

**Appendix 2-D – Analytical Results for EPA Compendium Method TO-11A at  
Sites S-4 and 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: 12/13/10 15:28

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>
S4-P-09-04-10	0090802-03	Air	09/04/10 23:00	09/08/10 12:05
S5-P-09-04-10	0090802-04	Air	09/04/10 23:00	09/08/10 12:05
S4-P-09-07-10	0090906-07	Air	09/07/10 23:59	09/09/10 12:17
S4-D-09-07-10	0090906-08	Air	09/07/10 23:59	09/09/10 12:17
S5-P-09-07-10	0090906-09	Air	09/07/10 23:59	09/09/10 12:17
S5-D-09-07-10	0090906-10	Air	09/07/10 23:59	09/09/10 12:17
S4-P-09-10-10	0091501-04	Air	09/10/10 23:54	09/14/10 16:01
S5-P-09-10-10	0091501-05	Air	09/10/10 23:49	09/14/10 16:01
S4-P-09-13-10	0091614-05	Air	09/13/10 23:59	09/16/10 12:42
S5-P-09-13-10	0091614-06	Air	09/13/10 23:59	09/16/10 12:42
S4-P-09-16-10	0092120-08	Air	09/16/10 23:54	09/21/10 13:32
S4-P-09-19-10	0092120-11	Air	09/19/10 23:54	09/21/10 13:32
S4-D-09-19-10	0092120-12	Air	09/19/10 23:54	09/21/10 13:32
S5-P-09-16-10	0092120-14	Air	09/16/10 23:54	09/21/10 13:32
S5-P-09-19-10	0092120-17	Air	09/19/10 23:54	09/21/10 13:32
S5-D-09-19-10	0092120-18	Air	09/19/10 23:54	09/21/10 13:32
S4-P-09-22-10	0092403-04	Air	09/22/10 23:59	09/24/10 10:22
S5-P-09-22-10	0092403-06	Air	09/22/10 23:59	09/24/10 10:22
S4-P-09-25-10	0092901-06	Air	09/25/10 23:49	09/28/10 16:00
S5-P-09-25-10	0092901-07	Air	09/25/10 23:49	09/28/10 16:00
S4-P-09-28-10	0093008-06	Air	09/28/10 23:49	09/30/10 14:35
S5-P-09-28-10	0093008-07	Air	09/28/10 23:49	09/30/10 14:35
S4-P-10-1-10	0100501-06	Air	10/01/10 23:59	10/05/10 13:09

Eastern Research Group

*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.*



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**AQS SITE CODE:**

PHONE: na	FAX: na		SITE CODE:	Natural Gas Air Quality Study
S5-P-10-1-10	0100501-07	Air	10/01/10 23:59	10/05/10 13:09
S4-P-10-4-10	0100601-08	Air	10/04/10 23:59	10/06/10 10:58
S4-D-10-4-10	0100601-09	Air	10/04/10 23:59	10/06/10 10:58
S5-P-10-4-10	0100601-10	Air	10/04/10 23:59	10/06/10 10:58
S5-D-10-4-10	0100601-11	Air	10/04/10 23:59	10/06/10 10:58
S4-P-10-7-10	0101208-06	Air	10/07/10 23:59	10/12/10 10:29
S5-P-10-7-10	0101208-07	Air	10/07/10 23:59	10/12/10 10:29
S4-P-10-10-10	0101208-13	Air	10/10/10 23:59	10/12/10 10:29
S5-P-10-10-10	0101208-14	Air	10/10/10 23:59	10/12/10 10:29
S4-P-10-13-10	0101514-08	Air	10/13/10 23:59	10/15/10 10:47
S4-D-10-13-10	0101514-09	Air	10/13/10 23:59	10/15/10 10:47
S5-P-10-13-10	0101514-10	Air	10/13/10 23:59	10/15/10 10:47
S5-D-10-13-10	0101514-11	Air	10/13/10 23:59	10/15/10 10:47
S4-P-10-16-10	0102001-06	Air	10/16/10 23:59	10/19/10 15:32
S5-P-10-16-10	0102001-07	Air	10/16/10 23:59	10/19/10 15:32
S4-P-10-19-10	0102116-05	Air	10/19/10 23:59	10/21/10 10:37
S5-P-10-19-10	0102116-06	Air	10/19/10 23:59	10/21/10 10:37
S4-P-10-22-10	0102621-06	Air	10/22/10 23:59	10/26/10 12:26
S5-P-10-22-10	0102621-07	Air	10/22/10 23:59	10/26/10 12:26
S4-P-10-25-10	0102801-06	Air	10/25/10 23:59	10/27/10 15:42
S5-P-10-25-10	0102801-07	Air	10/25/10 23:59	10/27/10 15:42
S4-P-10-28-10	0110212-12	Air	10/28/10 23:59	11/02/10 13:32
S4-D-10-28-10	0110212-13	Air	10/28/10 23:59	11/02/10 13:32
S4-P-10-31-10	0110212-14	Air	10/31/10 23:59	11/02/10 13:32
S5-P-10-28-10	0110212-15	Air	10/28/10 23:59	11/02/10 13:32
S5-D-10-28-10	0110212-16	Air	10/28/10 23:59	11/02/10 13:32



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Fort Worth, TX 76102-6311  
**ATTN:** Brain Boerner

**PHONE:** na  
S5-P-10-31-10

**FAX:** na  
0110212-17

Air

**FILE #:** 3786.02.002.001

**REPORTED:** 12/13/10 15:28

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

**AQS SITE CODE:**

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

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: S4-P-09-04-10

Lab ID: 0090802-03

Sampled: 09/04/10 23:00

Matrix: Air

Sample Volume: 709.83 L

Received: 09/08/10 12:05

Comments: Site 4

Analyzed: 09/15/10 02:02

## Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	2.35	2.89		0.005
Acetaldehyde	4.66	8.41		0.007
Acetone	2.59	6.16		0.009
Propionaldehyde	0.375	0.89		0.003
Crotonaldehyde	0.190	0.55		0.003
Butyraldehyde	0.418	1.24		0.003
Benzaldehyde	0.023	0.10		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.044	0.16		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.024	0.10		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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 SITE CODE: Natural Gas Air Quality Study

<b>Description:</b> S5-P-09-04-10	<b>Lab ID:</b> 0090802-04	<b>Sampled:</b> 09/04/10 23:00
<b>Matrix:</b> Air	<b>Sample Volume:</b> 781.53 L	<b>Received:</b> 09/08/10 12:05
<b>Comments:</b> Site 5		<b>Analyzed:</b> 09/15/10 03:24

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.977	1.20		0.005
Acetaldehyde	4.93	8.90		0.006
Acetone	2.17	5.16		0.008
Propionaldehyde	0.357	0.85		0.003
Crotonaldehyde	0.109	0.31		0.003
Butyraldehyde	0.366	1.08		0.002
Benzaldehyde	0.014	0.06		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.017	0.06		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.025	0.10		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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

<b>Description:</b> S4-P-09-07-10	<b>Lab ID:</b> 0090906-07	<b>Sampled:</b> 09/07/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 669.6 L	<b>Received:</b> 09/09/10 12:17
<b>Comments:</b> Dup1 Site 4		<b>Analyzed:</b> 09/28/10 02:02

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	1.10	1.35		0.005
Acetaldehyde	1.99	3.59		0.007
Acetone	0.412	0.98		0.010
Propionaldehyde	0.131	0.31		0.003
Crotonaldehyde	0.051	0.15		0.003
Butyraldehyde	0.133	0.39		0.003
Benzaldehyde	0.016	0.07		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.022	0.08		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.015	0.06		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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AQS SITE CODE:

PHONE: na

FAX: na

SITE CODE:

Natural Gas Air Quality Study

Description: S4-D-09-07-10

Lab ID: 0090906-08

Sampled: 09/07/10 23:59

Matrix: Air

Sample Volume: 734.4 L

Received: 09/09/10 12:17

Comments: Dup2 Site 4

Analyzed: 09/28/10 03:24

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	4.19	5.16		0.005
Acetaldehyde	1.58	2.85		0.007
Acetone	0.750	1.78		0.009
Propionaldehyde	0.140	0.33		0.003
Crotonaldehyde	0.090	0.26		0.003
Butyraldehyde	0.177	0.52		0.002
Benzaldehyde	0.070	0.31		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.082	0.29		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.112	0.46		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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AQS SITE CODE:

PHONE: na

FAX: na

SITE CODE:

Natural Gas Air Quality Study

Description: S5-P-09-07-10

Lab ID: 0090906-09

Sampled: 09/07/10 23:59

Matrix: Air

Sample Volume: 878.4 L

Received: 09/09/10 12:17

Comments: Dup1 Site 5

Analyzed: 09/28/10 04:46

## Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.884	1.09		0.004
Acetaldehyde	1.42	2.56		0.006
Acetone	0.262	0.62		0.007
Propionaldehyde	0.073	0.17		0.002
Crotonaldehyde	0.046	0.13		0.003
Butyraldehyde	0.053	0.16		0.002
Benzaldehyde	0.013	0.06		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.011	0.04		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.025	0.10		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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

<b>Description:</b> S5-D-09-07-10	<b>Lab ID:</b> 0090906-10	<b>Sampled:</b> 09/07/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 979.2 L	<b>Received:</b> 09/09/10 12:17
<b>Comments:</b> Dup2 Site 5		<b>Analyzed:</b> 09/28/10 06:08

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.807	0.99		0.004
Acetaldehyde	1.44	2.60		0.005
Acetone	0.215	0.51		0.007
Propionaldehyde	0.081	0.19		0.002
Crotonaldehyde	0.042	0.12		0.002
Butyraldehyde	0.055	0.16		0.002
Benzaldehyde	0.011	0.05		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.010	0.04		0.002
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.021	0.09		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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AQS SITE CODE:

PHONE: na

FAX: na

SITE CODE:

Natural Gas Air Quality Study

Description: S4-P-09-10-10

Lab ID: 0091501-04

Sampled: 09/10/10 23:54

Matrix: Air

Sample Volume: 688.32 L

Received: 09/14/10 16:01

Comments: Site 4

Analyzed: 09/28/10 00:41

## Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.877	1.08		0.005
Acetaldehyde	2.32	4.19		0.007
Acetone	0.412	0.98		0.009
Propionaldehyde	0.115	0.27		0.003
Crotonaldehyde	0.098	0.28		0.003
Butyraldehyde	0.079	0.23		0.003
Benzaldehyde	0.009	0.04		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.026	0.09		0.003
Tolualdehydes	ND	ND	U	0.004
Hexaldehyde	0.016	0.07		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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<b>Description:</b> S5-P-09-10-10	<b>Lab ID:</b> 0091501-05	<b>Sampled:</b> 09/10/10 23:49
<b>Matrix:</b> Air	<b>Sample Volume:</b> 896.25 L	<b>Received:</b> 09/14/10 16:01
<b>Comments:</b> Site 5		<b>Analyzed:</b> 09/28/10 01:22

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.842	1.04		0.004
Acetaldehyde	2.46	4.44		0.006
Acetone	0.326	0.78		0.007
Propionaldehyde	0.073	0.17		0.002
Crotonaldehyde	0.071	0.20		0.002
Butyraldehyde	0.047	0.14		0.002
Benzaldehyde	0.009	0.04		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.008	0.03		0.003
Tolualdehydes	ND	ND	U	0.003
Hexaldehyde	0.017	0.07		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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<b>Description:</b> S4-P-09-13-10	<b>Lab ID:</b> 0091614-05	<b>Sampled:</b> 09/13/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 731.34 L	<b>Received:</b> 09/16/10 12:42
<b>Comments:</b> Site 4		<b>Analyzed:</b> 09/29/10 16:12

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.412	0.51		0.005
Acetaldehyde	1.38	2.49		0.007
Acetone	0.598	1.42		0.009
Propionaldehyde	0.060	0.14		0.003
Crotonaldehyde	0.069	0.20		0.003
Butyraldehyde	0.052	0.15		0.002
Benzaldehyde	0.010	0.04		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.015	0.05		0.003
Tolualdehydes	ND	ND	U	0.004
Hexaldehyde	0.011	0.05		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

**Description:** S5-P-09-13-10      **Lab ID:** 0091614-06      **Sampled:** 09/13/10 23:59  
**Matrix:** Air      **Sample Volume:** 889.08 L      **Received:** 09/16/10 12:42  
**Comments:** Site 5      **Analyzed:** 09/29/10 16:52

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.936	1.15		0.004
Acetaldehyde	2.56	4.62		0.006
Acetone	0.650	1.55		0.007
Propionaldehyde	0.047	0.11		0.002
Crotonaldehyde	0.119	0.34		0.002
Butyraldehyde	0.037	0.11		0.002
Benzaldehyde	0.008	0.03		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.015	0.05		0.003
Tolualdehydes	ND	ND	U	0.003
Hexaldehyde	0.019	0.08		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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**Description:** S4-P-09-16-10 **Lab ID:** 0092120-08 **Sampled:** 09/16/10 23:54  
**Matrix:** Air **Sample Volume:** 724.17 L **Received:** 09/21/10 13:32  
**Comments:** Site 4 **Analyzed:** 09/29/10 17:33

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.487	0.60		0.005
Acetaldehyde	1.88	3.39		0.007
Acetone	1.53	3.64		0.009
Propionaldehyde	0.064	0.15		0.003
Crotonaldehyde	0.059	0.17		0.003
Butyraldehyde	0.045	0.13		0.002
Benzaldehyde	0.009	0.04		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.011	0.04		0.003
Tolualdehydes	ND	ND	U	0.004
Hexaldehyde	0.011	0.05		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



# 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: 12/13/10 15:28  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

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<b>Description:</b> S4-P-09-19-10	<b>Lab ID:</b> 0092120-11	<b>Sampled:</b> 09/19/10 23:54
<b>Matrix:</b> Air	<b>Sample Volume:</b> 688.32 L	<b>Received:</b> 09/21/10 13:32
<b>Comments:</b> Dup1 Site 4		<b>Analyzed:</b> 09/30/10 13:17

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### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	4.45	5.48		0.005
Acetaldehyde	2.91	5.25		0.007
Acetone	1.88	4.47		0.009
Propionaldehyde	0.236	0.56		0.003
Crotonaldehyde	0.142	0.41		0.003
Butyraldehyde	0.196	0.58		0.003
Benzaldehyde	0.071	0.31		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.075	0.27		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.143	0.59		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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Description: S4-D-09-19-10

Lab ID: 0092120-12

Sampled: 09/19/10 23:54

Matrix: Air

Sample Volume: 666.81 L

Received: 09/21/10 13:32

Comments: Dup2 Site 4

Analyzed: 09/30/10 14:38

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	7.77	9.56		0.005
Acetaldehyde	2.80	5.05		0.007
Acetone	3.56	8.47		0.010
Propionaldehyde	0.421	1.00		0.003
Crotonaldehyde	0.153	0.44		0.003
Butyraldehyde	0.360	1.06		0.003
Benzaldehyde	0.129	0.56		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.154	0.54		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.258	1.06		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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<b>Description:</b> S5-P-09-16-10	<b>Lab ID:</b> 0092120-14	<b>Sampled:</b> 09/16/10 23:54
<b>Matrix:</b> Air	<b>Sample Volume:</b> 874.74 L	<b>Received:</b> 09/21/10 13:32
<b>Comments:</b> Site 5		<b>Analyzed:</b> 09/29/10 18:14

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.900	1.11		0.004
Acetaldehyde	2.28	4.12		0.006
Acetone	1.13	2.69		0.007
Propionaldehyde	0.046	0.11		0.002
Crotonaldehyde	0.076	0.22		0.003
Butyraldehyde	0.040	0.12		0.002
Benzaldehyde	0.011	0.05		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.009	0.03		0.003
Tolualdehydes	ND	ND	U	0.003
Hexaldehyde	0.018	0.07		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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<b>Description:</b> S5-P-09-19-10	<b>Lab ID:</b> 0092120-17	<b>Sampled:</b> 09/19/10 23:54
<b>Matrix:</b> Air	<b>Sample Volume:</b> 856.8 L	<b>Received:</b> 09/21/10 13:32
<b>Comments:</b> Dup1 Site 5		<b>Analyzed:</b> 09/30/10 16:00

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	1.32	1.62		0.004
Acetaldehyde	1.91	3.45		0.006
Acetone	1.19	2.83		0.007
Propionaldehyde	0.065	0.16		0.002
Crotonaldehyde	0.111	0.32		0.003
Butyraldehyde	0.044	0.13		0.002
Benzaldehyde	0.015	0.07		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.016	0.06		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.025	0.10		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-D-09-19-10

Lab ID: 0092120-18

Sampled: 09/19/10 23:54

Matrix: Air

Sample Volume: 1000.8 L

Received: 09/21/10 13:32

Comments: Dup2 Site 5

Analyzed: 09/30/10 17:22

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	1.16	1.43		0.004
Acetaldehyde	1.89	3.41		0.005
Acetone	1.09	2.59		0.006
Propionaldehyde	0.064	0.15		0.002
Crotonaldehyde	0.098	0.28		0.002
Butyraldehyde	0.053	0.16		0.002
Benzaldehyde	0.013	0.06		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.014	0.05		0.002
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.021	0.09		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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 AQS SITE CODE:  
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<b>Description:</b> S4-P-09-22-10	<b>Lab ID:</b> 0092403-04	<b>Sampled:</b> 09/22/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 695.49 L	<b>Received:</b> 09/24/10 10:22
<b>Comments:</b> Site 4		<b>Analyzed:</b> 10/21/10 19:18

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.603	0.74		0.005
Acetaldehyde	1.35	2.44		0.007
Acetone	0.585	1.39		0.009
Propionaldehyde	0.053	0.13		0.003
Crotonaldehyde	0.052	0.15		0.003
Butyraldehyde	0.047	0.14		0.003
Benzaldehyde	0.008	0.03		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.019	0.07		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.014	0.06		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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

<b>Description:</b> S5-P-09-22-10	<b>Lab ID:</b> 0092403-06	<b>Sampled:</b> 09/22/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 867.57 L	<b>Received:</b> 09/24/10 10:22
<b>Comments:</b> Site 5		<b>Analyzed:</b> 10/21/10 18:37

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.550	0.68		0.004
Acetaldehyde	1.40	2.53		0.006
Acetone	0.569	1.35		0.007
Propionaldehyde	0.018	0.04		0.002
Crotonaldehyde	0.031	0.09		0.003
Butyraldehyde	0.026	0.08		0.002
Benzaldehyde	0.007	0.03		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.008	0.03		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.015	0.06		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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<b>Description:</b> S4-P-09-25-10	<b>Lab ID:</b> 0092901-06	<b>Sampled:</b> 09/25/10 23:49
<b>Matrix:</b> Air	<b>Sample Volume:</b> 724.17 L	<b>Received:</b> 09/28/10 16:00
<b>Comments:</b> Site 4		<b>Analyzed:</b> 10/04/10 19:23

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### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.572	0.70		0.005
Acetaldehyde	3.41	6.16		0.007
Acetone	0.701	1.67		0.009
Propionaldehyde	0.070	0.17		0.003
Crotonaldehyde	0.056	0.16		0.003
Butyraldehyde	0.051	0.15		0.002
Benzaldehyde	0.012	0.05		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.011	0.04		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.013	0.05		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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 AQS SITE CODE:  
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<b>Description:</b> S5-P-09-25-10	<b>Lab ID:</b> 0092901-07	<b>Sampled:</b> 09/25/10 23:49
<b>Matrix:</b> Air	<b>Sample Volume:</b> 860.4 L	<b>Received:</b> 09/28/10 16:00
<b>Comments:</b> Site 5		<b>Analyzed:</b> 10/04/10 20:04

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.639	0.79		0.004
Acetaldehyde	1.63	2.94		0.006
Acetone	0.613	1.46		0.007
Propionaldehyde	0.019	0.05		0.002
Crotonaldehyde	0.030	0.09		0.003
Butyraldehyde	0.019	0.06		0.002
Benzaldehyde	0.009	0.04		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.007	0.02		0.003
Tolualdehydes	0.016	0.08		0.003
Hexaldehyde	0.019	0.08		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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 AQS SITE CODE:  
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<b>Description:</b> S4-P-09-28-10	<b>Lab ID:</b> 0093008-06	<b>Sampled:</b> 09/28/10 23:49
<b>Matrix:</b> Air	<b>Sample Volume:</b> 702.66 L	<b>Received:</b> 09/30/10 14:35
<b>Comments:</b> Site 4		<b>Analyzed:</b> 10/11/10 18:45

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.860	1.06		0.005
Acetaldehyde	8.37	15.10		0.007
Acetone	2.16	5.14		0.009
Propionaldehyde	0.112	0.27		0.003
Crotonaldehyde	0.065	0.19		0.003
Butyraldehyde	0.114	0.34		0.003
Benzaldehyde	0.011	0.05		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.018	0.06		0.003
Tolualdehydes	0.013	0.06		0.004
Hexaldehyde	0.010	0.04		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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<b>Description:</b> S5-P-09-28-10	<b>Lab ID:</b> 0093008-07	<b>Sampled:</b> 09/28/10 23:49
<b>Matrix:</b> Air	<b>Sample Volume:</b> 843.11 L	<b>Received:</b> 09/30/10 14:35
<b>Comments:</b> Site 5		<b>Analyzed:</b> 10/11/10 19:25

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.528	0.65		0.004
Acetaldehyde	1.26	2.27		0.006
Acetone	1.44	3.43		0.008
Propionaldehyde	0.021	0.05		0.002
Crotonaldehyde	0.028	0.08		0.003
Butyraldehyde	0.024	0.07		0.002
Benzaldehyde	0.006	0.03		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.009	0.03		0.003
Tolualdehydes	0.007	0.03		0.003
Hexaldehyde	0.023	0.09		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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<b>Description:</b> S4-P-10-1-10	<b>Lab ID:</b> 0100501-06	<b>Sampled:</b> 10/01/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 693.55 L	<b>Received:</b> 10/05/10 13:09
<b>Comments:</b> Site 4		<b>Analyzed:</b> 10/18/10 13:57

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	1.08	1.33		0.005
Acetaldehyde	6.62	12.00		0.007
Acetone	1.87	4.45		0.009
Propionaldehyde	0.138	0.33		0.003
Crotonaldehyde	0.063	0.18		0.003
Butyraldehyde	0.112	0.33		0.003
Benzaldehyde	0.110	0.48		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.018	0.06		0.003
Tolualdehydes	0.017	0.08		0.004
Hexaldehyde	0.021	0.09		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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<b>Description:</b> S5-P-10-1-10	<b>Lab ID:</b> 0100501-07	<b>Sampled:</b> 10/01/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 858 L	<b>Received:</b> 10/05/10 13:09
<b>Comments:</b> Site 5		<b>Analyzed:</b> 10/18/10 14:38

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.578	0.71		0.004
Acetaldehyde	0.969	1.75		0.006
Acetone	1.08	2.57		0.007
Propionaldehyde	0.017	0.04		0.002
Crotonaldehyde	0.023	0.07		0.003
Butyraldehyde	0.020	0.06		0.002
Benzaldehyde	0.011	0.05		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.007	0.02		0.003
Tolualdehydes	0.010	0.05		0.003
Hexaldehyde	0.028	0.12		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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<b>Description:</b> S4-P-10-4-10	<b>Lab ID:</b> 0100601-08	<b>Sampled:</b> 10/04/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 702.66 L	<b>Received:</b> 10/06/10 10:58
<b>Comments:</b> Dup1 Site 4		<b>Analyzed:</b> 10/19/10 03:34

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### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	1.06	1.30		0.005
Acetaldehyde	3.16	5.70		0.007
Acetone	4.65	11.10		0.009
Propionaldehyde	0.093	0.22		0.003
Crotonaldehyde	0.049	0.14		0.003
Butyraldehyde	0.216	0.64		0.003
Benzaldehyde	0.017	0.07		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.012	0.04		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.012	0.05		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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AQS SITE CODE:

PHONE: na

FAX: na

SITE CODE:

Natural Gas Air Quality Study

Description: S4-D-10-4-10

Lab ID: 0100601-09

Sampled: 10/04/10 23:59

Matrix: Air

Sample Volume: 595.11 L

Received: 10/06/10 10:58

Comments: Dup2 Site 4

Analyzed: 10/19/10 04:56

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	3.64	4.48		0.006
Acetaldehyde	3.30	5.96		0.008
Acetone	4.40	10.50		0.011
Propionaldehyde	0.212	0.50		0.004
Crotonaldehyde	0.062	0.18		0.004
Butyraldehyde	0.231	0.68		0.003
Benzaldehyde	0.067	0.29		0.003
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.058	0.21		0.004
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.129	0.53		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.002



# 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: 12/13/10 15:28  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

<b>Description:</b> S5-P-10-4-10	<b>Lab ID:</b> 0100601-10	<b>Sampled:</b> 10/04/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 831.72 L	<b>Received:</b> 10/06/10 10:58
<b>Comments:</b> Dup1 Site 5		<b>Analyzed:</b> 10/19/10 06:18

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.714	0.88		0.004
Acetaldehyde	1.31	2.36		0.006
Acetone	1.80	4.28		0.008
Propionaldehyde	0.031	0.07		0.003
Crotonaldehyde	0.039	0.11		0.003
Butyraldehyde	0.030	0.09		0.002
Benzaldehyde	0.010	0.04		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.006	0.02		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.023	0.09		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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Description: S5-D-10-4-10

Lab ID: 0100601-11

Sampled: 10/04/10 23:59

Matrix: Air

Sample Volume: 917.76 L

Received: 10/06/10 10:58

Comments: Dup2 Site 5

Analyzed: 10/19/10 07:39

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.628	0.77		0.004
Acetaldehyde	1.29	2.33		0.005
Acetone	1.75	4.16		0.007
Propionaldehyde	0.029	0.07		0.002
Crotonaldehyde	0.036	0.10		0.002
Butyraldehyde	0.027	0.08		0.002
Benzaldehyde	0.009	0.04		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.006	0.02		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.020	0.08		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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SITE CODE:

Natural Gas Air Quality Study

Description: S4-P-10-7-10

Lab ID: 0101208-06

Sampled: 10/07/10 23:59

Matrix: Air

Sample Volume: 579.39 L

Received: 10/12/10 10:29

Comments: Sample ran 21.7 hrs. due to power outage.

Analyzed: 10/27/10 08:19

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	1.19	1.46		0.006
Acetaldehyde	9.06	16.40		0.009
Acetone	4.90	11.70		0.011
Propionaldehyde	0.154	0.37		0.004
Crotonaldehyde	0.084	0.24		0.004
Butyraldehyde	0.148	0.44		0.003
Benzaldehyde	0.020	0.09		0.003
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.019	0.07		0.004
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.016	0.07		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.002



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 AQS SITE CODE:  
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<b>Description:</b> S5-P-10-7-10	<b>Lab ID:</b> 0101208-07	<b>Sampled:</b> 10/07/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 874.74 L	<b>Received:</b> 10/12/10 10:29
<b>Comments:</b> Site 5		<b>Analyzed:</b> 10/27/10 09:41

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.526	0.65		0.004
Acetaldehyde	2.16	3.90		0.006
Acetone	2.44	5.81		0.007
Propionaldehyde	0.020	0.05		0.002
Crotonaldehyde	0.035	0.10		0.003
Butyraldehyde	0.034	0.10		0.002
Benzaldehyde	0.009	0.04		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.006	0.02		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.018	0.07		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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SITE CODE:

Natural Gas Air Quality Study

Description: S4-P-10-10-10

Lab ID: 0101208-13

Sampled: 10/10/10 23:59

Matrix: Air

Sample Volume: 663.23 L

Received: 10/12/10 10:29

Comments: Site 4

Analyzed: 10/27/10 05:34

## Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.793	0.98		0.005
Acetaldehyde	3.55	6.41		0.008
Acetone	1.46	3.47		0.010
Propionaldehyde	0.075	0.18		0.003
Crotonaldehyde	0.066	0.19		0.003
Butyraldehyde	0.056	0.17		0.003
Benzaldehyde	0.010	0.04		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.008	0.03		0.003
Tolualdehydes	0.009	0.04		0.004
Hexaldehyde	0.012	0.05		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.002



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AQS SITE CODE:

PHONE: na

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SITE CODE:

Natural Gas Air Quality Study

Description: S5-P-10-10-10

Lab ID: 0101208-14

Sampled: 10/10/10 23:59

Matrix: Air

Sample Volume: 838.89 L

Received: 10/12/10 10:29

Comments: Site 5

Analyzed: 10/27/10 06:56

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.613	0.75		0.004
Acetaldehyde	1.55	2.80		0.006
Acetone	1.03	2.45		0.008
Propionaldehyde	0.023	0.05		0.003
Crotonaldehyde	0.034	0.10		0.003
Butyraldehyde	0.022	0.07		0.002
Benzaldehyde	0.007	0.03		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.010	0.04		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.023	0.09		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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AQS SITE CODE:

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SITE CODE:

Natural Gas Air Quality Study

**Description:** S4-P-10-13-10

**Lab ID:** 0101514-08

**Sampled:** 10/13/10 23:59

**Matrix:** Air

**Sample Volume:** 664.95 L

**Received:** 10/15/10 10:47

**Comments:** Dup1 Site 4

**Analyzed:** 10/29/10 10:00

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.851	1.05		0.005
Acetaldehyde	2.92	5.27		0.008
Acetone	2.22	5.28		0.010
Propionaldehyde	0.074	0.18		0.003
Crotonaldehyde	0.037	0.11		0.003
Butyraldehyde	0.087	0.26		0.003
Benzaldehyde	0.009	0.04		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.011	0.04		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.010	0.04		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.002



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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-D-10-13-10      **Lab ID:** 0101514-09      **Sampled:** 10/13/10 23:59  
**Matrix:** Air      **Sample Volume:** 661.38 L      **Received:** 10/15/10 10:47  
**Comments:** Dup2 Site 4      **Analyzed:** 10/29/10 12:43

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	1.92	2.36		0.005
Acetaldehyde	1.90	3.43		0.008
Acetone	2.73	6.50		0.010
Propionaldehyde	0.222	0.53		0.003
Crotonaldehyde	0.062	0.18		0.003
Butyraldehyde	0.168	0.50		0.003
Benzaldehyde	0.028	0.12		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.058	0.21		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.109	0.45		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.002



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FILE #: 3786.02.002.001

REPORTED: 12/13/10 15:28

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-10-13-10

Lab ID: 0101514-10

Sampled: 10/13/10 23:59

Matrix: Air

Sample Volume: 865.15 L

Received: 10/15/10 10:47

Comments: Dup1 Site 5

Analyzed: 10/29/10 16:48

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.818	1.01		0.004
Acetaldehyde	1.17	2.11		0.006
Acetone	1.30	3.09		0.007
Propionaldehyde	0.027	0.06		0.002
Crotonaldehyde	0.029	0.08		0.003
Butyraldehyde	0.033	0.10		0.002
Benzaldehyde	0.008	0.03		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.007	0.02		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.019	0.08		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



# CERTIFICATE OF ANALYSIS

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 Fort Worth, TX 76102-6311  
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FILE #: 3786.02.002.001  
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<b>Description:</b> S5-D-10-13-10	<b>Lab ID:</b> 0101514-11	<b>Sampled:</b> 10/13/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 950.95 L	<b>Received:</b> 10/15/10 10:47
<b>Comments:</b> Dup2 Site 5		<b>Analyzed:</b> 10/29/10 19:32

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.712	0.88		0.004
Acetaldehyde	1.16	2.09		0.005
Acetone	1.25	2.97		0.007
Propionaldehyde	0.025	0.06		0.002
Crotonaldehyde	0.029	0.08		0.002
Butyraldehyde	0.031	0.09		0.002
Benzaldehyde	0.007	0.03		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.006	0.02		0.002
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.016	0.07		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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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: 0102001-06

Sampled: 10/16/10 23:59

Matrix: Air

Sample Volume: 645.3 L

Received: 10/19/10 15:32

Comments: Site 4

Analyzed: 10/29/10 07:17

## Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	1.16	1.43		0.006
Acetaldehyde	7.69	13.90		0.008
Acetone	3.15	7.50		0.010
Propionaldehyde	0.138	0.33		0.003
Crotonaldehyde	0.059	0.17		0.003
Butyraldehyde	0.132	0.39		0.003
Benzaldehyde	0.016	0.07		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.019	0.07		0.004
Tolualdehydes	0.011	0.05		0.004
Hexaldehyde	0.014	0.06		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.002



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AQS SITE CODE:

PHONE: na

FAX: na

SITE CODE:

Natural Gas Air Quality Study

Description: S5-P-10-16-10

Lab ID: 0102001-07

Sampled: 10/16/10 23:59

Matrix: Air

Sample Volume: 810.21 L

Received: 10/19/10 15:32

Comments: Site 5

Analyzed: 10/29/10 08:38

## Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.565	0.70		0.004
Acetaldehyde	1.84	3.32		0.006
Acetone	2.74	6.52		0.008
Propionaldehyde	0.018	0.04		0.003
Crotonaldehyde	0.024	0.07		0.003
Butyraldehyde	0.032	0.09		0.002
Benzaldehyde	0.007	0.03		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.007	0.02		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.020	0.08		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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<b>Description:</b> S4-P-10-19-10	<b>Lab ID:</b> 0102116-05	<b>Sampled:</b> 10/19/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 645.84 L	<b>Received:</b> 10/21/10 10:37
<b>Comments:</b> Site 4		<b>Analyzed:</b> 11/11/10 06:36

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	1.26	1.55		0.006
Acetaldehyde	5.82	10.50		0.008
Acetone	2.23	5.31		0.010
Propionaldehyde	0.158	0.38		0.003
Crotonaldehyde	0.096	0.28		0.003
Butyraldehyde	0.656	1.94		0.003
Benzaldehyde	0.021	0.09		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.059	0.21		0.004
Tolualdehydes	0.018	0.09		0.004
Hexaldehyde	0.199	0.82		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.002



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<b>Description:</b> S5-P-10-19-10	<b>Lab ID:</b> 0102116-06	<b>Sampled:</b> 10/19/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 874.74 L	<b>Received:</b> 10/21/10 10:37
<b>Comments:</b> Site 5		<b>Analyzed:</b> 11/11/10 07:57

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.674	0.83		0.004
Acetaldehyde	1.75	3.16		0.006
Acetone	1.16	2.76		0.007
Propionaldehyde	0.021	0.05		0.002
Crotonaldehyde	0.044	0.13		0.003
Butyraldehyde	0.036	0.11		0.002
Benzaldehyde	0.009	0.04		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	0.009	0.03		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.020	0.08		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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PHONE: na FAX: na

**Description:** S4-P-10-22-10 **Lab ID:** 0102621-06 **Sampled:** 10/22/10 23:59  
**Matrix:** Air **Sample Volume:** 639.93 L **Received:** 10/26/10 12:26  
**Comments:** Site 4 **Analyzed:** 11/11/10 09:19

## Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.908	1.12		0.006
Acetaldehyde	2.27	4.10		0.008
Acetone	0.942	2.24		0.010
Propionaldehyde	0.189	0.45		0.003
Crotonaldehyde	0.075	0.22		0.003
Butyraldehyde	0.496	1.47		0.003
Benzaldehyde	0.029	0.13		0.003
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.137	0.48		0.004
Tolualdehydes	0.053	0.26		0.004
Hexaldehyde	0.531	2.18		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.002



# 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: 12/13/10 15:28  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

<b>Description:</b> S5-P-10-22-10	<b>Lab ID:</b> 0102621-07	<b>Sampled:</b> 10/22/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 790.08 L	<b>Received:</b> 10/26/10 12:26
<b>Comments:</b> Site 5		<b>Analyzed:</b> 11/11/10 10:42

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.651	0.80		0.005
Acetaldehyde	1.64	2.96		0.006
Acetone	0.716	1.70		0.008
Propionaldehyde	0.023	0.05		0.003
Crotonaldehyde	0.041	0.12		0.003
Butyraldehyde	0.015	0.04		0.002
Benzaldehyde	0.011	0.05		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.010	0.04		0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.023	0.09		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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

<b>Description:</b> S4-P-10-25-10	<b>Lab ID:</b> 0102801-06	<b>Sampled:</b> 10/25/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 665.28 L	<b>Received:</b> 10/27/10 15:42
<b>Comments:</b> Site 4		<b>Analyzed:</b> 11/04/10 16:10

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.868	1.07		0.005
Acetaldehyde	1.74	3.14		0.008
Acetone	1.23	2.93		0.010
Propionaldehyde	0.149	0.36		0.003
Crotonaldehyde	0.071	0.20		0.003
Butyraldehyde	0.176	0.52		0.003
Benzaldehyde	0.034	0.15		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.103	0.36		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.545	2.24		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.002



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SITE CODE:

Natural Gas Air Quality Study

Description: S5-P-10-25-10

Lab ID: 0102801-07

Sampled: 10/25/10 23:59

Matrix: Air

Sample Volume: 842.48 L

Received: 10/27/10 15:42

Comments: Site 5

Analyzed: 11/04/10 17:31

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.584	0.72		0.004
Acetaldehyde	1.29	2.33		0.006
Acetone	0.929	2.21		0.008
Propionaldehyde	0.017	0.04		0.002
Crotonaldehyde	0.045	0.13		0.003
Butyraldehyde	0.017	0.05		0.002
Benzaldehyde	ND	ND	U	0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	ND	ND	U	0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.019	0.08		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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FILE #: 3786.02.002.001  
 REPORTED: 12/13/10 15:28  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

<b>Description:</b> S4-P-10-28-10	<b>Lab ID:</b> 0110212-12	<b>Sampled:</b> 10/28/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 614.9 L	<b>Received:</b> 11/02/10 13:32
<b>Comments:</b> Dup1 Site 4		<b>Analyzed:</b> 11/08/10 14:50

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.993	1.22		0.006
Acetaldehyde	3.06	5.52		0.008
Acetone	1.21	2.88		0.010
Propionaldehyde	0.110	0.26		0.003
Crotonaldehyde	0.019	0.05		0.004
Butyraldehyde	0.107	0.32		0.003
Benzaldehyde	0.040	0.17		0.003
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.077	0.27		0.004
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.373	1.53		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.002



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

<b>Description:</b>	S4-D-10-28-10	<b>Lab ID:</b>	0110212-13	<b>Sampled:</b>	10/28/10 23:59
<b>Matrix:</b>	Air	<b>Sample Volume:</b>	657.8 L	<b>Received:</b>	11/02/10 13:32
<b>Comments:</b>	Dup2 Site 4			<b>Analyzed:</b>	11/09/10 12:03

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.934	1.15		0.005
Acetaldehyde	3.21	5.80		0.008
Acetone	1.26	3.00		0.010
Propionaldehyde	0.115	0.27		0.003
Crotonaldehyde	0.020	0.06		0.003
Butyraldehyde	0.126	0.37		0.003
Benzaldehyde	0.035	0.15		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.085	0.30		0.003
Tolualdehydes	ND	ND	A-01, U	0.004
Hexaldehyde	0.399	1.64		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.002



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FILE #: 3786.02.002.001  
 REPORTED: 12/13/10 15:28  
 SUBMITTED: 09/08/10 to 11/02/10  
 AQS SITE CODE:  
 SITE CODE: Natural Gas Air Quality Study

<b>Description:</b> S4-P-10-31-10	<b>Lab ID:</b> 0110212-14	<b>Sampled:</b> 10/31/10 23:59
<b>Matrix:</b> Air	<b>Sample Volume:</b> 715 L	<b>Received:</b> 11/02/10 13:32
<b>Comments:</b> Site 4		<b>Analyzed:</b> 11/17/10 04:02

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.917	1.13		0.005
Acetaldehyde	1.88	3.39		0.007
Acetone	1.72	4.09		0.009
Propionaldehyde	0.094	0.22		0.003
Crotonaldehyde	0.044	0.13		0.003
Butyraldehyde	0.112	0.33		0.003
Benzaldehyde	0.025	0.11		0.002
Isovaleraldehyde	ND	ND	U	0.003
Valeraldehyde	0.069	0.24		0.003
Tolualdehydes	0.009	0.04		0.004
Hexaldehyde	0.293	1.20		0.002
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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AQS SITE CODE:

PHONE: na

FAX: na

SITE CODE:

Natural Gas Air Quality Study

Description: S5-P-10-28-10

Lab ID: 0110212-15

Sampled: 10/28/10 23:59

Matrix: Air

Sample Volume: 807.95 L

Received: 11/02/10 13:32

Comments: Dup1 Site 5

Analyzed: 11/17/10 06:45

### Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.679	0.84		0.004
Acetaldehyde	0.831	1.50		0.006
Acetone	1.35	3.21		0.008
Propionaldehyde	0.019	0.05		0.003
Crotonaldehyde	0.016	0.05		0.003
Butyraldehyde	0.024	0.07		0.002
Benzaldehyde	0.007	0.03		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	ND	ND	U	0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.016	0.07		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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AQS SITE CODE:

PHONE: na FAX: na

SITE CODE: Natural Gas Air Quality Study

Description: S5-D-10-28-10

Lab ID: 0110212-16

Sampled: 10/28/10 23:59

Matrix: Air

Sample Volume: 965.25 L

Received: 11/02/10 13:32

Comments: Dup2 Site 5

Analyzed: 11/17/10 09:29

## Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.536	0.66	A-01a	0.004
Acetaldehyde	0.799	1.44		0.005
Acetone	1.32	3.14		0.007
Propionaldehyde	0.020	0.05		0.002
Crotonaldehyde	0.016	0.05		0.002
Butyraldehyde	0.022	0.07		0.002
Benzaldehyde	0.006	0.03		0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	ND	ND	U	0.002
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.014	0.06		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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AQS SITE CODE:

PHONE: na

FAX: na

SITE CODE:

Natural Gas Air Quality Study

Description: S5-P-10-31-10

Lab ID: 0110212-17

Sampled: 10/31/10 23:59

Matrix: Air

Sample Volume: 807.95 L

Received: 11/02/10 13:32

Comments: Site 5

Analyzed: 11/17/10 05:24

## Air Toxics by EPA Compendium Method TO-11A

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Formaldehyde	0.474	0.58		0.004
Acetaldehyde	2.11	3.81		0.006
Acetone	2.37	5.64		0.008
Propionaldehyde	0.015	0.04		0.003
Crotonaldehyde	0.041	0.12		0.003
Butyraldehyde	0.031	0.09		0.002
Benzaldehyde	ND	ND	U	0.002
Isovaleraldehyde	ND	ND	U	0.002
Valeraldehyde	ND	ND	U	0.003
Tolualdehydes	ND	ND	A-01, U	0.003
Hexaldehyde	0.014	0.06		0.001
2,5-Dimethylbenzaldehyde	ND	ND	U	0.001



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 AQS SITE CODE:  
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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Air Toxics by EPA Compendium Method TO-11A - Quality Control

Batch B0I1704 - TO-11A extraction

### Duplicate (B0I1704-DUP1)

Source: 0090906-07

Prepared: 09/17/10 Analyzed: 09/28/10

Formaldehyde	1.10	ppbv	1.10	0.0247	10	
Acetaldehyde	1.99	ppbv	1.99	0.138	10	
Acetone	0.415	ppbv	0.412	0.840	10	
Propionaldehyde	0.133	ppbv	0.131	1.42	10	
Crotonaldehyde	0.052	ppbv	0.051	1.91	10	
Butyraldehyde	0.124	ppbv	0.133	7.19	10	
Benzaldehyde	0.017	ppbv	0.016	3.28	10	
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	0.022	ppbv	0.022	2.78	10	
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.017	ppbv	0.015	8.52	10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U

### Duplicate (B0I1704-DUP2)

Source: 0090906-08

Prepared: 09/17/10 Analyzed: 09/28/10

Formaldehyde	4.22	ppbv	4.19	0.690	10	
Acetaldehyde	1.57	ppbv	1.58	0.759	10	
Acetone	0.741	ppbv	0.750	1.26	10	
Propionaldehyde	0.130	ppbv	0.140	7.37	10	
Crotonaldehyde	0.088	ppbv	0.090	2.65	10	
Butyraldehyde	0.169	ppbv	0.177	4.81	10	
Benzaldehyde	0.066	ppbv	0.070	4.96	10	
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	0.080	ppbv	0.082	3.02	10	
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.102	ppbv	0.112	9.12	10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U

### Duplicate (B0I1704-DUP3)

Source: 0090906-09

Prepared: 09/17/10 Analyzed: 09/28/10

Formaldehyde	0.899	ppbv	0.884	1.58	10	
Acetaldehyde	1.42	ppbv	1.42	0.0877	10	
Acetone	0.268	ppbv	0.262	2.18	10	
Propionaldehyde	0.079	ppbv	0.073	8.25	10	
Crotonaldehyde	0.048	ppbv	0.046	4.84	10	
Butyraldehyde	0.052	ppbv	0.053	0.470	10	
Benzaldehyde	0.013	ppbv	0.013	6.00	10	
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	0.012	ppbv	0.011	3.34	10	
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.027	ppbv	0.025	7.02	10	

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

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Air Toxics by EPA Compendium Method TO-11A - Quality Control

Batch B0I1704 - TO-11A extraction

Duplicate (B0I1704-DUP3) Continued		Source: 0090906-09	Prepared: 09/17/10	Analyzed: 09/28/10		
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U

Duplicate (B0I1704-DUP4)		Source: 0090906-10	Prepared: 09/17/10	Analyzed: 09/28/10		
Formaldehyde	0.813	ppbv	0.807		0.779	10
Acetaldehyde	1.43	ppbv	1.44		0.960	10
Acetone	0.211	ppbv	0.215		1.89	10
Propionaldehyde	0.075	ppbv	0.081		7.41	10
Crotonaldehyde	0.041	ppbv	0.042		3.00	10
Butyraldehyde	0.056	ppbv	0.055		2.52	10
Benzaldehyde	0.010	ppbv	0.011		4.31	10
Isovaleraldehyde	ND	ppbv	ND			10
Valeraldehyde	0.010	ppbv	0.010		6.42	10
Tolualdehydes	ND	ppbv	ND			10
Hexaldehyde	0.019	ppbv	0.021		9.65	10
2,5-Dimethylbenzaldehyde	ND	ppbv	ND			10

Batch B0I2702 - TO-11A extraction

Duplicate (B0I2702-DUPD)		Source: 0092120-11	Prepared: 09/27/10	Analyzed: 09/30/10		
Formaldehyde	4.47	ppbv	4.45		0.565	10
Acetaldehyde	2.91	ppbv	2.91		0.271	10
Acetone	1.86	ppbv	1.88		0.680	10
Propionaldehyde	0.229	ppbv	0.236		3.15	10
Crotonaldehyde	0.137	ppbv	0.142		3.37	10
Butyraldehyde	0.189	ppbv	0.196		3.15	10
Benzaldehyde	0.072	ppbv	0.071		1.20	10
Isovaleraldehyde	ND	ppbv	ND			10
Valeraldehyde	0.075	ppbv	0.075		0.0101	10
Tolualdehydes	ND	ppbv	ND			10
Hexaldehyde	0.135	ppbv	0.143		5.66	10
2,5-Dimethylbenzaldehyde	ND	ppbv	ND			10

Duplicate (B0I2702-DUPE)		Source: 0092120-12	Prepared: 09/27/10	Analyzed: 09/30/10		
Formaldehyde	7.79	ppbv	7.77		0.261	10
Acetaldehyde	2.80	ppbv	2.80		0.241	10
Acetone	3.56	ppbv	3.56		0.0531	10
Propionaldehyde	0.421	ppbv	0.421		0.0255	10
Crotonaldehyde	0.146	ppbv	0.153		4.39	10
Butyraldehyde	0.359	ppbv	0.360		0.148	10
Benzaldehyde	0.129	ppbv	0.129		0.644	10

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Air Toxics by EPA Compendium Method TO-11A - Quality Control

Batch B0I2702 - TO-11A extraction

**Duplicate (B0I2702-DUPE) Continued** Source: 0092120-12 Prepared: 09/27/10 Analyzed: 09/30/10

Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	0.153	ppbv	0.154	0.844	10	
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.259	ppbv	0.258	0.222	10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U

**Duplicate (B0I2702-DUPF)** Source: 0092120-17 Prepared: 09/27/10 Analyzed: 09/30/10

Formaldehyde	1.32	ppbv	1.32	0.0176	10	
Acetaldehyde	1.91	ppbv	1.91	0.137	10	
Acetone	1.19	ppbv	1.19	0.112	10	
Propionaldehyde	0.067	ppbv	0.065	2.86	10	
Crotonaldehyde	0.110	ppbv	0.111	0.668	10	
Butyraldehyde	0.046	ppbv	0.044	5.98	10	
Benzaldehyde	0.016	ppbv	0.015	9.11	10	
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	0.017	ppbv	0.016	7.42	10	
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.027	ppbv	0.025	7.79	10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U

**Duplicate (B0I2702-DUPG)** Source: 0092120-18 Prepared: 09/27/10 Analyzed: 09/30/10

Formaldehyde	1.16	ppbv	1.16	0.256	10	
Acetaldehyde	1.89	ppbv	1.89	0.0168	10	
Acetone	1.09	ppbv	1.09	0.224	10	
Propionaldehyde	0.063	ppbv	0.064	1.01	10	
Crotonaldehyde	0.097	ppbv	0.098	0.575	10	
Butyraldehyde	0.054	ppbv	0.053	1.01	10	
Benzaldehyde	0.014	ppbv	0.013	9.61	10	
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	0.014	ppbv	0.014	3.24	10	
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.021	ppbv	0.021	0.975	10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U

Batch B0J1201 - TO-11A extraction

**Duplicate (B0J1201-DUP3)** Source: 0100601-08 Prepared: 10/12/10 Analyzed: 10/19/10

Formaldehyde	1.06	ppbv	1.06	0.0184	10	
Acetaldehyde	3.16	ppbv	3.16	0.135	10	
Acetone	4.66	ppbv	4.65	0.301	10	

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 PHONE: na FAX: na

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Air Toxics by EPA Compendium Method TO-11A - Quality Control

Batch B0J1201 - TO-11A extraction

<b>Duplicate (B0J1201-DUP3) Continued</b>		<b>Source: 0100601-08</b>		Prepared: 10/12/10 Analyzed: 10/19/10	
Propionaldehyde	0.103	ppbv	0.093	9.46	10
Crotonaldehyde	0.049	ppbv	0.049	1.26	10
Butyraldehyde	0.228	ppbv	0.216	5.18	10
Benzaldehyde	0.016	ppbv	0.017	6.55	10
Isovaleraldehyde	ND	ppbv	ND		10 U
Valeraldehyde	0.011	ppbv	0.012	9.00	10
Tolualdehydes	ND	ppbv	ND		10 A-01, U
Hexaldehyde	0.011	ppbv	0.012	3.85	10
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10 U
<b>Duplicate (B0J1201-DUP4)</b>		<b>Source: 0100601-09</b>		Prepared: 10/12/10 Analyzed: 10/19/10	
Formaldehyde	3.65	ppbv	3.64	0.289	10
Acetaldehyde	3.31	ppbv	3.30	0.117	10
Acetone	4.40	ppbv	4.40	0.0121	10
Propionaldehyde	0.204	ppbv	0.212	3.80	10
Crotonaldehyde	0.061	ppbv	0.062	1.95	10
Butyraldehyde	0.230	ppbv	0.231	0.108	10
Benzaldehyde	0.065	ppbv	0.067	2.18	10
Isovaleraldehyde	ND	ppbv	ND		10 U
Valeraldehyde	0.055	ppbv	0.058	6.51	10
Tolualdehydes	ND	ppbv	ND		10 A-01, U
Hexaldehyde	0.135	ppbv	0.129	4.89	10
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10 U
<b>Duplicate (B0J1201-DUP5)</b>		<b>Source: 0100601-10</b>		Prepared: 10/12/10 Analyzed: 10/19/10	
Formaldehyde	0.719	ppbv	0.714	0.764	10
Acetaldehyde	1.32	ppbv	1.31	0.468	10
Acetone	1.81	ppbv	1.80	0.519	10
Propionaldehyde	0.030	ppbv	0.031	4.00	10
Crotonaldehyde	0.040	ppbv	0.039	0.818	10
Butyraldehyde	0.028	ppbv	0.030	5.43	10
Benzaldehyde	0.010	ppbv	0.010	7.89	10
Isovaleraldehyde	ND	ppbv	ND		10 U
Valeraldehyde	0.007	ppbv	0.006	2.29	10
Tolualdehydes	ND	ppbv	ND		10 A-01, U
Hexaldehyde	0.022	ppbv	0.023	8.16	10
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10 U
<b>Duplicate (B0J1201-DUP6)</b>		<b>Source: 0100601-11</b>		Prepared: 10/12/10 Analyzed: 10/19/10	
Formaldehyde	0.642	ppbv	0.628	2.29	10

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## Air Toxics by EPA Compendium Method TO-11A - Quality Control

Batch B0J1201 - TO-11A extraction

**Duplicate (B0J1201-DUP6) Continued** Source: 0100601-11 Prepared: 10/12/10 Analyzed: 10/19/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Acetaldehyde	1.31	ppbv	1.29	2.00	10	
Acetone	1.78	ppbv	1.75	1.76	10	
Propionaldehyde	0.028	ppbv	0.029	3.90	10	
Crotonaldehyde	0.036	ppbv	0.036	0.409	10	
Butyraldehyde	0.029	ppbv	0.027	5.92	10	
Benzaldehyde	0.008	ppbv	0.009	6.96	10	
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	0.006	ppbv	0.006	0.446	10	
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.019	ppbv	0.020	5.88	10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U

Batch B0J2501 - TO-11A extraction

**Duplicate (B0J2501-DUP1)** Source: 0101514-08 Prepared: 10/25/10 Analyzed: 10/29/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Formaldehyde	0.848	ppbv	0.851	0.353	10	
Acetaldehyde	2.90	ppbv	2.92	0.474	10	
Acetone	2.21	ppbv	2.22	0.417	10	
Propionaldehyde	0.071	ppbv	0.074	3.79	10	
Crotonaldehyde	0.039	ppbv	0.037	5.92	10	
Butyraldehyde	0.087	ppbv	0.087	0.0271	10	
Benzaldehyde	0.010	ppbv	0.009	7.65	10	
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	0.011	ppbv	0.011	6.19	10	
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.010	ppbv	0.010	1.98	10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U

**Duplicate (B0J2501-DUP2)** Source: 0101514-09 Prepared: 10/25/10 Analyzed: 10/29/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Formaldehyde	1.92	ppbv	1.92	0.193	10	
Acetaldehyde	1.89	ppbv	1.90	0.102	10	
Acetone	2.72	ppbv	2.73	0.168	10	
Propionaldehyde	0.217	ppbv	0.222	2.09	10	
Crotonaldehyde	0.067	ppbv	0.062	7.40	10	
Butyraldehyde	0.168	ppbv	0.168	0.274	10	
Benzaldehyde	0.028	ppbv	0.028	1.87	10	
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	0.059	ppbv	0.058	2.25	10	
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.107	ppbv	0.109	2.13	10	

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Air Toxics by EPA Compendium Method TO-11A - Quality Control

Batch B0J2501 - TO-11A extraction

Duplicate (B0J2501-DUP2) Continued		Source: 0101514-09		Prepared: 10/25/10 Analyzed: 10/29/10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND	10	U

Duplicate (B0J2501-DUP3)		Source: 0101514-10		Prepared: 10/25/10 Analyzed: 10/29/10	
Formaldehyde	0.800	ppbv	0.818	2.20	10
Acetaldehyde	1.16	ppbv	1.17	0.256	10
Acetone	1.30	ppbv	1.30	0.0691	10
Propionaldehyde	0.028	ppbv	0.027	2.77	10
Crotonaldehyde	0.030	ppbv	0.029	3.62	10
Butyraldehyde	0.032	ppbv	0.033	4.76	10
Benzaldehyde	0.008	ppbv	0.008	0.604	10
Isovaleraldehyde	ND	ppbv	ND		10 U
Valeraldehyde	0.006	ppbv	0.007	5.58	10
Tolualdehydes	ND	ppbv	ND		10 A-01, U
Hexaldehyde	0.020	ppbv	0.019	4.93	10
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10 U

Duplicate (B0J2501-DUP4)		Source: 0101514-11		Prepared: 10/25/10 Analyzed: 10/29/10	
Formaldehyde	0.720	ppbv	0.712	1.18	10
Acetaldehyde	1.18	ppbv	1.16	1.28	10
Acetone	1.27	ppbv	1.25	1.09	10
Propionaldehyde	0.026	ppbv	0.025	2.43	10
Crotonaldehyde	0.030	ppbv	0.029	1.24	10
Butyraldehyde	0.032	ppbv	0.031	0.914	10
Benzaldehyde	0.008	ppbv	0.007	7.59	10
Isovaleraldehyde	ND	ppbv	ND		10 U
Valeraldehyde	0.006	ppbv	0.006	2.62	10
Tolualdehydes	ND	ppbv	ND		10 A-01, U
Hexaldehyde	0.016	ppbv	0.016	0.489	10
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10 U

Batch B0K0302 - TO-11A extraction

Duplicate (B0K0302-DUPB)		Source: 0110212-12		Prepared: 11/03/10 Analyzed: 11/08/10	
Formaldehyde	0.984	ppbv	0.993	0.923	10
Acetaldehyde	3.03	ppbv	3.06	0.979	10
Acetone	1.19	ppbv	1.21	1.39	10
Propionaldehyde	0.106	ppbv	0.110	4.07	10
Crotonaldehyde	0.019	ppbv	0.019	1.21	10
Butyraldehyde	0.107	ppbv	0.107	0.813	10
Benzaldehyde	0.038	ppbv	0.040	5.12	10

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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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## Air Toxics by EPA Compendium Method TO-11A - Quality Control

### Batch B0K0302 - TO-11A extraction

Duplicate (B0K0302-DUPB) Continued		Source: 0110212-12		Prepared: 11/03/10 Analyzed: 11/08/10		
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	0.076	ppbv	0.077	1.43	10	
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.342	ppbv	0.373	8.72	10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U

Duplicate (B0K0302-DUPC)		Source: 0110212-13		Prepared: 11/03/10 Analyzed: 11/09/10		
Formaldehyde	0.945	ppbv	0.934	1.18	10	
Acetaldehyde	3.22	ppbv	3.21	0.476	10	
Acetone	1.26	ppbv	1.26	0.0516	10	
Propionaldehyde	0.113	ppbv	0.115	1.98	10	
Crotonaldehyde	0.021	ppbv	0.020	8.50	10	
Butyraldehyde	0.126	ppbv	0.126	0.360	10	
Benzaldehyde	0.035	ppbv	0.035	0.942	10	
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	0.086	ppbv	0.085	1.52	10	
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.381	ppbv	0.399	4.71	10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U

### Batch B0K0401 - TO-11A extraction

Duplicate (B0K0401-DUP1)		Source: 0110212-15		Prepared: 11/04/10 Analyzed: 11/17/10		
Formaldehyde	0.672	ppbv	0.679	1.03	10	
Acetaldehyde	0.822	ppbv	0.831	1.11	10	
Acetone	1.34	ppbv	1.35	0.796	10	
Propionaldehyde	0.019	ppbv	0.019	2.28	10	
Crotonaldehyde	0.016	ppbv	0.016	2.96	10	
Butyraldehyde	0.024	ppbv	0.024	1.49	10	
Benzaldehyde	0.007	ppbv	0.007	6.73	10	
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	ND	ppbv	ND		10	U
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.016	ppbv	0.016	0.895	10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U

Duplicate (B0K0401-DUP2)		Source: 0110212-16		Prepared: 11/04/10 Analyzed: 11/17/10		
Formaldehyde	0.534	ppbv	0.536	0.319	10	
Acetaldehyde	0.800	ppbv	0.799	0.154	10	
Acetone	1.32	ppbv	1.32	0.172	10	



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## Air Toxics by EPA Compendium Method TO-11A - Quality Control

Batch B0K0401 - TO-11A extraction

**Duplicate (B0K0401-DUP2) Continued**                      **Source: 0110212-16**                      Prepared: 11/04/10 Analyzed: 11/17/10

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Propionaldehyde	0.020	ppbv	0.020	1.62	10	
Crotonaldehyde	0.015	ppbv	0.016	3.27	10	
Butyraldehyde	0.023	ppbv	0.022	3.30	10	
Benzaldehyde	0.006	ppbv	0.006	0.866	10	
Isovaleraldehyde	ND	ppbv	ND		10	U
Valeraldehyde	ND	ppbv	ND		10	U
Tolualdehydes	ND	ppbv	ND		10	A-01, U
Hexaldehyde	0.014	ppbv	0.014	1.07	10	
2,5-Dimethylbenzaldehyde	ND	ppbv	ND		10	U



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### Notes and Definitions

- U Under Detection Limit
- A-01a Sample does not meet QAPP duplicate criteria.
- A-01 Compound not detected due to co-elution
- ND Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
- NR Not Reported
- MDL Method Detection Limit
- RPD Relative Percent Difference

Note: Breakthrough cartridges were not submitted or analyzed as specified by Compendium Method TO-11A. This deviation from the method has been approved by the US EPA, under the contract for NMOC, UATMP, PAMS, HAPS, and NATTS Support (US EPA Contract No. 68-D-03-049).