

COMMONWEALTH OF PENNSYLVANIA

**Department of Environmental Protection
Bureau of Laboratories**

(717) 346-7200

July 27, 2015



SUBJECT: Analysis Report for June 1-4, 2015

TO: Andrew Schwietzer, Air Quality District Supervisor
4530 Bath Pike
Bethlehem, PA 18017

FROM: Linda Hreha, Supervisor
Mobile Laboratory Group
Bureau of Laboratories
P.O. Box 1467
Harrisburg, PA 17105

The following text outlines results obtained from air analysis performed June 1-4, 2015 at and near the IESI Landfill Facility in Bethlehem, PA. The instrumentation utilized in the testing was a RAM 2000 Open Path Fourier Transform Infrared Spectrometer (OPFTIR). The analytical method performed was EPA Compendium Method TO-16.

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Analytical Report

Sampling Locations and Weather Conditions for Analysis

Date	Sample ID	Location	Time (24 hr)	Average Wind Direction	Average Wind Speed (mph)	Weather Conditions
6/1/2015	01JUN15UPWIND1518	Kingston Park	15:18-15:45	N	4	Cloudy/Drizzle
6/2/2015	02JUN15MLG0700	IESI Landfill Upper Location	07:00-10:01	SW	4	Cloudy/Rainy
6/2/2015	02JUN15MLG01052	IESI Landfill Lower Location	10:52 – 16:00	SE	4	Cloudy/Rainy
6/3/2015	03JUN15MLG0635	Steel City Mennonite Church	06:35-12:01	SW	2	Cloudy/Foggy
6/3/2015	03JUN15MLG 1305	Hader Road	13:05 – 17:00	SW	4	Cloudy
6/4/2015	04JUN15MLG0605	Steel City Park	06:05-10:05	SW	3	Cloudy
6/4/2015	01JUN15MLG1055	Bethlehem Waste Water Treatment Plant	10:55-14:56	NW	2	Cloudy

Terms:

Time Weighted Average(TWA)- the average concentration during the specified analysis time.

Max- Maximum concentration observed during the specified analysis time.

Time of Maximum- Specific time during the analysis session that the maximum concentration was observed.

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Analytical Report

DEP Bureau of Laboratories
P.O. Box 1467
Harrisburg, PA 17105

Sample ID: 01JUN15UPWIND1518

Date of Analysis: 6/01/2015

Locations for sampling as determined by DEP Regional Office Staff

Upwind Spectrum*: 01JUN15UPWIND1518

Sampling Location: Kingston Park

Client: Andrew Schwietzer, Air Quality District Supervisor
4530 Bath Pike
Bethlehem, PA 18017

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

- * The upwind spectrum obtained is representative of ambient atmospheric conditions near the analysis site but upwind of the specific analysis site. This upwind spectrum does not represent a zero concentration for constituents, only a representation of constituents in the ambient air upwind of analysis site. All subsequent sampling was compared to this upwind spectrum. All reported results represent concentrations above those present in the ambient upwind air sample. The format in which this upwind spectrum is obtained does not allow for concentration derivation. DEP Regional Staff directed the Mobile Laboratory Group Staff as to where this upwind spectrum was to be obtained.

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Analytical Report

DEP Bureau of Laboratories
P.O. Box 1467
Harrisburg, PA 17105

Sample ID: 02JUN15MLG0700

Date of Analysis: 6/02/2015

Locations for sampling as determined by DEP Regional Office Staff

Upwind Spectrum*: 01JUN15UPWIND1518

Sampling Location: IESI Landfill Upper Location

Client: Andrew Schwietzer, Air Quality District Supervisor
4530 Bath Pike
Bethlehem, PA 18017

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

- * The upwind spectrum obtained is representative of ambient atmospheric conditions near the analysis site but upwind of the specific analysis site. This upwind spectrum does not represent a zero concentration for constituents, only a representation of constituents in the ambient air upwind of analysis site. All subsequent sampling was compared to this upwind spectrum. All reported results represent concentrations above those present in the ambient upwind air sample. The format in which this upwind spectrum is obtained does not allow for concentration derivation. DEP Regional Staff directed the Mobile Laboratory Group Staff as to where this upwind spectrum was to be obtained.

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Analytical Report

Sample: 02JUN15MLG0700							
Compound	Analyst	Test Method	Analysis Time	Report Limit (ppb)	Time Weighted Avg. (ppb)	Max Conc. (ppb)	Time of Max (24 Hr.)
1,2,4-Trimethyl benzene	Linda Hreha	TO-16	07:00 to 10:01	303	--	--	--
2-Methyl Butane	Linda Hreha	TO-16	07:00 to 10:01	129	--	--	--
2-Methyl Pentane	Linda Hreha	TO-16	07:00 to 10:01	118	--	--	--
3-Methyl Pentane	Linda Hreha	TO-16	07:00 to 10:01	123	--	--	--
Acetaldehyde	Linda Hreha	TO-16	07:00 to 10:01	334	--	--	--
Ammonia	Linda Hreha	TO-16	07:00 to 10:01	9	--	--	--
Benzene	Linda Hreha	TO-16	07:00 to 10:01	164	--	--	--
Carbon Disulfide	Linda Hreha	TO-16	07:00 to 10:01	395	--	--	--
Carbon Monoxide	Linda Hreha	TO-16	07:00 to 10:01	33	94	216	8:58
Carbonyl Sulfide	Linda Hreha	TO-16	07:00 to 10:01	19	--	--	--
Chloroform	Linda Hreha	TO-16	07:00 to 10:01	25	--	--	--
Chloromethane	Linda Hreha	TO-16	07:00 to 10:01	361	--	--	--
Dimethyl sulfide	Linda Hreha	TO-16	07:00 to 10:01	207	--	--	--
Ethane	Linda Hreha	TO-16	07:00 to 10:01	294	--	--	--
Ethanol	Linda Hreha	TO-16	07:00 to 10:01	59	--	84	7:43
Ethylbenzene	Linda Hreha	TO-16	07:00 to 10:01	352	--	--	--
Ethylene	Linda Hreha	TO-16	07:00 to 10:01	26	--	--	--
Formaldehyde	Linda Hreha	TO-16	07:00 to 10:01	28	--	--	--
Hydrogen Chloride	Linda Hreha	TO-16	07:00 to 10:01	36	--	--	--
Hydrogen Sulfide	Linda Hreha	TO-16	07:00 to 10:01	13952	--	--	--
iso-Butane	Linda Hreha	TO-16	07:00 to 10:01	92	--	--	--
Methane	Linda Hreha	TO-16	07:00 to 10:01	130	1679	3895	7:36
Methanol	Linda Hreha	TO-16	07:00 to 10:01	14	--	--	--
Methyl mercaptan	Linda Hreha	TO-16	07:00 to 10:01	513	--	564	7:43
Methyl tert-butyl ether (MTBE)	Linda Hreha	TO-16	07:00 to 10:01	17	--	--	--
Methylamine	Linda Hreha	TO-16	07:00 to 10:01	160	--	--	--
m-Xylene	Linda Hreha	TO-16	07:00 to 10:01	96	--	--	--
Naphthalene	Linda Hreha	TO-16	07:00 to 10:01	29	--	54	9:42
n-Butane	Linda Hreha	TO-16	07:00 to 10:01	103	--	--	--
n-Heptane	Linda Hreha	TO-16	07:00 to 10:01	1124	--	--	--
n-Hexane	Linda Hreha	TO-16	07:00 to 10:01	308	--	--	--
Nitric Acid	Linda Hreha	TO-16	07:00 to 10:01	23	--	--	--
Nitric Oxide	Linda Hreha	TO-16	07:00 to 10:01	1258	--	--	--
Nitrogen Dioxide	Linda Hreha	TO-16	07:00 to 10:01	458	--	--	--
Nitrous Acid	Linda Hreha	TO-16	07:00 to 10:01	6	--	--	--
Nitrous Oxide	Linda Hreha	TO-16	07:00 to 10:01	85	--	220	7:39
n-Octane	Linda Hreha	TO-16	07:00 to 10:01	791	--	--	--
n-Pentane	Linda Hreha	TO-16	07:00 to 10:01	179	--	--	--
o-Xylene	Linda Hreha	TO-16	07:00 to 10:01	310	--	--	--
Ozone	Linda Hreha	TO-16	07:00 to 10:01	29	--	40	7:58
Propane	Linda Hreha	TO-16	07:00 to 10:01	179	--	--	--
p-Xylene	Linda Hreha	TO-16	07:00 to 10:01	174	--	--	--
Styrene	Linda Hreha	TO-16	07:00 to 10:01	33	--	58	8:08
Sulfur Dioxide	Linda Hreha	TO-16	07:00 to 10:01	186	--	--	--
Toluene	Linda Hreha	TO-16	07:00 to 10:01	357	--	--	--
Triethylamine	Linda Hreha	TO-16	07:00 to 10:01	39	--	57	8:32

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Analytical Report

DEP Bureau of Laboratories
P.O. Box 1467
Harrisburg, PA 17105

Sample ID: 02JUN15MLG1052

Date of Analysis: 6/02/2015

Locations for sampling as determined by DEP Regional Office Staff

Upwind Spectrum*: 01JUN15UPWIND1518

Sampling Location: IESI Landfill Lower location

Client: Andrew Schwietzer, Air Quality District Supervisor
4530 Bath Pike
Bethlehem, PA 18017

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

- * The upwind spectrum obtained is representative of ambient atmospheric conditions near the analysis site but upwind of the specific analysis site. This upwind spectrum does not represent a zero concentration for constituents, only a representation of constituents in the ambient air upwind of analysis site. All subsequent sampling was compared to this upwind spectrum. All reported results represent concentrations above those present in the ambient upwind air sample. The format in which this upwind spectrum is obtained does not allow for concentration derivation. DEP Regional Staff directed the Mobile Laboratory Group Staff as to where this upwind spectrum was to be obtained.

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Analytical Report

Sample: 02JUN15MLG1052							
Compound	Analyst	Test Method	Analysis Time	Report Limit (ppb)	Time Weighted Avg. (ppb)	Max Conc. (ppb)	Time of Max (24 Hr.)
1,2,4-Trimethyl benzene	Linda Hreha	TO-16	10:52 to 16:00	200	--	--	--
2-Methyl Butane	Linda Hreha	TO-16	10:52 to 16:00	301	--	--	--
2-Methyl Pentane	Linda Hreha	TO-16	10:52 to 16:00	326	--	--	--
3-Methyl Pentane	Linda Hreha	TO-16	10:52 to 16:00	339	--	--	--
Acetaldehyde	Linda Hreha	TO-16	10:52 to 16:00	240	--	--	--
Ammonia	Linda Hreha	TO-16	10:52 to 16:00	6	--	7	13:46
Benzene	Linda Hreha	TO-16	10:52 to 16:00	147	--	--	--
Carbon Disulfide	Linda Hreha	TO-16	10:52 to 16:00	249	--	--	--
Carbon Monoxide	Linda Hreha	TO-16	10:52 to 16:00	19	66	128	15:01
Carbonyl Sulfide	Linda Hreha	TO-16	10:52 to 16:00	11	--	--	--
Chloroform	Linda Hreha	TO-16	10:52 to 16:00	14	--	--	--
Chloromethane	Linda Hreha	TO-16	10:52 to 16:00	269	--	--	--
Dimethyl sulfide	Linda Hreha	TO-16	10:52 to 16:00	184	--	205	15:03
Ethane	Linda Hreha	TO-16	10:52 to 16:00	768	--	--	--
Ethanol	Linda Hreha	TO-16	10:52 to 16:00	40	--	95	14:27
Ethylbenzene	Linda Hreha	TO-16	10:52 to 16:00	294	--	--	--
Ethylene	Linda Hreha	TO-16	10:52 to 16:00	15	--	--	--
Formaldehyde	Linda Hreha	TO-16	10:52 to 16:00	37	--	--	--
Hydrogen Chloride	Linda Hreha	TO-16	10:52 to 16:00	46	--	--	--
Hydrogen Sulfide	Linda Hreha	TO-16	10:52 to 16:00	12840	--	--	--
iso-Butane	Linda Hreha	TO-16	10:52 to 16:00	270	--	--	--
Methane	Linda Hreha	TO-16	10:52 to 16:00	291	5436	12656	15:49
Methanol	Linda Hreha	TO-16	10:52 to 16:00	11	--	15	12:41
Methyl mercaptan	Linda Hreha	TO-16	10:52 to 16:00	440	--	657	11:51
Methyl tert-butyl ether (MTBE)	Linda Hreha	TO-16	10:52 to 16:00	13	--	19	15:49
Methylamine	Linda Hreha	TO-16	10:52 to 16:00	129	--	--	--
m-Xylene	Linda Hreha	TO-16	10:52 to 16:00	68	--	--	--
Naphthalene	Linda Hreha	TO-16	10:52 to 16:00	21	--	--	--
n-Butane	Linda Hreha	TO-16	10:52 to 16:00	163	--	314	11:07
n-Heptane	Linda Hreha	TO-16	10:52 to 16:00	2869	--	--	--
n-Hexane	Linda Hreha	TO-16	10:52 to 16:00	735	--	--	--
Nitric Acid	Linda Hreha	TO-16	10:52 to 16:00	20	--	--	--
Nitric Oxide	Linda Hreha	TO-16	10:52 to 16:00	623	--	--	--
Nitrogen Dioxide	Linda Hreha	TO-16	10:52 to 16:00	1298	--	--	--
Nitrous Acid	Linda Hreha	TO-16	10:52 to 16:00	7	--	--	--
Nitrous Oxide	Linda Hreha	TO-16	10:52 to 16:00	63	--	135	15:39
n-Octane	Linda Hreha	TO-16	10:52 to 16:00	2358	--	--	--
n-Pentane	Linda Hreha	TO-16	10:52 to 16:00	397	--	--	--
o-Xylene	Linda Hreha	TO-16	10:52 to 16:00	167	--	--	--
Ozone	Linda Hreha	TO-16	10:52 to 16:00	23	--	27	14:59
Propane	Linda Hreha	TO-16	10:52 to 16:00	445	--	--	--
p-Xylene	Linda Hreha	TO-16	10:52 to 16:00	126	--	--	--
Styrene	Linda Hreha	TO-16	10:52 to 16:00	22	--	--	--
Sulfur Dioxide	Linda Hreha	TO-16	10:52 to 16:00	136	--	147	14:27
Toluene	Linda Hreha	TO-16	10:52 to 16:00	310	--	--	--
Triethylamine	Linda Hreha	TO-16	10:52 to 16:00	31	--	56	11:02

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Analytical Report

DEP Bureau of Laboratories
P.O. Box 1467
Harrisburg, PA 17105

Sample ID: 03JUN15MLG0635

Date of Analysis: 6/03/2015

Locations for sampling as determined by DEP Regional Office Staff

Upwind Spectrum*: 01JUN15UPWIND1518

Sampling Location: Steel City Mennonite Church

Client: Andrew Schwietzer, Air Quality District Supervisor
4530 Bath Pike
Bethlehem, PA 18017

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

- * The upwind spectrum obtained is representative of ambient atmospheric conditions near the analysis site but upwind of the specific analysis site. This upwind spectrum does not represent a zero concentration for constituents, only a representation of constituents in the ambient air upwind of analysis site. All subsequent sampling was compared to this upwind spectrum. All reported results represent concentrations above those present in the ambient upwind air sample. The format in which this upwind spectrum is obtained does not allow for concentration derivation. DEP Regional Staff directed the Mobile Laboratory Group Staff as to where this upwind spectrum was to be obtained.

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Analytical Report

Sample: 03JUN15MLG0635							
Compound	Analyst	Test Method	Analysis Time	Report Limit (ppb)	Time Weighted Avg. (ppb)	Max Conc. (ppb)	Time of Max (24 Hr.)
1,2,4-Trimethyl benzene	Linda Hreha	TO-16	06:35 to 12:01	252	--	--	--
2-Methyl Butane	Linda Hreha	TO-16	06:35 to 12:01	26	--	44	10:30
2-Methyl Pentane	Linda Hreha	TO-16	06:35 to 12:01	54	--	--	--
3-Methyl Pentane	Linda Hreha	TO-16	06:35 to 12:01	36	--	--	--
Acetaldehyde	Linda Hreha	TO-16	06:35 to 12:01	205	--	--	--
Ammonia	Linda Hreha	TO-16	06:35 to 12:01	8	--	12	10:47
Benzene	Linda Hreha	TO-16	06:35 to 12:01	198	--	212	10:34
Carbon Disulfide	Linda Hreha	TO-16	06:35 to 12:01	125	--	--	--
Carbon Monoxide	Linda Hreha	TO-16	06:35 to 12:01	20	22	141	10:25
Carbonyl Sulfide	Linda Hreha	TO-16	06:35 to 12:01	8	--	--	--
Chloroform	Linda Hreha	TO-16	06:35 to 12:01	18	--	--	--
Chloromethane	Linda Hreha	TO-16	06:35 to 12:01	266	--	--	--
Dimethyl sulfide	Linda Hreha	TO-16	06:35 to 12:01	95	--	--	--
Ethane	Linda Hreha	TO-16	06:35 to 12:01	115	--	--	--
Ethanol	Linda Hreha	TO-16	06:35 to 12:01	51	--	177	10:31
Ethylbenzene	Linda Hreha	TO-16	06:35 to 12:01	100	--	155	10:50
Ethylene	Linda Hreha	TO-16	06:35 to 12:01	19	--	--	--
Formaldehyde	Linda Hreha	TO-16	06:35 to 12:01	21	--	--	--
Hydrogen Chloride	Linda Hreha	TO-16	06:35 to 12:01	30	--	--	--
Hydrogen Sulfide	Linda Hreha	TO-16	06:35 to 12:01	10187	--	--	--
iso-Butane	Linda Hreha	TO-16	06:35 to 12:01	29	--	--	--
Methane	Linda Hreha	TO-16	06:35 to 12:01	99	--	--	--
Methanol	Linda Hreha	TO-16	06:35 to 12:01	15	--	18	8:33
Methyl mercaptan	Linda Hreha	TO-16	06:35 to 12:01	192	--	--	--
Methyl tert-butyl ether (MTBE)	Linda Hreha	TO-16	06:35 to 12:01	14	--	24	11:41
Methylamine	Linda Hreha	TO-16	06:35 to 12:01	170	--	--	--
m-Xylene	Linda Hreha	TO-16	06:35 to 12:01	63	--	95	9:09
Naphthalene	Linda Hreha	TO-16	06:35 to 12:01	23	--	27	9:12
n-Butane	Linda Hreha	TO-16	06:35 to 12:01	45	--	--	--
n-Heptane	Linda Hreha	TO-16	06:35 to 12:01	253	--	--	--
n-Hexane	Linda Hreha	TO-16	06:35 to 12:01	64	--	--	--
Nitric Acid	Linda Hreha	TO-16	06:35 to 12:01	18	--	--	--
Nitric Oxide	Linda Hreha	TO-16	06:35 to 12:01	503	--	--	--
Nitrogen Dioxide	Linda Hreha	TO-16	06:35 to 12:01	123	--	--	--
Nitrous Acid	Linda Hreha	TO-16	06:35 to 12:01	5	--	7	11:32
Nitrous Oxide	Linda Hreha	TO-16	06:35 to 12:01	18	--	--	--
n-Octane	Linda Hreha	TO-16	06:35 to 12:01	214	--	--	--
n-Pentane	Linda Hreha	TO-16	06:35 to 12:01	46	--	--	--
o-Xylene	Linda Hreha	TO-16	06:35 to 12:01	39	--	64	11:36
Ozone	Linda Hreha	TO-16	06:35 to 12:01	31	--	--	--
Propane	Linda Hreha	TO-16	06:35 to 12:01	37	--	--	--
p-Xylene	Linda Hreha	TO-16	06:35 to 12:01	115	--	163	8:43
Styrene	Linda Hreha	TO-16	06:35 to 12:01	32	--	--	--
Sulfur Dioxide	Linda Hreha	TO-16	06:35 to 12:01	166	--	--	--
Toluene	Linda Hreha	TO-16	06:35 to 12:01	104	--	--	--
Triethylamine	Linda Hreha	TO-16	06:35 to 12:01	23	--	--	--

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Analytical Report

DEP Bureau of Laboratories
P.O. Box 1467
Harrisburg, PA 17105

Sample ID: 03JUN15MLG1305

Date of Analysis: 6/03/2015

Locations for sampling as determined by DEP Regional Office Staff

Upwind Spectrum*: 01JUN15UPWIND1518

Sampling Location: Hader Road

Client: Andrew Schwietzer, Air Quality District Supervisor
4530 Bath Pike
Bethlehem, PA 18017

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

- * The upwind spectrum obtained is representative of ambient atmospheric conditions near the analysis site but upwind of the specific analysis site. This upwind spectrum does not represent a zero concentration for constituents, only a representation of constituents in the ambient air upwind of analysis site. All subsequent sampling was compared to this upwind spectrum. All reported results represent concentrations above those present in the ambient upwind air sample. The format in which this upwind spectrum is obtained does not allow for concentration derivation. DEP Regional Staff directed the Mobile Laboratory Group Staff as to where this upwind spectrum was to be obtained.

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Analytical Report

Sample: 03JUN15MLG1305							
Compound	Analyst	Test Method	Analysis Time	Report Limit (ppb)	Time Weighted Avg. (ppb)	Max Conc. (ppb)	Time of Max (24 Hr.)
1,2,4-Trimethyl benzene	Linda Hreha	TO-16	13:05 to 17:00	213	--	--	--
2-Methyl Butane	Linda Hreha	TO-16	13:05 to 17:00	23	--	--	--
2-Methyl Pentane	Linda Hreha	TO-16	13:05 to 17:00	43	--	--	--
3-Methyl Pentane	Linda Hreha	TO-16	13:05 to 17:00	28	--	--	--
Acetaldehyde	Linda Hreha	TO-16	13:05 to 17:00	111	--	--	--
Ammonia	Linda Hreha	TO-16	13:05 to 17:00	6	--	--	--
Benzene	Linda Hreha	TO-16	13:05 to 17:00	177	--	--	--
Carbon Disulfide	Linda Hreha	TO-16	13:05 to 17:00	86	--	--	--
Carbon Monoxide	Linda Hreha	TO-16	13:05 to 17:00	17	--	91	16:00
Carbonyl Sulfide	Linda Hreha	TO-16	13:05 to 17:00	5	--	--	--
Chloroform	Linda Hreha	TO-16	13:05 to 17:00	6	--	--	--
Chloromethane	Linda Hreha	TO-16	13:05 to 17:00	221	--	--	--
Dimethyl sulfide	Linda Hreha	TO-16	13:05 to 17:00	83	--	191	15:41
Ethane	Linda Hreha	TO-16	13:05 to 17:00	88	--	--	--
Ethanol	Linda Hreha	TO-16	13:05 to 17:00	23	--	103	13:18
Ethylbenzene	Linda Hreha	TO-16	13:05 to 17:00	84	--	85	16:23
Ethylene	Linda Hreha	TO-16	13:05 to 17:00	13	--	--	--
Formaldehyde	Linda Hreha	TO-16	13:05 to 17:00	18	--	--	--
Hydrogen Chloride	Linda Hreha	TO-16	13:05 to 17:00	26	--	--	--
Hydrogen Sulfide	Linda Hreha	TO-16	13:05 to 17:00	6995	--	--	--
iso-Butane	Linda Hreha	TO-16	13:05 to 17:00	23	--	--	--
Methane	Linda Hreha	TO-16	13:05 to 17:00	68	--	1198	14:14
Methanol	Linda Hreha	TO-16	13:05 to 17:00	13	--	--	--
Methyl mercaptan	Linda Hreha	TO-16	13:05 to 17:00	168	--	--	--
Methyl tert-butyl ether (MTBE)	Linda Hreha	TO-16	13:05 to 17:00	13	--	--	--
Methylamine	Linda Hreha	TO-16	13:05 to 17:00	132	--	--	--
m-Xylene	Linda Hreha	TO-16	13:05 to 17:00	58	--	--	--
Naphthalene	Linda Hreha	TO-16	13:05 to 17:00	20	--	--	--
n-Butane	Linda Hreha	TO-16	13:05 to 17:00	31	--	--	--
n-Heptane	Linda Hreha	TO-16	13:05 to 17:00	218	--	--	--
n-Hexane	Linda Hreha	TO-16	13:05 to 17:00	56	--	--	--
Nitric Acid	Linda Hreha	TO-16	13:05 to 17:00	17	--	27	16:27
Nitric Oxide	Linda Hreha	TO-16	13:05 to 17:00	384	--	--	--
Nitrogen Dioxide	Linda Hreha	TO-16	13:05 to 17:00	106	--	373	15:41
Nitrous Acid	Linda Hreha	TO-16	13:05 to 17:00	5	--	--	--
Nitrous Oxide	Linda Hreha	TO-16	13:05 to 17:00	8	--	--	--
n-Octane	Linda Hreha	TO-16	13:05 to 17:00	185	--	--	--
n-Pentane	Linda Hreha	TO-16	13:05 to 17:00	36	--	--	--
o-Xylene	Linda Hreha	TO-16	13:05 to 17:00	32	--	103	16:20
Ozone	Linda Hreha	TO-16	13:05 to 17:00	28	--	--	--
Propane	Linda Hreha	TO-16	13:05 to 17:00	32	--	--	--
p-Xylene	Linda Hreha	TO-16	13:05 to 17:00	98	--	--	--
Styrene	Linda Hreha	TO-16	13:05 to 17:00	29	--	--	--
Sulfur Dioxide	Linda Hreha	TO-16	13:05 to 17:00	121	--	--	--
Toluene	Linda Hreha	TO-16	13:05 to 17:00	83	--	200	15:33
Triethylamine	Linda Hreha	TO-16	13:05 to 17:00	16	--	--	--

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Analytical Report

DEP Bureau of Laboratories
P.O. Box 1467
Harrisburg, PA 17105

Sample ID: 04JUN15MLG0605

Date of Analysis: 6/4/2015

Locations for sampling as determined by DEP Regional Office Staff

Upwind Spectrum*: 01JUN15UPWIND1518

Sampling Location: Steel City Park

Client: Andrew Schwietzer, Air Quality District Supervisor
4530 Bath Pike
Bethlehem, PA 18017

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

- * The upwind spectrum obtained is representative of ambient atmospheric conditions near the analysis site but upwind of the specific analysis site. This upwind spectrum does not represent a zero concentration for constituents, only a representation of constituents in the ambient air upwind of analysis site. All subsequent sampling was compared to this upwind spectrum. All reported results represent concentrations above those present in the ambient upwind air sample. The format in which this upwind spectrum is obtained does not allow for concentration derivation. DEP Regional Staff directed the Mobile Laboratory Group Staff as to where this upwind spectrum was to be obtained.

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Analytical Report

Sample: 04JUN15MLG0605							
Compound	Analyst	Test Method	Analysis Time	Report Limit (ppb)	Time Weighted Avg. (ppb)	Max Conc. (ppb)	Time of Max (24 Hr.)
1,2,4-Trimethyl benzene	Linda Hreha	TO-16	06:05 to 10:05	210	--	--	--
2-Methyl Butane	Linda Hreha	TO-16	06:05 to 10:05	56	--	--	--
2-Methyl Pentane	Linda Hreha	TO-16	06:05 to 10:05	57	--	--	--
3-Methyl Pentane	Linda Hreha	TO-16	06:05 to 10:05	61	--	--	--
Acetaldehyde	Linda Hreha	TO-16	06:05 to 10:05	110	--	--	--
Ammonia	Linda Hreha	TO-16	06:05 to 10:05	5	--	--	--
Benzene	Linda Hreha	TO-16	06:05 to 10:05	139	--	147	8:20
Carbon Disulfide	Linda Hreha	TO-16	06:05 to 10:05	235	--	--	--
Carbon Monoxide	Linda Hreha	TO-16	06:05 to 10:05	22	60	208	8:09
Carbonyl Sulfide	Linda Hreha	TO-16	06:05 to 10:05	12	--	--	--
Chloroform	Linda Hreha	TO-16	06:05 to 10:05	7	--	8	7:05
Chloromethane	Linda Hreha	TO-16	06:05 to 10:05	251	--	--	--
Dimethyl sulfide	Linda Hreha	TO-16	06:05 to 10:05	140	--	--	--
Ethane	Linda Hreha	TO-16	06:05 to 10:05	142	--	174	9:01
Ethanol	Linda Hreha	TO-16	06:05 to 10:05	19	--	39	7:33
Ethylbenzene	Linda Hreha	TO-16	06:05 to 10:05	192	--	--	--
Ethylene	Linda Hreha	TO-16	06:05 to 10:05	11	--	--	--
Formaldehyde	Linda Hreha	TO-16	06:05 to 10:05	17	--	--	--
Hydrogen Chloride	Linda Hreha	TO-16	06:05 to 10:05	22	--	28	7:29
Hydrogen Sulfide	Linda Hreha	TO-16	06:05 to 10:05	9455	--	--	--
iso-Butane	Linda Hreha	TO-16	06:05 to 10:05	45	--	--	--
Methane	Linda Hreha	TO-16	06:05 to 10:05	95	623	808	6:15
Methanol	Linda Hreha	TO-16	06:05 to 10:05	11	--	14	6:24
Methyl mercaptan	Linda Hreha	TO-16	06:05 to 10:05	322	--	566	6:14
Methyl tert-butyl ether (MTBE)	Linda Hreha	TO-16	06:05 to 10:05	10	--	--	--
Methylamine	Linda Hreha	TO-16	06:05 to 10:05	123	--	177	6:55
m-Xylene	Linda Hreha	TO-16	06:05 to 10:05	63	--	--	--
Naphthalene	Linda Hreha	TO-16	06:05 to 10:05	20	--	--	--
n-Butane	Linda Hreha	TO-16	06:05 to 10:05	52	--	--	--
n-Heptane	Linda Hreha	TO-16	06:05 to 10:05	511	--	--	--
n-Hexane	Linda Hreha	TO-16	06:05 to 10:05	136	--	--	--
Nitric Acid	Linda Hreha	TO-16	06:05 to 10:05	14	--	--	--
Nitric Oxide	Linda Hreha	TO-16	06:05 to 10:05	556	--	--	--
Nitrogen Dioxide	Linda Hreha	TO-16	06:05 to 10:05	204	--	--	--
Nitrous Acid	Linda Hreha	TO-16	06:05 to 10:05	4	--	5	9:35
Nitrous Oxide	Linda Hreha	TO-16	06:05 to 10:05	10	101	107	6:13
n-Octane	Linda Hreha	TO-16	06:05 to 10:05	370	--	--	--
n-Pentane	Linda Hreha	TO-16	06:05 to 10:05	88	--	--	--
o-Xylene	Linda Hreha	TO-16	06:05 to 10:05	152	--	189	9:36
Ozone	Linda Hreha	TO-16	06:05 to 10:05	22	--	29	9:27
Propane	Linda Hreha	TO-16	06:05 to 10:05	78	--	--	--
p-Xylene	Linda Hreha	TO-16	06:05 to 10:05	112	--	130	9:05
Styrene	Linda Hreha	TO-16	06:05 to 10:05	24	--	--	--
Sulfur Dioxide	Linda Hreha	TO-16	06:05 to 10:05	138	--	--	--
Toluene	Linda Hreha	TO-16	06:05 to 10:05	283	--	--	--
Triethylamine	Linda Hreha	TO-16	06:05 to 10:05	13	--	--	--

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Analytical Report

DEP Bureau of Laboratories
P.O. Box 1467
Harrisburg, PA 17105

Sample ID: 04JUN15MLG1055

Date of Analysis: 6/04/2015

Locations for sampling as determined by DEP Regional Office Staff

Upwind Spectrum*: 01JUN15UPWIND1518

Sampling Location: Bethlehem Waste Water Treatment Plant

Client: Andrew Schwietzer, Air Quality District Supervisor
4530 Bath Pike
Bethlehem, PA 18017

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

- * The upwind spectrum obtained is representative of ambient atmospheric conditions near the analysis site but upwind of the specific analysis site. This upwind spectrum does not represent a zero concentration for constituents, only a representation of constituents in the ambient air upwind of analysis site. All subsequent sampling was compared to this upwind spectrum. All reported results represent concentrations above those present in the ambient upwind air sample. The format in which this upwind spectrum is obtained does not allow for concentration derivation. DEP Regional Staff directed the Mobile Laboratory Group Staff as to where this upwind spectrum was to be obtained.

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Analytical Report

Sample: 04JUN15MLG1055							
Compound	Analyst	Test Method	Analysis Time	Report Limit (ppb)	Time Weighted Avg. (ppb)	Max Conc. (ppb)	Time of Max (24 Hr.)
1,2,4-Trimethyl benzene	Linda Hreha	TO-16	10:55 to14:56	313	--	--	--
2-Methyl Butane	Linda Hreha	TO-16	10:55 to14:56	144	--	--	--
2-Methyl Pentane	Linda Hreha	TO-16	10:55 to14:56	143	--	--	--
3-Methyl Pentane	Linda Hreha	TO-16	10:55 to14:56	158	--	--	--
Acetaldehyde	Linda Hreha	TO-16	10:55 to14:56	368	--	--	--
Ammonia	Linda Hreha	TO-16	10:55 to14:56	11	--	22	13:27
Benzene	Linda Hreha	TO-16	10:55 to14:56	172	--	--	--
Carbon Disulfide	Linda Hreha	TO-16	10:55 to14:56	492	--	--	--
Carbon Monoxide	Linda Hreha	TO-16	10:55 to14:56	41	136	166	13:52
Carbonyl Sulfide	Linda Hreha	TO-16	10:55 to14:56	24	--	--	--
Chloroform	Linda Hreha	TO-16	10:55 to14:56	36	--	--	--
Chloromethane	Linda Hreha	TO-16	10:55 to14:56	367	--	--	--
Dimethyl sulfide	Linda Hreha	TO-16	10:55 to14:56	198	--	--	--
Ethane	Linda Hreha	TO-16	10:55 to14:56	343	--	--	--
Ethanol	Linda Hreha	TO-16	10:55 to14:56	72	--	118	13:17
Ethylbenzene	Linda Hreha	TO-16	10:55 to14:56	462	--	--	--
Ethylene	Linda Hreha	TO-16	10:55 to14:56	42	--	--	--
Formaldehyde	Linda Hreha	TO-16	10:55 to14:56	29	--	--	--
Hydrogen Chloride	Linda Hreha	TO-16	10:55 to14:56	33	--	--	--
Hydrogen Sulfide	Linda Hreha	TO-16	10:55 to14:56	14124	--	--	--
iso-Butane	Linda Hreha	TO-16	10:55 to14:56	115	--	--	--
Methane	Linda Hreha	TO-16	10:55 to14:56	239	1948	4584	11:09
Methanol	Linda Hreha	TO-16	10:55 to14:56	14	--	--	--
Methyl mercaptan	Linda Hreha	TO-16	10:55 to14:56	580	--	1289	14:44
Methyl tert-butyl ether (MTBE)	Linda Hreha	TO-16	10:55 to14:56	18	--	--	--
Methylamine	Linda Hreha	TO-16	10:55 to14:56	169	--	--	--
m-Xylene	Linda Hreha	TO-16	10:55 to14:56	112	--	--	--
Naphthalene	Linda Hreha	TO-16	10:55 to14:56	35	--	--	--
n-Butane	Linda Hreha	TO-16	10:55 to14:56	120	--	--	--
n-Heptane	Linda Hreha	TO-16	10:55 to14:56	1293	--	--	--
n-Hexane	Linda Hreha	TO-16	10:55 to14:56	344	--	--	--
Nitric Acid	Linda Hreha	TO-16	10:55 to14:56	18	--	--	--
Nitric Oxide	Linda Hreha	TO-16	10:55 to14:56	1559	--	--	--
Nitrogen Dioxide	Linda Hreha	TO-16	10:55 to14:56	549	--	--	--
Nitrous Acid	Linda Hreha	TO-16	10:55 to14:56	6	--	--	--
Nitrous Oxide	Linda Hreha	TO-16	10:55 to14:56	113	--	232	13:44
n-Octane	Linda Hreha	TO-16	10:55 to14:56	984	--	--	--
n-Pentane	Linda Hreha	TO-16	10:55 to14:56	200	--	--	--
o-Xylene	Linda Hreha	TO-16	10:55 to14:56	360	--	--	--
Ozone	Linda Hreha	TO-16	10:55 to14:56	20	46	64	12:33
Propane	Linda Hreha	TO-16	10:55 to14:56	209	--	--	--
p-Xylene	Linda Hreha	TO-16	10:55 to14:56	224	--	--	--
Styrene	Linda Hreha	TO-16	10:55 to14:56	31	--	--	--
Sulfur Dioxide	Linda Hreha	TO-16	10:55 to14:56	188	--	--	--
Toluene	Linda Hreha	TO-16	10:55 to14:56	366	--	--	--
Triethylamine	Linda Hreha	TO-16	10:55 to14:56	44	--	53	12:10

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