
n-Heptane	0.726	0.10	0.43		0.180
Methylcyclohexane	0.722	0.10	0.42		0.190
2,2,3-Trimethylpentane	0.176	0.02	0.10	U	0.280
2,3,4-Trimethylpentane	0.236	0.03	0.14		0.140
2-Methylheptane	0.337	0.04	0.20		0.170
3-Methylheptane	0.270	0.03	0.16		0.110
1-Octene	0.131	0.02	0.08	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.274	0.03	0.16		0.180
Isopropylbenzene	0.130	0.02	0.08	U	0.210
a-Pinene	0.204	0.03	0.14	U	0.240
n-Propylbenzene	0.125	0.01	0.07	U	0.200
m-Ethyltoluene	0.237	0.03	0.13		0.150
p-Ethyltoluene	0.168	0.02	0.09	U	0.240
1,3,5-Trimethylbenzene	0.195	0.02	0.11		0.170
o-Ethyltoluene	0.174	0.02	0.10	U	0.180
b-Pinene	0.140	0.02	0.10	U	0.240
1,2,4-Trimethylbenzene	0.297	0.03	0.16		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.303	0.03	0.18		0.230
1,2,3-Trimethylbenzene	0.101	0.01	0.06	U	0.170
m-Diethylbenzene	0.188	0.02	0.10	U	0.240
p-Diethylbenzene	0.0890	0.01	0.05	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.316	0.03	0.18		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.644	0.05	0.38		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	103	ND	ND		
Sum of Unknowns	43.1	ND	ND		
TNMOC	146	ND	ND		



# CERTIFICATE OF ANALYSIS

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-4-10 Lab ID: 0100601-01 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 7" Hg Canister #: 5087 Received: 10/06/10 10:58  
 Comments: Site 1 Analyzed: 10/08/10 15:35

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.62	1.31	1.51		0.380
Ethane	5.50	2.75	3.39		0.120
Propane	6.32	2.11	3.81		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.23	0.31	0.73		0.130
Isobutene/1-Butene	0.679	0.17	0.39		0.150
n-Butane	2.56	0.64	1.52		0.170
trans-2-Butene	0.113	0.03	0.07	U	0.140
cis-2-Butene	0.134	0.03	0.08	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.37	0.67	1.99		0.190
1-Pentene	0.266	0.05	0.15		0.120
2-Methyl-1-butene	0.145	0.03	0.08	U	0.240
n-Pentane	2.00	0.40	1.18		0.0900
Isoprene	0.397	0.08	0.22		0.240
trans-2-Pentene	0.148	0.03	0.09		0.140
cis-2-Pentene	0.0980	0.02	0.06	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.314	0.05	0.19		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.257	0.04	0.15	U	0.360
Cyclopentane	0.226	0.05	0.13		0.120
2,3-Dimethylbutane	0.461	0.08	0.27		0.200
2-Methylpentane	1.62	0.27	0.95		0.140
3-Methylpentane	0.729	0.12	0.43		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.177	0.03	0.10	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.612	0.10	0.36		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.523	0.09	0.30		0.140
2,4-Dimethylpentane	0.227	0.03	0.13	U	0.230
Cyclohexane	0.206	0.03	0.12		0.190
2-Methylhexane	0.505	0.07	0.30		0.110
2,3-Dimethylpentane	0.555	0.08	0.33		0.370
3-Methylhexane	0.688	0.10	0.40		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-4-10 Lab ID: 0100601-01 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 7" Hg Canister #: 5087 Received: 10/06/10 10:58  
 Comments: Site 1 Analyzed: 10/08/10 15:35

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.959</b>	<b>0.12</b>	<b>0.56</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.398</b>	<b>0.06</b>	<b>0.23</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.394</b>	<b>0.06</b>	<b>0.23</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.214	0.03	0.13	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.369</b>	<b>0.05</b>	<b>0.22</b>		<b>0.140</b>
2-Methylheptane	0.159	0.02	0.09	U	0.170
<b>3-Methylheptane</b>	<b>0.218</b>	<b>0.03</b>	<b>0.13</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.181</b>	<b>0.02</b>	<b>0.11</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	0.0920	0.01	0.05	U	0.200
<b>m-Ethyltoluene</b>	<b>0.222</b>	<b>0.02</b>	<b>0.12</b>		<b>0.150</b>
p-Ethyltoluene	0.135	0.02	0.07	U	0.240
1,3,5-Trimethylbenzene	0.125	0.01	0.07	U	0.170
o-Ethyltoluene	0.157	0.02	0.09	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.224	0.02	0.12	U	0.240
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.309</b>	<b>0.03</b>	<b>0.18</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.211	0.02	0.12	U	0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.209	0.02	0.12	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>43.3</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>24.3</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>67.6</b>	<b>ND</b>	<b>ND</b>		



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City of Fort Worth  
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 Fort Worth, TX 76102-6311  
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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-4-10 Lab ID: 0100601-02 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 5.5" Hg Canister #: 5111 Received: 10/06/10 10:58  
 Comments: Site 2 Analyzed: 10/08/10 16:36

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.71	1.36	1.56		0.380
Ethane	6.41	3.21	3.95		0.120
Propane	6.01	2.00	3.62		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.01	0.50	1.20		0.130
Isobutene/1-Butene	0.826	0.21	0.48		0.150
n-Butane	3.59	0.90	2.14		0.170
trans-2-Butene	0.153	0.04	0.09		0.140
cis-2-Butene	0.170	0.04	0.10	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	4.44	0.89	2.63		0.190
1-Pentene	0.235	0.05	0.14		0.120
2-Methyl-1-butene	0.209	0.04	0.12	U	0.240
n-Pentane	2.35	0.47	1.39		0.0900
Isoprene	0.317	0.06	0.18		0.240
trans-2-Pentene	0.251	0.05	0.14		0.140
cis-2-Pentene	0.154	0.03	0.09	U	0.190
2-Methyl-2-butene	0.155	0.03	0.09	U	0.240
2,2-Dimethylbutane	0.475	0.08	0.28		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.240	0.04	0.14	U	0.360
Cyclopentane	0.277	0.06	0.16		0.120
2,3-Dimethylbutane	0.583	0.10	0.34		0.200
2-Methylpentane	2.15	0.36	1.27		0.140
3-Methylpentane	1.01	0.17	0.60		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.241	0.04	0.14	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.901	0.15	0.53		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.764	0.13	0.44		0.140
2,4-Dimethylpentane	0.313	0.04	0.18		0.230
Cyclohexane	0.246	0.04	0.14		0.190
2-Methylhexane	0.615	0.09	0.36		0.110
2,3-Dimethylpentane	0.496	0.07	0.29		0.370
3-Methylhexane	0.851	0.12	0.50		0.150
1-Heptene	ND	ND	ND	U	0.370

Eastern Research Group

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-4-10 Lab ID: 0100601-02 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 5.5" Hg Canister #: 5111 Received: 10/06/10 10:58  
 Comments: Site 2 Analyzed: 10/08/10 16:36

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.53	0.19	0.90		0.170
n-Heptane	0.489	0.07	0.29		0.180
Methylcyclohexane	0.669	0.10	0.39		0.190
2,2,3-Trimethylpentane	0.324	0.04	0.19		0.280
2,3,4-Trimethylpentane	0.480	0.06	0.28		0.140
2-Methylheptane	0.302	0.04	0.18		0.170
3-Methylheptane	0.248	0.03	0.15		0.110
1-Octene	0.120	0.02	0.07	U	0.280
1-Nonene	0.281	0.03	0.16		0.240
n-Nonane	1.44	0.16	0.84		0.180
Isopropylbenzene	0.123	0.02	0.08	U	0.210
a-Pinene	0.232	0.03	0.16	U	0.240
n-Propylbenzene	0.362	0.04	0.20		0.200
m-Ethyltoluene	0.706	0.08	0.39		0.150
p-Ethyltoluene	0.510	0.06	0.28		0.240
1,3,5-Trimethylbenzene	0.813	0.09	0.45		0.170
o-Ethyltoluene	0.662	0.07	0.36		0.180
b-Pinene	0.486	0.06	0.34		0.240
1,2,4-Trimethylbenzene	1.18	0.13	0.65		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	2.20	0.22	1.28		0.230
1,2,3-Trimethylbenzene	0.328	0.04	0.18		0.170
m-Diethylbenzene	0.242	0.02	0.13		0.240
p-Diethylbenzene	0.198	0.02	0.11		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	1.22	0.11	0.71		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.442	0.04	0.26		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	65.4	ND	ND		
Sum of Unknowns	37.7	ND	ND		
TNMOC	103	ND	ND		





# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-4-10 Lab ID: 0100601-03 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 5" Hg Canister #: 5001 Received: 10/06/10 10:58  
 Comments: Site 3 Analyzed: 10/08/10 17:38

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.48	1.24	1.43		0.380
Ethane	11.2	5.60	6.90		0.120
Propane	5.36	1.79	3.23		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.54	0.39	0.92		0.130
Isobutene/1-Butene	0.783	0.20	0.45		0.150
n-Butane	2.87	0.72	1.71		0.170
trans-2-Butene	0.100	0.03	0.06	U	0.140
cis-2-Butene	0.119	0.03	0.07	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.54	0.71	2.09		0.190
1-Pentene	0.200	0.04	0.12		0.120
2-Methyl-1-butene	0.146	0.03	0.08	U	0.240
n-Pentane	2.36	0.47	1.40		0.0900
Isoprene	0.428	0.09	0.24		0.240
trans-2-Pentene	0.235	0.05	0.14		0.140
cis-2-Pentene	0.0970	0.02	0.06	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.265	0.04	0.16		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.238	0.05	0.14		0.120
2,3-Dimethylbutane	0.422	0.07	0.25		0.200
2-Methylpentane	1.40	0.23	0.82		0.140
3-Methylpentane	0.751	0.13	0.44		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.182	0.03	0.11	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.774	0.13	0.46		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.713	0.12	0.41		0.140
2,4-Dimethylpentane	0.227	0.03	0.13	U	0.230
Cyclohexane	0.204	0.03	0.12		0.190
2-Methylhexane	0.533	0.08	0.31		0.110
2,3-Dimethylpentane	0.908	0.13	0.53		0.370
3-Methylhexane	0.953	0.14	0.56		0.150
1-Heptene	ND	ND	ND	U	0.370

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 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-4-10 Lab ID: 0100601-03 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 5" Hg Canister #: 5001 Received: 10/06/10 10:58  
 Comments: Site 3 Analyzed: 10/08/10 17:38

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>1.04</b>	<b>0.13</b>	<b>0.61</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.324</b>	<b>0.05</b>	<b>0.19</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.412</b>	<b>0.06</b>	<b>0.24</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.236	0.03	0.14	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.371</b>	<b>0.05</b>	<b>0.22</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.196</b>	<b>0.02</b>	<b>0.12</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.134</b>	<b>0.02</b>	<b>0.08</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.194</b>	<b>0.02</b>	<b>0.11</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
<b>a-Pinene</b>	<b>0.590</b>	<b>0.07</b>	<b>0.41</b>		<b>0.240</b>
n-Propylbenzene	0.0980	0.01	0.05	U	0.200
<b>m-Ethyltoluene</b>	<b>0.213</b>	<b>0.02</b>	<b>0.12</b>		<b>0.150</b>
p-Ethyltoluene	0.143	0.02	0.08	U	0.240
1,3,5-Trimethylbenzene	0.140	0.02	0.08	U	0.170
o-Ethyltoluene	0.179	0.02	0.10	U	0.180
<b>b-Pinene</b>	<b>0.287</b>	<b>0.04</b>	<b>0.20</b>		<b>0.240</b>
<b>1,2,4-Trimethylbenzene</b>	<b>0.281</b>	<b>0.03</b>	<b>0.15</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.175	0.02	0.10	U	0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.264</b>	<b>0.02</b>	<b>0.15</b>		<b>0.220</b>
1-Dodecene	0.0930	0.01	0.05	U	0.290
n-Dodecane	0.288	0.02	0.17	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>50.8</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>39.1</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>89.9</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-D-10-4-10 Lab ID: 0100601-04 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 9.5" Hg Canister #: 5017 Received: 10/06/10 10:58  
 Comments: Dup2 Site 4 Analyzed: 10/07/10 13:24

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.43	1.72	1.97		0.380
Ethane	17.0	8.50	10.50		0.120
Propane	17.1	5.70	10.30		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	11.7	2.93	6.97		0.130
Isobutene/1-Butene	2.30	0.58	1.32		0.150
n-Butane	55.1	13.80	32.80		0.170
trans-2-Butene	1.42	0.36	0.82		0.140
cis-2-Butene	1.22	0.31	0.70		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	73.8	14.80	43.60		0.190
1-Pentene	1.64	0.33	0.94		0.120
2-Methyl-1-butene	2.80	0.56	1.61		0.240
n-Pentane	29.7	5.94	17.60		0.0900
Isoprene	0.474	0.09	0.27		0.240
trans-2-Pentene	3.96	0.79	2.28		0.140
cis-2-Pentene	2.06	0.41	1.18		0.190
2-Methyl-2-butene	4.94	0.99	2.84		0.240
2,2-Dimethylbutane	1.71	0.29	1.01		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.295	0.05	0.17	U	0.360
Cyclopentane	2.32	0.46	1.33		0.120
2,3-Dimethylbutane	6.38	1.06	3.76		0.200
2-Methylpentane	14.9	2.48	8.77		0.140
3-Methylpentane	8.08	1.35	4.76		0.200
2-Methyl-1-pentene	0.589	0.10	0.34		0.360
1-Hexene	0.395	0.07	0.23		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	7.03	1.17	4.14		0.240
trans-2-Hexene	0.706	0.12	0.41		0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	4.63	0.77	2.66		0.140
2,4-Dimethylpentane	2.24	0.32	1.31		0.230
Cyclohexane	1.42	0.24	0.82		0.190
2-Methylhexane	2.45	0.35	1.44		0.110
2,3-Dimethylpentane	2.05	0.29	1.20		0.370
3-Methylhexane	2.66	0.38	1.56		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	8.28	1.04	4.85		0.170

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FILE #: 3786.02.002.001  
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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-D-10-4-10 Lab ID: 0100601-04 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 9.5" Hg Canister #: 5017 Received: 10/06/10 10:58  
 Comments: Dup2 Site 4 Analyzed: 10/07/10 13:24

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	1.66	0.24	0.97		0.180
Methylcyclohexane	1.40	0.20	0.81		0.190
2,2,3-Trimethylpentane	1.12	0.14	0.66		0.280
2,3,4-Trimethylpentane	1.90	0.24	1.11		0.140
2-Methylheptane	0.554	0.07	0.32		0.170
3-Methylheptane	0.476	0.06	0.28		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.457	0.05	0.27		0.180
Isopropylbenzene	0.119	0.01	0.07	U	0.210
a-Pinene	0.199	0.02	0.14	U	0.240
n-Propylbenzene	0.215	0.02	0.12		0.200
m-Ethyltoluene	0.447	0.05	0.25		0.150
p-Ethyltoluene	0.338	0.04	0.19		0.240
1,3,5-Trimethylbenzene	0.371	0.04	0.20		0.170
o-Ethyltoluene	0.169	0.02	0.09	U	0.180
b-Pinene	0.145	0.02	0.10	U	0.240
1,2,4-Trimethylbenzene	0.750	0.08	0.41		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.653	0.07	0.38		0.230
1,2,3-Trimethylbenzene	0.202	0.02	0.11		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.194	0.02	0.11		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.814	0.07	0.47		0.220
1-Dodecene	0.160	0.01	0.09	U	0.290
n-Dodecane	0.288	0.02	0.17	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	324	ND	ND		
Sum of Unknowns	79.8	ND	ND		
TNMOC	403	ND	ND		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-4-10 Lab ID: 0100601-05 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 9.5" Hg Canister #: 5064 Received: 10/06/10 10:58  
 Comments: Dup1 Site 4 Analyzed: 10/07/10 12:22

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.44	1.72	1.98		0.380
Ethane	17.0	8.50	10.50		0.120
Propane	16.4	5.47	9.88		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	11.5	2.88	6.85		0.130
Isobutene/1-Butene	2.31	0.58	1.33		0.150
n-Butane	51.9	13.00	30.90		0.170
trans-2-Butene	1.44	0.36	0.83		0.140
cis-2-Butene	1.25	0.31	0.72		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	72.2	14.40	42.70		0.190
1-Pentene	1.61	0.32	0.93		0.120
2-Methyl-1-butene	2.87	0.57	1.65		0.240
n-Pentane	29.7	5.94	17.60		0.0900
Isoprene	0.408	0.08	0.23		0.240
trans-2-Pentene	3.98	0.80	2.29		0.140
cis-2-Pentene	2.05	0.41	1.18		0.190
2-Methyl-2-butene	4.97	0.99	2.86		0.240
2,2-Dimethylbutane	1.57	0.26	0.92		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.326	0.05	0.19	U	0.360
Cyclopentane	2.29	0.46	1.32		0.120
2,3-Dimethylbutane	6.14	1.02	3.61		0.200
2-Methylpentane	13.7	2.28	8.06		0.140
3-Methylpentane	7.85	1.31	4.62		0.200
2-Methyl-1-pentene	0.545	0.09	0.31		0.360
1-Hexene	0.399	0.07	0.23		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	7.07	1.18	4.16		0.240
trans-2-Hexene	0.685	0.11	0.39		0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	4.46	0.74	2.56		0.140
2,4-Dimethylpentane	2.10	0.30	1.23		0.230
Cyclohexane	1.36	0.23	0.78		0.190
2-Methylhexane	2.56	0.37	1.50		0.110
2,3-Dimethylpentane	2.00	0.29	1.17		0.370
3-Methylhexane	2.54	0.36	1.49		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	8.45	1.06	4.94		0.170

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# CERTIFICATE OF ANALYSIS

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-4-10 Lab ID: 0100601-05 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 9.5" Hg Canister #: 5064 Received: 10/06/10 10:58  
 Comments: Dup1 Site 4 Analyzed: 10/07/10 12:22

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	1.70	0.24	1.00		0.180
Methylcyclohexane	1.39	0.20	0.80		0.190
2,2,3-Trimethylpentane	1.21	0.15	0.71		0.280
2,3,4-Trimethylpentane	1.86	0.23	1.09		0.140
2-Methylheptane	0.539	0.07	0.32		0.170
3-Methylheptane	0.453	0.06	0.27		0.110
1-Octene	0.157	0.02	0.09	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.411	0.05	0.24		0.180
Isopropylbenzene	0.125	0.02	0.08	U	0.210
a-Pinene	0.108	0.01	0.08	U	0.240
n-Propylbenzene	0.206	0.02	0.11		0.200
m-Ethyltoluene	0.499	0.06	0.27		0.150
p-Ethyltoluene	0.319	0.04	0.18		0.240
1,3,5-Trimethylbenzene	0.397	0.04	0.22		0.170
o-Ethyltoluene	0.239	0.03	0.13		0.180
b-Pinene	0.105	0.01	0.07	U	0.240
1,2,4-Trimethylbenzene	0.618	0.07	0.34		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.575	0.06	0.34		0.230
1,2,3-Trimethylbenzene	0.168	0.02	0.09	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.183	0.02	0.10		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.868	0.08	0.51		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.456	0.04	0.27		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	316	ND	ND		
Sum of Unknowns	46.5	ND	ND		
TNMOC	362	ND	ND		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-4-10

Lab ID: 0100601-06

Sampled: 10/04/10 23:59

Pressure @ Receipt: 11.5" Hg

Canister #: 5114

Received: 10/06/10 10:58

Comments: Dup1 Site 5

Analyzed: 10/07/10 16:29

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.91	0.96	1.10		0.380
Ethane	40.4	20.20	24.90		0.120
Propane	12.8	4.27	7.71		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	3.22	0.81	1.92		0.130
Isobutene/1-Butene	0.546	0.14	0.31		0.150
n-Butane	4.07	1.02	2.42		0.170
trans-2-Butene	0.177	0.04	0.10		0.140
cis-2-Butene	0.214	0.05	0.12		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.02	0.60	1.79		0.190
1-Pentene	0.184	0.04	0.11		0.120
2-Methyl-1-butene	0.117	0.02	0.07	U	0.240
n-Pentane	2.32	0.46	1.37		0.0900
Isoprene	0.249	0.05	0.14		0.240
trans-2-Pentene	0.166	0.03	0.10		0.140
cis-2-Pentene	0.163	0.03	0.09	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.352	0.06	0.21		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.267	0.05	0.15		0.120
2,3-Dimethylbutane	0.476	0.08	0.28		0.200
2-Methylpentane	1.57	0.26	0.92		0.140
3-Methylpentane	0.722	0.12	0.43		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.245	0.04	0.14	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.890	0.15	0.52		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.503	0.08	0.29		0.140
2,4-Dimethylpentane	0.296	0.04	0.17		0.230
Cyclohexane	0.419	0.07	0.24		0.190
2-Methylhexane	0.565	0.08	0.33		0.110
2,3-Dimethylpentane	0.458	0.07	0.27		0.370
3-Methylhexane	0.585	0.08	0.34		0.150
1-Heptene	ND	ND	ND	U	0.370

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City of Fort Worth  
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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-4-10 Lab ID: 0100601-06 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 11.5" Hg Canister #: 5114 Received: 10/06/10 10:58  
 Comments: Dup1 Site 5 Analyzed: 10/07/10 16:29

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.780</b>	<b>0.10</b>	<b>0.46</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.513</b>	<b>0.07</b>	<b>0.30</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.578</b>	<b>0.08</b>	<b>0.33</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.160	0.02	0.09	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.284</b>	<b>0.04</b>	<b>0.17</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.279</b>	<b>0.03</b>	<b>0.16</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.186</b>	<b>0.02</b>	<b>0.11</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.233</b>	<b>0.03</b>	<b>0.14</b>		<b>0.180</b>
Isopropylbenzene	0.148	0.02	0.09	U	0.210
a-Pinene	0.124	0.02	0.09	U	0.240
n-Propylbenzene	0.121	0.01	0.07	U	0.200
<b>m-Ethyltoluene</b>	<b>0.256</b>	<b>0.03</b>	<b>0.14</b>		<b>0.150</b>
p-Ethyltoluene	0.193	0.02	0.11	U	0.240
1,3,5-Trimethylbenzene	0.148	0.02	0.08	U	0.170
o-Ethyltoluene	0.172	0.02	0.09	U	0.180
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.275</b>	<b>0.03</b>	<b>0.15</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.233</b>	<b>0.02</b>	<b>0.14</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	0.0900	0.01	0.05	U	0.170
m-Diethylbenzene	0.176	0.02	0.10	U	0.240
p-Diethylbenzene	0.127	0.01	0.07	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.273</b>	<b>0.02</b>	<b>0.16</b>		<b>0.220</b>
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.202	0.02	0.12	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>88.3</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>17.8</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>106</b>	<b>ND</b>	<b>ND</b>		





# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-D-10-4-10

Lab ID: 0100601-07

Sampled: 10/04/10 23:59

Pressure @ Receipt: 11.5" Hg

Canister #: 5051

Received: 10/06/10 10:58

Comments: Dup2 Site 5

Analyzed: 10/08/10 11:32

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.02	1.01	1.16		0.380
Ethane	39.7	19.90	24.50		0.120
Propane	12.4	4.13	7.47		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.83	0.71	1.69		0.130
Isobutene/1-Butene	0.634	0.16	0.36		0.150
n-Butane	ND	ND	ND	A-01, U	0.170
trans-2-Butene	0.111	0.03	0.06	U	0.140
cis-2-Butene	0.145	0.04	0.08	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.93	0.59	1.73		0.190
1-Pentene	0.180	0.04	0.10		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	2.30	0.46	1.36		0.0900
Isoprene	0.252	0.05	0.14		0.240
trans-2-Pentene	0.146	0.03	0.08		0.140
cis-2-Pentene	0.124	0.02	0.07	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.268	0.04	0.16		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.184	0.03	0.11	U	0.360
Cyclopentane	0.246	0.05	0.14		0.120
2,3-Dimethylbutane	0.437	0.07	0.26		0.200
2-Methylpentane	1.86	0.31	1.09		0.140
3-Methylpentane	0.771	0.13	0.45		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.191	0.03	0.11	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.787	0.13	0.46		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.488	0.08	0.28		0.140
2,4-Dimethylpentane	0.237	0.03	0.14		0.230
Cyclohexane	0.333	0.06	0.19		0.190
2-Methylhexane	0.517	0.07	0.30		0.110
2,3-Dimethylpentane	0.452	0.06	0.27		0.370
3-Methylhexane	0.583	0.08	0.34		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-D-10-4-10 Lab ID: 0100601-07 Sampled: 10/04/10 23:59  
 Pressure @ Receipt: 11.5" Hg Canister #: 5051 Received: 10/06/10 10:58  
 Comments: Dup2 Site 5 Analyzed: 10/08/10 11:32

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.730	0.09	0.43		0.170
n-Heptane	0.423	0.06	0.25		0.180
Methylcyclohexane	0.518	0.07	0.30		0.190
2,2,3-Trimethylpentane	0.149	0.02	0.09	U	0.280
2,3,4-Trimethylpentane	0.218	0.03	0.13		0.140
2-Methylheptane	0.205	0.03	0.12		0.170
3-Methylheptane	0.159	0.02	0.09		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.165	0.02	0.10	U	0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	ND	ND	ND	U	0.200
m-Ethyltoluene	0.197	0.02	0.11		0.150
p-Ethyltoluene	0.0860	0.01	0.05	U	0.240
1,3,5-Trimethylbenzene	ND	ND	ND	U	0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.119	0.01	0.07	U	0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.226	0.02	0.13	U	0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.414	0.04	0.24		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.460	0.04	0.27		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>80.3</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>34.3</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>115</b>	<b>ND</b>	<b>ND</b>		



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 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-7-10 Lab ID: 0101208-01 Sampled: 10/07/10 23:59  
 Pressure @ Receipt: 6" Hg Canister #: 5136 Received: 10/12/10 10:29  
 Comments: Site 1 Analyzed: 10/12/10 16:26

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	5.40	2.70	3.10		0.380
Ethane	23.4	11.70	14.40		0.120
Propane	23.3	7.77	14.00		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	22.2	5.55	13.20		0.130
Isobutene/1-Butene	3.13	0.78	1.80		0.150
n-Butane	25.9	6.48	15.40		0.170
trans-2-Butene	0.956	0.24	0.55		0.140
cis-2-Butene	0.804	0.20	0.46		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	25.9	5.18	15.30		0.190
1-Pentene	0.895	0.18	0.52		0.120
2-Methyl-1-butene	1.13	0.23	0.65		0.240
n-Pentane	10.0	2.00	5.91		0.0900
Isoprene	1.27	0.25	0.71		0.240
trans-2-Pentene	1.26	0.25	0.72		0.140
cis-2-Pentene	0.627	0.13	0.36		0.190
2-Methyl-2-butene	1.31	0.26	0.75		0.240
2,2-Dimethylbutane	0.809	0.14	0.48		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.777	0.16	0.45		0.120
2,3-Dimethylbutane	1.92	0.32	1.13		0.200
2-Methylpentane	5.80	0.97	3.41		0.140
3-Methylpentane	2.93	0.49	1.72		0.200
2-Methyl-1-pentene	0.164	0.03	0.09	U	0.360
1-Hexene	0.228	0.04	0.13	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.69	0.45	1.58		0.240
trans-2-Hexene	0.154	0.03	0.09	U	0.360
cis-2-Hexene	0.177	0.03	0.10	U	0.360
Methylcyclopentane	2.10	0.35	1.21		0.140
2,4-Dimethylpentane	0.797	0.11	0.47		0.230
Cyclohexane	0.767	0.13	0.44		0.190
2-Methylhexane	1.71	0.24	1.00		0.110
2,3-Dimethylpentane	1.23	0.18	0.72		0.370
3-Methylhexane	2.64	0.38	1.55		0.150
1-Heptene	ND	ND	ND	U	0.370

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Description: S2-P-10-7-10 Lab ID: 0101208-02 Sampled: 10/07/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5141 Received: 10/12/10 10:29  
 Comments: Site 2 Analyzed: 10/12/10 17:27

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	5.15	2.58	2.96		0.380
Ethane	46.8	23.40	28.80		0.120
Propane	14.5	4.83	8.74		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	3.88	0.97	2.31		0.130
Isobutene/1-Butene	1.76	0.44	1.01		0.150
n-Butane	10.8	2.70	6.43		0.170
trans-2-Butene	0.245	0.06	0.14		0.140
cis-2-Butene	0.256	0.06	0.15		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	8.73	1.75	5.16		0.190
1-Pentene	0.355	0.07	0.20		0.120
2-Methyl-1-butene	0.353	0.07	0.20		0.240
n-Pentane	5.00	1.00	2.96		0.0900
Isoprene	1.16	0.23	0.65		0.240
trans-2-Pentene	0.469	0.09	0.27		0.140
cis-2-Pentene	0.227	0.05	0.13		0.190
2-Methyl-2-butene	0.427	0.09	0.25		0.240
2,2-Dimethylbutane	1.04	0.17	0.61		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.438	0.09	0.25		0.120
2,3-Dimethylbutane	1.04	0.17	0.61		0.200
2-Methylpentane	3.90	0.65	2.30		0.140
3-Methylpentane	1.75	0.29	1.03		0.200
2-Methyl-1-pentene	0.0990	0.02	0.06	U	0.360
1-Hexene	0.194	0.03	0.11	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.74	0.29	1.02		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	0.199	0.03	0.11	U	0.360
Methylcyclopentane	1.17	0.20	0.67		0.140
2,4-Dimethylpentane	0.485	0.07	0.29		0.230
Cyclohexane	0.444	0.07	0.26		0.190
2-Methylhexane	1.15	0.16	0.68		0.110
2,3-Dimethylpentane	0.871	0.12	0.51		0.370
3-Methylhexane	1.65	0.24	0.97		0.150
1-Heptene	ND	ND	ND	U	0.370

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SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-7-10 Lab ID: 0101208-02 Sampled: 10/07/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5141 Received: 10/12/10 10:29  
 Comments: Site 2 Analyzed: 10/12/10 17:27

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	3.15	0.39	1.84		0.170
n-Heptane	1.05	0.15	0.62		0.180
Methylcyclohexane	1.41	0.20	0.81		0.190
2,2,3-Trimethylpentane	0.649	0.08	0.38		0.280
2,3,4-Trimethylpentane	0.990	0.12	0.58		0.140
2-Methylheptane	0.604	0.08	0.35		0.170
3-Methylheptane	0.493	0.06	0.29		0.110
1-Octene	0.157	0.02	0.09	U	0.280
1-Nonene	0.444	0.05	0.26		0.240
n-Nonane	1.87	0.21	1.09		0.180
Isopropylbenzene	0.0870	0.01	0.05	U	0.210
a-Pinene	0.302	0.04	0.21		0.240
n-Propylbenzene	0.413	0.05	0.23		0.200
m-Ethyltoluene	0.820	0.09	0.45		0.150
p-Ethyltoluene	0.579	0.06	0.32		0.240
1,3,5-Trimethylbenzene	0.983	0.11	0.54		0.170
o-Ethyltoluene	0.784	0.09	0.43		0.180
b-Pinene	0.586	0.07	0.41		0.240
1,2,4-Trimethylbenzene	1.33	0.15	0.73		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	2.38	0.24	1.39		0.230
1,2,3-Trimethylbenzene	0.310	0.03	0.17		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.231	0.02	0.13		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	1.10	0.10	0.64		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.306	0.03	0.18		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	156	ND	ND		
Sum of Unknowns	63.0	ND	ND		
TNMOC	219	ND	ND		



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 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-7-10 Lab ID: 0101208-03 Sampled: 10/07/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5027 Received: 10/12/10 10:29  
 Comments: Site 3 Analyzed: 10/12/10 18:29

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	5.79	2.90	3.33		0.380
Ethane	83.1	41.60	51.20		0.120
Propane	19.0	6.33	11.40		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	4.47	1.12	2.66		0.130
Isobutene/1-Butene	1.71	0.43	0.98		0.150
n-Butane	13.2	3.30	7.86		0.170
trans-2-Butene	0.280	0.07	0.16		0.140
cis-2-Butene	0.313	0.08	0.18		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	10.8	2.16	6.39		0.190
1-Pentene	0.402	0.08	0.23		0.120
2-Methyl-1-butene	0.467	0.09	0.27		0.240
n-Pentane	5.44	1.09	3.22		0.0900
Isoprene	0.890	0.18	0.50		0.240
trans-2-Pentene	0.529	0.11	0.30		0.140
cis-2-Pentene	0.302	0.06	0.17		0.190
2-Methyl-2-butene	0.484	0.10	0.28		0.240
2,2-Dimethylbutane	0.525	0.09	0.31		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.323	0.05	0.19	U	0.360
Cyclopentane	0.535	0.11	0.31		0.120
2,3-Dimethylbutane	1.30	0.22	0.77		0.200
2-Methylpentane	5.67	0.95	3.34		0.140
3-Methylpentane	2.28	0.38	1.34		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.338	0.06	0.19	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.30	0.38	1.35		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.48	0.25	0.85		0.140
2,4-Dimethylpentane	0.691	0.10	0.41		0.230
Cyclohexane	0.675	0.11	0.39		0.190
2-Methylhexane	1.44	0.21	0.85		0.110
2,3-Dimethylpentane	1.10	0.16	0.65		0.370
3-Methylhexane	1.78	0.25	1.04		0.150
1-Heptene	ND	ND	ND	U	0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-7-10 Lab ID: 0101208-03 Sampled: 10/07/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5027 Received: 10/12/10 10:29  
 Comments: Site 3 Analyzed: 10/12/10 18:29

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	3.94	0.49	2.31		0.170
n-Heptane	1.22	0.17	0.72		0.180
Methylcyclohexane	1.21	0.17	0.70		0.190
2,2,3-Trimethylpentane	0.739	0.09	0.43		0.280
2,3,4-Trimethylpentane	1.19	0.15	0.70		0.140
2-Methylheptane	0.447	0.06	0.26		0.170
3-Methylheptane	0.419	0.05	0.25		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	0.181	0.02	0.10	U	0.240
n-Nonane	0.433	0.05	0.25		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.520	0.07	0.36		0.240
n-Propylbenzene	0.207	0.02	0.11		0.200
m-Ethyltoluene	0.657	0.07	0.36		0.150
p-Ethyltoluene	0.312	0.03	0.17		0.240
1,3,5-Trimethylbenzene	0.384	0.04	0.21		0.170
o-Ethyltoluene	0.375	0.04	0.21		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.696	0.08	0.38		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.693	0.07	0.40		0.230
1,2,3-Trimethylbenzene	0.198	0.02	0.11		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.128	0.01	0.07	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.633	0.06	0.37		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.417	0.03	0.24		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	201	ND	ND		
Sum of Unknowns	39.2	ND	ND		
TNMOC	240	ND	ND		





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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-7-10 Lab ID: 0101208-04 Sampled: 10/07/10 23:59  
 Pressure @ Receipt: 11" Hg Canister #: 5094 Received: 10/12/10 10:29  
 Comments: Site 4 Analyzed: 10/12/10 19:30

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	10.8	5.40	6.21		0.380
Ethane	107	53.50	65.90	E	0.120
Propane	104	34.70	62.70	E	0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	37.9	9.48	22.60		0.130
Isobutene/1-Butene	9.14	2.29	5.25		0.150
n-Butane	143	35.80	85.20	E	0.170
trans-2-Butene	4.97	1.24	2.86		0.140
cis-2-Butene	3.95	0.99	2.27		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	182	36.40	108.00	E	0.190
1-Pentene	4.42	0.88	2.54		0.120
2-Methyl-1-butene	8.28	1.66	4.76		0.240
n-Pentane	78.4	15.70	46.40		0.0900
Isoprene	1.26	0.25	0.70		0.240
trans-2-Pentene	10.5	2.10	6.04		0.140
cis-2-Pentene	5.35	1.07	3.08		0.190
2-Methyl-2-butene	14.1	2.82	8.11		0.240
2,2-Dimethylbutane	4.83	0.81	2.84		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.783	0.13	0.45		0.360
Cyclopentane	6.00	1.20	3.45		0.120
2,3-Dimethylbutane	15.1	2.52	8.89		0.200
2-Methylpentane	38.7	6.45	22.80		0.140
3-Methylpentane	22.6	3.77	13.30		0.200
2-Methyl-1-pentene	1.55	0.26	0.89		0.360
1-Hexene	0.881	0.15	0.51		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	20.9	3.48	12.30		0.240
trans-2-Hexene	2.12	0.35	1.22		0.360
cis-2-Hexene	0.123	0.02	0.07	U	0.360
Methylcyclopentane	12.5	2.08	7.19		0.140
2,4-Dimethylpentane	5.75	0.82	3.37		0.230
Cyclohexane	4.25	0.71	2.44		0.190
2-Methylhexane	8.36	1.19	4.90		0.110
2,3-Dimethylpentane	5.10	0.73	2.99		0.370
3-Methylhexane	8.65	1.24	5.08		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	24.8	3.10	14.50		0.170

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City of Fort Worth  
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 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-7-10 Lab ID: 0101208-04 Sampled: 10/07/10 23:59  
 Pressure @ Receipt: 11" Hg Canister #: 5094 Received: 10/12/10 10:29  
 Comments: Site 4 Analyzed: 10/12/10 19:30

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	6.05	0.86	3.55		0.180
Methylcyclohexane	5.72	0.82	3.29		0.190
2,2,3-Trimethylpentane	4.50	0.56	2.63		0.280
2,3,4-Trimethylpentane	6.28	0.79	3.68		0.140
2-Methylheptane	2.20	0.28	1.29		0.170
3-Methylheptane	1.94	0.24	1.14		0.110
1-Octene	0.114	0.01	0.07	U	0.280
1-Nonene	0.566	0.06	0.33		0.240
n-Nonane	1.71	0.19	1.00		0.180
Isopropylbenzene	0.251	0.03	0.16		0.210
a-Pinene	1.18	0.15	0.82		0.240
n-Propylbenzene	0.725	0.08	0.40		0.200
m-Ethyltoluene	2.11	0.23	1.15		0.150
p-Ethyltoluene	1.21	0.13	0.66		0.240
1,3,5-Trimethylbenzene	1.70	0.19	0.93		0.170
o-Ethyltoluene	0.679	0.08	0.37		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	3.50	0.39	1.92		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	2.44	0.24	1.42		0.230
1,2,3-Trimethylbenzene	0.944	0.11	0.52		0.170
m-Diethylbenzene	0.390	0.04	0.22		0.240
p-Diethylbenzene	0.379	0.04	0.21		0.140
1-Undecene	0.100	0.01	0.06	U	0.220
n-Undecane	1.66	0.15	0.97		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.870	0.07	0.51		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	1010	ND	ND		
Sum of Unknowns	160	ND	ND		
TNMOC	1170	ND	ND		



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FILE #: 3786.02.002.001  
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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-7-10

Lab ID: 0101208-05

Sampled: 10/07/10 23:59

Pressure @ Receipt: 14.5" Hg

Canister #: 5019

Received: 10/12/10 10:29

Comments: Site 5

Analyzed: 10/12/10 20:31

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.06	1.53	1.76		0.380
Ethane	59.5	29.80	36.70		0.120
Propane	28.1	9.37	16.90		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	5.50	1.38	3.28		0.130
Isobutene/1-Butene	0.971	0.24	0.56		0.150
n-Butane	14.3	3.58	8.52		0.170
trans-2-Butene	0.157	0.04	0.09		0.140
cis-2-Butene	0.199	0.05	0.11		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	6.73	1.35	3.98		0.190
1-Pentene	0.261	0.05	0.15		0.120
2-Methyl-1-butene	0.166	0.03	0.10	U	0.240
n-Pentane	5.13	1.03	3.03		0.0900
Isoprene	0.354	0.07	0.20		0.240
trans-2-Pentene	0.278	0.06	0.16		0.140
cis-2-Pentene	0.182	0.04	0.11	U	0.190
2-Methyl-2-butene	0.127	0.03	0.07	U	0.240
2,2-Dimethylbutane	0.568	0.09	0.33		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.478	0.10	0.28		0.120
2,3-Dimethylbutane	0.743	0.12	0.44		0.200
2-Methylpentane	3.80	0.63	2.24		0.140
3-Methylpentane	1.48	0.25	0.87		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.282	0.05	0.16	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.80	0.30	1.06		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	0.0840	0.01	0.05	U	0.360
Methylcyclopentane	1.21	0.20	0.70		0.140
2,4-Dimethylpentane	0.434	0.06	0.26		0.230
Cyclohexane	0.631	0.11	0.36		0.190
2-Methylhexane	0.976	0.14	0.57		0.110
2,3-Dimethylpentane	0.792	0.11	0.47		0.370
3-Methylhexane	1.54	0.22	0.90		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-7-10 Lab ID: 0101208-05 Sampled: 10/07/10 23:59  
 Pressure @ Receipt: 14.5" Hg Canister #: 5019 Received: 10/12/10 10:29  
 Comments: Site 5 Analyzed: 10/12/10 20:31

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.81	0.23	1.06		0.170
n-Heptane	0.929	0.13	0.55		0.180
Methylcyclohexane	1.03	0.15	0.59		0.190
2,2,3-Trimethylpentane	0.429	0.05	0.25		0.280
2,3,4-Trimethylpentane	0.554	0.07	0.32		0.140
2-Methylheptane	0.511	0.06	0.30		0.170
3-Methylheptane	0.373	0.05	0.22		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.356	0.04	0.21		0.180
Isopropylbenzene	0.0960	0.01	0.06	U	0.210
a-Pinene	0.267	0.03	0.19		0.240
n-Propylbenzene	0.192	0.02	0.11	U	0.200
m-Ethyltoluene	0.373	0.04	0.20		0.150
p-Ethyltoluene	0.223	0.02	0.12	U	0.240
1,3,5-Trimethylbenzene	0.255	0.03	0.14		0.170
o-Ethyltoluene	0.251	0.03	0.14		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.436	0.05	0.24		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.320	0.03	0.19		0.230
1,2,3-Trimethylbenzene	0.117	0.01	0.06	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.117	0.01	0.06	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.386	0.04	0.23		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.387	0.03	0.23		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	161	ND	ND		
Sum of Unknowns	46.4	ND	ND		
TNMOC	207	ND	ND		



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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-10-10 Lab ID: 0101208-08 Sampled: 10/10/10 23:59  
 Pressure @ Receipt: 6.5" Hg Canister #: 5007 Received: 10/12/10 10:29  
 Comments: Site 1 Analyzed: 10/12/10 21:32

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.52	0.76	0.87		0.380
Ethane	7.14	3.57	4.40		0.120
Propane	6.42	2.14	3.87		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	9.40	2.35	5.60		0.130
Isobutene/1-Butene	0.681	0.17	0.39		0.150
n-Butane	7.71	1.93	4.59		0.170
trans-2-Butene	0.116	0.03	0.07	U	0.140
cis-2-Butene	0.149	0.04	0.09	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.52	0.70	2.08		0.190
1-Pentene	0.187	0.04	0.11		0.120
2-Methyl-1-butene	0.154	0.03	0.09	U	0.240
n-Pentane	2.30	0.46	1.36		0.0900
Isoprene	0.887	0.18	0.50		0.240
trans-2-Pentene	0.141	0.03	0.08		0.140
cis-2-Pentene	0.109	0.02	0.06	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.278	0.05	0.16		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.242	0.05	0.14		0.120
2,3-Dimethylbutane	0.370	0.06	0.22		0.200
2-Methylpentane	2.30	0.38	1.35		0.140
3-Methylpentane	0.573	0.10	0.34		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.175	0.03	0.10	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.562	0.09	0.33		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.679	0.11	0.39		0.140
2,4-Dimethylpentane	0.148	0.02	0.09	U	0.230
Cyclohexane	0.202	0.03	0.12		0.190
2-Methylhexane	0.464	0.07	0.27		0.110
2,3-Dimethylpentane	0.542	0.08	0.32		0.370
3-Methylhexane	0.787	0.11	0.46		0.150
1-Heptene	ND	ND	ND	U	0.370

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 REPORTED: 05/24/11 11:34  
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 AQS SITE CODE:  
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Description: S1-P-10-10-10 Lab ID: 0101208-08 Sampled: 10/10/10 23:59  
 Pressure @ Receipt: 6.5" Hg Canister #: 5007 Received: 10/12/10 10:29  
 Comments: Site 1 Analyzed: 10/12/10 21:32

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.682</b>	<b>0.09</b>	<b>0.40</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.294</b>	<b>0.04</b>	<b>0.17</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.383</b>	<b>0.05</b>	<b>0.22</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.132	0.02	0.08	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.192</b>	<b>0.02</b>	<b>0.11</b>		<b>0.140</b>
2-Methylheptane	0.125	0.02	0.07	U	0.170
3-Methylheptane	0.0960	0.01	0.06	U	0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.131	0.01	0.08	U	0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.223	0.03	0.16	U	0.240
n-Propylbenzene	0.0770	0.01	0.04	U	0.200
<b>m-Ethyltoluene</b>	<b>0.172</b>	<b>0.02</b>	<b>0.09</b>		<b>0.150</b>
p-Ethyltoluene	0.116	0.01	0.06	U	0.240
1,3,5-Trimethylbenzene	0.113	0.01	0.06	U	0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.200	0.02	0.11	U	0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.162	0.02	0.09	U	0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.121	0.01	0.07	U	0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.150	0.01	0.09	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>56.1</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>34.6</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>90.6</b>	<b>ND</b>	<b>ND</b>		



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 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-10-10 Lab ID: 0101208-09 Sampled: 10/10/10 23:59  
 Pressure @ Receipt: 6.5" Hg Canister #: 5018 Received: 10/12/10 10:29  
 Comments: Site 2 Analyzed: 10/12/10 22:34

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.07	1.04	1.19		0.380
Ethane	16.5	8.25	10.20		0.120
Propane	5.59	1.86	3.37		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.39	0.35	0.83		0.130
Isobutene/1-Butene	0.792	0.20	0.46		0.150
n-Butane	ND	ND	ND	A-01, U	0.170
trans-2-Butene	0.159	0.04	0.09		0.140
cis-2-Butene	0.143	0.04	0.08	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	4.04	0.81	2.39		0.190
1-Pentene	0.171	0.03	0.10		0.120
2-Methyl-1-butene	0.206	0.04	0.12	U	0.240
n-Pentane	2.10	0.42	1.24		0.0900
Isoprene	0.585	0.12	0.33		0.240
trans-2-Pentene	0.271	0.05	0.16		0.140
cis-2-Pentene	0.129	0.03	0.07	U	0.190
2-Methyl-2-butene	0.228	0.05	0.13	U	0.240
2,2-Dimethylbutane	0.263	0.04	0.16		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.249	0.04	0.14	U	0.360
Cyclopentane	0.289	0.06	0.17		0.120
2,3-Dimethylbutane	0.530	0.09	0.31		0.200
2-Methylpentane	2.34	0.39	1.38		0.140
3-Methylpentane	0.943	0.16	0.56		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.163	0.03	0.09	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.833	0.14	0.49		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.702	0.12	0.40		0.140
2,4-Dimethylpentane	0.256	0.04	0.15		0.230
Cyclohexane	0.246	0.04	0.14		0.190
2-Methylhexane	0.648	0.09	0.38		0.110
2,3-Dimethylpentane	0.618	0.09	0.36		0.370
3-Methylhexane	0.927	0.13	0.54		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-10-10 Lab ID: 0101208-09 Sampled: 10/10/10 23:59  
 Pressure @ Receipt: 6.5" Hg Canister #: 5018 Received: 10/12/10 10:29  
 Comments: Site 2 Analyzed: 10/12/10 22:34

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.55	0.19	0.91		0.170
n-Heptane	0.426	0.06	0.25		0.180
Methylcyclohexane	0.490	0.07	0.28		0.190
2,2,3-Trimethylpentane	0.301	0.04	0.18		0.280
2,3,4-Trimethylpentane	0.479	0.06	0.28		0.140
2-Methylheptane	0.257	0.03	0.15		0.170
3-Methylheptane	0.196	0.02	0.12		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.193	0.02	0.11		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.108	0.01	0.08	U	0.240
n-Propylbenzene	0.119	0.01	0.07	U	0.200
m-Ethyltoluene	0.255	0.03	0.14		0.150
p-Ethyltoluene	0.173	0.02	0.09	U	0.240
1,3,5-Trimethylbenzene	0.183	0.02	0.10		0.170
o-Ethyltoluene	0.221	0.02	0.12		0.180
b-Pinene	0.151	0.02	0.11	U	0.240
1,2,4-Trimethylbenzene	0.344	0.04	0.19		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.157	0.02	0.09	U	0.230
1,2,3-Trimethylbenzene	0.101	0.01	0.06	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.134	0.01	0.08	U	0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.109	0.01	0.06	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>55.1</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>32.7</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>87.8</b>	<b>ND</b>	<b>ND</b>		





# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-10-10 Lab ID: 0101208-10 Sampled: 10/10/10 23:59  
 Pressure @ Receipt: 8" Hg Canister #: 5035 Received: 10/12/10 10:29  
 Comments: Site 3 Analyzed: 10/12/10 23:35

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.18	0.59	0.68		0.380
Ethane	37.8	18.90	23.30		0.120
Propane	18.3	6.10	11.00		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	4.60	1.15	2.74		0.130
Isobutene/1-Butene	0.437	0.11	0.25		0.150
n-Butane	7.14	1.79	4.25		0.170
trans-2-Butene	0.0700	0.02	0.04	U	0.140
cis-2-Butene	0.112	0.03	0.06	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.95	0.79	2.34		0.190
1-Pentene	0.132	0.03	0.08		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	3.28	0.66	1.94		0.0900
Isoprene	0.260	0.05	0.15		0.240
trans-2-Pentene	0.0900	0.02	0.05	U	0.140
cis-2-Pentene	0.100	0.02	0.06	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.299	0.05	0.18		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.221	0.04	0.13		0.120
2,3-Dimethylbutane	0.331	0.06	0.20		0.200
2-Methylpentane	1.63	0.27	0.96		0.140
3-Methylpentane	0.837	0.14	0.49		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.145	0.02	0.08	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.38	0.23	0.81		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.515	0.09	0.30		0.140
2,4-Dimethylpentane	0.191	0.03	0.11	U	0.230
Cyclohexane	0.401	0.07	0.23		0.190
2-Methylhexane	0.704	0.10	0.41		0.110
2,3-Dimethylpentane	0.458	0.07	0.27		0.370
3-Methylhexane	0.938	0.13	0.55		0.150
1-Heptene	0.205	0.03	0.12	U	0.370

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 REPORTED: 05/24/11 11:34  
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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-10-10 Lab ID: 0101208-10 Sampled: 10/10/10 23:59  
 Pressure @ Receipt: 8" Hg Canister #: 5035 Received: 10/12/10 10:29  
 Comments: Site 3 Analyzed: 10/12/10 23:35

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.296</b>	<b>0.04</b>	<b>0.17</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.701</b>	<b>0.10</b>	<b>0.41</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.672</b>	<b>0.10</b>	<b>0.39</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.175	0.02	0.10	U	0.280
2,3,4-Trimethylpentane	0.138	0.02	0.08	U	0.140
<b>2-Methylheptane</b>	<b>0.394</b>	<b>0.05</b>	<b>0.23</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.354</b>	<b>0.04</b>	<b>0.21</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.255</b>	<b>0.03</b>	<b>0.15</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.108	0.01	0.08	U	0.240
n-Propylbenzene	0.130	0.01	0.07	U	0.200
m-Ethyltoluene	0.127	0.01	0.07	U	0.150
p-Ethyltoluene	0.154	0.02	0.08	U	0.240
<b>1,3,5-Trimethylbenzene</b>	<b>0.183</b>	<b>0.02</b>	<b>0.10</b>		<b>0.170</b>
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.243</b>	<b>0.03</b>	<b>0.13</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.216	0.02	0.13	U	0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.326</b>	<b>0.03</b>	<b>0.19</b>		<b>0.220</b>
1-Dodecene	ND	ND	ND	U	0.290
<b>n-Dodecane</b>	<b>0.448</b>	<b>0.04</b>	<b>0.26</b>		<b>0.290</b>
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>94.4</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>30.4</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>125</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-10-10 Lab ID: 0101208-11 Sampled: 10/10/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5010 Received: 10/12/10 10:29  
 Comments: Site 4 Analyzed: 10/13/10 00:36

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.40	1.20	1.38		0.380
Ethane	83.9	42.00	51.70		0.120
Propane	21.2	7.07	12.80		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	7.08	1.77	4.22		0.130
Isobutene/1-Butene	2.04	0.51	1.17		0.150
n-Butane	28.6	7.15	17.00		0.170
trans-2-Butene	1.12	0.28	0.64		0.140
cis-2-Butene	0.966	0.24	0.56		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	43.4	8.68	25.70		0.190
1-Pentene	1.31	0.26	0.75		0.120
2-Methyl-1-butene	2.42	0.48	1.39		0.240
n-Pentane	19.0	3.80	11.20		0.0900
Isoprene	0.419	0.08	0.23		0.240
trans-2-Pentene	3.33	0.67	1.91		0.140
cis-2-Pentene	1.75	0.35	1.01		0.190
2-Methyl-2-butene	4.32	0.86	2.48		0.240
2,2-Dimethylbutane	1.60	0.27	0.94		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.310	0.05	0.18	U	0.360
Cyclopentane	1.82	0.36	1.05		0.120
2,3-Dimethylbutane	5.02	0.84	2.96		0.200
2-Methylpentane	14.2	2.37	8.36		0.140
3-Methylpentane	8.23	1.37	4.84		0.200
2-Methyl-1-pentene	0.655	0.11	0.38		0.360
1-Hexene	0.336	0.06	0.19	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	7.58	1.26	4.46		0.240
trans-2-Hexene	0.715	0.12	0.41		0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	5.01	0.84	2.88		0.140
2,4-Dimethylpentane	2.26	0.32	1.33		0.230
Cyclohexane	1.63	0.27	0.94		0.190
2-Methylhexane	4.15	0.59	2.43		0.110
2,3-Dimethylpentane	2.60	0.37	1.53		0.370
3-Methylhexane	4.45	0.64	2.61		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	10.6	1.33	6.20		0.170

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-10-10 Lab ID: 0101208-11 Sampled: 10/10/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5010 Received: 10/12/10 10:29  
 Comments: Site 4 Analyzed: 10/13/10 00:36

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	2.90	0.41	1.70		0.180
Methylcyclohexane	2.18	0.31	1.25		0.190
2,2,3-Trimethylpentane	1.92	0.24	1.12		0.280
2,3,4-Trimethylpentane	2.87	0.36	1.68		0.140
2-Methylheptane	1.14	0.14	0.67		0.170
3-Methylheptane	1.04	0.13	0.61		0.110
1-Octene	0.265	0.03	0.15	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.620	0.07	0.36		0.180
Isopropylbenzene	0.126	0.02	0.08	U	0.210
a-Pinene	0.279	0.03	0.20		0.240
n-Propylbenzene	0.328	0.04	0.18		0.200
m-Ethyltoluene	0.866	0.10	0.47		0.150
p-Ethyltoluene	0.494	0.05	0.27		0.240
1,3,5-Trimethylbenzene	0.526	0.06	0.29		0.170
o-Ethyltoluene	0.398	0.04	0.22		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	1.19	0.13	0.65		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.527	0.05	0.31		0.230
1,2,3-Trimethylbenzene	0.259	0.03	0.14		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.362	0.03	0.21		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.179	0.01	0.10	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	333	ND	ND		
Sum of Unknowns	65.9	ND	ND		
TNMOC	399	ND	ND		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-10-10 Lab ID: 0101208-12 Sampled: 10/10/10 23:59  
 Pressure @ Receipt: 14.5" Hg Canister #: 5135 Received: 10/12/10 10:29  
 Comments: Site 5 Analyzed: 10/13/10 01:38

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.92	0.96	1.10		0.380
Ethane	18.9	9.45	11.60		0.120
Propane	7.98	2.66	4.81		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.92	0.48	1.14		0.130
Isobutene/1-Butene	0.600	0.15	0.35		0.150
n-Butane	ND	ND	ND	A-01, U	0.170
trans-2-Butene	0.117	0.03	0.07	U	0.140
cis-2-Butene	0.155	0.04	0.09	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.36	0.67	1.99		0.190
1-Pentene	0.206	0.04	0.12		0.120
2-Methyl-1-butene	0.125	0.03	0.07	U	0.240
n-Pentane	3.71	0.74	2.19		0.0900
Isoprene	0.301	0.06	0.17		0.240
trans-2-Pentene	0.175	0.04	0.10		0.140
cis-2-Pentene	0.182	0.04	0.11	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.393	0.07	0.23		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.404	0.08	0.23		0.120
2,3-Dimethylbutane	0.485	0.08	0.29		0.200
2-Methylpentane	1.87	0.31	1.10		0.140
3-Methylpentane	0.785	0.13	0.46		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.284	0.05	0.16	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.814	0.14	0.48		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.770	0.13	0.44		0.140
2,4-Dimethylpentane	0.314	0.04	0.18		0.230
Cyclohexane	0.362	0.06	0.21		0.190
2-Methylhexane	0.610	0.09	0.36		0.110
2,3-Dimethylpentane	0.667	0.10	0.39		0.370
3-Methylhexane	0.922	0.13	0.54		0.150
1-Heptene	ND	ND	ND	U	0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-10-10 Lab ID: 0101208-12 Sampled: 10/10/10 23:59  
 Pressure @ Receipt: 14.5" Hg Canister #: 5135 Received: 10/12/10 10:29  
 Comments: Site 5 Analyzed: 10/13/10 01:38

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.970	0.12	0.57		0.170
n-Heptane	0.453	0.06	0.27		0.180
Methylcyclohexane	0.477	0.07	0.27		0.190
2,2,3-Trimethylpentane	0.185	0.02	0.11	U	0.280
2,3,4-Trimethylpentane	0.424	0.05	0.25		0.140
2-Methylheptane	0.244	0.03	0.14		0.170
3-Methylheptane	0.266	0.03	0.16		0.110
1-Octene	0.186	0.02	0.11	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.204	0.02	0.12		0.180
Isopropylbenzene	0.0960	0.01	0.06	U	0.210
a-Pinene	0.124	0.02	0.09	U	0.240
n-Propylbenzene	0.150	0.02	0.08	U	0.200
m-Ethyltoluene	0.253	0.03	0.14		0.150
p-Ethyltoluene	0.162	0.02	0.09	U	0.240
1,3,5-Trimethylbenzene	0.145	0.02	0.08	U	0.170
o-Ethyltoluene	0.149	0.02	0.08	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.241	0.03	0.13		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.262	0.03	0.15		0.230
1,2,3-Trimethylbenzene	0.0980	0.01	0.05	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.293	0.03	0.17		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.219	0.02	0.13	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	59.6	ND	ND		
Sum of Unknowns	45.6	ND	ND		
TNMOC	105	ND	ND		



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 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-13-10 Lab ID: 0101514-01 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5034 Received: 10/15/10 10:47  
 Comments: Site 1 Analyzed: 10/18/10 21:08

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	0.963	0.48	0.55		0.380
Ethane	28.8	14.40	17.70		0.120
Propane	29.4	9.80	17.70		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	6.22	1.56	3.70		0.130
Isobutene/1-Butene	0.707	0.18	0.41		0.150
n-Butane	20.3	5.08	12.10		0.170
trans-2-Butene	0.189	0.05	0.11		0.140
cis-2-Butene	0.185	0.05	0.11		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	8.44	1.69	4.99		0.190
1-Pentene	0.250	0.05	0.14		0.120
2-Methyl-1-butene	0.189	0.04	0.11	U	0.240
n-Pentane	7.12	1.42	4.21		0.0900
Isoprene	1.26	0.25	0.70		0.240
trans-2-Pentene	0.262	0.05	0.15		0.140
cis-2-Pentene	0.167	0.03	0.10	U	0.190
2-Methyl-2-butene	0.107	0.02	0.06	U	0.240
2,2-Dimethylbutane	0.328	0.05	0.19		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.156	0.03	0.09	U	0.360
Cyclopentane	0.546	0.11	0.31		0.120
2,3-Dimethylbutane	0.588	0.10	0.35		0.200
2-Methylpentane	3.41	0.57	2.01		0.140
3-Methylpentane	1.46	0.24	0.86		0.200
2-Methyl-1-pentene	0.215	0.04	0.12	U	0.360
1-Hexene	0.215	0.04	0.12	U	0.360
2-Ethyl-1-butene	2.37	0.40	1.36		0.360
n-Hexane	2.37	0.40	1.40		0.240
trans-2-Hexene	0.141	0.02	0.08	U	0.360
cis-2-Hexene	0.212	0.04	0.12	U	0.360
Methylcyclopentane	1.18	0.20	0.68		0.140
2,4-Dimethylpentane	0.270	0.04	0.16		0.230
Cyclohexane	0.772	0.13	0.44		0.190
2-Methylhexane	0.878	0.13	0.52		0.110
2,3-Dimethylpentane	0.729	0.10	0.43		0.370
3-Methylhexane	0.947	0.14	0.56		0.150
1-Heptene	1.14	0.16	0.66		0.370

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-13-10 Lab ID: 0101514-01 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5034 Received: 10/15/10 10:47  
 Comments: Site 1 Analyzed: 10/18/10 21:08

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.14	0.14	0.67		0.170
n-Heptane	1.04	0.15	0.61		0.180
Methylcyclohexane	1.06	0.15	0.61		0.190
2,2,3-Trimethylpentane	0.197	0.02	0.12	U	0.280
2,3,4-Trimethylpentane	0.278	0.03	0.16		0.140
2-Methylheptane	0.357	0.04	0.21		0.170
3-Methylheptane	0.293	0.04	0.17		0.110
1-Octene	0.127	0.02	0.07	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.316	0.04	0.19		0.180
Isopropylbenzene	0.114	0.01	0.07	U	0.210
a-Pinene	0.105	0.01	0.07	U	0.240
n-Propylbenzene	0.100	0.01	0.05	U	0.200
m-Ethyltoluene	0.196	0.02	0.11		0.150
p-Ethyltoluene	0.193	0.02	0.11	U	0.240
1,3,5-Trimethylbenzene	0.188	0.02	0.10		0.170
o-Ethyltoluene	0.192	0.02	0.11		0.180
b-Pinene	0.144	0.02	0.10	U	0.240
1,2,4-Trimethylbenzene	0.307	0.03	0.17		0.240
1-Decene	0.307	0.03	0.18		0.240
n-Decane	0.346	0.03	0.20		0.230
1,2,3-Trimethylbenzene	0.0930	0.01	0.05	U	0.170
m-Diethylbenzene	0.103	0.01	0.06	U	0.240
p-Diethylbenzene	0.0920	0.01	0.05	U	0.140
1-Undecene	0.0810	0.01	0.05	U	0.220
n-Undecane	0.246	0.02	0.14		0.220
1-Dodecene	0.0830	0.01	0.05	U	0.290
n-Dodecane	0.186	0.02	0.11	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	0.0930	0.01	0.05	U	0.290
SNMOC (Sum of Knowns)	132	ND	ND		
Sum of Unknowns	30.0	ND	ND		
TNMOC	162	ND	ND		





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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-13-10 Lab ID: 0101514-02 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 6.5" Hg Canister #: 5016 Received: 10/15/10 10:47  
 Comments: Site 2 Analyzed: 10/18/10 22:09

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.01	0.51	0.58		0.380
Ethane	35.0	17.50	21.60		0.120
Propane	87.0	29.00	52.40		0.200
Propyne	0.0750	0.03	0.04	U	0.200
Isobutane	10.7	2.68	6.37		0.130
Isobutene/1-Butene	0.647	0.16	0.37		0.150
n-Butane	56.9	14.20	33.90		0.170
trans-2-Butene	0.135	0.03	0.08	U	0.140
cis-2-Butene	0.170	0.04	0.10	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	11.8	2.36	6.98		0.190
1-Pentene	0.318	0.06	0.18		0.120
2-Methyl-1-butene	0.371	0.07	0.21		0.240
n-Pentane	9.28	1.86	5.49		0.0900
Isoprene	0.687	0.14	0.38		0.240
trans-2-Pentene	0.681	0.14	0.39		0.140
cis-2-Pentene	0.348	0.07	0.20		0.190
2-Methyl-2-butene	0.746	0.15	0.43		0.240
2,2-Dimethylbutane	0.698	0.12	0.41		0.200
Cyclopentene	0.151	0.03	0.08	U	0.240
4-Methyl-1-pentene	0.308	0.05	0.18	U	0.360
Cyclopentane	0.872	0.17	0.50		0.120
2,3-Dimethylbutane	1.83	0.31	1.08		0.200
2-Methylpentane	6.89	1.15	4.06		0.140
3-Methylpentane	4.02	0.67	2.37		0.200
2-Methyl-1-pentene	0.120	0.02	0.07	U	0.360
1-Hexene	0.186	0.03	0.11	U	0.360
2-Ethyl-1-butene	5.22	0.87	3.00		0.360
n-Hexane	5.22	0.87	3.07		0.240
trans-2-Hexene	0.192	0.03	0.11	U	0.360
cis-2-Hexene	0.131	0.02	0.08	U	0.360
Methylcyclopentane	2.74	0.46	1.58		0.140
2,4-Dimethylpentane	1.01	0.14	0.59		0.230
Cyclohexane	1.26	0.21	0.72		0.190
2-Methylhexane	2.54	0.36	1.49		0.110
2,3-Dimethylpentane	1.86	0.27	1.09		0.370
3-Methylhexane	2.96	0.42	1.74		0.150
1-Heptene	5.38	0.77	3.09		0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-13-10 Lab ID: 0101514-02 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 6.5" Hg Canister #: 5016 Received: 10/15/10 10:47  
 Comments: Site 2 Analyzed: 10/18/10 22:09

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	5.38	0.67	3.15		0.170
n-Heptane	2.68	0.38	1.57		0.180
Methylcyclohexane	3.12	0.45	1.79		0.190
2,2,3-Trimethylpentane	1.21	0.15	0.71		0.280
2,3,4-Trimethylpentane	1.38	0.17	0.81		0.140
2-Methylheptane	1.48	0.19	0.87		0.170
3-Methylheptane	1.13	0.14	0.66		0.110
1-Octene	0.137	0.02	0.08	U	0.280
1-Nonene	0.570	0.06	0.33		0.240
n-Nonane	2.68	0.30	1.57		0.180
Isopropylbenzene	0.224	0.03	0.14		0.210
a-Pinene	0.261	0.03	0.18		0.240
n-Propylbenzene	0.500	0.06	0.27		0.200
m-Ethyltoluene	1.05	0.12	0.58		0.150
p-Ethyltoluene	0.802	0.09	0.44		0.240
1,3,5-Trimethylbenzene	1.29	0.14	0.71		0.170
o-Ethyltoluene	1.02	0.11	0.56		0.180
b-Pinene	0.447	0.06	0.31		0.240
1,2,4-Trimethylbenzene	1.87	0.21	1.02		0.240
1-Decene	0.219	0.02	0.13	U	0.240
n-Decane	3.42	0.34	1.99		0.230
1,2,3-Trimethylbenzene	0.479	0.05	0.26		0.170
m-Diethylbenzene	0.246	0.02	0.14		0.240
p-Diethylbenzene	0.279	0.03	0.15		0.140
1-Undecene	0.254	0.02	0.15		0.220
n-Undecane	1.76	0.16	1.02		0.220
1-Dodecene	0.140	0.01	0.08	U	0.290
n-Dodecane	0.388	0.03	0.23		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	343	ND	ND		
Sum of Unknowns	112	ND	ND		
TNMOC	455	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-13-10 Lab ID: 0101514-03 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5146 Received: 10/15/10 10:47  
 Comments: Site 3 Analyzed: 10/18/10 23:10

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	0.814	0.41	0.47		0.380
Ethane	61.5	30.80	37.90		0.120
Propane	35.9	12.00	21.60		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	8.14	2.04	4.85		0.130
Isobutene/1-Butene	0.395	0.10	0.23		0.150
n-Butane	15.8	3.95	9.41		0.170
trans-2-Butene	0.132	0.03	0.08	U	0.140
cis-2-Butene	13.7	3.43	7.88		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	6.25	1.25	3.70		0.190
1-Pentene	0.180	0.04	0.10		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	6.00	1.20	3.55		0.0900
Isoprene	0.327	0.07	0.18		0.240
trans-2-Pentene	0.0940	0.02	0.05	U	0.140
cis-2-Pentene	0.115	0.02	0.07	U	0.190
2-Methyl-2-butene	0.0890	0.02	0.05	U	0.240
2,2-Dimethylbutane	0.593	0.10	0.35		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.451	0.09	0.26		0.120
2,3-Dimethylbutane	0.409	0.07	0.24		0.200
2-Methylpentane	2.23	0.37	1.31		0.140
3-Methylpentane	1.16	0.19	0.68		0.200
2-Methyl-1-pentene	0.226	0.04	0.13	U	0.360
1-Hexene	0.226	0.04	0.13	U	0.360
2-Ethyl-1-butene	1.93	0.32	1.11		0.360
n-Hexane	1.93	0.32	1.14		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	0.165	0.03	0.09	U	0.360
Methylcyclopentane	0.924	0.15	0.53		0.140
2,4-Dimethylpentane	0.211	0.03	0.12	U	0.230
Cyclohexane	0.769	0.13	0.44		0.190
2-Methylhexane	0.794	0.11	0.47		0.110
2,3-Dimethylpentane	0.446	0.06	0.26		0.370
3-Methylhexane	0.788	0.11	0.46		0.150
1-Heptene	0.515	0.07	0.30		0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-13-10 Lab ID: 0101514-03 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5146 Received: 10/15/10 10:47  
 Comments: Site 3 Analyzed: 10/18/10 23:10

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.515</b>	<b>0.06</b>	<b>0.30</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.942</b>	<b>0.14</b>	<b>0.55</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>1.02</b>	<b>0.15</b>	<b>0.59</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.219	0.03	0.13	U	0.280
2,3,4-Trimethylpentane	0.0980	0.01	0.06	U	0.140
<b>2-Methylheptane</b>	<b>1.14</b>	<b>0.14</b>	<b>0.67</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.303</b>	<b>0.04</b>	<b>0.18</b>		<b>0.110</b>
1-Octene	0.118	0.01	0.07	U	0.280
1-Nonene	0.0850	0.01	0.05	U	0.240
<b>n-Nonane</b>	<b>0.312</b>	<b>0.03</b>	<b>0.18</b>		<b>0.180</b>
Isopropylbenzene	0.103	0.01	0.06	U	0.210
a-Pinene	0.0760	0.01	0.05	U	0.240
n-Propylbenzene	0.0870	0.01	0.05	U	0.200
m-Ethyltoluene	0.117	0.01	0.06	U	0.150
p-Ethyltoluene	0.213	0.02	0.12	U	0.240
<b>1,3,5-Trimethylbenzene</b>	<b>0.219</b>	<b>0.02</b>	<b>0.12</b>		<b>0.170</b>
<b>o-Ethyltoluene</b>	<b>0.188</b>	<b>0.02</b>	<b>0.10</b>		<b>0.180</b>
<b>b-Pinene</b>	<b>0.310</b>	<b>0.04</b>	<b>0.22</b>		<b>0.240</b>
1,2,4-Trimethylbenzene	0.203	0.02	0.11	U	0.240
1-Decene	0.203	0.02	0.12	U	0.240
<b>n-Decane</b>	<b>0.297</b>	<b>0.03</b>	<b>0.17</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	0.0760	0.01	0.04	U	0.170
m-Diethylbenzene	0.100	0.01	0.06	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
<b>1-Undecene</b>	<b>0.506</b>	<b>0.05</b>	<b>0.29</b>		<b>0.220</b>
<b>n-Undecane</b>	<b>0.250</b>	<b>0.02</b>	<b>0.15</b>		<b>0.220</b>
1-Dodecene	0.144	0.01	0.08	U	0.290
n-Dodecane	0.156	0.01	0.09	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>157</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>42.2</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>199</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-13-10 Lab ID: 0101514-04 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 10.5" Hg Canister #: 5079 Received: 10/15/10 10:47  
 Comments: Dup1 Site 4 Analyzed: 10/18/10 13:01

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.48	1.24	1.43		0.380
Ethane	36.6	18.30	22.60		0.120
Propane	39.9	13.30	24.00		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	10.6	2.65	6.31		0.130
Isobutene/1-Butene	1.54	0.39	0.89		0.150
n-Butane	34.8	8.70	20.70		0.170
trans-2-Butene	0.716	0.18	0.41		0.140
cis-2-Butene	0.676	0.17	0.39		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	33.2	6.64	19.60		0.190
1-Pentene	0.769	0.15	0.44		0.120
2-Methyl-1-butene	1.22	0.24	0.70		0.240
n-Pentane	22.3	4.46	13.20		0.0900
Isoprene	0.349	0.07	0.20		0.240
trans-2-Pentene	1.70	0.34	0.98		0.140
cis-2-Pentene	0.908	0.18	0.52		0.190
2-Methyl-2-butene	2.05	0.41	1.18		0.240
2,2-Dimethylbutane	1.13	0.19	0.67		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.144	0.02	0.08	U	0.360
Cyclopentane	1.78	0.36	1.02		0.120
2,3-Dimethylbutane	3.05	0.51	1.80		0.200
2-Methylpentane	9.94	1.66	5.85		0.140
3-Methylpentane	5.67	0.95	3.34		0.200
2-Methyl-1-pentene	0.288	0.05	0.17	U	0.360
1-Hexene	0.298	0.05	0.17	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	6.87	1.15	4.04		0.240
trans-2-Hexene	0.292	0.05	0.17	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	3.48	0.58	2.00		0.140
2,4-Dimethylpentane	1.26	0.18	0.74		0.230
Cyclohexane	1.77	0.30	1.02		0.190
2-Methylhexane	2.12	0.30	1.24		0.110
2,3-Dimethylpentane	1.39	0.20	0.82		0.370
3-Methylhexane	2.31	0.33	1.36		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-13-10 Lab ID: 0101514-04 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 10.5" Hg Canister #: 5079 Received: 10/15/10 10:47  
 Comments: Dup1 Site 4 Analyzed: 10/18/10 13:01

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	5.19	0.65	3.04		0.170
n-Heptane	1.84	0.26	1.08		0.180
Methylcyclohexane	2.04	0.29	1.17		0.190
2,2,3-Trimethylpentane	0.897	0.11	0.53		0.280
2,3,4-Trimethylpentane	1.30	0.16	0.76		0.140
2-Methylheptane	0.854	0.11	0.50		0.170
3-Methylheptane	0.808	0.10	0.47		0.110
1-Octene	0.142	0.02	0.08	U	0.280
1-Nonene	0.288	0.03	0.17		0.240
n-Nonane	0.899	0.10	0.53		0.180
Isopropylbenzene	0.140	0.02	0.09	U	0.210
a-Pinene	0.149	0.02	0.10	U	0.240
n-Propylbenzene	0.294	0.03	0.16		0.200
m-Ethyltoluene	0.616	0.07	0.34		0.150
p-Ethyltoluene	0.389	0.04	0.21		0.240
1,3,5-Trimethylbenzene	0.457	0.05	0.25		0.170
o-Ethyltoluene	0.213	0.02	0.12		0.180
b-Pinene	0.128	0.02	0.09	U	0.240
1,2,4-Trimethylbenzene	0.793	0.09	0.43		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.683	0.07	0.40		0.230
1,2,3-Trimethylbenzene	0.270	0.03	0.15		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.395	0.04	0.23		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.221	0.02	0.13	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>267</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>48.1</b>	<b>ND</b>	<b>ND</b>		
<b>TNMO</b>	<b>315</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

**Description:** S4-D-10-13-10 **Lab ID:** 0101514-05 **Sampled:** 10/13/10 23:59  
**Pressure @ Receipt:** 10.5" Hg **Canister #:** 5049 **Received:** 10/15/10 10:47  
**Comments:** Dup2 Site 4 **Analyzed:** 10/18/10 14:02

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.17	1.09	1.25		0.380
Ethane	36.7	18.40	22.60		0.120
Propane	40.0	13.30	24.10		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	10.7	2.68	6.37		0.130
Isobutene/1-Butene	1.53	0.38	0.88		0.150
n-Butane	34.3	8.58	20.40		0.170
trans-2-Butene	0.736	0.18	0.42		0.140
cis-2-Butene	0.659	0.17	0.38		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	33.1	6.62	19.60		0.190
1-Pentene	0.765	0.15	0.44		0.120
2-Methyl-1-butene	1.19	0.24	0.68		0.240
n-Pentane	22.3	4.46	13.20		0.0900
Isoprene	0.351	0.07	0.20		0.240
trans-2-Pentene	1.70	0.34	0.98		0.140
cis-2-Pentene	0.891	0.18	0.51		0.190
2-Methyl-2-butene	1.99	0.40	1.14		0.240
2,2-Dimethylbutane	1.09	0.18	0.64		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.209	0.03	0.12	U	0.360
Cyclopentane	1.79	0.36	1.03		0.120
2,3-Dimethylbutane	3.12	0.52	1.84		0.200
2-Methylpentane	9.27	1.55	5.46		0.140
3-Methylpentane	5.59	0.93	3.29		0.200
2-Methyl-1-pentene	0.275	0.05	0.16	U	0.360
1-Hexene	0.307	0.05	0.18	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	6.76	1.13	3.98		0.240
trans-2-Hexene	0.292	0.05	0.17	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	3.62	0.60	2.08		0.140
2,4-Dimethylpentane	1.35	0.19	0.79		0.230
Cyclohexane	1.73	0.29	1.00		0.190
2-Methylhexane	2.00	0.29	1.17		0.110
2,3-Dimethylpentane	1.45	0.21	0.85		0.370
3-Methylhexane	2.38	0.34	1.40		0.150
1-Heptene	ND	ND	ND	U	0.370

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 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S4-D-10-13-10 Lab ID: 0101514-05 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 10.5" Hg Canister #: 5049 Received: 10/15/10 10:47  
 Comments: Dup2 Site 4 Analyzed: 10/18/10 14:02

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	5.10	0.64	2.98		0.170
n-Heptane	1.80	0.26	1.06		0.180
Methylcyclohexane	2.02	0.29	1.16		0.190
2,2,3-Trimethylpentane	1.04	0.13	0.61		0.280
2,3,4-Trimethylpentane	1.28	0.16	0.75		0.140
2-Methylheptane	0.833	0.10	0.49		0.170
3-Methylheptane	0.784	0.10	0.46		0.110
1-Octene	0.154	0.02	0.09	U	0.280
1-Nonene	0.192	0.02	0.11	U	0.240
n-Nonane	0.901	0.10	0.53		0.180
Isopropylbenzene	0.206	0.03	0.13	U	0.210
a-Pinene	0.228	0.03	0.16	U	0.240
n-Propylbenzene	0.310	0.03	0.17		0.200
m-Ethyltoluene	0.662	0.07	0.36		0.150
p-Ethyltoluene	0.410	0.05	0.22		0.240
1,3,5-Trimethylbenzene	0.533	0.06	0.29		0.170
o-Ethyltoluene	0.414	0.05	0.23		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.921	0.10	0.50		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.738	0.07	0.43		0.230
1,2,3-Trimethylbenzene	0.214	0.02	0.12		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.398	0.04	0.23		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.230	0.02	0.13	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>265</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>51.5</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOOC</b>	<b>317</b>	<b>ND</b>	<b>ND</b>		





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 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-13-10 Lab ID: 0101514-06 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 12" Hg Canister #: 5039 Received: 10/15/10 10:47  
 Comments: Dup1 Site 5 Analyzed: 10/18/10 17:04

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.36	0.68	0.78		0.380
Ethane	44.4	22.20	27.40		0.120
Propane	36.8	12.30	22.20		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	7.08	1.77	4.22		0.130
Isobutene/1-Butene	0.593	0.15	0.34		0.150
n-Butane	21.0	5.25	12.50		0.170
trans-2-Butene	0.0790	0.02	0.05	U	0.140
cis-2-Butene	0.130	0.03	0.07	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	7.33	1.47	4.33		0.190
1-Pentene	0.146	0.03	0.08		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	7.68	1.54	4.54		0.0900
Isoprene	0.244	0.05	0.14		0.240
trans-2-Pentene	0.117	0.02	0.07	U	0.140
cis-2-Pentene	0.104	0.02	0.06	U	0.190
2-Methyl-2-butene	0.106	0.02	0.06	U	0.240
2,2-Dimethylbutane	0.334	0.06	0.20		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.502	0.10	0.29		0.120
2,3-Dimethylbutane	0.451	0.08	0.27		0.200
2-Methylpentane	3.04	0.51	1.79		0.140
3-Methylpentane	1.53	0.26	0.90		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.205	0.03	0.12	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.73	0.46	1.61		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.58	0.26	0.91		0.140
2,4-Dimethylpentane	0.246	0.04	0.14		0.230
Cyclohexane	1.27	0.21	0.73		0.190
2-Methylhexane	0.897	0.13	0.53		0.110
2,3-Dimethylpentane	0.653	0.09	0.38		0.370
3-Methylhexane	1.48	0.21	0.87		0.150
1-Heptene	0.446	0.06	0.26		0.370

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 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-13-10 Lab ID: 0101514-06 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 12" Hg Canister #: 5039 Received: 10/15/10 10:47  
 Comments: Dup1 Site 5 Analyzed: 10/18/10 17:04

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.326</b>	<b>0.04</b>	<b>0.19</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>1.19</b>	<b>0.17</b>	<b>0.70</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>1.47</b>	<b>0.21</b>	<b>0.85</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.120	0.02	0.07	U	0.280
2,3,4-Trimethylpentane	0.138	0.02	0.08	U	0.140
<b>2-Methylheptane</b>	<b>0.469</b>	<b>0.06</b>	<b>0.27</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.297</b>	<b>0.04</b>	<b>0.17</b>		<b>0.110</b>
1-Octene	0.196	0.02	0.11	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.303</b>	<b>0.03</b>	<b>0.18</b>		<b>0.180</b>
Isopropylbenzene	0.0990	0.01	0.06	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	0.120	0.01	0.07	U	0.200
<b>m-Ethyltoluene</b>	<b>0.217</b>	<b>0.02</b>	<b>0.12</b>		<b>0.150</b>
p-Ethyltoluene	0.139	0.02	0.08	U	0.240
<b>1,3,5-Trimethylbenzene</b>	<b>0.181</b>	<b>0.02</b>	<b>0.10</b>		<b>0.170</b>
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.289</b>	<b>0.03</b>	<b>0.16</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.263</b>	<b>0.03</b>	<b>0.15</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	0.149	0.02	0.08	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.221</b>	<b>0.02</b>	<b>0.13</b>		<b>0.220</b>
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.238	0.02	0.14	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>154</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>68.3</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>222</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-D-10-13-10 Lab ID: 0101514-07 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 12" Hg Canister #: 5102 Received: 10/15/10 10:47  
 Comments: Dup2 Site 5 Analyzed: 10/18/10 18:06

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.38	0.69	0.79		0.380
Ethane	44.3	22.20	27.30		0.120
Propane	36.6	12.20	22.10		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	7.08	1.77	4.22		0.130
Isobutene/1-Butene	0.379	0.09	0.22		0.150
n-Butane	20.2	5.05	12.00		0.170
trans-2-Butene	ND	ND	ND	U	0.140
cis-2-Butene	0.125	0.03	0.07	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	7.04	1.41	4.16		0.190
1-Pentene	0.130	0.03	0.07		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	7.33	1.47	4.33		0.0900
Isoprene	0.244	0.05	0.14		0.240
trans-2-Pentene	0.0980	0.02	0.06	U	0.140
cis-2-Pentene	0.103	0.02	0.06	U	0.190
2-Methyl-2-butene	0.0790	0.02	0.05	U	0.240
2,2-Dimethylbutane	0.339	0.06	0.20		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.122	0.02	0.07	U	0.360
Cyclopentane	0.483	0.10	0.28		0.120
2,3-Dimethylbutane	0.449	0.07	0.26		0.200
2-Methylpentane	2.76	0.46	1.62		0.140
3-Methylpentane	1.43	0.24	0.84		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.171	0.03	0.10	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.60	0.43	1.53		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.24	0.21	0.71		0.140
2,4-Dimethylpentane	0.222	0.03	0.13	U	0.230
Cyclohexane	1.05	0.18	0.60		0.190
2-Methylhexane	0.978	0.14	0.57		0.110
2,3-Dimethylpentane	0.611	0.09	0.36		0.370
3-Methylhexane	1.12	0.16	0.66		0.150
1-Heptene	0.462	0.07	0.27		0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-D-10-13-10 Lab ID: 0101514-07 Sampled: 10/13/10 23:59  
 Pressure @ Receipt: 12" Hg Canister #: 5102 Received: 10/15/10 10:47  
 Comments: Dup2 Site 5 Analyzed: 10/18/10 18:06

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.230</b>	<b>0.03</b>	<b>0.14</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>1.14</b>	<b>0.16</b>	<b>0.67</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>1.40</b>	<b>0.20</b>	<b>0.81</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.224	0.03	0.13	U	0.280
2,3,4-Trimethylpentane	0.0840	0.01	0.05	U	0.140
<b>2-Methylheptane</b>	<b>0.415</b>	<b>0.05</b>	<b>0.24</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.319</b>	<b>0.04</b>	<b>0.19</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.283</b>	<b>0.03</b>	<b>0.17</b>		<b>0.180</b>
Isopropylbenzene	0.124	0.02	0.08	U	0.210
a-Pinene	0.196	0.02	0.14	U	0.240
n-Propylbenzene	0.130	0.01	0.07	U	0.200
<b>m-Ethyltoluene</b>	<b>0.150</b>	<b>0.02</b>	<b>0.08</b>		<b>0.150</b>
p-Ethyltoluene	0.144	0.02	0.08	U	0.240
1,3,5-Trimethylbenzene	0.165	0.02	0.09	U	0.170
<b>o-Ethyltoluene</b>	<b>0.189</b>	<b>0.02</b>	<b>0.10</b>		<b>0.180</b>
b-Pinene	0.125	0.02	0.09	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.240</b>	<b>0.03</b>	<b>0.13</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.200	0.02	0.12	U	0.230
1,2,3-Trimethylbenzene	0.0750	0.01	0.04	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.181	0.02	0.11	U	0.220
1-Dodecene	0.0840	0.01	0.05	U	0.290
n-Dodecane	0.150	0.01	0.09	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>150</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>22.4</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>173</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-16-10 Lab ID: 0102001-01 Sampled: 10/16/10 23:59  
 Pressure @ Receipt: 7" Hg Canister #: 5002 Received: 10/19/10 15:32  
 Comments: Site 1 Analyzed: 10/20/10 14:52

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.90	1.95	2.24		0.380
Ethane	15.8	7.90	9.74		0.120
Propane	13.2	4.40	7.95		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	20.3	5.08	12.10		0.130
Isobutene/1-Butene	3.76	0.94	2.16		0.150
n-Butane	47.7	11.90	28.40		0.170
trans-2-Butene	1.14	0.29	0.66		0.140
cis-2-Butene	1.14	0.29	0.66		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	33.9	6.78	20.00		0.190
1-Pentene	1.04	0.21	0.60		0.120
2-Methyl-1-butene	0.844	0.17	0.49		0.240
n-Pentane	11.0	2.20	6.51		0.0900
Isoprene	1.11	0.22	0.62		0.240
trans-2-Pentene	1.35	0.27	0.78		0.140
cis-2-Pentene	0.750	0.15	0.43		0.190
2-Methyl-2-butene	1.67	0.33	0.96		0.240
2,2-Dimethylbutane	0.890	0.15	0.52		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.877	0.18	0.50		0.120
2,3-Dimethylbutane	2.09	0.35	1.23		0.200
2-Methylpentane	8.06	1.34	4.74		0.140
3-Methylpentane	3.26	0.54	1.92		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.406	0.07	0.23		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.49	0.42	1.47		0.240
trans-2-Hexene	0.196	0.03	0.11	U	0.360
cis-2-Hexene	0.515	0.09	0.30		0.360
Methylcyclopentane	3.29	0.55	1.89		0.140
2,4-Dimethylpentane	0.872	0.13	0.51		0.230
Cyclohexane	0.844	0.14	0.49		0.190
2-Methylhexane	1.29	0.18	0.76		0.110
2,3-Dimethylpentane	0.878	0.13	0.52		0.370
3-Methylhexane	3.50	0.50	2.05		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	3.51	0.44	2.05		0.170

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-16-10 Lab ID: 0102001-01 Sampled: 10/16/10 23:59  
 Pressure @ Receipt: 7" Hg Canister #: 5002 Received: 10/19/10 15:32  
 Comments: Site 1 Analyzed: 10/20/10 14:52

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	1.28	0.18	0.75		0.180
Methylcyclohexane	1.45	0.21	0.83		0.190
2,2,3-Trimethylpentane	0.679	0.08	0.40		0.280
2,3,4-Trimethylpentane	1.07	0.13	0.63		0.140
2-Methylheptane	0.558	0.07	0.33		0.170
3-Methylheptane	0.384	0.05	0.23		0.110
1-Octene	0.297	0.04	0.17		0.280
1-Nonene	0.192	0.02	0.11	U	0.240
n-Nonane	0.563	0.06	0.33		0.180
Isopropylbenzene	0.132	0.02	0.08	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	0.320	0.04	0.18		0.200
m-Ethyltoluene	0.580	0.06	0.32		0.150
p-Ethyltoluene	0.429	0.05	0.24		0.240
1,3,5-Trimethylbenzene	0.474	0.05	0.26		0.170
o-Ethyltoluene	0.360	0.04	0.20		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.695	0.08	0.38		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.650	0.07	0.38		0.230
1,2,3-Trimethylbenzene	0.678	0.08	0.37		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.406	0.04	0.24		0.220
1-Dodecene	0.261	0.02	0.15	U	0.290
n-Dodecane	0.349	0.03	0.20		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>218</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>136</b>	<b>ND</b>	<b>ND</b>		
<b>TNMO</b>	<b>355</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-16-10 Lab ID: 0102001-02 Sampled: 10/16/10 23:59  
 Pressure @ Receipt: 3" Hg Canister #: 5012 Received: 10/19/10 15:32  
 Comments: Site 2 Analyzed: 10/20/10 15:53

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	5.10	2.55	2.93		0.380
Ethane	64.7	32.40	39.90		0.120
Propane	12.5	4.17	7.53		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	3.16	0.79	1.88		0.130
Isobutene/1-Butene	2.03	0.51	1.17		0.150
n-Butane	13.0	3.25	7.74		0.170
trans-2-Butene	0.288	0.07	0.17		0.140
cis-2-Butene	0.300	0.08	0.17		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	8.36	1.67	4.94		0.190
1-Pentene	0.329	0.07	0.19		0.120
2-Methyl-1-butene	0.354	0.07	0.20		0.240
n-Pentane	4.14	0.83	2.45		0.0900
Isoprene	0.628	0.13	0.35		0.240
trans-2-Pentene	0.468	0.09	0.27		0.140
cis-2-Pentene	0.243	0.05	0.14		0.190
2-Methyl-2-butene	0.353	0.07	0.20		0.240
2,2-Dimethylbutane	0.444	0.07	0.26		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.467	0.09	0.27		0.120
2,3-Dimethylbutane	0.886	0.15	0.52		0.200
2-Methylpentane	3.42	0.57	2.01		0.140
3-Methylpentane	1.46	0.24	0.86		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.276	0.05	0.16	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.40	0.23	0.82		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.30	0.22	0.75		0.140
2,4-Dimethylpentane	0.442	0.06	0.26		0.230
Cyclohexane	0.366	0.06	0.21		0.190
2-Methylhexane	1.00	0.14	0.59		0.110
2,3-Dimethylpentane	0.810	0.12	0.48		0.370
3-Methylhexane	1.45	0.21	0.85		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-16-10 Lab ID: 0102001-02 Sampled: 10/16/10 23:59  
 Pressure @ Receipt: 3" Hg Canister #: 5012 Received: 10/19/10 15:32  
 Comments: Site 2 Analyzed: 10/20/10 15:53

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	2.48	0.31	1.45		0.170
n-Heptane	0.728	0.10	0.43		0.180
Methylcyclohexane	0.724	0.10	0.42		0.190
2,2,3-Trimethylpentane	0.460	0.06	0.27		0.280
2,3,4-Trimethylpentane	0.744	0.09	0.44		0.140
2-Methylheptane	0.349	0.04	0.20		0.170
3-Methylheptane	0.282	0.04	0.17		0.110
1-Octene	0.145	0.02	0.08	U	0.280
1-Nonene	0.151	0.02	0.09	U	0.240
n-Nonane	0.432	0.05	0.25		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.233	0.03	0.16	U	0.240
n-Propylbenzene	0.153	0.02	0.08	U	0.200
m-Ethyltoluene	0.416	0.05	0.23		0.150
p-Ethyltoluene	0.218	0.02	0.12	U	0.240
1,3,5-Trimethylbenzene	0.304	0.03	0.17		0.170
o-Ethyltoluene	0.370	0.04	0.20		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.552	0.06	0.30		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.527	0.05	0.31		0.230
1,2,3-Trimethylbenzene	0.137	0.02	0.08	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.329	0.03	0.19		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.178	0.01	0.10	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	151	ND	ND		
Sum of Unknowns	51.9	ND	ND		
TNMOC	203	ND	ND		





# CERTIFICATE OF ANALYSIS

City of Fort Worth  
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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

PHONE: na FAX: na

Description: S3-P-10-16-10 Lab ID: 0102001-03 Sampled: 10/16/10 23:59  
 Pressure @ Receipt: 5.5" Hg Canister #: 5029 Received: 10/19/10 15:32  
 Comments: Site 3 Analyzed: 10/20/10 16:54

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.01	1.01	1.16		0.380
Ethane	66.1	33.10	40.70		0.120
Propane	36.2	12.10	21.80		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	9.18	2.30	5.47		0.130
Isobutene/1-Butene	0.621	0.16	0.36		0.150
n-Butane	18.7	4.68	11.10		0.170
trans-2-Butene	ND	ND	ND	U	0.140
cis-2-Butene	ND	ND	ND	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	8.11	1.62	4.80		0.190
1-Pentene	0.232	0.05	0.13		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	7.22	1.44	4.27		0.0900
Isoprene	0.309	0.06	0.17		0.240
trans-2-Pentene	0.166	0.03	0.10		0.140
cis-2-Pentene	ND	ND	ND	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.498	0.08	0.29		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.189	0.03	0.11	U	0.360
Cyclopentane	0.291	0.06	0.17		0.120
2,3-Dimethylbutane	0.615	0.10	0.36		0.200
2-Methylpentane	3.73	0.62	2.20		0.140
3-Methylpentane	1.78	0.30	1.05		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.245	0.04	0.14	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.77	0.46	1.63		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.723	0.12	0.42		0.140
2,4-Dimethylpentane	0.293	0.04	0.17		0.230
Cyclohexane	0.810	0.14	0.47		0.190
2-Methylhexane	1.27	0.18	0.75		0.110
2,3-Dimethylpentane	0.688	0.10	0.40		0.370
3-Methylhexane	1.32	0.19	0.77		0.150
1-Heptene	0.197	0.03	0.11	U	0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-16-10 Lab ID: 0102001-03 Sampled: 10/16/10 23:59  
 Pressure @ Receipt: 5.5" Hg Canister #: 5029 Received: 10/19/10 15:32  
 Comments: Site 3 Analyzed: 10/20/10 16:54

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.506</b>	<b>0.06</b>	<b>0.30</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>1.39</b>	<b>0.20</b>	<b>0.82</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>1.29</b>	<b>0.18</b>	<b>0.74</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.202	0.03	0.12	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.171</b>	<b>0.02</b>	<b>0.10</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.629</b>	<b>0.08</b>	<b>0.37</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.482</b>	<b>0.06</b>	<b>0.28</b>		<b>0.110</b>
1-Octene	0.108	0.01	0.06	U	0.280
1-Nonene	0.129	0.01	0.07	U	0.240
<b>n-Nonane</b>	<b>0.523</b>	<b>0.06</b>	<b>0.31</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.124	0.02	0.09	U	0.240
n-Propylbenzene	0.140	0.02	0.08	U	0.200
<b>m-Ethyltoluene</b>	<b>0.187</b>	<b>0.02</b>	<b>0.10</b>		<b>0.150</b>
p-Ethyltoluene	0.214	0.02	0.12	U	0.240
<b>1,3,5-Trimethylbenzene</b>	<b>0.309</b>	<b>0.03</b>	<b>0.17</b>		<b>0.170</b>
<b>o-Ethyltoluene</b>	<b>0.282</b>	<b>0.03</b>	<b>0.15</b>		<b>0.180</b>
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.331</b>	<b>0.04</b>	<b>0.18</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.526</b>	<b>0.05</b>	<b>0.31</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.282</b>	<b>0.03</b>	<b>0.16</b>		<b>0.220</b>
1-Dodecene	0.112	0.01	0.06	U	0.290
n-Dodecane	0.232	0.02	0.14	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>178</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>28.2</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>207</b>	<b>ND</b>	<b>ND</b>		



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 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-16-10 Lab ID: 0102001-04 Sampled: 10/16/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5031 Received: 10/19/10 15:32  
 Comments: Site 4 Analyzed: 10/20/10 17:56

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	8.55	4.28	4.91		0.380
Ethane	123	61.50	75.80	E	0.120
Propane	99.7	33.20	60.10	E	0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	34.2	8.55	20.40		0.130
Isobutene/1-Butene	6.90	1.73	3.97		0.150
n-Butane	114	28.50	67.90	E	0.170
trans-2-Butene	3.41	0.85	1.96		0.140
cis-2-Butene	2.96	0.74	1.70		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	139	27.80	82.20	E	0.190
1-Pentene	3.22	0.64	1.85		0.120
2-Methyl-1-butene	1.80	0.36	1.03		0.240
n-Pentane	61.2	12.20	36.20		0.0900
Isoprene	0.848	0.17	0.47		0.240
trans-2-Pentene	6.81	1.36	3.92		0.140
cis-2-Pentene	3.35	0.67	1.93		0.190
2-Methyl-2-butene	11.3	2.26	6.50		0.240
2,2-Dimethylbutane	4.10	0.68	2.41		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.526	0.09	0.30		0.360
Cyclopentane	4.78	0.96	2.75		0.120
2,3-Dimethylbutane	11.2	1.87	6.59		0.200
2-Methylpentane	28.8	4.80	17.00		0.140
3-Methylpentane	17.1	2.85	10.10		0.200
2-Methyl-1-pentene	0.274	0.05	0.16	U	0.360
1-Hexene	0.703	0.12	0.40		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	15.1	2.52	8.89		0.240
trans-2-Hexene	1.64	0.27	0.94		0.360
cis-2-Hexene	0.157	0.03	0.09	U	0.360
Methylcyclopentane	9.22	1.54	5.30		0.140
2,4-Dimethylpentane	4.33	0.62	2.54		0.230
Cyclohexane	3.09	0.52	1.78		0.190
2-Methylhexane	5.57	0.80	3.27		0.110
2,3-Dimethylpentane	3.79	0.54	2.22		0.370
3-Methylhexane	6.23	0.89	3.66		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	17.0	2.13	9.95		0.170

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
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 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-16-10 Lab ID: 0102001-04 Sampled: 10/16/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5031 Received: 10/19/10 15:32  
 Comments: Site 4 Analyzed: 10/20/10 17:56

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	3.73	0.53	2.19		0.180
Methylcyclohexane	3.78	0.54	2.17		0.190
2,2,3-Trimethylpentane	2.59	0.32	1.52		0.280
2,3,4-Trimethylpentane	4.34	0.54	2.54		0.140
2-Methylheptane	1.55	0.19	0.91		0.170
3-Methylheptane	1.31	0.16	0.77		0.110
1-Octene	0.188	0.02	0.11	U	0.280
1-Nonene	0.499	0.06	0.29		0.240
n-Nonane	1.25	0.14	0.73		0.180
Isopropylbenzene	0.156	0.02	0.10	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	0.616	0.07	0.34		0.200
m-Ethyltoluene	1.84	0.20	1.01		0.150
p-Ethyltoluene	1.15	0.13	0.63		0.240
1,3,5-Trimethylbenzene	1.60	0.18	0.88		0.170
o-Ethyltoluene	0.767	0.09	0.42		0.180
b-Pinene	0.705	0.09	0.49		0.240
1,2,4-Trimethylbenzene	3.51	0.39	1.92		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	1.73	0.17	1.01		0.230
1,2,3-Trimethylbenzene	1.15	0.13	0.63		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.614	0.06	0.34		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	1.12	0.10	0.65		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	3.44	0.29	2.00		0.290
1-Tridecene	0.884	0.07	0.51		0.290
n-Tridecane	0.725	0.06	0.42		0.290
SNMOC (Sum of Knowns)	833	ND	ND		
Sum of Unknowns	209	ND	ND		
TNMOC	1040	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-16-10 Lab ID: 0102001-05 Sampled: 10/16/10 23:59  
 Pressure @ Receipt: 11" Hg Canister #: 5047 Received: 10/19/10 15:32  
 Comments: Site 5 Analyzed: 10/20/10 18:57

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	4.34	2.17	2.49		0.380
Ethane	47.2	23.60	29.10		0.120
Propane	26.6	8.87	16.00		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	23.5	5.88	14.00		0.130
Isobutene/1-Butene	1.44	0.36	0.83		0.150
n-Butane	36.4	9.10	21.70		0.170
trans-2-Butene	0.309	0.08	0.18		0.140
cis-2-Butene	0.317	0.08	0.18		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	60.3	12.10	35.70		0.190
1-Pentene	0.407	0.08	0.23		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	44.7	8.94	26.40		0.0900
Isoprene	0.414	0.08	0.23		0.240
trans-2-Pentene	0.606	0.12	0.35		0.140
cis-2-Pentene	0.298	0.06	0.17		0.190
2-Methyl-2-butene	0.559	0.11	0.32		0.240
2,2-Dimethylbutane	1.62	0.27	0.95		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	5.22	1.04	3.00		0.120
2,3-Dimethylbutane	1.34	0.22	0.79		0.200
2-Methylpentane	4.21	0.70	2.48		0.140
3-Methylpentane	2.44	0.41	1.44		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.306	0.05	0.18	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.53	0.42	1.49		0.240
trans-2-Hexene	0.140	0.02	0.08	U	0.360
cis-2-Hexene	0.0880	0.01	0.05	U	0.360
Methylcyclopentane	1.57	0.26	0.90		0.140
2,4-Dimethylpentane	0.621	0.09	0.36		0.230
Cyclohexane	1.26	0.21	0.72		0.190
2-Methylhexane	1.48	0.21	0.87		0.110
2,3-Dimethylpentane	1.41	0.20	0.83		0.370
3-Methylhexane	2.48	0.35	1.46		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-16-10 Lab ID: 0102001-05 Sampled: 10/16/10 23:59  
 Pressure @ Receipt: 11" Hg Canister #: 5047 Received: 10/19/10 15:32  
 Comments: Site 5 Analyzed: 10/20/10 18:57

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	2.24	0.28	1.31		0.170
n-Heptane	1.33	0.19	0.78		0.180
Methylcyclohexane	1.20	0.17	0.69		0.190
2,2,3-Trimethylpentane	0.370	0.05	0.22		0.280
2,3,4-Trimethylpentane	0.625	0.08	0.37		0.140
2-Methylheptane	0.513	0.06	0.30		0.170
3-Methylheptane	0.359	0.04	0.21		0.110
1-Octene	0.0980	0.01	0.06	U	0.280
1-Nonene	0.578	0.06	0.33		0.240
n-Nonane	0.482	0.05	0.28		0.180
Isopropylbenzene	0.211	0.03	0.13		0.210
a-Pinene	1.41	0.18	0.98		0.240
n-Propylbenzene	0.470	0.05	0.26		0.200
m-Ethyltoluene	0.648	0.07	0.36		0.150
p-Ethyltoluene	1.15	0.13	0.63		0.240
1,3,5-Trimethylbenzene	0.821	0.09	0.45		0.170
o-Ethyltoluene	1.06	0.12	0.58		0.180
b-Pinene	0.821	0.10	0.57		0.240
1,2,4-Trimethylbenzene	2.12	0.24	1.16		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	1.35	0.14	0.79		0.230
1,2,3-Trimethylbenzene	1.45	0.16	0.79		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.614	0.06	0.34		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	7.58	0.69	4.41		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	3.92	0.33	2.28		0.290
1-Tridecene	0.202	0.02	0.12	U	0.290
n-Tridecane	0.205	0.02	0.12	U	0.290
SNMOC (Sum of Knowns)	324	ND	ND		
Sum of Unknowns	361	ND	ND		
TNMOC	685	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-19-10

Lab ID: 0102116-01

Sampled: 10/19/10 23:59

Pressure @ Receipt: 3" Hg

Canister #: 5011

Received: 10/21/10 10:37

Comments: Site 1

Analyzed: 10/21/10 19:04

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.67	1.84	2.11		0.380
Ethane	19.7	9.85	12.10		0.120
Propane	13.2	4.40	7.95		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	9.06	2.27	5.40		0.130
Isobutene/1-Butene	1.46	0.37	0.84		0.150
n-Butane	15.8	3.95	9.41		0.170
trans-2-Butene	0.347	0.09	0.20		0.140
cis-2-Butene	0.363	0.09	0.21		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	18.7	3.74	11.10		0.190
1-Pentene	0.441	0.09	0.25		0.120
2-Methyl-1-butene	0.529	0.11	0.30		0.240
n-Pentane	12.4	2.48	7.33		0.0900
Isoprene	1.52	0.30	0.85		0.240
trans-2-Pentene	0.659	0.13	0.38		0.140
cis-2-Pentene	0.335	0.07	0.19		0.190
2-Methyl-2-butene	0.486	0.10	0.28		0.240
2,2-Dimethylbutane	0.856	0.14	0.50		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.331	0.06	0.19	U	0.360
Cyclopentane	1.51	0.30	0.87		0.120
2,3-Dimethylbutane	1.36	0.23	0.80		0.200
2-Methylpentane	5.33	0.89	3.14		0.140
3-Methylpentane	2.29	0.38	1.35		0.200
2-Methyl-1-pentene	0.106	0.02	0.06	U	0.360
1-Hexene	0.112	0.02	0.06	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.14	0.36	1.26		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.26	0.21	0.72		0.140
2,4-Dimethylpentane	0.581	0.08	0.34		0.230
Cyclohexane	0.759	0.13	0.44		0.190
2-Methylhexane	1.02	0.15	0.60		0.110
2,3-Dimethylpentane	0.836	0.12	0.49		0.370
3-Methylhexane	1.32	0.19	0.77		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-19-10 Lab ID: 0102116-01 Sampled: 10/19/10 23:59  
 Pressure @ Receipt: 3" Hg Canister #: 5011 Received: 10/21/10 10:37  
 Comments: Site 1 Analyzed: 10/21/10 19:04

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	2.32	0.29	1.36		0.170
n-Heptane	0.869	0.12	0.51		0.180
Methylcyclohexane	1.07	0.15	0.62		0.190
2,2,3-Trimethylpentane	0.415	0.05	0.24		0.280
2,3,4-Trimethylpentane	0.610	0.08	0.36		0.140
2-Methylheptane	0.373	0.05	0.22		0.170
3-Methylheptane	0.302	0.04	0.18		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	0.210	0.02	0.12	U	0.240
n-Nonane	0.431	0.05	0.25		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.753	0.09	0.53		0.240
n-Propylbenzene	0.203	0.02	0.11		0.200
m-Ethyltoluene	0.445	0.05	0.24		0.150
p-Ethyltoluene	0.334	0.04	0.18		0.240
1,3,5-Trimethylbenzene	0.489	0.05	0.27		0.170
o-Ethyltoluene	0.414	0.05	0.23		0.180
b-Pinene	0.162	0.02	0.11	U	0.240
1,2,4-Trimethylbenzene	0.668	0.07	0.37		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.684	0.07	0.40		0.230
1,2,3-Trimethylbenzene	0.269	0.03	0.15		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.473	0.04	0.28		0.220
1-Dodecene	0.373	0.03	0.21		0.290
n-Dodecane	0.489	0.04	0.28		0.290
1-Tridecene	0.118	0.01	0.07	U	0.290
n-Tridecane	0.152	0.01	0.09	U	0.290
SNMOC (Sum of Knowns)	147	ND	ND		
Sum of Unknowns	93.7	ND	ND		
TNMOC	241	ND	ND		





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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-19-10 Lab ID: 0102116-02 Sampled: 10/19/10 23:59  
 Pressure @ Receipt: 2.5" Hg Canister #: 5110 Received: 10/21/10 10:37  
 Comments: Site 2 Analyzed: 10/21/10 20:05

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.42	1.71	1.97		0.380
Ethane	20.0	10.00	12.30		0.120
Propane	10.8	3.60	6.51		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	3.09	0.77	1.84		0.130
Isobutene/1-Butene	1.13	0.28	0.65		0.150
n-Butane	9.53	2.38	5.68		0.170
trans-2-Butene	0.196	0.05	0.11		0.140
cis-2-Butene	0.200	0.05	0.12		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	6.94	1.39	4.10		0.190
1-Pentene	0.263	0.05	0.15		0.120
2-Methyl-1-butene	0.291	0.06	0.17		0.240
n-Pentane	3.87	0.77	2.29		0.0900
Isoprene	0.726	0.15	0.41		0.240
trans-2-Pentene	0.337	0.07	0.19		0.140
cis-2-Pentene	0.175	0.04	0.10	U	0.190
2-Methyl-2-butene	0.352	0.07	0.20		0.240
2,2-Dimethylbutane	0.474	0.08	0.28		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.227	0.04	0.13	U	0.360
Cyclopentane	0.412	0.08	0.24		0.120
2,3-Dimethylbutane	0.835	0.14	0.49		0.200
2-Methylpentane	3.80	0.63	2.24		0.140
3-Methylpentane	1.48	0.25	0.87		0.200
2-Methyl-1-pentene	0.0900	0.02	0.05	U	0.360
1-Hexene	0.109	0.02	0.06	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.57	0.26	0.92		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.935	0.16	0.54		0.140
2,4-Dimethylpentane	0.435	0.06	0.26		0.230
Cyclohexane	0.437	0.07	0.25		0.190
2-Methylhexane	1.01	0.14	0.59		0.110
2,3-Dimethylpentane	0.861	0.12	0.51		0.370
3-Methylhexane	1.38	0.20	0.81		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-19-10 Lab ID: 0102116-02 Sampled: 10/19/10 23:59  
 Pressure @ Receipt: 2.5" Hg Canister #: 5110 Received: 10/21/10 10:37  
 Comments: Site 2 Analyzed: 10/21/10 20:05

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	2.12	0.27	1.24		0.170
n-Heptane	0.788	0.11	0.46		0.180
Methylcyclohexane	0.863	0.12	0.50		0.190
2,2,3-Trimethylpentane	0.476	0.06	0.28		0.280
2,3,4-Trimethylpentane	0.562	0.07	0.33		0.140
2-Methylheptane	0.412	0.05	0.24		0.170
3-Methylheptane	0.347	0.04	0.20		0.110
1-Octene	0.102	0.01	0.06	U	0.280
1-Nonene	0.230	0.03	0.13	U	0.240
n-Nonane	1.05	0.12	0.61		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.163	0.02	0.11	U	0.240
n-Propylbenzene	0.256	0.03	0.14		0.200
m-Ethyltoluene	0.473	0.05	0.26		0.150
p-Ethyltoluene	0.366	0.04	0.20		0.240
1,3,5-Trimethylbenzene	0.543	0.06	0.30		0.170
o-Ethyltoluene	0.473	0.05	0.26		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.831	0.09	0.46		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	1.37	0.14	0.80		0.230
1,2,3-Trimethylbenzene	0.178	0.02	0.10		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.477	0.04	0.28		0.220
1-Dodecene	0.213	0.02	0.12	U	0.290
n-Dodecane	0.150	0.01	0.09	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>101</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>43.5</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>144</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-19-10 Lab ID: 0102116-03 Sampled: 10/19/10 23:59  
 Pressure @ Receipt: 5.5" Hg Canister #: 5137 Received: 10/21/10 10:37  
 Comments: Site 3 Field recovery section left blank Analyzed: 10/21/10 21:06

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.41	0.71	0.81		0.380
Ethane	66.2	33.10	40.80		0.120
Propane	39.1	13.00	23.60		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	9.60	2.40	5.72		0.130
Isobutene/1-Butene	0.521	0.13	0.30		0.150
n-Butane	18.7	4.68	11.10		0.170
trans-2-Butene	0.0710	0.02	0.04	U	0.140
cis-2-Butene	0.0810	0.02	0.05	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	7.51	1.50	4.44		0.190
1-Pentene	0.144	0.03	0.08		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	6.95	1.39	4.11		0.0900
Isoprene	1.70	0.34	0.95		0.240
trans-2-Pentene	0.106	0.02	0.06	U	0.140
cis-2-Pentene	ND	ND	ND	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.443	0.07	0.26		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.191	0.03	0.11	U	0.360
Cyclopentane	0.290	0.06	0.17		0.120
2,3-Dimethylbutane	0.463	0.08	0.27		0.200
2-Methylpentane	4.30	0.72	2.53		0.140
3-Methylpentane	1.58	0.26	0.93		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.144	0.02	0.08	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.80	0.47	1.65		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.770	0.13	0.44		0.140
2,4-Dimethylpentane	0.226	0.03	0.13	U	0.230
Cyclohexane	0.825	0.14	0.47		0.190
2-Methylhexane	1.28	0.18	0.75		0.110
2,3-Dimethylpentane	0.669	0.10	0.39		0.370
3-Methylhexane	1.58	0.23	0.93		0.150
1-Heptene	0.190	0.03	0.11	U	0.370

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 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-19-10 Lab ID: 0102116-03 Sampled: 10/19/10 23:59  
 Pressure @ Receipt: 5.5" Hg Canister #: 5137 Received: 10/21/10 10:37  
 Comments: Site 3 Field recovery section left blank Analyzed: 10/21/10 21:06

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.391</b>	<b>0.05</b>	<b>0.23</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>1.38</b>	<b>0.20</b>	<b>0.81</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>1.35</b>	<b>0.19</b>	<b>0.78</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.205	0.03	0.12	U	0.280
2,3,4-Trimethylpentane	0.105	0.01	0.06	U	0.140
<b>2-Methylheptane</b>	<b>0.644</b>	<b>0.08</b>	<b>0.38</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.410</b>	<b>0.05</b>	<b>0.24</b>		<b>0.110</b>
1-Octene	0.212	0.03	0.12	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.330</b>	<b>0.04</b>	<b>0.19</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.233	0.03	0.16	U	0.240
n-Propylbenzene	ND	ND	ND	U	0.200
<b>m-Ethyltoluene</b>	<b>0.169</b>	<b>0.02</b>	<b>0.09</b>		<b>0.150</b>
p-Ethyltoluene	0.133	0.01	0.07	U	0.240
<b>1,3,5-Trimethylbenzene</b>	<b>0.186</b>	<b>0.02</b>	<b>0.10</b>		<b>0.170</b>
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	0.114	0.01	0.08	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.247</b>	<b>0.03</b>	<b>0.14</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.266</b>	<b>0.03</b>	<b>0.16</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.159	0.01	0.09	U	0.220
1-Dodecene	0.103	0.01	0.06	U	0.290
n-Dodecane	0.128	0.01	0.07	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>180</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>31.7</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>211</b>	<b>ND</b>	<b>ND</b>		

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-19-10

Lab ID: 0102116-04

Sampled: 10/19/10 23:59

Pressure @ Receipt: 8.5" Hg

Canister #: 5130

Received: 10/21/10 10:37

Comments: Site 4

Analyzed: 10/21/10 22:07

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	3.62	1.81	2.08		0.380
Ethane	49.1	24.60	30.30		0.120
Propane	46.2	15.40	27.80		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	16.1	4.03	9.59		0.130
Isobutene/1-Butene	3.67	0.92	2.11		0.150
n-Butane	64.7	16.20	38.50		0.170
trans-2-Butene	2.20	0.55	1.26		0.140
cis-2-Butene	2.11	0.53	1.21		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	90.5	18.10	53.50		0.190
1-Pentene	2.67	0.53	1.54		0.120
2-Methyl-1-butene	4.58	0.92	2.63		0.240
n-Pentane	36.3	7.26	21.50		0.0900
Isoprene	0.679	0.14	0.38		0.240
trans-2-Pentene	5.67	1.13	3.26		0.140
cis-2-Pentene	2.95	0.59	1.70		0.190
2-Methyl-2-butene	7.24	1.45	4.16		0.240
2,2-Dimethylbutane	2.69	0.45	1.58		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.502	0.08	0.29		0.360
Cyclopentane	2.71	0.54	1.56		0.120
2,3-Dimethylbutane	6.99	1.17	4.11		0.200
2-Methylpentane	19.2	3.20	11.30		0.140
3-Methylpentane	12.0	2.00	7.06		0.200
2-Methyl-1-pentene	0.688	0.12	0.40		0.360
1-Hexene	0.465	0.08	0.27		0.360
2-Ethyl-1-butene	1.50	0.25	0.86		0.360
n-Hexane	10.9	1.82	6.42		0.240
trans-2-Hexene	0.849	0.14	0.49		0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	6.16	1.03	3.54		0.140
2,4-Dimethylpentane	2.67	0.38	1.57		0.230
Cyclohexane	2.20	0.37	1.26		0.190
2-Methylhexane	3.76	0.54	2.21		0.110
2,3-Dimethylpentane	2.77	0.40	1.63		0.370
3-Methylhexane	4.56	0.65	2.68		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	9.73	1.22	5.69		0.170

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-19-10 Lab ID: 0102116-04 Sampled: 10/19/10 23:59  
 Pressure @ Receipt: 8.5" Hg Canister #: 5130 Received: 10/21/10 10:37  
 Comments: Site 4 Analyzed: 10/21/10 22:07

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	2.41	0.34	1.41		0.180
Methylcyclohexane	2.18	0.31	1.25		0.190
2,2,3-Trimethylpentane	1.44	0.18	0.84		0.280
2,3,4-Trimethylpentane	2.29	0.29	1.34		0.140
2-Methylheptane	0.909	0.11	0.53		0.170
3-Methylheptane	0.761	0.10	0.45		0.110
1-Octene	0.143	0.02	0.08	U	0.280
1-Nonene	0.850	0.09	0.49		0.240
n-Nonane	3.76	0.42	2.20		0.180
Isopropylbenzene	0.210	0.03	0.13		0.210
a-Pinene	0.384	0.05	0.27		0.240
n-Propylbenzene	0.968	0.11	0.53		0.200
m-Ethyltoluene	1.71	0.19	0.94		0.150
p-Ethyltoluene	1.68	0.19	0.92		0.240
1,3,5-Trimethylbenzene	2.34	0.26	1.28		0.170
o-Ethyltoluene	0.576	0.06	0.32		0.180
b-Pinene	1.14	0.14	0.80		0.240
1,2,4-Trimethylbenzene	3.27	0.36	1.79		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	8.73	0.87	5.09		0.230
1,2,3-Trimethylbenzene	2.14	0.24	1.17		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	1.02	0.10	0.56		0.140
1-Undecene	2.70	0.25	1.55		0.220
n-Undecane	2.86	0.26	1.67		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	1.25	0.10	0.73		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	0.155	0.01	0.09	U	0.290
SNMOC (Sum of Knowns)	498	ND	ND		
Sum of Unknowns	282	ND	ND		
TNMOC	780	ND	ND		



# CERTIFICATE OF ANALYSIS

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-19-10 Lab ID: 0102207-01 Sampled: 10/19/10 23:59  
 Pressure @ Receipt: 14" Hg Canister #: 5101 Received: 10/22/10 14:54  
 Comments: Site 5 Analyzed: 10/26/10 16:22

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.58	0.79	0.91		0.380
Ethane	25.7	12.90	15.80		0.120
Propane	13.8	4.60	8.31		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.98	0.75	1.77		0.130
Isobutene/1-Butene	0.469	0.12	0.27		0.150
n-Butane	8.28	2.07	4.93		0.170
trans-2-Butene	0.0740	0.02	0.04	U	0.140
cis-2-Butene	0.0910	0.02	0.05	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.93	0.59	1.73		0.190
1-Pentene	0.119	0.02	0.07	U	0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	3.68	0.74	2.18		0.0900
Isoprene	0.334	0.07	0.19		0.240
trans-2-Pentene	ND	ND	ND	U	0.140
cis-2-Pentene	ND	ND	ND	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.242	0.04	0.14		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.352	0.07	0.20		0.120
2,3-Dimethylbutane	0.241	0.04	0.14		0.200
2-Methylpentane	0.789	0.13	0.46		0.140
3-Methylpentane	0.587	0.10	0.35		0.200
2-Methyl-1-pentene	0.108	0.02	0.06	U	0.360
1-Hexene	0.0610	0.01	0.04	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.908	0.15	0.54		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.517	0.09	0.30		0.140
2,4-Dimethylpentane	0.168	0.02	0.10	U	0.230
Cyclohexane	0.345	0.06	0.20		0.190
2-Methylhexane	0.648	0.09	0.38		0.110
2,3-Dimethylpentane	0.505	0.07	0.30		0.370
3-Methylhexane	0.947	0.14	0.56		0.150
1-Heptene	0.111	0.02	0.06	U	0.370

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 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-19-10 Lab ID: 0102207-01 Sampled: 10/19/10 23:59  
 Pressure @ Receipt: 14" Hg Canister #: 5101 Received: 10/22/10 14:54  
 Comments: Site 5 Analyzed: 10/26/10 16:22

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.302</b>	<b>0.04</b>	<b>0.18</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.522</b>	<b>0.07</b>	<b>0.31</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.517</b>	<b>0.07</b>	<b>0.30</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.115	0.01	0.07	U	0.280
2,3,4-Trimethylpentane	0.126	0.02	0.07	U	0.140
<b>2-Methylheptane</b>	<b>0.295</b>	<b>0.04</b>	<b>0.17</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.196</b>	<b>0.02</b>	<b>0.12</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.256</b>	<b>0.03</b>	<b>0.15</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.191	0.02	0.13	U	0.240
n-Propylbenzene	ND	ND	ND	U	0.200
m-Ethyltoluene	0.144	0.02	0.08	U	0.150
p-Ethyltoluene	ND	ND	ND	U	0.240
1,3,5-Trimethylbenzene	ND	ND	ND	U	0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.154	0.02	0.08	U	0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.127	0.01	0.07	U	0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.130	0.01	0.08	U	0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	ND	ND	ND	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>74.1</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>26.3</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>100</b>	<b>ND</b>	<b>ND</b>		





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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-22-10 Lab ID: 0102621-01 Sampled: 10/22/10 23:59  
 Pressure @ Receipt: 6" Hg Canister #: 5027 Received: 10/26/10 12:26  
 Comments: Site 1 Analyzed: 10/26/10 17:23

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.41	0.71	0.81		0.380
Ethane	6.60	3.30	4.07		0.120
Propane	5.82	1.94	3.51		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.70	0.43	1.01		0.130
Isobutene/1-Butene	0.717	0.18	0.41		0.150
n-Butane	3.70	0.93	2.20		0.170
trans-2-Butene	0.132	0.03	0.08	U	0.140
cis-2-Butene	0.125	0.03	0.07	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.72	0.54	1.61		0.190
1-Pentene	0.167	0.03	0.10		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	2.45	0.49	1.45		0.0900
Isoprene	0.452	0.09	0.25		0.240
trans-2-Pentene	0.134	0.03	0.08	U	0.140
cis-2-Pentene	0.102	0.02	0.06	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.187	0.03	0.11	U	0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.217	0.04	0.13		0.120
2,3-Dimethylbutane	0.329	0.05	0.19		0.200
2-Methylpentane	1.11	0.19	0.65		0.140
3-Methylpentane	0.616	0.10	0.36		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.136	0.02	0.08	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.589	0.10	0.35		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.475	0.08	0.27		0.140
2,4-Dimethylpentane	0.139	0.02	0.08	U	0.230
Cyclohexane	0.251	0.04	0.14		0.190
2-Methylhexane	0.362	0.05	0.21		0.110
2,3-Dimethylpentane	0.463	0.07	0.27		0.370
3-Methylhexane	0.791	0.11	0.46		0.150
1-Heptene	ND	ND	ND	U	0.370

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-22-10 Lab ID: 0102621-01 Sampled: 10/22/10 23:59  
 Pressure @ Receipt: 6" Hg Canister #: 5027 Received: 10/26/10 12:26  
 Comments: Site 1 Analyzed: 10/26/10 17:23

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.478	0.06	0.28		0.170
n-Heptane	0.301	0.04	0.18		0.180
Methylcyclohexane	0.390	0.06	0.22		0.190
2,2,3-Trimethylpentane	ND	ND	ND	U	0.280
2,3,4-Trimethylpentane	0.186	0.02	0.11		0.140
2-Methylheptane	0.169	0.02	0.10	U	0.170
3-Methylheptane	0.107	0.01	0.06	U	0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.206	0.02	0.12		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.567	0.07	0.40		0.240
n-Propylbenzene	0.113	0.01	0.06	U	0.200
m-Ethyltoluene	0.220	0.02	0.12		0.150
p-Ethyltoluene	0.140	0.02	0.08	U	0.240
1,3,5-Trimethylbenzene	0.173	0.02	0.09		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.250	0.03	0.14		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.384	0.04	0.22		0.230
1,2,3-Trimethylbenzene	0.0750	0.01	0.04	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	0.132	0.01	0.08	U	0.220
n-Undecane	0.248	0.02	0.14		0.220
1-Dodecene	0.0620	0.01	0.04	U	0.290
n-Dodecane	0.194	0.02	0.11	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	42.4	ND	ND		
Sum of Unknowns	35.8	ND	ND		
TNMOC	78.2	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-22-10 Lab ID: 0102621-02 Sampled: 10/22/10 23:59  
 Pressure @ Receipt: 3.5" Hg Canister #: 5018 Received: 10/26/10 12:26  
 Comments: Site 2 Analyzed: 10/26/10 18:24

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.00	1.00	1.15		0.380
Ethane	7.99	4.00	4.92		0.120
Propane	5.18	1.73	3.12		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.70	0.43	1.01		0.130
Isobutene/1-Butene	0.964	0.24	0.55		0.150
n-Butane	6.57	1.64	3.91		0.170
trans-2-Butene	0.174	0.04	0.10		0.140
cis-2-Butene	0.209	0.05	0.12		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.89	0.78	2.30		0.190
1-Pentene	0.216	0.04	0.12		0.120
2-Methyl-1-butene	0.241	0.05	0.14		0.240
n-Pentane	2.42	0.48	1.43		0.0900
Isoprene	0.554	0.11	0.31		0.240
trans-2-Pentene	0.269	0.05	0.16		0.140
cis-2-Pentene	0.189	0.04	0.11	U	0.190
2-Methyl-2-butene	0.257	0.05	0.15		0.240
2,2-Dimethylbutane	0.232	0.04	0.14		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.245	0.05	0.14		0.120
2,3-Dimethylbutane	0.439	0.07	0.26		0.200
2-Methylpentane	1.76	0.29	1.04		0.140
3-Methylpentane	0.830	0.14	0.49		0.200
2-Methyl-1-pentene	0.134	0.02	0.08	U	0.360
1-Hexene	0.104	0.02	0.06	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.784	0.13	0.46		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.671	0.11	0.39		0.140
2,4-Dimethylpentane	0.230	0.03	0.14		0.230
Cyclohexane	0.241	0.04	0.14		0.190
2-Methylhexane	0.437	0.06	0.26		0.110
2,3-Dimethylpentane	0.519	0.07	0.31		0.370
3-Methylhexane	0.994	0.14	0.58		0.150
1-Heptene	ND	ND	ND	U	0.370



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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-22-10 Lab ID: 0102621-02 Sampled: 10/22/10 23:59  
 Pressure @ Receipt: 3.5" Hg Canister #: 5018 Received: 10/26/10 12:26  
 Comments: Site 2 Analyzed: 10/26/10 18:24

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.955</b>	<b>0.12</b>	<b>0.56</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.384</b>	<b>0.05</b>	<b>0.23</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.450</b>	<b>0.06</b>	<b>0.26</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.173	0.02	0.10	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.368</b>	<b>0.05</b>	<b>0.22</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.206</b>	<b>0.03</b>	<b>0.12</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.137</b>	<b>0.02</b>	<b>0.08</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.276</b>	<b>0.03</b>	<b>0.16</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.133	0.02	0.09	U	0.240
n-Propylbenzene	0.133	0.01	0.07	U	0.200
<b>m-Ethyltoluene</b>	<b>0.212</b>	<b>0.02</b>	<b>0.12</b>		<b>0.150</b>
p-Ethyltoluene	0.196	0.02	0.11	U	0.240
1,3,5-Trimethylbenzene	0.150	0.02	0.08	U	0.170
o-Ethyltoluene	0.105	0.01	0.06	U	0.180
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.318</b>	<b>0.04</b>	<b>0.17</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.382</b>	<b>0.04</b>	<b>0.22</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.157	0.01	0.09	U	0.220
1-Dodecene	0.109	0.01	0.06	U	0.290
n-Dodecane	0.141	0.01	0.08	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>51.2</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>36.9</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>88.1</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-22-10 Lab ID: 0102621-03 Sampled: 10/22/10 23:59  
 Pressure @ Receipt: 6" Hg Canister #: 5147 Received: 10/26/10 12:26  
 Comments: Site 3 Analyzed: 10/26/10 19:24

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.46	1.23	1.41		0.380
Ethane	14.5	7.25	8.93		0.120
Propane	7.29	2.43	4.39		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.91	0.48	1.14		0.130
Isobutene/1-Butene	0.902	0.23	0.52		0.150
n-Butane	3.58	0.90	2.13		0.170
trans-2-Butene	0.130	0.03	0.07	U	0.140
cis-2-Butene	0.172	0.04	0.10	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.35	0.47	1.39		0.190
1-Pentene	0.222	0.04	0.13		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	1.97	0.39	1.17		0.0900
Isoprene	0.354	0.07	0.20		0.240
trans-2-Pentene	0.170	0.03	0.10		0.140
cis-2-Pentene	0.111	0.02	0.06	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.295	0.05	0.17		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.226	0.05	0.13		0.120
2,3-Dimethylbutane	0.299	0.05	0.18		0.200
2-Methylpentane	1.12	0.19	0.66		0.140
3-Methylpentane	0.582	0.10	0.34		0.200
2-Methyl-1-pentene	0.0990	0.02	0.06	U	0.360
1-Hexene	0.206	0.03	0.12	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.705	0.12	0.42		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.571	0.10	0.33		0.140
2,4-Dimethylpentane	0.162	0.02	0.10	U	0.230
Cyclohexane	0.297	0.05	0.17		0.190
2-Methylhexane	0.405	0.06	0.24		0.110
2,3-Dimethylpentane	0.506	0.07	0.30		0.370
3-Methylhexane	1.19	0.17	0.70		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-22-10 Lab ID: 0102621-03 Sampled: 10/22/10 23:59  
 Pressure @ Receipt: 6" Hg Canister #: 5147 Received: 10/26/10 12:26  
 Comments: Site 3 Analyzed: 10/26/10 19:24

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.369	0.05	0.22		0.170
n-Heptane	0.422	0.06	0.25		0.180
Methylcyclohexane	0.484	0.07	0.28		0.190
2,2,3-Trimethylpentane	0.146	0.02	0.09	U	0.280
2,3,4-Trimethylpentane	0.152	0.02	0.09		0.140
2-Methylheptane	0.188	0.02	0.11		0.170
3-Methylheptane	0.193	0.02	0.11		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	0.189	0.02	0.11	U	0.240
n-Nonane	0.345	0.04	0.20		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.227	0.03	0.16	U	0.240
n-Propylbenzene	0.183	0.02	0.10	U	0.200
m-Ethyltoluene	0.254	0.03	0.14		0.150
p-Ethyltoluene	0.243	0.03	0.13		0.240
1,3,5-Trimethylbenzene	0.365	0.04	0.20		0.170
o-Ethyltoluene	0.309	0.03	0.17		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.537	0.06	0.29		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.531	0.05	0.31		0.230
1,2,3-Trimethylbenzene	0.181	0.02	0.10		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.204	0.02	0.11		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.468	0.04	0.27		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.501	0.04	0.29		0.290
1-Tridecene	0.109	0.01	0.06	U	0.290
n-Tridecane	0.117	0.01	0.07	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>54.8</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>48.5</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>103</b>	<b>ND</b>	<b>ND</b>		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-22-10 Lab ID: 0102621-04 Sampled: 10/22/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5013 Received: 10/26/10 12:26  
 Comments: Site 4 Analyzed: 10/26/10 20:25

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.35	1.18	1.35		0.380
Ethane	10.6	5.30	6.53		0.120
Propane	5.63	1.88	3.39		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.64	0.41	0.98		0.130
Isobutene/1-Butene	0.843	0.21	0.49		0.150
n-Butane	6.38	1.60	3.80		0.170
trans-2-Butene	0.219	0.05	0.13		0.140
cis-2-Butene	0.261	0.07	0.15		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	6.74	1.35	3.99		0.190
1-Pentene	0.310	0.06	0.18		0.120
2-Methyl-1-butene	0.388	0.08	0.22		0.240
n-Pentane	3.50	0.70	2.07		0.0900
Isoprene	0.313	0.06	0.18		0.240
trans-2-Pentene	0.508	0.10	0.29		0.140
cis-2-Pentene	0.288	0.06	0.17		0.190
2-Methyl-2-butene	0.568	0.11	0.33		0.240
2,2-Dimethylbutane	0.455	0.08	0.27		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.402	0.08	0.23		0.120
2,3-Dimethylbutane	0.878	0.15	0.52		0.200
2-Methylpentane	3.04	0.51	1.79		0.140
3-Methylpentane	1.74	0.29	1.02		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.253	0.04	0.15	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.37	0.23	0.81		0.240
trans-2-Hexene	0.111	0.02	0.06	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.02	0.17	0.59		0.140
2,4-Dimethylpentane	0.421	0.06	0.25		0.230
Cyclohexane	0.363	0.06	0.21		0.190
2-Methylhexane	0.880	0.13	0.52		0.110
2,3-Dimethylpentane	0.804	0.12	0.47		0.370
3-Methylhexane	2.05	0.29	1.20		0.150
1-Heptene	ND	ND	ND	U	0.370

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City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-22-10 Lab ID: 0102621-04 Sampled: 10/22/10 23:59  
 Pressure @ Receipt: 9" Hg Canister #: 5013 Received: 10/26/10 12:26  
 Comments: Site 4 Analyzed: 10/26/10 20:25

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	1.86	0.23	1.09		0.170
n-Heptane	0.736	0.11	0.43		0.180
Methylcyclohexane	0.607	0.09	0.35		0.190
2,2,3-Trimethylpentane	0.297	0.04	0.17		0.280
2,3,4-Trimethylpentane	0.662	0.08	0.39		0.140
2-Methylheptane	0.304	0.04	0.18		0.170
3-Methylheptane	0.266	0.03	0.16		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	0.324	0.04	0.19		0.240
n-Nonane	2.12	0.24	1.24		0.180
Isopropylbenzene	0.144	0.02	0.09	U	0.210
a-Pinene	0.489	0.06	0.34		0.240
n-Propylbenzene	0.513	0.06	0.28		0.200
m-Ethyltoluene	0.772	0.09	0.42		0.150
p-Ethyltoluene	0.829	0.09	0.45		0.240
1,3,5-Trimethylbenzene	1.09	0.12	0.60		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	0.948	0.12	0.66		0.240
1,2,4-Trimethylbenzene	1.45	0.16	0.79		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	3.42	0.34	1.99		0.230
1,2,3-Trimethylbenzene	0.733	0.08	0.40		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.931	0.08	0.54		0.220
1-Dodecene	0.0850	0.01	0.05	U	0.290
n-Dodecane	0.370	0.03	0.22		0.290
1-Tridecene	0.0890	0.01	0.05	U	0.290
n-Tridecane	0.0620	0.00	0.04	U	0.290
SNMOC (Sum of Knowns)	85.0	ND	ND		
Sum of Unknowns	122	ND	ND		
TNMOC	207	ND	ND		





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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-22-10 Lab ID: 0102621-05 Sampled: 10/22/10 23:59  
 Pressure @ Receipt: 14.5" Hg Canister #: 5114 Received: 10/26/10 12:26  
 Comments: Site 5 Analyzed: 10/26/10 21:27

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.32	0.66	0.76		0.380
Ethane	12.3	6.15	7.58		0.120
Propane	5.21	1.74	3.14		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.19	0.30	0.71		0.130
Isobutene/1-Butene	0.473	0.12	0.27		0.150
n-Butane	6.21	1.55	3.70		0.170
trans-2-Butene	0.112	0.03	0.06	U	0.140
cis-2-Butene	0.157	0.04	0.09	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	1.98	0.40	1.17		0.190
1-Pentene	0.183	0.04	0.11		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	2.06	0.41	1.22		0.0900
Isoprene	0.398	0.08	0.22		0.240
trans-2-Pentene	0.126	0.03	0.07	U	0.140
cis-2-Pentene	0.0950	0.02	0.05	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.221	0.04	0.13		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.207	0.03	0.12	U	0.360
Cyclopentane	0.207	0.04	0.12		0.120
2,3-Dimethylbutane	0.284	0.05	0.17		0.200
2-Methylpentane	0.545	0.09	0.32		0.140
3-Methylpentane	0.420	0.07	0.25		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.190	0.03	0.11	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.447	0.07	0.26		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	0.210	0.04	0.12	U	0.360
Methylcyclopentane	0.460	0.08	0.26		0.140
2,4-Dimethylpentane	0.147	0.02	0.09	U	0.230
Cyclohexane	0.222	0.04	0.13		0.190
2-Methylhexane	0.373	0.05	0.22		0.110
2,3-Dimethylpentane	0.412	0.06	0.24		0.370
3-Methylhexane	0.744	0.11	0.44		0.150
1-Heptene	ND	ND	ND	U	0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-22-10 Lab ID: 0102621-05 Sampled: 10/22/10 23:59  
 Pressure @ Receipt: 14.5" Hg Canister #: 5114 Received: 10/26/10 12:26  
 Comments: Site 5 Analyzed: 10/26/10 21:27

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.407</b>	<b>0.05</b>	<b>0.24</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.321</b>	<b>0.05</b>	<b>0.19</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.311</b>	<b>0.04</b>	<b>0.18</b>		<b>0.190</b>
2,2,3-Trimethylpentane	ND	ND	ND	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.203</b>	<b>0.03</b>	<b>0.12</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.220</b>	<b>0.03</b>	<b>0.13</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.119</b>	<b>0.01</b>	<b>0.07</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.210</b>	<b>0.02</b>	<b>0.12</b>		<b>0.180</b>
Isopropylbenzene	0.105	0.01	0.06	U	0.210
<b>a-Pinene</b>	<b>0.715</b>	<b>0.09</b>	<b>0.50</b>		<b>0.240</b>
n-Propylbenzene	0.128	0.01	0.07	U	0.200
<b>m-Ethyltoluene</b>	<b>0.246</b>	<b>0.03</b>	<b>0.14</b>		<b>0.150</b>
p-Ethyltoluene	0.135	0.02	0.07	U	0.240
1,3,5-Trimethylbenzene	0.149	0.02	0.08	U	0.170
o-Ethyltoluene	0.105	0.01	0.06	U	0.180
b-Pinene	0.230	0.03	0.16	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.300</b>	<b>0.03</b>	<b>0.16</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.217	0.02	0.13	U	0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.144	0.01	0.08	U	0.220
1-Dodecene	0.0680	0.01	0.04	U	0.290
n-Dodecane	0.151	0.01	0.09	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>46.1</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>30.0</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>76.1</b>	<b>ND</b>	<b>ND</b>		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-25-10 Lab ID: 0102801-01 Sampled: 10/25/10 23:59  
 Pressure @ Receipt: 6" Hg Canister #: 5019 Received: 10/27/10 15:42  
 Comments: Site 1 Analyzed: 10/28/10 20:27

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.21	0.61	0.70		0.380
Ethane	8.40	4.20	5.18		0.120
Propane	6.53	2.18	3.93		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.76	0.44	1.05		0.130
Isobutene/1-Butene	0.586	0.15	0.34		0.150
n-Butane	4.33	1.08	2.58		0.170
trans-2-Butene	0.128	0.03	0.07	U	0.140
cis-2-Butene	0.180	0.05	0.10		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.70	0.54	1.60		0.190
1-Pentene	0.236	0.05	0.14		0.120
2-Methyl-1-butene	0.109	0.02	0.06	U	0.240
n-Pentane	1.60	0.32	0.95		0.0900
Isoprene	1.09	0.22	0.61		0.240
trans-2-Pentene	0.215	0.04	0.12		0.140
cis-2-Pentene	0.162	0.03	0.09	U	0.190
2-Methyl-2-butene	0.0920	0.02	0.05	U	0.240
2,2-Dimethylbutane	0.347	0.06	0.20		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.240	0.05	0.14		0.120
2,3-Dimethylbutane	0.357	0.06	0.21		0.200
2-Methylpentane	ND	ND	ND	A-01, U	0.140
3-Methylpentane	0.647	0.11	0.38		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.245	0.04	0.14	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.710	0.12	0.42		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.352	0.06	0.20		0.140
2,4-Dimethylpentane	0.233	0.03	0.14		0.230
Cyclohexane	0.290	0.05	0.17		0.190
2-Methylhexane	0.527	0.08	0.31		0.110
2,3-Dimethylpentane	0.610	0.09	0.36		0.370
3-Methylhexane	1.23	0.18	0.72		0.150
1-Heptene	0.146	0.02	0.08	U	0.370

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 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-25-10 Lab ID: 0102801-01 Sampled: 10/25/10 23:59  
 Pressure @ Receipt: 6" Hg Canister #: 5019 Received: 10/27/10 15:42  
 Comments: Site 1 Analyzed: 10/28/10 20:27

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.620	0.08	0.36		0.170
n-Heptane	0.472	0.07	0.28		0.180
Methylcyclohexane	0.711	0.10	0.41		0.190
2,2,3-Trimethylpentane	0.146	0.02	0.09	U	0.280
2,3,4-Trimethylpentane	0.273	0.03	0.16		0.140
2-Methylheptane	0.269	0.03	0.16		0.170
3-Methylheptane	0.166	0.02	0.10		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.233	0.03	0.14		0.180
Isopropylbenzene	0.149	0.02	0.09	U	0.210
a-Pinene	0.642	0.08	0.45		0.240
n-Propylbenzene	0.164	0.02	0.09	U	0.200
m-Ethyltoluene	0.319	0.04	0.18		0.150
p-Ethyltoluene	0.245	0.03	0.13		0.240
1,3,5-Trimethylbenzene	0.285	0.03	0.16		0.170
o-Ethyltoluene	0.297	0.03	0.16		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.483	0.05	0.26		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.463	0.05	0.27		0.230
1,2,3-Trimethylbenzene	0.171	0.02	0.09		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.295	0.03	0.17		0.220
1-Dodecene	0.243	0.02	0.14	U	0.290
n-Dodecane	0.361	0.03	0.21		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	48.0	ND	ND		
Sum of Unknowns	45.9	ND	ND		
TNMOC	93.9	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-25-10 Lab ID: 0102801-02 Sampled: 10/25/10 23:59  
 Pressure @ Receipt: 2.5" Hg Canister #: 5087 Received: 10/27/10 15:42  
 Comments: Site 2 Analyzed: 10/28/10 22:29

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.96	0.98	1.13		0.380
Ethane	11.4	5.70	7.02		0.120
Propane	6.96	2.32	4.19		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.00	0.50	1.19		0.130
Isobutene/1-Butene	0.853	0.21	0.49		0.150
n-Butane	5.47	1.37	3.26		0.170
trans-2-Butene	0.174	0.04	0.10		0.140
cis-2-Butene	0.209	0.05	0.12		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.95	0.79	2.34		0.190
1-Pentene	0.415	0.08	0.24		0.120
2-Methyl-1-butene	0.234	0.05	0.14	U	0.240
n-Pentane	2.91	0.58	1.72		0.0900
Isoprene	1.23	0.25	0.69		0.240
trans-2-Pentene	0.470	0.09	0.27		0.140
cis-2-Pentene	0.218	0.04	0.13		0.190
2-Methyl-2-butene	0.266	0.05	0.15		0.240
2,2-Dimethylbutane	0.371	0.06	0.22		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.326	0.07	0.19		0.120
2,3-Dimethylbutane	0.555	0.09	0.33		0.200
2-Methylpentane	2.48	0.41	1.46		0.140
3-Methylpentane	1.01	0.17	0.60		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.381	0.06	0.22		0.360
2-Ethyl-1-butene	0.442	0.07	0.25		0.360
n-Hexane	1.14	0.19	0.67		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.601	0.10	0.35		0.140
2,4-Dimethylpentane	0.376	0.05	0.22		0.230
Cyclohexane	0.384	0.06	0.22		0.190
2-Methylhexane	0.723	0.10	0.42		0.110
2,3-Dimethylpentane	0.828	0.12	0.49		0.370
3-Methylhexane	2.49	0.36	1.46		0.150
1-Heptene	0.255	0.04	0.15	U	0.370
2,2,4-Trimethylpentane	1.32	0.17	0.77		0.170

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-25-10 Lab ID: 0102801-02 Sampled: 10/25/10 23:59  
 Pressure @ Receipt: 2.5" Hg Canister #: 5087 Received: 10/27/10 15:42  
 Comments: Site 2 Analyzed: 10/28/10 22:29

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>n-Heptane</b>	<b>0.564</b>	<b>0.08</b>	<b>0.33</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.662</b>	<b>0.09</b>	<b>0.38</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.218	0.03	0.13	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.426</b>	<b>0.05</b>	<b>0.25</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.294</b>	<b>0.04</b>	<b>0.17</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.213</b>	<b>0.03</b>	<b>0.13</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	0.174	0.02	0.10	U	0.240
<b>n-Nonane</b>	<b>0.355</b>	<b>0.04</b>	<b>0.21</b>		<b>0.180</b>
Isopropylbenzene	0.118	0.01	0.07	U	0.210
a-Pinene	0.162	0.02	0.11	U	0.240
n-Propylbenzene	0.130	0.01	0.07	U	0.200
<b>m-Ethyltoluene</b>	<b>0.321</b>	<b>0.04</b>	<b>0.18</b>		<b>0.150</b>
p-Ethyltoluene	0.236	0.03	0.13	U	0.240
<b>1,3,5-Trimethylbenzene</b>	<b>0.238</b>	<b>0.03</b>	<b>0.13</b>		<b>0.170</b>
<b>o-Ethyltoluene</b>	<b>0.344</b>	<b>0.04</b>	<b>0.19</b>		<b>0.180</b>
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.537</b>	<b>0.06</b>	<b>0.29</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.614</b>	<b>0.06</b>	<b>0.36</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	0.163	0.02	0.09	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.444</b>	<b>0.04</b>	<b>0.26</b>		<b>0.220</b>
<b>1-Dodecene</b>	<b>0.301</b>	<b>0.03</b>	<b>0.17</b>		<b>0.290</b>
<b>n-Dodecane</b>	<b>0.686</b>	<b>0.06</b>	<b>0.40</b>		<b>0.290</b>
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>66.8</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>58.5</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>125</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-25-10 Lab ID: 0102801-03 Sampled: 10/25/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5136 Received: 10/27/10 15:42  
 Comments: Site 3 Analyzed: 10/28/10 15:42

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	0.921	0.46	0.53		0.380
Ethane	27.3	13.70	16.80		0.120
Propane	17.6	5.87	10.60		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	4.45	1.11	2.65		0.130
Isobutene/1-Butene	0.428	0.11	0.25		0.150
n-Butane	8.10	2.03	4.82		0.170
trans-2-Butene	0.0970	0.02	0.06	U	0.140
cis-2-Butene	0.193	0.05	0.11		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	4.19	0.84	2.48		0.190
1-Pentene	0.192	0.04	0.11		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	3.90	0.78	2.31		0.0900
Isoprene	1.01	0.20	0.56		0.240
trans-2-Pentene	0.111	0.02	0.06	U	0.140
cis-2-Pentene	0.100	0.02	0.06	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.380	0.06	0.22		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.294	0.06	0.17		0.120
2,3-Dimethylbutane	0.412	0.07	0.24		0.200
2-Methylpentane	1.81	0.30	1.07		0.140
3-Methylpentane	1.29	0.22	0.76		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.186	0.03	0.11	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	2.04	0.34	1.20		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.484	0.08	0.28		0.140
2,4-Dimethylpentane	0.293	0.04	0.17		0.230
Cyclohexane	0.587	0.10	0.34		0.190
2-Methylhexane	1.04	0.15	0.61		0.110
2,3-Dimethylpentane	0.567	0.08	0.33		0.370
3-Methylhexane	1.34	0.19	0.79		0.150
1-Heptene	0.189	0.03	0.11	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-25-10 Lab ID: 0102801-03 Sampled: 10/25/10 23:59  
 Pressure @ Receipt: 7.5" Hg Canister #: 5136 Received: 10/27/10 15:42  
 Comments: Site 3 Analyzed: 10/28/10 15:42

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.308	0.04	0.18		0.170
n-Heptane	1.14	0.16	0.67		0.180
Methylcyclohexane	1.00	0.14	0.58		0.190
2,2,3-Trimethylpentane	0.187	0.02	0.11	U	0.280
2,3,4-Trimethylpentane	0.165	0.02	0.10		0.140
2-Methylheptane	0.474	0.06	0.28		0.170
3-Methylheptane	0.374	0.05	0.22		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.349	0.04	0.20		0.180
Isopropylbenzene	0.0910	0.01	0.06	U	0.210
a-Pinene	0.414	0.05	0.29		0.240
n-Propylbenzene	0.123	0.01	0.07	U	0.200
m-Ethyltoluene	0.213	0.02	0.12		0.150
p-Ethyltoluene	0.187	0.02	0.10	U	0.240
1,3,5-Trimethylbenzene	0.240	0.03	0.13		0.170
o-Ethyltoluene	0.197	0.02	0.11		0.180
b-Pinene	0.459	0.06	0.32		0.240
1,2,4-Trimethylbenzene	0.283	0.03	0.16		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.358	0.04	0.21		0.230
1,2,3-Trimethylbenzene	0.112	0.01	0.06	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.138	0.01	0.08	U	0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	ND	ND	ND	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	91.1	ND	ND		
Sum of Unknowns	26.0	ND	ND		
TNMOC	117	ND	ND		





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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-25-10 Lab ID: 0102801-04 Sampled: 10/25/10 23:59  
 Pressure @ Receipt: 8.5" Hg Canister #: 5094 Received: 10/27/10 15:42  
 Comments: Site 4 Analyzed: 10/28/10 21:28

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.27	0.64	0.73		0.380
Ethane	16.1	8.05	9.92		0.120
Propane	15.3	5.10	9.22		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	4.48	1.12	2.67		0.130
Isobutene/1-Butene	0.852	0.21	0.49		0.150
n-Butane	14.7	3.68	8.75		0.170
trans-2-Butene	0.452	0.11	0.26		0.140
cis-2-Butene	0.459	0.12	0.26		0.180
3-Methyl-1-butene	0.229	0.05	0.13	U	0.240
Isopentane	19.8	3.96	11.70		0.190
1-Pentene	0.630	0.13	0.36		0.120
2-Methyl-1-butene	0.949	0.19	0.55		0.240
n-Pentane	10.0	2.00	5.91		0.0900
Isoprene	0.749	0.15	0.42		0.240
trans-2-Pentene	1.29	0.26	0.74		0.140
cis-2-Pentene	0.678	0.14	0.39		0.190
2-Methyl-2-butene	1.67	0.33	0.96		0.240
2,2-Dimethylbutane	1.01	0.17	0.60		0.200
Cyclopentene	0.245	0.05	0.14		0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.979	0.20	0.56		0.120
2,3-Dimethylbutane	2.10	0.35	1.24		0.200
2-Methylpentane	5.74	0.96	3.38		0.140
3-Methylpentane	3.55	0.59	2.09		0.200
2-Methyl-1-pentene	0.157	0.03	0.09	U	0.360
1-Hexene	0.313	0.05	0.18	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	3.22	0.54	1.90		0.240
trans-2-Hexene	0.253	0.04	0.15	U	0.360
cis-2-Hexene	0.119	0.02	0.07	U	0.360
Methylcyclopentane	2.06	0.34	1.18		0.140
2,4-Dimethylpentane	1.15	0.16	0.68		0.230
Cyclohexane	0.873	0.15	0.50		0.190
2-Methylhexane	1.72	0.25	1.01		0.110
2,3-Dimethylpentane	1.65	0.24	0.97		0.370
3-Methylhexane	2.45	0.35	1.44		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	3.82	0.48	2.24		0.170

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-25-10 Lab ID: 0102801-04 Sampled: 10/25/10 23:59  
 Pressure @ Receipt: 8.5" Hg Canister #: 5094 Received: 10/27/10 15:42  
 Comments: Site 4 Analyzed: 10/28/10 21:28

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	1.01	0.14	0.59		0.180
Methylcyclohexane	1.32	0.19	0.76		0.190
2,2,3-Trimethylpentane	0.637	0.08	0.37		0.280
2,3,4-Trimethylpentane	0.964	0.12	0.56		0.140
2-Methylheptane	0.458	0.06	0.27		0.170
3-Methylheptane	0.426	0.05	0.25		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.370	0.04	0.22		0.180
Isopropylbenzene	0.156	0.02	0.10	U	0.210
a-Pinene	0.544	0.07	0.38		0.240
n-Propylbenzene	0.173	0.02	0.09	U	0.200
m-Ethyltoluene	0.357	0.04	0.20		0.150
p-Ethyltoluene	0.271	0.03	0.15		0.240
1,3,5-Trimethylbenzene	0.321	0.04	0.18		0.170
o-Ethyltoluene	0.207	0.02	0.11		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.502	0.06	0.28		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.519	0.05	0.30		0.230
1,2,3-Trimethylbenzene	0.156	0.02	0.09	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.359	0.03	0.21		0.220
1-Dodecene	0.305	0.03	0.18		0.290
n-Dodecane	0.471	0.04	0.27		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	141	ND	ND		
Sum of Unknowns	46.4	ND	ND		
TNMOC	187	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-25-10

Lab ID: 0102801-05

Sampled: 10/25/10 23:59

Pressure @ Receipt: 14" Hg

Canister #: 5082

Received: 10/27/10 15:42

Comments: Site 5

Analyzed: 10/28/10 14:44

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.10	0.55	0.63		0.380
Ethane	21.4	10.70	13.20		0.120
Propane	12.9	4.30	7.77		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	3.17	0.79	1.89		0.130
Isobutene/1-Butene	0.478	0.12	0.28		0.150
n-Butane	7.16	1.79	4.26		0.170
trans-2-Butene	0.104	0.03	0.06	U	0.140
cis-2-Butene	0.181	0.05	0.10		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.22	0.64	1.90		0.190
1-Pentene	0.208	0.04	0.12		0.120
2-Methyl-1-butene	0.115	0.02	0.07	U	0.240
n-Pentane	2.76	0.55	1.63		0.0900
Isoprene	0.657	0.13	0.37		0.240
trans-2-Pentene	0.160	0.03	0.09		0.140
cis-2-Pentene	0.163	0.03	0.09	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.379	0.06	0.22		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.313	0.06	0.18		0.120
2,3-Dimethylbutane	0.405	0.07	0.24		0.200
2-Methylpentane	1.99	0.33	1.17		0.140
3-Methylpentane	0.933	0.16	0.55		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.240	0.04	0.14	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.41	0.24	0.83		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.443	0.07	0.26		0.140
2,4-Dimethylpentane	0.288	0.04	0.17		0.230
Cyclohexane	0.495	0.08	0.29		0.190
2-Methylhexane	0.868	0.12	0.51		0.110
2,3-Dimethylpentane	1.05	0.15	0.62		0.370
3-Methylhexane	1.39	0.20	0.82		0.150
1-Heptene	0.135	0.02	0.08	U	0.370

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-25-10 Lab ID: 0102801-05 Sampled: 10/25/10 23:59  
 Pressure @ Receipt: 14" Hg Canister #: 5082 Received: 10/27/10 15:42  
 Comments: Site 5 Analyzed: 10/28/10 14:44

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.509	0.06	0.30		0.170
n-Heptane	0.779	0.11	0.46		0.180
Methylcyclohexane	0.887	0.13	0.51		0.190
2,2,3-Trimethylpentane	0.125	0.02	0.07	U	0.280
2,3,4-Trimethylpentane	0.180	0.02	0.11		0.140
2-Methylheptane	0.423	0.05	0.25		0.170
3-Methylheptane	0.312	0.04	0.18		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.296	0.03	0.17		0.180
Isopropylbenzene	0.240	0.03	0.15		0.210
a-Pinene	0.321	0.04	0.22		0.240
n-Propylbenzene	0.190	0.02	0.10	U	0.200
m-Ethyltoluene	0.266	0.03	0.15		0.150
p-Ethyltoluene	0.200	0.02	0.11	U	0.240
1,3,5-Trimethylbenzene	0.257	0.03	0.14		0.170
o-Ethyltoluene	0.171	0.02	0.09	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.315	0.04	0.17		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.258	0.03	0.15		0.230
1,2,3-Trimethylbenzene	0.118	0.01	0.06	U	0.170
m-Diethylbenzene	0.199	0.02	0.11	U	0.240
p-Diethylbenzene	0.168	0.02	0.09		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.232	0.02	0.14		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.216	0.02	0.13	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	77.2	ND	ND		
Sum of Unknowns	38.2	ND	ND		
TNMOC	115	ND	ND		



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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-28-10 Lab ID: 0110212-01 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 7" Hg Canister #: 5025 Received: 11/02/10 13:32  
 Comments: Site 1 Analyzed: 11/03/10 18:12

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.95	0.98	1.12		0.380
Ethane	10.0	5.00	6.16		0.120
Propane	9.22	3.07	5.55		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.30	0.58	1.37		0.130
Isobutene/1-Butene	0.738	0.19	0.42		0.150
n-Butane	ND	ND	ND	A-01, U	0.170
trans-2-Butene	0.139	0.03	0.08	U	0.140
cis-2-Butene	0.160	0.04	0.09	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	3.26	0.65	1.93		0.190
1-Pentene	0.247	0.05	0.14		0.120
2-Methyl-1-butene	0.0930	0.02	0.05	U	0.240
n-Pentane	2.66	0.53	1.57		0.0900
Isoprene	0.423	0.08	0.24		0.240
trans-2-Pentene	0.175	0.04	0.10		0.140
cis-2-Pentene	0.127	0.03	0.07	U	0.190
2-Methyl-2-butene	0.118	0.02	0.07	U	0.240
2,2-Dimethylbutane	0.226	0.04	0.13		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.324	0.06	0.19		0.120
2,3-Dimethylbutane	0.337	0.06	0.20		0.200
2-Methylpentane	1.44	0.24	0.85		0.140
3-Methylpentane	0.674	0.11	0.40		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.233	0.04	0.13	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.767	0.13	0.45		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.760	0.13	0.44		0.140
2,4-Dimethylpentane	0.180	0.03	0.11	U	0.230
Cyclohexane	0.403	0.07	0.23		0.190
2-Methylhexane	0.469	0.07	0.28		0.110
2,3-Dimethylpentane	0.652	0.09	0.38		0.370
3-Methylhexane	1.12	0.16	0.66		0.150
1-Heptene	0.183	0.03	0.11	U	0.370

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-28-10 Lab ID: 0110212-01 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 7" Hg Canister #: 5025 Received: 11/02/10 13:32  
 Comments: Site 1 Analyzed: 11/03/10 18:12

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.539</b>	<b>0.07</b>	<b>0.32</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.414</b>	<b>0.06</b>	<b>0.24</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.506</b>	<b>0.07</b>	<b>0.29</b>		<b>0.190</b>
2,2,3-Trimethylpentane	ND	ND	ND	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.190</b>	<b>0.02</b>	<b>0.11</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.211</b>	<b>0.03</b>	<b>0.12</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.163</b>	<b>0.02</b>	<b>0.10</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.183</b>	<b>0.02</b>	<b>0.11</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	ND	ND	ND	U	0.200
m-Ethyltoluene	0.138	0.02	0.08	U	0.150
p-Ethyltoluene	0.121	0.01	0.07	U	0.240
1,3,5-Trimethylbenzene	0.122	0.01	0.07	U	0.170
o-Ethyltoluene	0.131	0.01	0.07	U	0.180
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.247</b>	<b>0.03</b>	<b>0.14</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.274</b>	<b>0.03</b>	<b>0.16</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.881</b>	<b>0.08</b>	<b>0.51</b>		<b>0.220</b>
1-Dodecene	ND	ND	ND	U	0.290
<b>n-Dodecane</b>	<b>0.338</b>	<b>0.03</b>	<b>0.20</b>		<b>0.290</b>
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>48.5</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>52.4</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>101</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
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 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-31-10 Lab ID: 0110212-02 Sampled: 10/31/10 23:59  
 Pressure @ Receipt: 8" Hg Canister #: 5064 Received: 11/02/10 13:32  
 Comments: Site 1 Analyzed: 11/03/10 19:14

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.61	0.81	0.93		0.380
Ethane	10.1	5.05	6.22		0.120
Propane	8.44	2.81	5.08		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.85	0.71	1.70		0.130
Isobutene/1-Butene	0.627	0.16	0.36		0.150
n-Butane	ND	ND	ND	A-01, U	0.170
trans-2-Butene	0.123	0.03	0.07	U	0.140
cis-2-Butene	0.159	0.04	0.09	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	2.86	0.57	1.69		0.190
1-Pentene	0.213	0.04	0.12		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	1.93	0.39	1.14		0.0900
Isoprene	0.543	0.11	0.30		0.240
trans-2-Pentene	ND	ND	ND	U	0.140
cis-2-Pentene	0.110	0.02	0.06	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.347	0.06	0.20		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.246	0.05	0.14		0.120
2,3-Dimethylbutane	0.325	0.05	0.19		0.200
2-Methylpentane	0.904	0.15	0.53		0.140
3-Methylpentane	0.554	0.09	0.33		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.245	0.04	0.14	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.520	0.09	0.31		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.733	0.12	0.42		0.140
2,4-Dimethylpentane	0.186	0.03	0.11	U	0.230
Cyclohexane	0.258	0.04	0.15		0.190
2-Methylhexane	0.325	0.05	0.19		0.110
2,3-Dimethylpentane	0.702	0.10	0.41		0.370
3-Methylhexane	1.27	0.18	0.75		0.150
1-Heptene	ND	ND	ND	U	0.370



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 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S1-P-10-31-10 Lab ID: 0110212-02 Sampled: 10/31/10 23:59  
 Pressure @ Receipt: 8" Hg Canister #: 5064 Received: 11/02/10 13:32  
 Comments: Site 1 Analyzed: 11/03/10 19:14

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	0.498	0.06	0.29		0.170
n-Heptane	0.268	0.04	0.16		0.180
Methylcyclohexane	0.409	0.06	0.24		0.190
2,2,3-Trimethylpentane	ND	ND	ND	U	0.280
2,3,4-Trimethylpentane	0.186	0.02	0.11		0.140
2-Methylheptane	0.224	0.03	0.13		0.170
3-Methylheptane	0.160	0.02	0.09		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.164	0.02	0.10	U	0.180
Isopropylbenzene	0.0800	0.01	0.05	U	0.210
a-Pinene	0.187	0.02	0.13	U	0.240
n-Propylbenzene	0.107	0.01	0.06	U	0.200
m-Ethyltoluene	0.151	0.02	0.08		0.150
p-Ethyltoluene	0.176	0.02	0.10	U	0.240
1,3,5-Trimethylbenzene	0.159	0.02	0.09	U	0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.258	0.03	0.14		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.251	0.03	0.15		0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.430	0.04	0.25		0.220
1-Dodecene	0.0840	0.01	0.05	U	0.290
n-Dodecane	0.219	0.02	0.13	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>44.7</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>46.7</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>91.4</b>	<b>ND</b>	<b>ND</b>		





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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-28-10 Lab ID: 0110212-03 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 3" Hg Canister #: 5024 Received: 11/02/10 13:32  
 Comments: Site 2 Analyzed: 11/03/10 20:15

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.78	0.89	1.02		0.380
Ethane	18.7	9.35	11.50		0.120
Propane	19.8	6.60	11.90		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	5.79	1.45	3.45		0.130
Isobutene/1-Butene	0.842	0.21	0.48		0.150
n-Butane	19.1	4.78	11.40	A-01	0.170
trans-2-Butene	0.356	0.09	0.21		0.140
cis-2-Butene	0.337	0.08	0.19		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	27.7	5.54	16.40		0.190
1-Pentene	0.708	0.14	0.41		0.120
2-Methyl-1-butene	1.20	0.24	0.69		0.240
n-Pentane	11.7	2.34	6.92		0.0900
Isoprene	0.287	0.06	0.16		0.240
trans-2-Pentene	1.88	0.38	1.08		0.140
cis-2-Pentene	0.873	0.18	0.50		0.190
2-Methyl-2-butene	2.34	0.47	1.35		0.240
2,2-Dimethylbutane	1.12	0.19	0.66		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	1.24	0.25	0.71		0.120
2,3-Dimethylbutane	3.81	0.64	2.24		0.200
2-Methylpentane	9.50	1.58	5.59		0.140
3-Methylpentane	6.08	1.01	3.58		0.200
2-Methyl-1-pentene	0.365	0.06	0.21		0.360
1-Hexene	0.191	0.03	0.11	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	6.70	1.12	3.94		0.240
trans-2-Hexene	0.452	0.08	0.26		0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	3.79	0.63	2.18		0.140
2,4-Dimethylpentane	1.60	0.23	0.94		0.230
Cyclohexane	1.22	0.20	0.70		0.190
2-Methylhexane	2.83	0.40	1.66		0.110
2,3-Dimethylpentane	2.05	0.29	1.20		0.370
3-Methylhexane	3.02	0.43	1.77		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	8.42	1.05	4.93		0.170

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FILE #: 3786.02.002.001  
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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-28-10 Lab ID: 0110212-03 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 3" Hg Canister #: 5024 Received: 11/02/10 13:32  
 Comments: Site 2 Analyzed: 11/03/10 20:15

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	2.27	0.32	1.33		0.180
Methylcyclohexane	2.86	0.41	1.64		0.190
2,2,3-Trimethylpentane	1.32	0.17	0.77		0.280
2,3,4-Trimethylpentane	1.87	0.23	1.09		0.140
2-Methylheptane	1.30	0.16	0.76		0.170
3-Methylheptane	1.04	0.13	0.61		0.110
1-Octene	0.192	0.02	0.11	U	0.280
1-Nonene	0.801	0.09	0.46		0.240
n-Nonane	3.52	0.39	2.06		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	0.348	0.04	0.24		0.240
n-Propylbenzene	0.605	0.07	0.33		0.200
m-Ethyltoluene	0.930	0.10	0.51		0.150
p-Ethyltoluene	0.845	0.09	0.46		0.240
1,3,5-Trimethylbenzene	1.58	0.18	0.87		0.170
o-Ethyltoluene	1.19	0.13	0.65		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	1.82	0.20	1.00		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	4.93	0.49	2.87		0.230
1,2,3-Trimethylbenzene	0.851	0.09	0.47		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	0.362	0.04	0.20		0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	2.40	0.22	1.40		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.351	0.03	0.20		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	222	ND	ND		
Sum of Unknowns	78.6	ND	ND		
TNMOC	301	ND	ND		



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 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-31-10 Lab ID: 0110212-04 Sampled: 10/31/10 23:59  
 Pressure @ Receipt: 3.5" Hg Canister #: 5111 Received: 11/02/10 13:32  
 Comments: Site 2 Analyzed: 11/03/10 21:16

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.14	1.07	1.23		0.380
Ethane	13.0	6.50	8.01		0.120
Propane	8.50	2.83	5.12		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	2.59	0.65	1.54		0.130
Isobutene/1-Butene	0.800	0.20	0.46		0.150
n-Butane	8.87	2.22	5.28		0.170
trans-2-Butene	0.104	0.03	0.06	U	0.140
cis-2-Butene	0.151	0.04	0.09	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	4.20	0.84	2.48		0.190
1-Pentene	0.233	0.05	0.13		0.120
2-Methyl-1-butene	0.197	0.04	0.11	U	0.240
n-Pentane	2.51	0.50	1.48		0.0900
Isoprene	0.388	0.08	0.22		0.240
trans-2-Pentene	0.191	0.04	0.11		0.140
cis-2-Pentene	0.121	0.02	0.07	U	0.190
2-Methyl-2-butene	0.190	0.04	0.11	U	0.240
2,2-Dimethylbutane	0.370	0.06	0.22		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.254	0.05	0.15		0.120
2,3-Dimethylbutane	0.403	0.07	0.24		0.200
2-Methylpentane	1.77	0.30	1.04		0.140
3-Methylpentane	0.739	0.12	0.44		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.154	0.03	0.09	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.797	0.13	0.47		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.645	0.11	0.37		0.140
2,4-Dimethylpentane	0.205	0.03	0.12	U	0.230
Cyclohexane	0.234	0.04	0.14		0.190
2-Methylhexane	0.541	0.08	0.32		0.110
2,3-Dimethylpentane	0.432	0.06	0.25		0.370
3-Methylhexane	0.784	0.11	0.46		0.150
1-Heptene	ND	ND	ND	U	0.370

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FILE #: 3786.02.002.001  
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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S2-P-10-31-10 Lab ID: 0110212-04 Sampled: 10/31/10 23:59  
 Pressure @ Receipt: 3.5" Hg Canister #: 5111 Received: 11/02/10 13:32  
 Comments: Site 2 Analyzed: 11/03/10 21:16

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.887</b>	<b>0.11</b>	<b>0.52</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.358</b>	<b>0.05</b>	<b>0.21</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.388</b>	<b>0.06</b>	<b>0.22</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.183	0.02	0.11	U	0.280
<b>2,3,4-Trimethylpentane</b>	<b>0.307</b>	<b>0.04</b>	<b>0.18</b>		<b>0.140</b>
<b>2-Methylheptane</b>	<b>0.263</b>	<b>0.03</b>	<b>0.15</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.218</b>	<b>0.03</b>	<b>0.13</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.308</b>	<b>0.03</b>	<b>0.18</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	0.110	0.01	0.06	U	0.200
<b>m-Ethyltoluene</b>	<b>0.174</b>	<b>0.02</b>	<b>0.10</b>		<b>0.150</b>
p-Ethyltoluene	0.166	0.02	0.09	U	0.240
<b>1,3,5-Trimethylbenzene</b>	<b>0.185</b>	<b>0.02</b>	<b>0.10</b>		<b>0.170</b>
o-Ethyltoluene	0.127	0.01	0.07	U	0.180
b-Pinene	ND	ND	ND	U	0.240
<b>1,2,4-Trimethylbenzene</b>	<b>0.248</b>	<b>0.03</b>	<b>0.14</b>		<b>0.240</b>
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.364</b>	<b>0.04</b>	<b>0.21</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.511</b>	<b>0.05</b>	<b>0.30</b>		<b>0.220</b>
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.233	0.02	0.14	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>62.3</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>27.5</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>89.8</b>	<b>ND</b>	<b>ND</b>		



# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S3-P-10-28-10 Lab ID: 0110212-05 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 6" Hg Canister #: 5141 Received: 11/02/10 13:32  
 Comments: Site 3 Analyzed: 11/03/10 22:18

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.06	0.53	0.61		0.380
Ethane	35.5	17.80	21.90		0.120
Propane	23.1	7.70	13.90		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	4.84	1.21	2.88		0.130
Isobutene/1-Butene	0.440	0.11	0.25		0.150
n-Butane	11.8	2.95	7.03		0.170
trans-2-Butene	0.0740	0.02	0.04	U	0.140
cis-2-Butene	0.105	0.03	0.06	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	4.20	0.84	2.48		0.190
1-Pentene	0.170	0.03	0.10		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	4.25	0.85	2.51		0.0900
Isoprene	0.443	0.09	0.25		0.240
trans-2-Pentene	0.0970	0.02	0.06	U	0.140
cis-2-Pentene	ND	ND	ND	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.410	0.07	0.24		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.347	0.07	0.20		0.120
2,3-Dimethylbutane	0.344	0.06	0.20		0.200
2-Methylpentane	1.81	0.30	1.07		0.140
3-Methylpentane	0.837	0.14	0.49		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.197	0.03	0.11	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.41	0.24	0.83		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.814	0.14	0.47		0.140
2,4-Dimethylpentane	0.184	0.03	0.11	U	0.230
Cyclohexane	0.543	0.09	0.31		0.190
2-Methylhexane	0.663	0.09	0.39		0.110
2,3-Dimethylpentane	0.542	0.08	0.32		0.370
3-Methylhexane	1.05	0.15	0.62		0.150
1-Heptene	0.195	0.03	0.11	U	0.370

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Description: S3-P-10-28-10 Lab ID: 0110212-05 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 6" Hg Canister #: 5141 Received: 11/02/10 13:32  
 Comments: Site 3 Analyzed: 11/03/10 22:18

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.253</b>	<b>0.03</b>	<b>0.15</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.743</b>	<b>0.11</b>	<b>0.44</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.731</b>	<b>0.10</b>	<b>0.42</b>		<b>0.190</b>
2,2,3-Trimethylpentane	0.165	0.02	0.10	U	0.280
2,3,4-Trimethylpentane	0.134	0.02	0.08	U	0.140
<b>2-Methylheptane</b>	<b>0.272</b>	<b>0.03</b>	<b>0.16</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.252</b>	<b>0.03</b>	<b>0.15</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.248</b>	<b>0.03</b>	<b>0.15</b>		<b>0.180</b>
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	ND	ND	ND	U	0.200
m-Ethyltoluene	0.0900	0.01	0.05	U	0.150
p-Ethyltoluene	0.0980	0.01	0.05	U	0.240
1,3,5-Trimethylbenzene	0.138	0.02	0.08	U	0.170
o-Ethyltoluene	0.132	0.01	0.07	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.198	0.02	0.11	U	0.240
1-Decene	ND	ND	ND	U	0.240
<b>n-Decane</b>	<b>0.241</b>	<b>0.02</b>	<b>0.14</b>		<b>0.230</b>
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
<b>n-Undecane</b>	<b>0.406</b>	<b>0.04</b>	<b>0.24</b>		<b>0.220</b>
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.238	0.02	0.14	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>103</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>27.8</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>131</b>	<b>ND</b>	<b>ND</b>		



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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-28-10 Lab ID: 0110212-06 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 3.5" Hg Canister #: 5123 Received: 11/02/10 13:32  
 Comments: Dup1 Site 4 Analyzed: 11/03/10 09:55

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.87	0.94	1.07		0.380
Ethane	21.1	10.60	13.00		0.120
Propane	21.7	7.23	13.10		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	32.8	8.20	19.50		0.130
Isobutene/1-Butene	4.85	1.21	2.79		0.150
n-Butane	125	31.30	74.40	E	0.170
trans-2-Butene	3.33	0.83	1.91		0.140
cis-2-Butene	2.31	0.58	1.33		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	114	22.80	67.40	E	0.190
1-Pentene	2.05	0.41	1.18		0.120
2-Methyl-1-butene	2.86	0.57	1.64		0.240
n-Pentane	46.3	9.26	27.40		0.0900
Isoprene	0.130	0.03	0.07	U	0.240
trans-2-Pentene	5.62	1.12	3.23		0.140
cis-2-Pentene	2.69	0.54	1.55		0.190
2-Methyl-2-butene	7.44	1.49	4.28		0.240
2,2-Dimethylbutane	3.03	0.51	1.78		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.489	0.08	0.28		0.360
Cyclopentane	4.00	0.80	2.30		0.120
2,3-Dimethylbutane	10.6	1.77	6.24		0.200
2-Methylpentane	26.0	4.33	15.30		0.140
3-Methylpentane	15.6	2.60	9.18		0.200
2-Methyl-1-pentene	0.562	0.09	0.32		0.360
1-Hexene	0.543	0.09	0.31		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	14.4	2.40	8.48		0.240
trans-2-Hexene	1.49	0.25	0.86		0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	9.30	1.55	5.35		0.140
2,4-Dimethylpentane	4.17	0.60	2.45		0.230
Cyclohexane	2.84	0.47	1.63		0.190
2-Methylhexane	5.28	0.75	3.10		0.110
2,3-Dimethylpentane	3.44	0.49	2.02		0.370
3-Methylhexane	5.78	0.83	3.39		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	16.5	2.06	9.66		0.170

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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-28-10 Lab ID: 0110212-06 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 3.5" Hg Canister #: 5123 Received: 11/02/10 13:32  
 Comments: Dup1 Site 4 Analyzed: 11/03/10 09:55

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	3.64	0.52	2.14		0.180
Methylcyclohexane	2.92	0.42	1.68		0.190
2,2,3-Trimethylpentane	2.72	0.34	1.59		0.280
2,3,4-Trimethylpentane	3.55	0.44	2.08		0.140
2-Methylheptane	1.05	0.13	0.61		0.170
3-Methylheptane	0.889	0.11	0.52		0.110
1-Octene	0.169	0.02	0.10	U	0.280
1-Nonene	0.169	0.02	0.10	U	0.240
n-Nonane	0.529	0.06	0.31		0.180
Isopropylbenzene	ND	ND	ND	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	0.199	0.02	0.11	U	0.200
m-Ethyltoluene	0.454	0.05	0.25		0.150
p-Ethyltoluene	0.256	0.03	0.14		0.240
1,3,5-Trimethylbenzene	0.362	0.04	0.20		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	0.191	0.02	0.13	U	0.240
1,2,4-Trimethylbenzene	0.712	0.08	0.39		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.894	0.09	0.52		0.230
1,2,3-Trimethylbenzene	0.141	0.02	0.08	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.589	0.05	0.34		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.248	0.02	0.14	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>559</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>76.8</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>636</b>	<b>ND</b>	<b>ND</b>		





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City of Fort Worth  
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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-D-10-28-10 Lab ID: 0110212-07 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 3.5" Hg Canister #: 5001 Received: 11/02/10 13:32  
 Comments: Dup2 Site 4 Analyzed: 11/03/10 10:56

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.86	0.93	1.07		0.380
Ethane	21.1	10.60	13.00		0.120
Propane	21.8	7.27	13.10		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	33.2	8.30	19.80		0.130
Isobutene/1-Butene	5.40	1.35	3.10		0.150
n-Butane	127	31.80	75.60	E	0.170
trans-2-Butene	3.98	1.00	2.29		0.140
cis-2-Butene	2.75	0.69	1.58		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	115	23.00	68.00	E	0.190
1-Pentene	2.16	0.43	1.24		0.120
2-Methyl-1-butene	4.23	0.85	2.43		0.240
n-Pentane	46.8	9.36	27.70		0.0900
Isoprene	0.209	0.04	0.12	U	0.240
trans-2-Pentene	6.63	1.33	3.81		0.140
cis-2-Pentene	3.21	0.64	1.85		0.190
2-Methyl-2-butene	8.10	1.62	4.66		0.240
2,2-Dimethylbutane	3.12	0.52	1.84		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.553	0.09	0.32		0.360
Cyclopentane	4.02	0.80	2.31		0.120
2,3-Dimethylbutane	10.9	1.82	6.42		0.200
2-Methylpentane	27.5	4.58	16.20		0.140
3-Methylpentane	16.0	2.67	9.42		0.200
2-Methyl-1-pentene	1.23	0.21	0.71		0.360
1-Hexene	0.459	0.08	0.26		0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	15.2	2.53	8.95		0.240
trans-2-Hexene	1.39	0.23	0.80		0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	9.63	1.61	5.54		0.140
2,4-Dimethylpentane	4.05	0.58	2.38		0.230
Cyclohexane	2.94	0.49	1.69		0.190
2-Methylhexane	5.49	0.78	3.22		0.110
2,3-Dimethylpentane	3.71	0.53	2.18		0.370
3-Methylhexane	6.03	0.86	3.54		0.150
1-Heptene	ND	ND	ND	U	0.370
2,2,4-Trimethylpentane	16.7	2.09	9.77		0.170

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 AQS SITE CODE:  
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Description: S4-D-10-28-10 Lab ID: 0110212-07 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 3.5" Hg Canister #: 5001 Received: 11/02/10 13:32  
 Comments: Dup2 Site 4 Analyzed: 11/03/10 10:56

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
n-Heptane	3.98	0.57	2.34		0.180
Methylcyclohexane	3.54	0.51	2.04		0.190
2,2,3-Trimethylpentane	2.61	0.33	1.53		0.280
2,3,4-Trimethylpentane	3.48	0.44	2.04		0.140
2-Methylheptane	1.15	0.14	0.67		0.170
3-Methylheptane	0.978	0.12	0.57		0.110
1-Octene	0.261	0.03	0.15	U	0.280
1-Nonene	0.154	0.02	0.09	U	0.240
n-Nonane	0.746	0.08	0.44		0.180
Isopropylbenzene	0.104	0.01	0.06	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	0.247	0.03	0.14		0.200
m-Ethyltoluene	0.553	0.06	0.30		0.150
p-Ethyltoluene	0.369	0.04	0.20		0.240
1,3,5-Trimethylbenzene	0.516	0.06	0.28		0.170
o-Ethyltoluene	0.235	0.03	0.13		0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.842	0.09	0.46		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	1.54	0.15	0.90		0.230
1,2,3-Trimethylbenzene	0.255	0.03	0.14		0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.984	0.09	0.57		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.476	0.04	0.28		0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	578	ND	ND		
Sum of Unknowns	84.8	ND	ND		
TNMOC	663	ND	ND		



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 AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-31-10 Lab ID: 0110212-08 Sampled: 10/31/10 23:59  
 Pressure @ Receipt: 10" Hg Canister #: 5083 Received: 11/02/10 13:32  
 Comments: Site 4 Analyzed: 11/03/10 23:19

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	2.13	1.07	1.22		0.380
Ethane	21.8	10.90	13.40		0.120
Propane	10.9	3.63	6.57		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	3.13	0.78	1.86		0.130
Isobutene/1-Butene	0.822	0.21	0.47		0.150
n-Butane	11.9	2.98	7.09		0.170
trans-2-Butene	0.252	0.06	0.15		0.140
cis-2-Butene	0.291	0.07	0.17		0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	11.4	2.28	6.74		0.190
1-Pentene	0.363	0.07	0.21		0.120
2-Methyl-1-butene	0.483	0.10	0.28		0.240
n-Pentane	5.02	1.00	2.97		0.0900
Isoprene	0.305	0.06	0.17		0.240
trans-2-Pentene	0.634	0.13	0.36		0.140
cis-2-Pentene	0.367	0.07	0.21		0.190
2-Methyl-2-butene	0.707	0.14	0.41		0.240
2,2-Dimethylbutane	0.570	0.10	0.34		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	0.203	0.03	0.12	U	0.360
Cyclopentane	0.534	0.11	0.31		0.120
2,3-Dimethylbutane	1.17	0.20	0.69		0.200
2-Methylpentane	3.62	0.60	2.13		0.140
3-Methylpentane	1.86	0.31	1.09		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.326	0.05	0.19	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.61	0.27	0.95		0.240
trans-2-Hexene	0.112	0.02	0.06	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	1.13	0.19	0.65		0.140
2,4-Dimethylpentane	0.512	0.07	0.30		0.230
Cyclohexane	0.456	0.08	0.26		0.190
2-Methylhexane	0.903	0.13	0.53		0.110
2,3-Dimethylpentane	0.841	0.12	0.49		0.370
3-Methylhexane	1.15	0.16	0.68		0.150
1-Heptene	ND	ND	ND	U	0.370

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City of Fort Worth  
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FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S4-P-10-31-10 Lab ID: 0110212-08 Sampled: 10/31/10 23:59  
 Pressure @ Receipt: 10" Hg Canister #: 5083 Received: 11/02/10 13:32  
 Comments: Site 4 Analyzed: 11/03/10 23:19

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
2,2,4-Trimethylpentane	2.13	0.27	1.25		0.170
n-Heptane	0.615	0.09	0.36		0.180
Methylcyclohexane	0.743	0.11	0.43		0.190
2,2,3-Trimethylpentane	0.356	0.04	0.21		0.280
2,3,4-Trimethylpentane	0.650	0.08	0.38		0.140
2-Methylheptane	0.344	0.04	0.20		0.170
3-Methylheptane	0.266	0.03	0.16		0.110
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.401	0.04	0.23		0.180
Isopropylbenzene	0.111	0.01	0.07	U	0.210
a-Pinene	0.150	0.02	0.11	U	0.240
n-Propylbenzene	0.191	0.02	0.11	U	0.200
m-Ethyltoluene	0.338	0.04	0.19		0.150
p-Ethyltoluene	0.245	0.03	0.13		0.240
1,3,5-Trimethylbenzene	0.316	0.04	0.17		0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.436	0.05	0.24		0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.636	0.06	0.37		0.230
1,2,3-Trimethylbenzene	0.137	0.02	0.08	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.329	0.03	0.19		0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.159	0.01	0.09	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
SNMOC (Sum of Knowns)	103	ND	ND		
Sum of Unknowns	36.5	ND	ND		
TNMOC	140	ND	ND		



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 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:

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SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-28-10 Lab ID: 0110212-09 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 12" Hg Canister #: 5058 Received: 11/02/10 13:32  
 Comments: Dup1 Site 5 Analyzed: 11/03/10 14:01

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.14	0.57	0.66		0.380
Ethane	30.6	15.30	18.90		0.120
Propane	21.2	7.07	12.80		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	4.23	1.06	2.52		0.130
Isobutene/1-Butene	0.426	0.11	0.25		0.150
n-Butane	11.7	2.93	6.97		0.170
trans-2-Butene	0.104	0.03	0.06	U	0.140
cis-2-Butene	0.147	0.04	0.08	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	4.00	0.80	2.37		0.190
1-Pentene	0.145	0.03	0.08		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	4.08	0.82	2.41		0.0900
Isoprene	0.180	0.04	0.10	U	0.240
trans-2-Pentene	0.122	0.02	0.07	U	0.140
cis-2-Pentene	0.147	0.03	0.08	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.315	0.05	0.19		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.358	0.07	0.21		0.120
2,3-Dimethylbutane	0.372	0.06	0.22		0.200
2-Methylpentane	1.46	0.24	0.86		0.140
3-Methylpentane	0.861	0.14	0.51		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.197	0.03	0.11	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.32	0.22	0.78		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.607	0.10	0.35		0.140
2,4-Dimethylpentane	0.191	0.03	0.11	U	0.230
Cyclohexane	0.550	0.09	0.32		0.190
2-Methylhexane	0.592	0.08	0.35		0.110
2,3-Dimethylpentane	0.589	0.08	0.35		0.370
3-Methylhexane	0.648	0.09	0.38		0.150
1-Heptene	0.203	0.03	0.12	U	0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-28-10 Lab ID: 0110212-09 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 12" Hg Canister #: 5058 Received: 11/02/10 13:32  
 Comments: Dup1 Site 5 Analyzed: 11/03/10 14:01

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.232</b>	<b>0.03</b>	<b>0.14</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.620</b>	<b>0.09</b>	<b>0.36</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.691</b>	<b>0.10</b>	<b>0.40</b>		<b>0.190</b>
2,2,3-Trimethylpentane	ND	ND	ND	U	0.280
2,3,4-Trimethylpentane	0.130	0.02	0.08	U	0.140
<b>2-Methylheptane</b>	<b>0.273</b>	<b>0.03</b>	<b>0.16</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.263</b>	<b>0.03</b>	<b>0.15</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.181</b>	<b>0.02</b>	<b>0.11</b>		<b>0.180</b>
Isopropylbenzene	0.138	0.02	0.09	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	ND	ND	ND	U	0.200
m-Ethyltoluene	ND	ND	ND	U	0.150
p-Ethyltoluene	ND	ND	ND	U	0.240
1,3,5-Trimethylbenzene	ND	ND	ND	U	0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.0880	0.01	0.05	U	0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.116	0.01	0.07	U	0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.0960	0.01	0.06	U	0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	0.0730	0.01	0.04	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>92.7</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>15.5</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>108</b>	<b>ND</b>	<b>ND</b>		



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SITE CODE: Natural Gas Air Quality Study

Description: S5-D-10-28-10 Lab ID: 0110212-10 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 12" Hg Canister #: 5010 Received: 11/02/10 13:32  
 Comments: Dup2 Site 5 Analyzed: 11/03/10 15:04

## Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	1.13	0.57	0.65		0.380
Ethane	30.9	15.50	19.00		0.120
Propane	21.4	7.13	12.90		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	4.33	1.08	2.58		0.130
Isobutene/1-Butene	0.394	0.10	0.23		0.150
n-Butane	12.1	3.03	7.21		0.170
trans-2-Butene	0.122	0.03	0.07	U	0.140
cis-2-Butene	0.118	0.03	0.07	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	4.01	0.80	2.37		0.190
1-Pentene	0.146	0.03	0.08		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	4.20	0.84	2.48		0.0900
Isoprene	0.216	0.04	0.12	U	0.240
trans-2-Pentene	0.108	0.02	0.06	U	0.140
cis-2-Pentene	ND	ND	ND	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.321	0.05	0.19		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.346	0.07	0.20		0.120
2,3-Dimethylbutane	0.363	0.06	0.21		0.200
2-Methylpentane	1.59	0.27	0.94		0.140
3-Methylpentane	0.817	0.14	0.48		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.214	0.04	0.12	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	1.38	0.23	0.81		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.713	0.12	0.41		0.140
2,4-Dimethylpentane	0.191	0.03	0.11	U	0.230
Cyclohexane	0.565	0.09	0.33		0.190
2-Methylhexane	0.578	0.08	0.34		0.110
2,3-Dimethylpentane	0.437	0.06	0.26		0.370
3-Methylhexane	0.584	0.08	0.34		0.150
1-Heptene	0.232	0.03	0.13	U	0.370

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-D-10-28-10 Lab ID: 0110212-10 Sampled: 10/28/10 23:59  
 Pressure @ Receipt: 12" Hg Canister #: 5010 Received: 11/02/10 13:32  
 Comments: Dup2 Site 5 Analyzed: 11/03/10 15:04

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.233</b>	<b>0.03</b>	<b>0.14</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.642</b>	<b>0.09</b>	<b>0.38</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.679</b>	<b>0.10</b>	<b>0.39</b>		<b>0.190</b>
2,2,3-Trimethylpentane	ND	ND	ND	U	0.280
2,3,4-Trimethylpentane	0.129	0.02	0.08	U	0.140
<b>2-Methylheptane</b>	<b>0.264</b>	<b>0.03</b>	<b>0.15</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.187</b>	<b>0.02</b>	<b>0.11</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
<b>n-Nonane</b>	<b>0.185</b>	<b>0.02</b>	<b>0.11</b>		<b>0.180</b>
Isopropylbenzene	0.102	0.01	0.06	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	ND	ND	ND	U	0.200
m-Ethyltoluene	ND	ND	ND	U	0.150
p-Ethyltoluene	ND	ND	ND	U	0.240
1,3,5-Trimethylbenzene	ND	ND	ND	U	0.170
o-Ethyltoluene	ND	ND	ND	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.141	0.02	0.08	U	0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.0990	0.01	0.06	U	0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.103	0.01	0.06	U	0.220
1-Dodecene	ND	ND	ND	U	0.290
n-Dodecane	ND	ND	ND	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>94.0</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>16.9</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>111</b>	<b>ND</b>	<b>ND</b>		

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 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-31-10 Lab ID: 0110212-11 Sampled: 10/31/10 23:59  
 Pressure @ Receipt: 15" Hg Canister #: 5098 Received: 11/02/10 13:32  
 Comments: Site 5 Analyzed: 11/04/10 00:23

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
Ethylene	0.939	0.47	0.54		0.380
Ethane	10.4	5.20	6.41		0.120
Propane	5.24	1.75	3.16		0.200
Propyne	ND	ND	ND	U	0.200
Isobutane	1.41	0.35	0.84		0.130
Isobutene/1-Butene	0.421	0.11	0.24		0.150
n-Butane	2.77	0.69	1.65		0.170
trans-2-Butene	0.0840	0.02	0.05	U	0.140
cis-2-Butene	0.141	0.04	0.08	U	0.180
3-Methyl-1-butene	ND	ND	ND	U	0.240
Isopentane	1.67	0.33	0.99		0.190
1-Pentene	0.136	0.03	0.08		0.120
2-Methyl-1-butene	ND	ND	ND	U	0.240
n-Pentane	1.39	0.28	0.82		0.0900
Isoprene	0.160	0.03	0.09	U	0.240
trans-2-Pentene	0.0980	0.02	0.06	U	0.140
cis-2-Pentene	0.127	0.03	0.07	U	0.190
2-Methyl-2-butene	ND	ND	ND	U	0.240
2,2-Dimethylbutane	0.258	0.04	0.15		0.200
Cyclopentene	ND	ND	ND	U	0.240
4-Methyl-1-pentene	ND	ND	ND	U	0.360
Cyclopentane	0.235	0.05	0.14		0.120
2,3-Dimethylbutane	0.299	0.05	0.18		0.200
2-Methylpentane	0.657	0.11	0.39		0.140
3-Methylpentane	0.414	0.07	0.24		0.200
2-Methyl-1-pentene	ND	ND	ND	U	0.360
1-Hexene	0.175	0.03	0.10	U	0.360
2-Ethyl-1-butene	ND	ND	ND	U	0.360
n-Hexane	0.443	0.07	0.26		0.240
trans-2-Hexene	ND	ND	ND	U	0.360
cis-2-Hexene	ND	ND	ND	U	0.360
Methylcyclopentane	0.227	0.04	0.13		0.140
2,4-Dimethylpentane	0.147	0.02	0.09	U	0.230
Cyclohexane	0.188	0.03	0.11	U	0.190
2-Methylhexane	0.238	0.03	0.14		0.110
2,3-Dimethylpentane	0.290	0.04	0.17	U	0.370
3-Methylhexane	0.320	0.05	0.19		0.150
1-Heptene	ND	ND	ND	U	0.370

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 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Description: S5-P-10-31-10 Lab ID: 0110212-11 Sampled: 10/31/10 23:59  
 Pressure @ Receipt: 15" Hg Canister #: 5098 Received: 11/02/10 13:32  
 Comments: Site 5 Analyzed: 11/04/10 00:23

### Speciated Non-Methane Organic Compounds by GC/FID

Analyte	Results			Flag	MDL
	ppbC	ppbv	ug/m <sup>3</sup>		ppbC
<b>2,2,4-Trimethylpentane</b>	<b>0.370</b>	<b>0.05</b>	<b>0.22</b>		<b>0.170</b>
<b>n-Heptane</b>	<b>0.293</b>	<b>0.04</b>	<b>0.17</b>		<b>0.180</b>
<b>Methylcyclohexane</b>	<b>0.243</b>	<b>0.03</b>	<b>0.14</b>		<b>0.190</b>
2,2,3-Trimethylpentane	ND	ND	ND	U	0.280
2,3,4-Trimethylpentane	0.130	0.02	0.08	U	0.140
<b>2-Methylheptane</b>	<b>0.197</b>	<b>0.02</b>	<b>0.12</b>		<b>0.170</b>
<b>3-Methylheptane</b>	<b>0.128</b>	<b>0.02</b>	<b>0.07</b>		<b>0.110</b>
1-Octene	ND	ND	ND	U	0.280
1-Nonene	ND	ND	ND	U	0.240
n-Nonane	0.152	0.02	0.09	U	0.180
Isopropylbenzene	0.103	0.01	0.06	U	0.210
a-Pinene	ND	ND	ND	U	0.240
n-Propylbenzene	0.117	0.01	0.06	U	0.200
m-Ethyltoluene	0.119	0.01	0.07	U	0.150
p-Ethyltoluene	0.119	0.01	0.07	U	0.240
1,3,5-Trimethylbenzene	0.112	0.01	0.06	U	0.170
o-Ethyltoluene	0.116	0.01	0.06	U	0.180
b-Pinene	ND	ND	ND	U	0.240
1,2,4-Trimethylbenzene	0.209	0.02	0.11	U	0.240
1-Decene	ND	ND	ND	U	0.240
n-Decane	0.155	0.02	0.09	U	0.230
1,2,3-Trimethylbenzene	ND	ND	ND	U	0.170
m-Diethylbenzene	ND	ND	ND	U	0.240
p-Diethylbenzene	ND	ND	ND	U	0.140
1-Undecene	ND	ND	ND	U	0.220
n-Undecane	0.125	0.01	0.07	U	0.220
1-Dodecene	0.0790	0.01	0.05	U	0.290
n-Dodecane	0.112	0.01	0.07	U	0.290
1-Tridecene	ND	ND	ND	U	0.290
n-Tridecane	ND	ND	ND	U	0.290
<b>SNMOC (Sum of Knowns)</b>	<b>35.2</b>	<b>ND</b>	<b>ND</b>		
<b>Sum of Unknowns</b>	<b>14.6</b>	<b>ND</b>	<b>ND</b>		
<b>TNMOC</b>	<b>49.8</b>	<b>ND</b>	<b>ND</b>		



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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I1303 - Summa Canister Prep

Duplicate (B0I1303-DUP1)

Source: 0090906-03

Prepared: 09/07/10 Analyzed: 09/13/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	3.22	ppbC	3.23	0.527	30	
Ethane	8.04	ppbC	8.12	1.04	30	
Propane	8.72	ppbC	8.91	2.11	30	
Propyne	ND	ppbC	ND		30	
Isobutane	1.45	ppbC	1.52	4.58	30	
Isobutene/1-Butene	0.933	ppbC	0.91	2.72	30	
n-Butane	3.68	ppbC	3.92	6.26	30	
trans-2-Butene	0.256	ppbC	0.33	24.7	30	
cis-2-Butene	0.317	ppbC	0.37	16.5	30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	12.5	ppbC	12.60	1.32	30	
1-Pentene	0.442	ppbC	0.46	4.86	30	
2-Methyl-1-butene	0.525	ppbC	0.55	4.10	30	
n-Pentane	5.12	ppbC	5.31	3.61	30	
Isoprene	0.599	ppbC	0.63	4.57	30	
trans-2-Pentene	0.816	ppbC	0.81	1.23	30	
cis-2-Pentene	0.418	ppbC	0.45	7.59	30	
2-Methyl-2-butene	0.821	ppbC	0.83	1.33	30	
2,2-Dimethylbutane	0.497	ppbC	0.57	13.7	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	0.526	ppbC	0.54	1.88	30	
2,3-Dimethylbutane	1.25	ppbC	1.34	7.25	30	
2-Methylpentane	4.65	ppbC	4.70	1.07	30	
3-Methylpentane	1.91	ppbC	2.02	5.55	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	1.78	ppbC	1.86	4.18	30	
trans-2-Hexene	ND	ppbC	ND		30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	1.58	ppbC	1.64	3.60	30	
2,4-Dimethylpentane	0.571	ppbC	0.65	13.6	30	
Cyclohexane	0.890	ppbC	0.99	10.8	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I1303 - Summa Canister Prep

Duplicate (B0I1303-DUP1) Continued

Source: 0090906-03

Prepared: 09/07/10 Analyzed: 09/13/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
2-Methylhexane	0.856	ppbC	0.98	13.2	30	
2,3-Dimethylpentane	1.23	ppbC	0.66	60.7	30	
3-Methylhexane	1.58	ppbC	1.71	7.54	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	3.00	ppbC	2.94	2.15	30	
n-Heptane	0.588	ppbC	0.69	15.5	30	
Methylcyclohexane	0.915	ppbC	1.01	10.3	30	
2,2,3-Trimethylpentane	0.535	ppbC	0.54	0.187	30	
2,3,4-Trimethylpentane	0.906	ppbC	0.92	1.97	30	
2-Methylheptane	0.352	ppbC	0.40	12.8	30	
3-Methylheptane	0.279	ppbC	0.30	8.58	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.289	ppbC	0.30	4.07	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	ND	ppbC	ND		30	
m-Ethyltoluene	0.360	ppbC	0.35	4.26	30	
p-Ethyltoluene	ND	ppbC	ND		30	
1,3,5-Trimethylbenzene	0.309	ppbC	0.34	8.67	30	
o-Ethyltoluene	ND	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.475	ppbC	0.47	0.422	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.369	ppbC	0.40	7.06	30	
1,2,3-Trimethylbenzene	0.214	ppbC	ND		30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.509	ppbC	0.52	1.17	30	
1-Dodecene	0.581	ppbC	0.87	40.1	30	
n-Dodecane	0.365	ppbC	0.35	3.34	30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B011303 - Summa Canister Prep

### Duplicate (B011303-DUP1) Continued

Source: 0090906-03

Prepared: 09/07/10 Analyzed: 09/13/10

SNMOC (Sum of Knowns)	76.4	ppbC	78.60	2.75		
Sum of Unknowns	100	ppbC	102.00	1.29	30	
TNMOC	177	ppbC	180.00	1.93		

### Duplicate (B011303-DUP2)

Source: 0090906-04

Prepared: 09/07/10 Analyzed: 09/13/10

Ethylene	3.05	ppbC	3.07	0.588	30	
Ethane	8.02	ppbC	8.02	0.0125	30	
Propane	8.74	ppbC	8.76	0.240	30	
Propyne	ND	ppbC	ND		30	
Isobutane	1.45	ppbC	1.45	0.276	30	
Isobutene/1-Butene	0.836	ppbC	0.84	0.120	30	
n-Butane	3.76	ppbC	3.78	0.530	30	
trans-2-Butene	0.240	ppbC	0.26	9.15	30	
cis-2-Butene	0.307	ppbC	0.35	13.9	30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	12.1	ppbC	12.10	0.0495	30	
1-Pentene	0.434	ppbC	0.42	3.52	30	
2-Methyl-1-butene	0.538	ppbC	0.55	1.66	30	
n-Pentane	5.14	ppbC	5.12	0.468	30	
Isoprene	0.556	ppbC	0.64	14.7	30	
trans-2-Pentene	0.720	ppbC	0.77	6.84	30	
cis-2-Pentene	0.400	ppbC	0.43	7.46	30	
2-Methyl-2-butene	0.796	ppbC	0.79	0.630	30	
2,2-Dimethylbutane	0.529	ppbC	0.48	10.8	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	0.550	ppbC	0.49	11.9	30	
2,3-Dimethylbutane	1.25	ppbC	1.26	0.718	30	
2-Methylpentane	3.70	ppbC	3.73	0.861	30	
3-Methylpentane	1.88	ppbC	1.91	1.43	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	1.79	ppbC	1.82	2.10	30	
trans-2-Hexene	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I1303 - Summa Canister Prep

Duplicate (B0I1303-DUP2) Continued

Source: 0090906-04

Prepared: 09/07/10 Analyzed: 09/13/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	1.42	ppbC	1.47	3.66	30	
2,4-Dimethylpentane	0.546	ppbC	0.61	10.9	30	
Cyclohexane	0.465	ppbC	0.51	9.62	30	
2-Methylhexane	0.887	ppbC	0.95	6.96	30	
2,3-Dimethylpentane	1.00	ppbC	1.18	16.1	30	
3-Methylhexane	1.82	ppbC	1.95	7.07	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	2.79	ppbC	2.89	3.24	30	
n-Heptane	0.620	ppbC	0.67	7.90	30	
Methylcyclohexane	0.798	ppbC	0.88	10.2	30	
2,2,3-Trimethylpentane	0.623	ppbC	0.50	22.1	30	
2,3,4-Trimethylpentane	0.881	ppbC	0.92	4.76	30	
2-Methylheptane	0.291	ppbC	0.31	6.64	30	
3-Methylheptane	0.333	ppbC	0.25	28.5	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.311	ppbC	0.28	10.8	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	0.375	ppbC	0.38	1.85	30	
n-Propylbenzene	0.215	ppbC	0.22	2.30	30	
m-Ethyltoluene	0.306	ppbC	0.30	0.656	30	
p-Ethyltoluene	0.269	ppbC	0.24	11.4	30	
1,3,5-Trimethylbenzene	0.321	ppbC	0.32	0.939	30	
o-Ethyltoluene	ND	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.492	ppbC	0.48	2.89	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.422	ppbC	0.36	16.7	30	
1,2,3-Trimethylbenzene	0.170	ppbC	ND		30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	0.201	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.595	ppbC	0.59	0.844	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I1303 - Summa Canister Prep

### Duplicate (B0I1303-DUP2) Continued

Source: 0090906-04

Prepared: 09/07/10 Analyzed: 09/13/10

1-Dodecene	1.36	ppbC	2.25	49.7	30	
n-Dodecene	0.485	ppbC	0.57	16.8	30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecene	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	75.4	ppbC	76.80	1.89		
Sum of Unknowns	68.1	ppbC	68.80	1.08	30	
TNMOC	143	ppbC	146.00	1.51		

### Duplicate (B0I1303-DUP3)

Source: 0090906-05

Prepared: 09/07/10 Analyzed: 09/14/10

Ethylene	1.94	ppbC	1.99	2.55	30	
Ethane	8.89	ppbC	9.01	1.36	30	
Propane	4.73	ppbC	4.77	0.905	30	
Propyne	ND	ppbC	ND		30	
Isobutane	1.70	ppbC	1.69	0.355	30	
Isobutene/1-Butene	0.562	ppbC	0.57	1.94	30	
n-Butane	6.39	ppbC	6.59	3.03	30	
trans-2-Butene	ND	ppbC	ND		30	
cis-2-Butene	ND	ppbC	ND		30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	1.52	ppbC	1.55	2.09	30	
1-Pentene	0.237	ppbC	0.25	4.13	30	
2-Methyl-1-butene	ND	ppbC	ND		30	
n-Pentane	1.43	ppbC	1.63	12.9	30	
Isoprene	0.477	ppbC	0.52	7.85	30	
trans-2-Pentene	0.146	ppbC	0.15	4.03	30	
cis-2-Pentene	ND	ppbC	ND		30	
2-Methyl-2-butene	ND	ppbC	ND		30	
2,2-Dimethylbutane	0.363	ppbC	0.29	24.1	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	0.272	ppbC	0.19	36.0	30	
2,3-Dimethylbutane	0.319	ppbC	0.31	2.22	30	
2-Methylpentane	ND	ppbC	ND		30	
3-Methylpentane	0.543	ppbC	0.51	6.46	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I1303 - Summa Canister Prep

Duplicate (B0I1303-DUP3) Continued

Source: 0090906-05

Prepared: 09/07/10 Analyzed: 09/14/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	0.572	ppbC	0.57	0.702	30	
trans-2-Hexene	ND	ppbC	ND		30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	0.451	ppbC	0.45	0.663	30	
2,4-Dimethylpentane	ND	ppbC	ND		30	
Cyclohexane	0.254	ppbC	0.24	7.35	30	
2-Methylhexane	0.359	ppbC	0.45	22.1	30	
2,3-Dimethylpentane	0.475	ppbC	0.66	31.9	30	
3-Methylhexane	0.729	ppbC	0.86	16.0	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	0.594	ppbC	0.57	3.60	30	
n-Heptane	0.308	ppbC	0.31	1.29	30	
Methylcyclohexane	0.405	ppbC	0.36	11.5	30	
2,2,3-Trimethylpentane	ND	ppbC	ND		30	
2,3,4-Trimethylpentane	0.250	ppbC	0.28	11.7	30	
2-Methylheptane	0.224	ppbC	0.24	8.55	30	
3-Methylheptane	0.161	ppbC	0.20	22.6	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.250	ppbC	0.23	8.33	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	0.697	ppbC	0.74	5.31	30	
n-Propylbenzene	ND	ppbC	ND		30	
m-Ethyltoluene	0.263	ppbC	0.31	16.7	30	
p-Ethyltoluene	ND	ppbC	ND		30	
1,3,5-Trimethylbenzene	ND	ppbC	0.20		30	
o-Ethyltoluene	ND	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.265	ppbC	0.29	9.01	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.317	ppbC	0.33	3.41	30	
1,2,3-Trimethylbenzene	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B011303 - Summa Canister Prep

### Duplicate (B011303-DUP3) Continued

Source: 0090906-05

Prepared: 09/07/10 Analyzed: 09/14/10

m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	0.212	ppbC	0.19	9.90	30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.473	ppbC	0.44	7.91	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	0.353	ppbC	0.34	4.64	30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	39.7	ppbC	40.70	2.41		
Sum of Unknowns	76.1	ppbC	75.50	0.726	30	
TNMOCC	116	ppbC	116.00	0.362		

### Duplicate (B011303-DUP4)

Source: 0090906-06

Prepared: 09/07/10 Analyzed: 09/14/10

Ethylene	1.81	ppbC	1.74	3.94	30	
Ethane	8.94	ppbC	9.12	1.98	30	
Propane	4.82	ppbC	4.79	0.687	30	
Propyne	ND	ppbC	ND		30	
Isobutane	1.66	ppbC	1.72	3.91	30	
Isobutene/1-Butene	0.530	ppbC	0.55	3.52	30	
n-Butane	1.92	ppbC	1.88	1.58	30	
trans-2-Butene	ND	ppbC	ND		30	
cis-2-Butene	ND	ppbC	ND		30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	1.58	ppbC	1.57	0.571	30	
1-Pentene	0.176	ppbC	0.18	1.13	30	
2-Methyl-1-butene	ND	ppbC	ND		30	
n-Pentane	1.38	ppbC	1.40	1.66	30	
Isoprene	0.502	ppbC	0.46	8.73	30	
trans-2-Pentene	0.155	ppbC	ND		30	
cis-2-Pentene	ND	ppbC	ND		30	
2-Methyl-2-butene	ND	ppbC	ND		30	
2,2-Dimethylbutane	0.286	ppbC	0.26	10.3	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	0.237	ppbC	0.21	10.2	30	

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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I1303 - Summa Canister Prep

Duplicate (B0I1303-DUP4) Continued

Source: 0090906-06

Prepared: 09/07/10 Analyzed: 09/14/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
2,3-Dimethylbutane	0.304	ppbC	0.31	0.328	30	
2-Methylpentane	0.759	ppbC	0.70	7.80	30	
3-Methylpentane	0.610	ppbC	0.58	5.73	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	0.517	ppbC	0.52	0.193	30	
trans-2-Hexene	ND	ppbC	ND		30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	0.459	ppbC	0.42	8.40	30	
2,4-Dimethylpentane	ND	ppbC	ND		30	
Cyclohexane	0.292	ppbC	0.27	7.09	30	
2-Methylhexane	0.423	ppbC	0.33	24.1	30	
2,3-Dimethylpentane	0.870	ppbC	0.70	21.7	30	
3-Methylhexane	0.762	ppbC	0.79	3.61	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	0.585	ppbC	0.61	3.36	30	
n-Heptane	0.294	ppbC	0.26	11.1	30	
Methylcyclohexane	0.489	ppbC	0.43	13.5	30	
2,2,3-Trimethylpentane	ND	ppbC	ND		30	
2,3,4-Trimethylpentane	0.196	ppbC	0.20	2.02	30	
2-Methylheptane	0.335	ppbC	0.29	15.4	30	
3-Methylheptane	0.146	ppbC	0.15	1.36	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.232	ppbC	0.27	16.2	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	0.713	ppbC	0.69	3.42	30	
n-Propylbenzene	ND	ppbC	ND		30	
m-Ethyltoluene	0.289	ppbC	0.29	0.00	30	
p-Ethyltoluene	ND	ppbC	ND		30	
1,3,5-Trimethylbenzene	0.178	ppbC	0.17	3.43	30	
o-Ethyltoluene	ND	ppbC	0.21		30	
b-Pinene	0.269	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I1303 - Summa Canister Prep

**Duplicate (B0I1303-DUP4) Continued**

**Source: 0090906-06**

Prepared: 09/07/10 Analyzed: 09/14/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
1,2,4-Trimethylbenzene	0.308	ppbC	0.24	23.2	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	ND	ppbC	ND		30	
1,2,3-Trimethylbenzene	ND	ppbC	ND		30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	0.222	ppbC	0.25	10.7	30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.480	ppbC	0.41	15.7	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	0.349	ppbC	0.36	2.82	30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	36.4	ppbC	35.70	1.75		
Sum of Unknowns	52.1	ppbC	52.70	1.18	30	
TNMOC	88.5	ppbC	88.40	0.0226		

Batch B0I2404 - Summa Canister Prep

**Duplicate (B0I2404-DUP1)**

**Source: 0092120-09**

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	3.25	ppbC	3.21	1.33	30	
Ethane	40.6	ppbC	41.10	1.13	30	
Propane	41.2	ppbC	41.50	0.631	30	
Propyne	ND	ppbC	ND		30	
Isobutane	5.93	ppbC	5.87	1.03	30	
Isobutene/1-Butene	1.36	ppbC	1.31	3.53	30	
n-Butane	20.7	ppbC	20.50	0.729	30	
trans-2-Butene	0.702	ppbC	0.71	1.69	30	
cis-2-Butene	0.749	ppbC	0.69	7.77	30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	59.7	ppbC	59.30	0.607	30	
1-Pentene	1.57	ppbC	1.66	5.63	30	
2-Methyl-1-butene	2.66	ppbC	2.57	3.44	30	
n-Pentane	24.8	ppbC	24.30	1.98	30	
Isoprene	1.12	ppbC	1.11	1.35	30	
trans-2-Pentene	3.54	ppbC	3.47	2.08	30	
cis-2-Pentene	1.87	ppbC	1.76	6.44	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I2404 - Summa Canister Prep

Duplicate (B0I2404-DUP1) Continued

Source: 0092120-09

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
2-Methyl-2-butene	4.31	ppbC	4.12	4.60	30	
2,2-Dimethylbutane	1.82	ppbC	1.78	1.78	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	0.421	ppbC	ND		30	
Cyclopentane	2.06	ppbC	2.03	1.66	30	
2,3-Dimethylbutane	5.83	ppbC	5.71	2.10	30	
2-Methylpentane	15.9	ppbC	15.50	2.49	30	
3-Methylpentane	9.06	ppbC	8.82	2.76	30	
2-Methyl-1-pentene	0.569	ppbC	0.56	2.49	30	
1-Hexene	0.476	ppbC	0.41	15.9	30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	8.73	ppbC	8.55	2.08	30	
trans-2-Hexene	0.661	ppbC	0.68	2.10	30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	5.25	ppbC	5.22	0.554	30	
2,4-Dimethylpentane	2.42	ppbC	2.42	0.0413	30	
Cyclohexane	1.77	ppbC	1.80	1.34	30	
2-Methylhexane	3.26	ppbC	3.39	3.94	30	
2,3-Dimethylpentane	2.70	ppbC	2.94	8.40	30	
3-Methylhexane	3.80	ppbC	3.84	0.943	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	10.1	ppbC	9.94	1.96	30	
n-Heptane	2.17	ppbC	2.13	2.04	30	
Methylcyclohexane	2.27	ppbC	2.20	3.13	30	
2,2,3-Trimethylpentane	1.73	ppbC	1.68	2.70	30	
2,3,4-Trimethylpentane	2.40	ppbC	2.32	3.14	30	
2-Methylheptane	0.952	ppbC	0.91	4.07	30	
3-Methylheptane	0.721	ppbC	0.70	3.10	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.451	ppbC	0.42	7.36	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	0.535	ppbC	0.58	7.38	30	
n-Propylbenzene	0.271	ppbC	0.27	0.741	30	

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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I2404 - Summa Canister Prep

### Duplicate (B0I2404-DUP1) Continued

Source: 0092120-09

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
m-Ethyltoluene	0.681	ppbC	0.63	7.62	30	
p-Ethyltoluene	0.431	ppbC	0.39	10.8	30	
1,3,5-Trimethylbenzene	0.480	ppbC	0.46	5.13	30	
o-Ethyltoluene	0.251	ppbC	0.28	10.9	30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.963	ppbC	0.86	11.3	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.514	ppbC	0.50	3.77	30	
1,2,3-Trimethylbenzene	0.261	ppbC	0.20	26.0	30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.479	ppbC	0.45	7.14	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	0.352	ppbC	0.33	5.85	30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	326	ppbC	323.00	1.02		
Sum of Unknowns	72.6	ppbC	74.80	2.96	30	
TNMOC	399	ppbC	397.00	0.284		

### Duplicate (B0I2404-DUP2)

Source: 0092120-10

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	3.29	ppbC	3.37	2.43	30	
Ethane	40.8	ppbC	40.90	0.259	30	
Propane	41.3	ppbC	41.60	0.596	30	
Propyne	ND	ppbC	ND		30	
Isobutane	5.92	ppbC	5.88	0.644	30	
Isobutene/1-Butene	1.37	ppbC	1.39	1.74	30	
n-Butane	20.7	ppbC	20.90	0.726	30	
trans-2-Butene	0.702	ppbC	0.73	3.64	30	
cis-2-Butene	0.801	ppbC	0.74	8.05	30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	58.9	ppbC	59.20	0.571	30	
1-Pentene	1.65	ppbC	1.56	5.86	30	
2-Methyl-1-butene	2.56	ppbC	2.64	3.03	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I2404 - Summa Canister Prep

Duplicate (B0I2404-DUP2) Continued

Source: 0092120-10

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
n-Pentane	24.5	ppbC	24.70	0.813	30	
Isoprene	1.06	ppbC	1.13	6.03	30	
trans-2-Pentene	3.48	ppbC	3.54	1.51	30	
cis-2-Pentene	1.84	ppbC	1.83	0.218	30	
2-Methyl-2-butene	4.19	ppbC	4.26	1.66	30	
2,2-Dimethylbutane	1.81	ppbC	1.79	1.06	30	
Cyclopentene	ND	ppbC	ND		30	I
4-Methyl-1-pentene	ND	ppbC	ND		30	I
Cyclopentane	2.05	ppbC	2.03	1.03	30	
2,3-Dimethylbutane	5.79	ppbC	5.83	0.637	30	
2-Methylpentane	15.7	ppbC	15.90	1.70	30	
3-Methylpentane	8.94	ppbC	9.17	2.55	30	
2-Methyl-1-pentene	0.560	ppbC	0.55	2.17	30	
1-Hexene	0.459	ppbC	0.42	8.16	30	
2-Ethyl-1-butene	ND	ppbC	ND		30	I
n-Hexane	8.77	ppbC	8.90	1.49	30	
trans-2-Hexene	0.658	ppbC	0.68	2.55	30	
cis-2-Hexene	ND	ppbC	ND		30	I
Methylcyclopentane	5.30	ppbC	5.42	2.28	30	
2,4-Dimethylpentane	2.38	ppbC	2.49	4.27	30	
Cyclohexane	1.76	ppbC	1.80	2.42	30	
2-Methylhexane	3.40	ppbC	3.52	3.44	30	
2,3-Dimethylpentane	2.76	ppbC	2.86	3.70	30	
3-Methylhexane	4.41	ppbC	4.44	0.610	30	
1-Heptene	ND	ppbC	ND		30	I
2,2,4-Trimethylpentane	10.0	ppbC	10.60	5.28	30	
n-Heptane	2.26	ppbC	2.25	0.398	30	
Methylcyclohexane	2.24	ppbC	1.98	12.7	30	
2,2,3-Trimethylpentane	1.60	ppbC	1.94	19.8	30	
2,3,4-Trimethylpentane	2.46	ppbC	2.51	1.73	30	
2-Methylheptane	0.994	ppbC	0.95	5.05	30	
3-Methylheptane	0.759	ppbC	0.75	1.46	30	
1-Octene	ND	ppbC	ND		30	I
1-Nonene	ND	ppbC	ND		30	I

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I2404 - Summa Canister Prep

### Duplicate (B0I2404-DUP2) Continued

Source: 0092120-10

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
n-Nonane	0.502	ppbC	0.44	12.3	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	0.596	ppbC	0.59	1.18	30	
n-Propylbenzene	0.301	ppbC	0.29	2.69	30	
m-Ethyltoluene	0.676	ppbC	0.65	4.54	30	
p-Ethyltoluene	0.453	ppbC	0.46	1.97	30	
1,3,5-Trimethylbenzene	0.499	ppbC	0.48	3.47	30	
o-Ethyltoluene	0.326	ppbC	0.31	4.07	30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	1.02	ppbC	1.00	1.58	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.548	ppbC	0.44	22.8	30	
1,2,3-Trimethylbenzene	0.216	ppbC	0.31	35.7	30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.522	ppbC	0.44	16.1	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	0.350	ppbC	0.30	17.1	30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	326	ppbC	328.00	0.547		
Sum of Unknowns	77.7	ppbC	78.20	0.628	30	
TNMOC	404	ppbC	406.00	0.563		

### Duplicate (B0I2404-DUP3)

Source: 0092120-15

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	3.20	ppbC	3.13	2.46	30	
Ethane	33.9	ppbC	33.90	0.118	30	
Propane	15.7	ppbC	15.80	0.445	30	
Propyne	ND	ppbC	ND		30	
Isobutane	4.47	ppbC	4.52	1.02	30	
Isobutene/1-Butene	0.735	ppbC	0.65	11.7	30	
n-Butane	ND	ppbC	ND		30	A-01, I
trans-2-Butene	ND	ppbC	ND		30	
cis-2-Butene	0.185	ppbC	ND		30	

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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I2404 - Summa Canister Prep

Duplicate (B0I2404-DUP3) Continued

Source: 0092120-15

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	3.72	ppbC	3.66	1.57	30	
1-Pentene	0.230	ppbC	0.22	5.82	30	
2-Methyl-1-butene	ND	ppbC	ND		30	
n-Pentane	3.12	ppbC	3.20	2.72	30	
Isoprene	0.675	ppbC	0.74	8.92	30	
trans-2-Pentene	0.239	ppbC	0.26	8.03	30	
cis-2-Pentene	ND	ppbC	ND		30	
2-Methyl-2-butene	ND	ppbC	ND		30	
2,2-Dimethylbutane	0.341	ppbC	0.35	3.17	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	0.286	ppbC	0.29	2.08	30	
2,3-Dimethylbutane	0.455	ppbC	0.47	3.46	30	
2-Methylpentane	3.18	ppbC	3.21	0.783	30	
3-Methylpentane	0.972	ppbC	0.91	6.81	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	0.362	ppbC	0.48	27.8	30	
n-Hexane	1.22	ppbC	1.15	5.93	30	
trans-2-Hexene	ND	ppbC	ND		30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	1.73	ppbC	1.64	5.28	30	
2,4-Dimethylpentane	0.294	ppbC	0.27	9.25	30	
Cyclohexane	1.53	ppbC	1.58	3.15	30	
2-Methylhexane	0.636	ppbC	0.59	7.00	30	
2,3-Dimethylpentane	1.66	ppbC	1.40	17.2	30	
3-Methylhexane	2.76	ppbC	2.63	4.85	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	0.969	ppbC	1.03	5.91	30	
n-Heptane	0.597	ppbC	0.61	2.15	30	
Methylcyclohexane	0.957	ppbC	0.91	4.60	30	
2,2,3-Trimethylpentane	0.296	ppbC	ND		30	
2,3,4-Trimethylpentane	0.456	ppbC	0.29	44.5	30	

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City of Fort Worth  
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 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I2404 - Summa Canister Prep

### Duplicate (B0I2404-DUP3) Continued

Source: 0092120-15

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
2-Methylheptane	0.404	ppbC	0.36	11.2	30	
3-Methylheptane	0.279	ppbC	0.23	21.0	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.295	ppbC	0.27	10.3	30	
Isopropylbenzene	0.265	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	0.242	ppbC	0.22	7.73	30	
m-Ethyltoluene	0.475	ppbC	0.44	8.56	30	
p-Ethyltoluene	0.274	ppbC	ND		30	
1,3,5-Trimethylbenzene	0.381	ppbC	0.27	34.8	30	
o-Ethyltoluene	ND	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.374	ppbC	0.31	20.3	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.320	ppbC	0.29	10.9	30	
1,2,3-Trimethylbenzene	0.413	ppbC	0.37	10.4	30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.344	ppbC	0.37	6.20	30	
1-Dodecene	0.292	ppbC	ND		30	
n-Dodecane	0.358	ppbC	0.31	14.4	30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	99.0	ppbC	97.70	1.27		
Sum of Unknowns	129	ppbC	123.00	4.24	30	
TNMOC	227	ppbC	221.00	2.94		

### Duplicate (B0I2404-DUP4)

Source: 0092120-16

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	2.30	ppbC	2.25	2.46	30	
Ethane	32.7	ppbC	32.90	0.494	30	
Propane	14.7	ppbC	14.70	0.0407	30	
Propyne	ND	ppbC	ND		30	
Isobutane	3.18	ppbC	3.15	1.14	30	

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AQS SITE CODE:

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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### Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I2404 - Summa Canister Prep

Duplicate (B0I2404-DUP4) Continued

Source: 0092120-16

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Isobutene/1-Butene	0.648	ppbC	0.64	1.71	30	
n-Butane	ND	ppbC	ND		30	A-01, I
trans-2-Butene	ND	ppbC	ND		30	I
cis-2-Butene	0.214	ppbC	0.20	6.76	30	
3-Methyl-1-butene	ND	ppbC	ND		30	I
Isopentane	3.47	ppbC	3.46	0.491	30	
1-Pentene	0.214	ppbC	0.18	18.9	30	
2-Methyl-1-butene	ND	ppbC	ND		30	I
n-Pentane	2.64	ppbC	2.83	6.91	30	
Isoprene	0.517	ppbC	0.59	13.4	30	
trans-2-Pentene	0.185	ppbC	0.26	35.2	30	
cis-2-Pentene	ND	ppbC	ND		30	I
2-Methyl-2-butene	ND	ppbC	ND		30	I
2,2-Dimethylbutane	0.469	ppbC	0.48	1.69	30	
Cyclopentene	ND	ppbC	ND		30	I
4-Methyl-1-pentene	ND	ppbC	ND		30	I
Cyclopentane	0.310	ppbC	0.27	12.3	30	
2,3-Dimethylbutane	0.497	ppbC	0.44	11.3	30	
2-Methylpentane	2.73	ppbC	2.70	1.10	30	
3-Methylpentane	0.922	ppbC	0.95	2.46	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	I
1-Hexene	ND	ppbC	ND		30	I
2-Ethyl-1-butene	ND	ppbC	ND		30	I
n-Hexane	1.17	ppbC	1.21	3.44	30	
trans-2-Hexene	ND	ppbC	ND		30	I
cis-2-Hexene	ND	ppbC	ND		30	I
Methylcyclopentane	1.33	ppbC	1.34	1.05	30	
2,4-Dimethylpentane	0.315	ppbC	0.31	0.957	30	
Cyclohexane	0.482	ppbC	0.49	1.65	30	
2-Methylhexane	0.349	ppbC	0.70	66.8	30	
2,3-Dimethylpentane	1.02	ppbC	1.10	7.43	30	
3-Methylhexane	1.71	ppbC	1.75	2.08	30	
1-Heptene	ND	ppbC	ND		30	I
2,2,4-Trimethylpentane	0.974	ppbC	1.00	2.43	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0I2404 - Summa Canister Prep

Duplicate (B0I2404-DUP4) Continued

Source: 0092120-16

Prepared: 09/19/10 Analyzed: 09/27/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
n-Heptane	0.618	ppbC	0.65	4.28	30	
Methylcyclohexane	0.767	ppbC	0.81	5.70	30	
2,2,3-Trimethylpentane	ND	ppbC	ND		30	
2,3,4-Trimethylpentane	0.373	ppbC	0.37	0.268	30	
2-Methylheptane	0.387	ppbC	0.45	13.9	30	
3-Methylheptane	0.283	ppbC	0.30	5.50	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.259	ppbC	0.28	5.99	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	0.563	ppbC	0.52	7.56	30	
n-Propylbenzene	ND	ppbC	ND		30	
m-Ethyltoluene	0.298	ppbC	0.29	1.69	30	
p-Ethyltoluene	ND	ppbC	ND		30	
1,3,5-Trimethylbenzene	0.203	ppbC	0.18	9.82	30	
o-Ethyltoluene	ND	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.307	ppbC	0.30	2.98	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.242	ppbC	ND		30	
1,2,3-Trimethylbenzene	ND	ppbC	ND		30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.341	ppbC	0.30	13.8	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	ND	ppbC	ND		30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	86.9	ppbC	87.40	0.585		
Sum of Unknowns	72.7	ppbC	72.40	0.455	30	
TNMOC	160	ppbC	160.00	0.113		

Batch B0J0702 - Summa Canister Prep

Duplicate (B0J0702-DUP1)

Source: 0100601-05

Prepared: 10/04/10 Analyzed: 10/07/10

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J0702 - Summa Canister Prep

Duplicate (B0J0702-DUP1) Continued

Source: 0100601-05

Prepared: 10/04/10 Analyzed: 10/07/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	3.44	ppbC	3.44	0.203	30	
Ethane	17.0	ppbC	17.00	0.147	30	
Propane	16.3	ppbC	16.40	0.574	30	
Propyne	ND	ppbC	ND		30	
Isobutane	11.4	ppbC	11.50	0.385	30	
Isobutene/1-Butene	2.30	ppbC	2.31	0.824	30	
n-Butane	54.1	ppbC	51.90	4.02	30	
trans-2-Butene	1.47	ppbC	1.44	1.51	30	
cis-2-Butene	1.26	ppbC	1.25	1.03	30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	71.5	ppbC	72.20	1.09	30	
1-Pentene	1.58	ppbC	1.61	1.88	30	
2-Methyl-1-butene	2.74	ppbC	2.87	4.64	30	
n-Pentane	28.8	ppbC	29.70	3.01	30	
Isoprene	0.447	ppbC	0.41	9.12	30	
trans-2-Pentene	3.89	ppbC	3.98	2.29	30	
cis-2-Pentene	2.01	ppbC	2.05	2.12	30	
2-Methyl-2-butene	4.74	ppbC	4.97	4.80	30	
2,2-Dimethylbutane	1.65	ppbC	1.57	5.28	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	2.19	ppbC	2.29	4.42	30	
2,3-Dimethylbutane	6.20	ppbC	6.14	0.972	30	
2-Methylpentane	13.5	ppbC	13.70	1.43	30	
3-Methylpentane	7.79	ppbC	7.85	0.729	30	
2-Methyl-1-pentene	0.519	ppbC	0.55	4.89	30	
1-Hexene	0.405	ppbC	0.40	1.49	30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	6.64	ppbC	7.07	6.32	30	
trans-2-Hexene	0.614	ppbC	0.69	10.9	30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	4.37	ppbC	4.46	1.97	30	
2,4-Dimethylpentane	2.07	ppbC	2.10	1.53	30	
Cyclohexane	1.38	ppbC	1.36	1.32	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J0702 - Summa Canister Prep

Duplicate (B0J0702-DUP1) Continued

Source: 0100601-05

Prepared: 10/04/10 Analyzed: 10/07/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
2-Methylhexane	2.49	ppbC	2.56	3.05	30	
2,3-Dimethylpentane	2.14	ppbC	2.00	6.66	30	
3-Methylhexane	2.57	ppbC	2.54	1.13	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	8.18	ppbC	8.45	3.30	30	
n-Heptane	1.49	ppbC	1.70	13.1	30	
Methylcyclohexane	1.33	ppbC	1.39	4.48	30	
2,2,3-Trimethylpentane	1.11	ppbC	1.21	8.78	30	
2,3,4-Trimethylpentane	1.85	ppbC	1.86	0.646	30	
2-Methylheptane	0.511	ppbC	0.54	5.33	30	
3-Methylheptane	0.459	ppbC	0.45	1.32	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.357	ppbC	0.41	14.1	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	0.202	ppbC	0.21	1.96	30	
m-Ethyltoluene	0.437	ppbC	0.50	13.2	30	
p-Ethyltoluene	0.295	ppbC	0.32	7.82	30	
1,3,5-Trimethylbenzene	0.288	ppbC	0.40	31.8	30	
o-Ethyltoluene	0.256	ppbC	0.24	6.87	30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.579	ppbC	0.62	6.52	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.527	ppbC	0.58	8.71	30	
1,2,3-Trimethylbenzene	ND	ppbC	ND		30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	0.189	ppbC	0.18	3.23	30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.774	ppbC	0.87	11.4	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	0.391	ppbC	0.46	15.3	30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J0702 - Summa Canister Prep

### Duplicate (B0J0702-DUP1) Continued

Source: 0100601-05

Prepared: 10/04/10 Analyzed: 10/07/10

SNMOC (Sum of Knowns)	313	ppbC	316.00	0.977		
Sum of Unknowns	45.7	ppbC	46.50	1.76	30	
TNMOC	359	ppbC	362.00	1.07		

### Duplicate (B0J0702-DUP2)

Source: 0100601-04

Prepared: 10/04/10 Analyzed: 10/07/10

Ethylene	3.40	ppbC	3.43	0.761	30	
Ethane	17.1	ppbC	17.00	0.357	30	
Propane	17.0	ppbC	17.10	0.223	30	
Propyne	ND	ppbC	ND		30	
Isobutane	11.6	ppbC	11.70	0.189	30	
Isobutene/1-Butene	2.32	ppbC	2.30	1.08	30	
n-Butane	55.1	ppbC	55.10	0.0889	30	
trans-2-Butene	1.49	ppbC	1.42	4.87	30	
cis-2-Butene	1.24	ppbC	1.22	1.47	30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	74.1	ppbC	73.80	0.445	30	
1-Pentene	1.62	ppbC	1.64	1.48	30	
2-Methyl-1-butene	2.74	ppbC	2.80	2.02	30	
n-Pentane	29.5	ppbC	29.70	0.709	30	
Isoprene	0.487	ppbC	0.47	2.71	30	
trans-2-Pentene	3.93	ppbC	3.96	0.812	30	
cis-2-Pentene	2.01	ppbC	2.06	2.46	30	
2-Methyl-2-butene	4.79	ppbC	4.94	3.13	30	
2,2-Dimethylbutane	1.69	ppbC	1.71	1.18	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	2.26	ppbC	2.32	2.53	30	
2,3-Dimethylbutane	6.31	ppbC	6.38	1.09	30	
2-Methylpentane	14.6	ppbC	14.90	1.95	30	
3-Methylpentane	7.93	ppbC	8.08	1.89	30	
2-Methyl-1-pentene	0.536	ppbC	0.59	9.42	30	
1-Hexene	0.475	ppbC	0.40	18.4	30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	6.88	ppbC	7.03	2.21	30	
trans-2-Hexene	0.683	ppbC	0.71	3.31	30	

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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J0702 - Summa Canister Prep

Duplicate (B0J0702-DUP2) Continued

Source: 0100601-04

Prepared: 10/04/10 Analyzed: 10/07/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	4.56	ppbC	4.63	1.44	30	
2,4-Dimethylpentane	2.26	ppbC	2.24	0.533	30	
Cyclohexane	1.41	ppbC	1.42	0.638	30	
2-Methylhexane	2.54	ppbC	2.45	3.81	30	
2,3-Dimethylpentane	2.21	ppbC	2.05	7.46	30	
3-Methylhexane	2.72	ppbC	2.66	2.42	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	8.06	ppbC	8.28	2.70	30	
n-Heptane	1.60	ppbC	1.66	3.55	30	
Methylcyclohexane	1.30	ppbC	1.40	7.41	30	
2,2,3-Trimethylpentane	1.29	ppbC	1.12	13.6	30	
2,3,4-Trimethylpentane	1.80	ppbC	1.90	5.67	30	
2-Methylheptane	0.526	ppbC	0.55	5.19	30	
3-Methylheptane	0.516	ppbC	0.48	8.06	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.455	ppbC	0.46	0.439	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	0.248	ppbC	0.22	14.3	30	
m-Ethyltoluene	0.488	ppbC	0.45	8.77	30	
p-Ethyltoluene	0.344	ppbC	0.34	1.76	30	
1,3,5-Trimethylbenzene	0.379	ppbC	0.37	2.13	30	
o-Ethyltoluene	0.207	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.684	ppbC	0.75	9.21	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.602	ppbC	0.65	8.13	30	
1,2,3-Trimethylbenzene	0.234	ppbC	0.20	14.7	30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	0.181	ppbC	0.19	6.93	30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.799	ppbC	0.81	1.86	30	

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 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J0702 - Summa Canister Prep

### Duplicate (B0J0702-DUP2) Continued

Source: 0100601-04

Prepared: 10/04/10 Analyzed: 10/07/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
1-Dodecene	ND	ppbC	ND		30	
n-Dodecene	0.291	ppbC	ND		30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecene	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	323	ppbC	324.00	0.279		
Sum of Unknowns	79.2	ppbC	79.80	0.754	30	
TNMOC	402	ppbC	403.00	0.373		

### Duplicate (B0J0702-DUP3)

Source: 0100601-06

Prepared: 10/04/10 Analyzed: 10/07/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	1.93	ppbC	1.91	1.15	30	
Ethane	40.4	ppbC	40.40	0.0990	30	
Propane	12.7	ppbC	12.80	0.805	30	
Propyne	ND	ppbC	ND		30	
Isobutane	3.13	ppbC	3.22	2.68	30	
Isobutene/1-Butene	0.543	ppbC	0.55	0.551	30	
n-Butane	4.04	ppbC	4.07	0.616	30	
trans-2-Butene	ND	ppbC	0.18		30	
cis-2-Butene	0.195	ppbC	0.21	9.29	30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	3.09	ppbC	3.02	2.26	30	
1-Pentene	0.205	ppbC	0.18	10.8	30	
2-Methyl-1-butene	ND	ppbC	ND		30	
n-Pentane	2.30	ppbC	2.32	0.519	30	
Isoprene	0.246	ppbC	0.25	1.21	30	
trans-2-Pentene	0.194	ppbC	0.17	15.6	30	
cis-2-Pentene	0.195	ppbC	ND		30	
2-Methyl-2-butene	ND	ppbC	ND		30	
2,2-Dimethylbutane	0.398	ppbC	0.35	12.3	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	0.310	ppbC	0.27	14.9	30	
2,3-Dimethylbutane	0.519	ppbC	0.48	8.64	30	
2-Methylpentane	1.57	ppbC	1.57	0.319	30	
3-Methylpentane	0.798	ppbC	0.72	10.0	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J0702 - Summa Canister Prep

Duplicate (B0J0702-DUP3) Continued

Source: 0100601-06

Prepared: 10/04/10 Analyzed: 10/07/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	0.904	ppbC	0.89	1.56	30	
trans-2-Hexene	ND	ppbC	ND		30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	0.536	ppbC	0.50	6.35	30	
2,4-Dimethylpentane	0.312	ppbC	0.30	5.26	30	
Cyclohexane	0.393	ppbC	0.42	6.40	30	
2-Methylhexane	0.573	ppbC	0.57	1.41	30	
2,3-Dimethylpentane	0.476	ppbC	0.46	3.85	30	
3-Methylhexane	0.594	ppbC	0.59	1.53	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	0.805	ppbC	0.78	3.15	30	
n-Heptane	0.503	ppbC	0.51	1.97	30	
Methylcyclohexane	0.529	ppbC	0.58	8.85	30	
2,2,3-Trimethylpentane	ND	ppbC	ND		30	
2,3,4-Trimethylpentane	0.328	ppbC	0.28	14.4	30	
2-Methylheptane	0.249	ppbC	0.28	11.4	30	
3-Methylheptane	0.253	ppbC	0.19	30.5	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.236	ppbC	0.23	1.28	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	ND	ppbC	ND		30	
m-Ethyltoluene	0.265	ppbC	0.26	3.45	30	
p-Ethyltoluene	ND	ppbC	ND		30	
1,3,5-Trimethylbenzene	0.176	ppbC	ND		30	
o-Ethyltoluene	ND	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.252	ppbC	0.28	8.73	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.260	ppbC	0.23	11.0	30	
1,2,3-Trimethylbenzene	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J0702 - Summa Canister Prep

### Duplicate (B0J0702-DUP3) Continued

Source: 0100601-06

Prepared: 10/04/10 Analyzed: 10/07/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.237	ppbC	0.27	14.1	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	0.308	ppbC	ND		30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	88.6	ppbC	88.30	0.294		
Sum of Unknowns	19.0	ppbC	17.80	7.01	30	
TNMOC	108	ppbC	106.00	1.45		

### Duplicate (B0J0702-DUP4)

Source: 0100601-07

Prepared: 10/04/10 Analyzed: 10/08/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	2.06	ppbC	2.02	1.92	30	
Ethane	39.4	ppbC	39.70	0.692	30	
Propane	12.4	ppbC	12.40	0.436	30	
Propyne	ND	ppbC	ND		30	
Isobutane	2.76	ppbC	2.83	2.32	30	
Isobutene/1-Butene	0.557	ppbC	0.63	12.9	30	
n-Butane	ND	ppbC	ND		30	A-01, I
trans-2-Butene	ND	ppbC	ND		30	
cis-2-Butene	ND	ppbC	ND		30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	2.96	ppbC	2.93	0.950	30	
1-Pentene	0.157	ppbC	0.18	13.6	30	
2-Methyl-1-butene	ND	ppbC	ND		30	
n-Pentane	2.26	ppbC	2.30	2.06	30	
Isoprene	ND	ppbC	0.25		30	
trans-2-Pentene	ND	ppbC	0.15		30	
cis-2-Pentene	ND	ppbC	ND		30	
2-Methyl-2-butene	ND	ppbC	ND		30	
2,2-Dimethylbutane	0.268	ppbC	0.27	0.00	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	0.224	ppbC	0.25	9.36	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J0702 - Summa Canister Prep

Duplicate (B0J0702-DUP4) Continued

Source: 0100601-07

Prepared: 10/04/10 Analyzed: 10/08/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
2,3-Dimethylbutane	0.356	ppbC	0.44	20.4	30	
2-Methylpentane	1.81	ppbC	1.86	2.61	30	
3-Methylpentane	0.668	ppbC	0.77	14.3	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	0.827	ppbC	0.79	4.96	30	
trans-2-Hexene	ND	ppbC	ND		30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	0.479	ppbC	0.49	1.86	30	
2,4-Dimethylpentane	ND	ppbC	0.24		30	
Cyclohexane	0.331	ppbC	0.33	0.602	30	
2-Methylhexane	0.520	ppbC	0.52	0.579	30	
2,3-Dimethylpentane	0.445	ppbC	0.45	1.56	30	
3-Methylhexane	0.548	ppbC	0.58	6.19	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	0.732	ppbC	0.73	0.274	30	
n-Heptane	0.416	ppbC	0.42	1.67	30	
Methylcyclohexane	0.501	ppbC	0.52	3.34	30	
2,2,3-Trimethylpentane	ND	ppbC	ND		30	
2,3,4-Trimethylpentane	0.203	ppbC	0.22	7.13	30	
2-Methylheptane	0.212	ppbC	0.21	3.36	30	
3-Methylheptane	0.172	ppbC	0.16	7.85	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.189	ppbC	ND		30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	ND	ppbC	ND		30	
m-Ethyltoluene	0.250	ppbC	0.20	23.7	30	
p-Ethyltoluene	ND	ppbC	ND		30	
1,3,5-Trimethylbenzene	0.175	ppbC	ND		30	
o-Ethyltoluene	ND	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J0702 - Summa Canister Prep

Duplicate (B0J0702-DUP4) Continued

Source: 0100601-07

Prepared: 10/04/10 Analyzed: 10/08/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
1,2,4-Trimethylbenzene	ND	ppbC	ND		30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.328	ppbC	ND		30	
1,2,3-Trimethylbenzene	ND	ppbC	ND		30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.448	ppbC	0.41	7.89	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	0.454	ppbC	0.46	1.31	30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	80.5	ppbC	80.30	0.274		
Sum of Unknowns	33.2	ppbC	34.30	3.17	30	
TNMOC	114	ppbC	115.00	0.727		

Batch B0J1802 - Summa Canister Prep

Duplicate (B0J1802-DUP1)

Source: 0101514-04

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	2.54	ppbC	2.48	2.51	30	
Ethane	36.7	ppbC	36.60	0.292	30	
Propane	39.9	ppbC	39.90	0.150	30	
Propyne	ND	ppbC	ND		30	
Isobutane	10.6	ppbC	10.60	0.0944	30	
Isobutene/1-Butene	1.49	ppbC	1.54	3.37	30	
n-Butane	34.9	ppbC	34.80	0.289	30	
trans-2-Butene	0.662	ppbC	0.72	7.84	30	
cis-2-Butene	0.618	ppbC	0.68	8.96	30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	33.3	ppbC	33.20	0.538	30	
1-Pentene	0.825	ppbC	0.77	7.03	30	
2-Methyl-1-butene	1.20	ppbC	1.22	1.99	30	
n-Pentane	22.0	ppbC	22.30	0.971	30	
Isoprene	0.336	ppbC	0.35	3.80	30	
trans-2-Pentene	1.72	ppbC	1.70	0.702	30	
cis-2-Pentene	0.903	ppbC	0.91	0.552	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J1802 - Summa Canister Prep

Duplicate (B0J1802-DUP1) Continued

Source: 0101514-04

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
2-Methyl-2-butene	1.97	ppbC	2.05	3.99	30	
2,2-Dimethylbutane	1.11	ppbC	1.13	1.60	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	1.77	ppbC	1.78	0.394	30	
2,3-Dimethylbutane	3.05	ppbC	3.05	0.0984	30	
2-Methylpentane	9.80	ppbC	9.94	1.41	30	
3-Methylpentane	5.55	ppbC	5.67	2.10	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	6.75	ppbC	6.87	1.81	30	
trans-2-Hexene	ND	ppbC	ND		30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	3.46	ppbC	3.48	0.662	30	
2,4-Dimethylpentane	1.18	ppbC	1.26	7.04	30	
Cyclohexane	1.74	ppbC	1.77	1.82	30	
2-Methylhexane	2.11	ppbC	2.12	0.615	30	
2,3-Dimethylpentane	1.47	ppbC	1.39	5.53	30	
3-Methylhexane	2.40	ppbC	2.31	3.48	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	5.12	ppbC	5.19	1.26	30	
n-Heptane	1.78	ppbC	1.84	3.14	30	
Methylcyclohexane	2.00	ppbC	2.04	1.73	30	
2,2,3-Trimethylpentane	0.926	ppbC	0.90	3.18	30	
2,3,4-Trimethylpentane	1.33	ppbC	1.30	2.12	30	
2-Methylheptane	0.866	ppbC	0.85	1.40	30	
3-Methylheptane	0.741	ppbC	0.81	8.65	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	0.29		30	
n-Nonane	0.879	ppbC	0.90	2.25	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	0.279	ppbC	0.29	5.24	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J1802 - Summa Canister Prep

### Duplicate (B0J1802-DUP1) Continued

Source: 0101514-04

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
m-Ethyltoluene	0.629	ppbC	0.62	2.09	30	
p-Ethyltoluene	0.369	ppbC	0.39	5.28	30	
1,3,5-Trimethylbenzene	0.479	ppbC	0.46	4.70	30	
o-Ethyltoluene	0.338	ppbC	0.21	45.4	30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.789	ppbC	0.79	0.506	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.630	ppbC	0.68	8.07	30	
1,2,3-Trimethylbenzene	0.198	ppbC	0.27	30.8	30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.385	ppbC	0.40	2.56	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	ND	ppbC	ND		30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	266	ppbC	267.00	0.364		
Sum of Unknowns	49.4	ppbC	48.10	2.79	30	
TNMOC	315	ppbC	315.00	0.127		

### Duplicate (B0J1802-DUP2)

Source: 0101514-05

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	2.65	ppbC	2.17	20.0	30	
Ethane	36.8	ppbC	36.70	0.193	30	
Propane	40.0	ppbC	40.00	0.0150	30	
Propyne	ND	ppbC	ND		30	
Isobutane	10.7	ppbC	10.70	0.224	30	
Isobutene/1-Butene	1.51	ppbC	1.53	1.25	30	
n-Butane	34.7	ppbC	34.30	0.937	30	
trans-2-Butene	0.698	ppbC	0.74	5.30	30	
cis-2-Butene	0.679	ppbC	0.66	2.99	30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	33.6	ppbC	33.10	1.74	30	
1-Pentene	0.880	ppbC	0.77	14.0	30	
2-Methyl-1-butene	1.26	ppbC	1.19	5.64	30	

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 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J1802 - Summa Canister Prep

Duplicate (B0J1802-DUP2) Continued

Source: 0101514-05

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
n-Pentane	22.5	ppbC	22.30	1.19	30	
Isoprene	0.350	ppbC	0.35	0.285	30	
trans-2-Pentene	1.71	ppbC	1.70	0.529	30	
cis-2-Pentene	0.935	ppbC	0.89	4.82	30	
2-Methyl-2-butene	2.11	ppbC	1.99	5.81	30	
2,2-Dimethylbutane	1.06	ppbC	1.09	2.52	30	
Cyclopentene	ND	ppbC	ND		30	I
4-Methyl-1-pentene	ND	ppbC	ND		30	I
Cyclopentane	1.78	ppbC	1.79	0.559	30	
2,3-Dimethylbutane	3.02	ppbC	3.12	3.23	30	
2-Methylpentane	9.20	ppbC	9.27	0.758	30	
3-Methylpentane	5.70	ppbC	5.59	1.83	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	I
1-Hexene	ND	ppbC	ND		30	I
2-Ethyl-1-butene	ND	ppbC	ND		30	I
n-Hexane	6.84	ppbC	6.76	1.24	30	
trans-2-Hexene	ND	ppbC	ND		30	I
cis-2-Hexene	ND	ppbC	ND		30	I
Methylcyclopentane	3.54	ppbC	3.62	2.21	30	
2,4-Dimethylpentane	1.19	ppbC	1.35	12.6	30	
Cyclohexane	1.72	ppbC	1.73	0.927	30	
2-Methylhexane	2.18	ppbC	2.00	8.74	30	
2,3-Dimethylpentane	1.60	ppbC	1.45	10.3	30	
3-Methylhexane	2.57	ppbC	2.38	7.47	30	
1-Heptene	ND	ppbC	ND		30	I
2,2,4-Trimethylpentane	5.17	ppbC	5.10	1.44	30	
n-Heptane	1.84	ppbC	1.80	2.25	30	
Methylcyclohexane	2.02	ppbC	2.02	0.0990	30	
2,2,3-Trimethylpentane	0.922	ppbC	1.04	12.3	30	
2,3,4-Trimethylpentane	1.35	ppbC	1.28	4.79	30	
2-Methylheptane	0.928	ppbC	0.83	10.8	30	
3-Methylheptane	0.787	ppbC	0.78	0.382	30	
1-Octene	ND	ppbC	ND		30	I
1-Nonene	0.242	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J1802 - Summa Canister Prep

### Duplicate (B0J1802-DUP2) Continued

Source: 0101514-05

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
n-Nonane	0.885	ppbC	0.90	1.79	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	0.289	ppbC	0.31	7.01	30	
m-Ethyltoluene	0.666	ppbC	0.66	0.602	30	
p-Ethyltoluene	0.434	ppbC	0.41	5.69	30	
1,3,5-Trimethylbenzene	0.574	ppbC	0.53	7.41	30	
o-Ethyltoluene	0.316	ppbC	0.41	26.8	30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.904	ppbC	0.92	1.86	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.736	ppbC	0.74	0.271	30	
1,2,3-Trimethylbenzene	0.250	ppbC	0.21	15.5	30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	0.157	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.424	ppbC	0.40	6.33	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	ND	ppbC	ND		30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	269	ppbC	265.00	1.29		
Sum of Unknowns	54.3	ppbC	51.50	5.33	30	
TNMOC	323	ppbC	317.00	1.96		

### Duplicate (B0J1802-DUP3)

Source: 0101514-06

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	1.33	ppbC	1.36	2.60	30	
Ethane	43.7	ppbC	44.40	1.70	30	
Propane	36.2	ppbC	36.80	1.48	30	
Propyne	ND	ppbC	ND		30	
Isobutane	7.01	ppbC	7.08	0.979	30	
Isobutene/1-Butene	0.597	ppbC	0.59	0.672	30	
n-Butane	20.6	ppbC	21.00	1.99	30	
trans-2-Butene	ND	ppbC	ND		30	
cis-2-Butene	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J1802 - Summa Canister Prep

Duplicate (B0J1802-DUP3) Continued

Source: 0101514-06

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	7.16	ppbC	7.33	2.30	30	
1-Pentene	0.166	ppbC	0.15	12.8	30	
2-Methyl-1-butene	ND	ppbC	ND		30	
n-Pentane	7.33	ppbC	7.68	4.72	30	
Isoprene	0.254	ppbC	0.24	4.02	30	
trans-2-Pentene	ND	ppbC	ND		30	
cis-2-Pentene	ND	ppbC	ND		30	
2-Methyl-2-butene	ND	ppbC	ND		30	
2,2-Dimethylbutane	0.313	ppbC	0.33	6.49	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	0.501	ppbC	0.50	0.199	30	
2,3-Dimethylbutane	0.464	ppbC	0.45	2.84	30	
2-Methylpentane	2.84	ppbC	3.04	6.86	30	
3-Methylpentane	1.48	ppbC	1.53	3.12	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	2.55	ppbC	2.73	6.70	30	
trans-2-Hexene	ND	ppbC	ND		30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	1.52	ppbC	1.58	4.12	30	
2,4-Dimethylpentane	0.253	ppbC	0.25	2.81	30	
Cyclohexane	1.25	ppbC	1.27	1.83	30	
2-Methylhexane	0.898	ppbC	0.90	0.111	30	
2,3-Dimethylpentane	0.713	ppbC	0.65	8.78	30	
3-Methylhexane	1.44	ppbC	1.48	3.09	30	
1-Heptene	0.415	ppbC	0.45	7.20	30	
2,2,4-Trimethylpentane	0.292	ppbC	0.33	11.0	30	
n-Heptane	1.16	ppbC	1.19	2.80	30	
Methylcyclohexane	1.40	ppbC	1.47	5.09	30	
2,2,3-Trimethylpentane	ND	ppbC	ND		30	
2,3,4-Trimethylpentane	0.148	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J1802 - Summa Canister Prep

### Duplicate (B0J1802-DUP3) Continued

Source: 0101514-06

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
2-Methylheptane	0.434	ppbC	0.47	7.75	30	
3-Methylheptane	0.350	ppbC	0.30	16.4	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.305	ppbC	0.30	0.658	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	ND	ppbC	ND		30	
m-Ethyltoluene	0.254	ppbC	0.22	15.7	30	
p-Ethyltoluene	ND	ppbC	ND		30	
1,3,5-Trimethylbenzene	0.190	ppbC	0.18	4.85	30	
o-Ethyltoluene	ND	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.278	ppbC	0.29	3.88	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	ND	ppbC	0.26		30	
1,2,3-Trimethylbenzene	ND	ppbC	ND		30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.221	ppbC	0.22	0.00	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	ND	ppbC	ND		30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	151	ppbC	154.00	1.81		
Sum of Unknowns	66.4	ppbC	68.30	2.81	30	
TNMOC	218	ppbC	222.00	2.11		

### Duplicate (B0J1802-DUP4)

Source: 0101514-07

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	1.36	ppbC	1.38	1.10	30	
Ethane	43.9	ppbC	44.30	0.814	30	
Propane	36.4	ppbC	36.60	0.545	30	
Propyne	ND	ppbC	ND		30	
Isobutane	7.03	ppbC	7.08	0.723	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J1802 - Summa Canister Prep

Duplicate (B0J1802-DUP4) Continued

Source: 0101514-07

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Isobutene/1-Butene	0.382	ppbC	0.38	0.788	30	
n-Butane	20.0	ppbC	20.20	1.40	30	
trans-2-Butene	ND	ppbC	ND		30	
cis-2-Butene	ND	ppbC	ND		30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	7.03	ppbC	7.04	0.128	30	
1-Pentene	0.185	ppbC	0.13	34.9	30	
2-Methyl-1-butene	ND	ppbC	ND		30	
n-Pentane	7.37	ppbC	7.33	0.558	30	
Isoprene	0.274	ppbC	0.24	11.6	30	
trans-2-Pentene	ND	ppbC	ND		30	
cis-2-Pentene	ND	ppbC	ND		30	
2-Methyl-2-butene	ND	ppbC	ND		30	
2,2-Dimethylbutane	0.348	ppbC	0.34	2.62	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	0.528	ppbC	0.48	8.90	30	
2,3-Dimethylbutane	0.459	ppbC	0.45	2.20	30	
2-Methylpentane	2.83	ppbC	2.76	2.62	30	
3-Methylpentane	1.43	ppbC	1.43	0.489	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	2.68	ppbC	2.60	3.22	30	
trans-2-Hexene	ND	ppbC	ND		30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	1.22	ppbC	1.24	1.95	30	
2,4-Dimethylpentane	ND	ppbC	ND		30	
Cyclohexane	1.05	ppbC	1.05	0.382	30	
2-Methylhexane	0.951	ppbC	0.98	2.80	30	
2,3-Dimethylpentane	0.638	ppbC	0.61	4.32	30	
3-Methylhexane	1.18	ppbC	1.12	5.24	30	
1-Heptene	0.451	ppbC	0.46	2.41	30	
2,2,4-Trimethylpentane	0.267	ppbC	0.23	14.9	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0J1802 - Summa Canister Prep

Duplicate (B0J1802-DUP4) Continued

Source: 0101514-07

Prepared: 10/13/10 Analyzed: 10/18/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
n-Heptane	1.21	ppbC	1.14	6.22	30	
Methylcyclohexane	1.46	ppbC	1.40	4.14	30	
2,2,3-Trimethylpentane	ND	ppbC	ND		30	
2,3,4-Trimethylpentane	ND	ppbC	ND		30	
2-Methylheptane	0.426	ppbC	0.42	2.62	30	
3-Methylheptane	0.320	ppbC	0.32	0.313	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.312	ppbC	0.28	9.75	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	ND	ppbC	ND		30	
m-Ethyltoluene	0.202	ppbC	0.15	29.5	30	
p-Ethyltoluene	ND	ppbC	ND		30	
1,3,5-Trimethylbenzene	0.200	ppbC	ND		30	
o-Ethyltoluene	ND	ppbC	0.19		30	
b-Pinene	0.361	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.253	ppbC	0.24	5.27	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	ND	ppbC	ND		30	
1,2,3-Trimethylbenzene	ND	ppbC	ND		30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	ND	ppbC	ND		30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	ND	ppbC	ND		30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	150	ppbC	150.00	0.140		
Sum of Unknowns	22.7	ppbC	22.40	1.29	30	
TNMOC	173	ppbC	173.00	0.0521		

Batch B0K0305 - Summa Canister Prep

Duplicate (B0K0305-DUP1)

Source: 0110212-06

Prepared: 10/28/10 Analyzed: 11/03/10

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Page 244 of 254	



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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0K0305 - Summa Canister Prep

**Duplicate (B0K0305-DUP1) Continued**      **Source: 0110212-06**      Prepared: 10/28/10 Analyzed: 11/03/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	1.87	ppbC	1.87	0.214	30	
Ethane	21.2	ppbC	21.10	0.170	30	
Propane	21.8	ppbC	21.70	0.0782	30	
Propyne	ND	ppbC	ND		30	
Isobutane	32.9	ppbC	32.80	0.536	30	
Isobutene/1-Butene	4.93	ppbC	4.85	1.66	30	
n-Butane	125	ppbC	125.00	0.588	30	
trans-2-Butene	3.34	ppbC	3.33	0.360	30	
cis-2-Butene	2.36	ppbC	2.31	2.18	30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	114	ppbC	114.00	0.124	30	
1-Pentene	2.14	ppbC	2.05	4.48	30	
2-Methyl-1-butene	2.92	ppbC	2.86	2.08	30	
n-Pentane	46.8	ppbC	46.30	1.13	30	
Isoprene	ND	ppbC	ND		30	
trans-2-Pentene	5.77	ppbC	5.62	2.53	30	
cis-2-Pentene	2.86	ppbC	2.69	6.20	30	
2-Methyl-2-butene	7.60	ppbC	7.44	2.09	30	
2,2-Dimethylbutane	2.98	ppbC	3.03	1.70	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	0.501	ppbC	0.49	2.42	30	
Cyclopentane	4.02	ppbC	4.00	0.674	30	
2,3-Dimethylbutane	10.3	ppbC	10.60	3.01	30	
2-Methylpentane	26.1	ppbC	26.00	0.303	30	
3-Methylpentane	15.7	ppbC	15.60	0.141	30	
2-Methyl-1-pentene	0.566	ppbC	0.56	0.709	30	
1-Hexene	0.611	ppbC	0.54	11.8	30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	15.1	ppbC	14.40	4.40	30	
trans-2-Hexene	1.68	ppbC	1.49	11.5	30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	9.42	ppbC	9.30	1.26	30	
2,4-Dimethylpentane	4.14	ppbC	4.17	0.578	30	
Cyclohexane	2.88	ppbC	2.84	1.54	30	

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 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0K0305 - Summa Canister Prep

**Duplicate (B0K0305-DUP1) Continued**      **Source: 0110212-06**      Prepared: 10/28/10 Analyzed: 11/03/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
2-Methylhexane	5.43	ppbC	5.28	2.71	30	
2,3-Dimethylpentane	3.55	ppbC	3.44	3.09	30	
3-Methylhexane	5.90	ppbC	5.78	2.02	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	16.7	ppbC	16.50	1.12	30	
n-Heptane	3.83	ppbC	3.64	5.09	30	
Methylcyclohexane	2.98	ppbC	2.92	1.80	30	
2,2,3-Trimethylpentane	2.78	ppbC	2.72	2.00	30	
2,3,4-Trimethylpentane	3.64	ppbC	3.55	2.45	30	
2-Methylheptane	1.13	ppbC	1.05	6.70	30	
3-Methylheptane	0.948	ppbC	0.89	6.42	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.538	ppbC	0.53	1.69	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	0.234	ppbC	ND		30	
m-Ethyltoluene	0.501	ppbC	0.45	9.84	30	
p-Ethyltoluene	0.304	ppbC	0.26	17.1	30	
1,3,5-Trimethylbenzene	0.372	ppbC	0.36	2.72	30	
o-Ethyltoluene	ND	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.724	ppbC	0.71	1.67	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	0.894	ppbC	0.89	0.00	30	
1,2,3-Trimethylbenzene	ND	ppbC	ND		30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.613	ppbC	0.59	3.99	30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	ND	ppbC	ND		30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0K0305 - Summa Canister Prep

### Duplicate (B0K0305-DUP1) Continued

Source: 0110212-06

Prepared: 10/28/10 Analyzed: 11/03/10

SNMOC (Sum of Knowns)	565	ppbC	559.00	0.997		
Sum of Unknowns	77.8	ppbC	76.80	1.20	30	
TNMOC	642	ppbC	636.00	1.02		

### Duplicate (B0K0305-DUP2)

Source: 0110212-07

Prepared: 10/28/10 Analyzed: 11/03/10

Ethylene	1.90	ppbC	1.86	2.40	30	
Ethane	21.1	ppbC	21.10	0.0379	30	
Propane	21.7	ppbC	21.80	0.477	30	
Propyne	ND	ppbC	ND		30	
Isobutane	33.2	ppbC	33.20	0.00602	30	
Isobutene/1-Butene	5.28	ppbC	5.40	2.21	30	
n-Butane	127	ppbC	127.00	0.461	30	
trans-2-Butene	3.76	ppbC	3.98	5.69	30	
cis-2-Butene	2.60	ppbC	2.75	5.75	30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	114	ppbC	115.00	0.776	30	
1-Pentene	2.33	ppbC	2.16	7.44	30	
2-Methyl-1-butene	4.14	ppbC	4.23	2.03	30	
n-Pentane	46.7	ppbC	46.80	0.180	30	
Isoprene	ND	ppbC	ND		30	
trans-2-Pentene	6.58	ppbC	6.63	0.848	30	
cis-2-Pentene	3.17	ppbC	3.21	1.19	30	
2-Methyl-2-butene	7.96	ppbC	8.10	1.77	30	
2,2-Dimethylbutane	3.04	ppbC	3.12	2.89	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	0.497	ppbC	0.55	10.7	30	
Cyclopentane	4.01	ppbC	4.02	0.373	30	
2,3-Dimethylbutane	10.6	ppbC	10.90	3.13	30	
2-Methylpentane	26.8	ppbC	27.50	2.25	30	
3-Methylpentane	15.6	ppbC	16.00	2.81	30	
2-Methyl-1-pentene	1.08	ppbC	1.23	13.1	30	
1-Hexene	0.591	ppbC	0.46	25.1	30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	15.4	ppbC	15.20	1.15	30	
trans-2-Hexene	1.34	ppbC	1.39	3.08	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0K0305 - Summa Canister Prep

Duplicate (B0K0305-DUP2) Continued

Source: 0110212-07

Prepared: 10/28/10 Analyzed: 11/03/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	9.53	ppbC	9.63	1.05	30	
2,4-Dimethylpentane	3.86	ppbC	4.05	4.73	30	
Cyclohexane	2.87	ppbC	2.94	2.58	30	
2-Methylhexane	5.38	ppbC	5.49	1.93	30	
2,3-Dimethylpentane	3.61	ppbC	3.71	2.68	30	
3-Methylhexane	5.95	ppbC	6.03	1.25	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	16.1	ppbC	16.70	3.80	30	
n-Heptane	3.84	ppbC	3.98	3.53	30	
Methylcyclohexane	3.00	ppbC	3.54	16.4	30	
2,2,3-Trimethylpentane	2.65	ppbC	2.61	1.60	30	
2,3,4-Trimethylpentane	3.40	ppbC	3.48	2.36	30	
2-Methylheptane	1.09	ppbC	1.15	5.80	30	
3-Methylheptane	0.975	ppbC	0.98	0.307	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	0.730	ppbC	0.75	2.17	30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	0.267	ppbC	0.25	7.78	30	
m-Ethyltoluene	0.523	ppbC	0.55	5.58	30	
p-Ethyltoluene	0.351	ppbC	0.37	5.00	30	
1,3,5-Trimethylbenzene	0.495	ppbC	0.52	4.15	30	
o-Ethyltoluene	0.242	ppbC	0.24	2.94	30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	0.843	ppbC	0.84	0.119	30	
1-Decene	ND	ppbC	ND		30	
n-Decane	1.52	ppbC	1.54	1.37	30	
1,2,3-Trimethylbenzene	0.258	ppbC	0.26	1.17	30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	0.920	ppbC	0.98	6.72	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0K0305 - Summa Canister Prep

### Duplicate (B0K0305-DUP2) Continued

Source: 0110212-07

Prepared: 10/28/10 Analyzed: 11/03/10

1-Dodecene	ND	ppbC	ND		30	
n-Dodecene	0.373	ppbC	0.48	24.3	30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecene	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	572	ppbC	578.00	1.07		
Sum of Unknowns	83.9	ppbC	84.80	1.15	30	
TNMOC	656	ppbC	663.00	1.08		

### Duplicate (B0K0305-DUP3)

Source: 0110212-09

Prepared: 10/28/10 Analyzed: 11/03/10

Ethylene	1.15	ppbC	1.14	1.31	30	
Ethane	28.6	ppbC	30.60	6.98	30	
Propane	19.8	ppbC	21.20	6.63	30	
Propyne	ND	ppbC	ND		30	
Isobutane	4.05	ppbC	4.23	4.44	30	
Isobutene/1-Butene	0.428	ppbC	0.43	0.468	30	
n-Butane	10.7	ppbC	11.70	9.14	30	
trans-2-Butene	ND	ppbC	ND		30	
cis-2-Butene	ND	ppbC	ND		30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	3.75	ppbC	4.00	6.52	30	
1-Pentene	0.139	ppbC	0.15	4.23	30	
2-Methyl-1-butene	ND	ppbC	ND		30	
n-Pentane	3.88	ppbC	4.08	5.03	30	
Isoprene	ND	ppbC	ND		30	
trans-2-Pentene	ND	ppbC	ND		30	
cis-2-Pentene	ND	ppbC	ND		30	
2-Methyl-2-butene	ND	ppbC	ND		30	
2,2-Dimethylbutane	0.261	ppbC	0.32	18.8	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	0.370	ppbC	0.36	3.30	30	
2,3-Dimethylbutane	0.321	ppbC	0.37	14.7	30	
2-Methylpentane	1.46	ppbC	1.46	0.342	30	
3-Methylpentane	0.803	ppbC	0.86	6.97	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0K0305 - Summa Canister Prep

Duplicate (B0K0305-DUP3) Continued

Source: 0110212-09

Prepared: 10/28/10 Analyzed: 11/03/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	1.32	ppbC	1.32	0.227	30	
trans-2-Hexene	ND	ppbC	ND		30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	0.665	ppbC	0.61	9.12	30	
2,4-Dimethylpentane	ND	ppbC	ND		30	
Cyclohexane	0.540	ppbC	0.55	1.83	30	
2-Methylhexane	0.545	ppbC	0.59	8.27	30	
2,3-Dimethylpentane	0.534	ppbC	0.59	9.80	30	
3-Methylhexane	0.562	ppbC	0.65	14.2	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	0.269	ppbC	0.23	14.8	30	
n-Heptane	0.580	ppbC	0.62	6.67	30	
Methylcyclohexane	0.634	ppbC	0.69	8.60	30	
2,2,3-Trimethylpentane	ND	ppbC	ND		30	
2,3,4-Trimethylpentane	ND	ppbC	ND		30	
2-Methylheptane	0.257	ppbC	0.27	6.04	30	
3-Methylheptane	0.174	ppbC	0.26	40.7	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	ND	ppbC	0.18		30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	ND	ppbC	ND		30	
m-Ethyltoluene	ND	ppbC	ND		30	
p-Ethyltoluene	ND	ppbC	ND		30	
1,3,5-Trimethylbenzene	ND	ppbC	ND		30	
o-Ethyltoluene	ND	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	
1,2,4-Trimethylbenzene	ND	ppbC	ND		30	
1-Decene	ND	ppbC	ND		30	
n-Decane	ND	ppbC	ND		30	
1,2,3-Trimethylbenzene	ND	ppbC	ND		30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0K0305 - Summa Canister Prep

### Duplicate (B0K0305-DUP3) Continued

Source: 0110212-09

Prepared: 10/28/10 Analyzed: 11/03/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	ND	ppbC	ND		30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	ND	ppbC	ND		30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	86.8	ppbC	92.70	6.51		
Sum of Unknowns	14.0	ppbC	15.50	10.4	30	
TNMOC	101	ppbC	108.00	7.04		

### Duplicate (B0K0305-DUP4)

Source: 0110212-10

Prepared: 10/28/10 Analyzed: 11/03/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Ethylene	1.08	ppbC	1.13	5.16	30	
Ethane	28.5	ppbC	30.90	8.08	30	
Propane	19.8	ppbC	21.40	7.57	30	
Propyne	ND	ppbC	ND		30	
Isobutane	4.06	ppbC	4.33	6.53	30	
Isobutene/1-Butene	0.396	ppbC	0.39	0.506	30	
n-Butane	11.1	ppbC	12.10	8.46	30	
trans-2-Butene	ND	ppbC	ND		30	
cis-2-Butene	0.209	ppbC	ND		30	
3-Methyl-1-butene	ND	ppbC	ND		30	
Isopentane	3.61	ppbC	4.01	10.3	30	
1-Pentene	0.209	ppbC	0.15	35.5	30	
2-Methyl-1-butene	ND	ppbC	ND		30	
n-Pentane	3.80	ppbC	4.20	10.0	30	
Isoprene	ND	ppbC	ND		30	
trans-2-Pentene	ND	ppbC	ND		30	
cis-2-Pentene	ND	ppbC	ND		30	
2-Methyl-2-butene	ND	ppbC	ND		30	
2,2-Dimethylbutane	0.266	ppbC	0.32	18.7	30	
Cyclopentene	ND	ppbC	ND		30	
4-Methyl-1-pentene	ND	ppbC	ND		30	
Cyclopentane	0.321	ppbC	0.35	7.50	30	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0K0305 - Summa Canister Prep

Duplicate (B0K0305-DUP4) Continued

Source: 0110212-10

Prepared: 10/28/10 Analyzed: 11/03/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
2,3-Dimethylbutane	0.308	ppbC	0.36	16.4	30	
2-Methylpentane	1.39	ppbC	1.59	13.7	30	
3-Methylpentane	0.755	ppbC	0.82	7.89	30	
2-Methyl-1-pentene	ND	ppbC	ND		30	
1-Hexene	ND	ppbC	ND		30	
2-Ethyl-1-butene	ND	ppbC	ND		30	
n-Hexane	1.21	ppbC	1.38	12.5	30	
trans-2-Hexene	ND	ppbC	ND		30	
cis-2-Hexene	ND	ppbC	ND		30	
Methylcyclopentane	0.607	ppbC	0.71	16.1	30	
2,4-Dimethylpentane	ND	ppbC	ND		30	
Cyclohexane	0.519	ppbC	0.57	8.49	30	
2-Methylhexane	0.587	ppbC	0.58	1.55	30	
2,3-Dimethylpentane	0.530	ppbC	0.44	19.2	30	
3-Methylhexane	0.535	ppbC	0.58	8.76	30	
1-Heptene	ND	ppbC	ND		30	
2,2,4-Trimethylpentane	0.198	ppbC	0.23	16.2	30	
n-Heptane	0.572	ppbC	0.64	11.5	30	
Methylcyclohexane	0.513	ppbC	0.68	27.9	30	
2,2,3-Trimethylpentane	ND	ppbC	ND		30	
2,3,4-Trimethylpentane	ND	ppbC	ND		30	
2-Methylheptane	0.232	ppbC	0.26	12.9	30	
3-Methylheptane	0.196	ppbC	0.19	4.70	30	
1-Octene	ND	ppbC	ND		30	
1-Nonene	ND	ppbC	ND		30	
n-Nonane	ND	ppbC	0.19		30	
Isopropylbenzene	ND	ppbC	ND		30	
a-Pinene	ND	ppbC	ND		30	
n-Propylbenzene	ND	ppbC	ND		30	
m-Ethyltoluene	ND	ppbC	ND		30	
p-Ethyltoluene	ND	ppbC	ND		30	
1,3,5-Trimethylbenzene	ND	ppbC	ND		30	
o-Ethyltoluene	ND	ppbC	ND		30	
b-Pinene	ND	ppbC	ND		30	

Eastern Research Group

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# CERTIFICATE OF ANALYSIS

City of Fort Worth  
 1000 Throckmorton Street  
 Fort Worth, TX 76102-6311  
 ATTN: Brain Boerner  
 PHONE: na FAX: na

FILE #: 3786.02.002.001  
 REPORTED: 05/24/11 11:34  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Speciated Non-Methane Organic Compounds by GC/FID - Quality Control

Batch B0K0305 - Summa Canister Prep

**Duplicate (B0K0305-DUP4) Continued**      **Source: 0110212-10**      Prepared: 10/28/10 Analyzed: 11/03/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
1,2,4-Trimethylbenzene	ND	ppbC	ND		30	
1-Decene	ND	ppbC	ND		30	
n-Decane	ND	ppbC	ND		30	
1,2,3-Trimethylbenzene	ND	ppbC	ND		30	
m-Diethylbenzene	ND	ppbC	ND		30	
p-Diethylbenzene	ND	ppbC	ND		30	
1-Undecene	ND	ppbC	ND		30	
n-Undecane	ND	ppbC	ND		30	
1-Dodecene	ND	ppbC	ND		30	
n-Dodecane	ND	ppbC	ND		30	
1-Tridecene	ND	ppbC	ND		30	
n-Tridecane	ND	ppbC	ND		30	
SNMOC (Sum of Knowns)	86.6	ppbC	94.00	8.19		
Sum of Unknowns	14.1	ppbC	16.90	17.7	30	
TNMOC	101	ppbC	111.00	9.59		

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**SITE CODE:** Natural Gas Air Quality Study

### Notes and Definitions

- U Under Detection Limit
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
- A-01 Not reportable due to co-eluting compound.
- ND Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
- NR Not Reported
- MDL Method Detection Limit
- RPD Relative Percent Difference