**COMMONWEALTH OF PENNSYLVANIA**

**Department of Environmental Protection**

**Bureau of Laboratories**

(717) 346-7200

June 3, 2016



**SUBJECT**: Analysis Report for March 29-31, 2016

**TO**: Roger Bellas, Waste Management Program Manager

Northeast Regional Office

Department of Environmental Protection

2 Public Square

Wilkes-Barre, PA 18701-1915

**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 March 28-31, 2016 at and near the Keystone Landfill Facility. 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.

\*\*\*\*\*The results of the analysis provided in this laboratory report relate only to the sample(s) identified in the report. \*\*\*\*\*

Unless otherwise noted, the results presented on this laboratory report meet all the requirements of the NELAC Institutes (TNI).

\*\*\*\*\*This test report shall not be reproduced except in full without the written approval of the laboratory.\*\*\*\*\*

**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** |
| 03/28/2016 | 28MAR16UPWIND1315 | St. Anthony's Field Latitude: 41° 24' 45.68"N Longitude: 75° 37 '7.01"W | 13:15-14:00 | SW | 11 | Cloudy |
| 03/29/2016 | 29MAR16MLG0800 |  Landfill- Leachate Lagoon  Latitude: 41° 26' 5.63"N Longitude: 75°35 '45.97"W | 08:00-12:00 | W | 9 | Cloudy |
| 03/29/2016 | 29MAR16MLG1322 | Landfill - Working Face Latitude: 41° 25' 30.66"NLongitude: 75° 35' 2.97"W | 13:22-17:22 | SW | 16 | Sunny |
| 03/30/2016 | 30MAR16MLG0745 | Sherwood ParkLatitude: 41° 25' 17.63"N Longitude:75° 36' 56.00"W | 07:45-11:45 | 745-930 N/NW930-12:00 SW/S/SE | 1 | Sunny |
| 03/30/2016 | 30MAR16MLG1240 | Swinick Neighborhood Latitude: 41° 25' 29.93"N Longitude: 75° 36 '46.66"W | 12:40-16:40 | SE | 10 | Sunny |
| 03/31/2016 | 31MAR16MLG0730 | Mid-Valley High School- Athletic Field Latitude: 41° 26' 53.62"N Longitude: 75° 36' 20.49"W | 07:30-11:30 | S\SE | 4 | Partly Cloudy |
| 03/31/2016 | 31MAR16MLG1210 | Mid-Valley HS - Parking LotLatitude: 41° 26' 50.91"N Longitude: 75° 36' 9.99"W | 12:10-16:10 | N/NW | 8 |  Partly 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

 is observed.

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**Analytical Report**

DEP Bureau of Laboratories

P.O. Box 1467

Harrisburg, PA 17105

Sample ID: 28MAR16UPWIND1315

Date of Analysis: 03/28/2016

Locations for sampling as determined by DEP Northeast Regional Office Staff

Upwind Spectrum\*: 28MAR16UPWIND1315

Sampling Location: St. Anthony’s Field

 Latitude: 41° 24 ’45.68” N

 Longitude: 75° 37’ 7.01” W

Client: Roger Bellas, Waste Management Program Manager

 Northeast Regional Office

 Department of Environmental Protection

 2 Public Square

 Wilkes-Barre, PA 18701-1915

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 air upwind of the analysis site. All subsequent sampling was compared to this upwind spectrum. 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: 29MAR16MLG0800

Date of Analysis: 3/29/2016

Locations for sampling as determined by DEP Northeast Regional Office Staff

Upwind Spectrum\*: 28MAR16UPWIND1315

Sampling Location: Landfill - Leachate Lagoon

 Latitude: 41° 26' 5.63"N

 Longitude: 75° 35' 45.97"W

Client: Roger Bellas, Waste Management Program Manager

 Northeast Regional Office

 Department of Environmental Protection

 2 Public Square

 Wilkes-Barre, PA 18701-1915

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

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**Analytical Report**

DEP Bureau of Laboratories

P.O. Box 1467

Harrisburg, PA 17105

Sample ID: 29MAR16MLG1322

Date of Analysis: 03/29/2016

Locations for sampling as determined by DEP Northeast Regional Office Staff

Upwind Spectrum\*: 28MAR16UPWIND1315

Sampling Location: Landfill - Working Face

Latitude: 41° 25 '30.66"N

Longitude: 75° 35' 2.97"W

Client: Roger Bellas, Waste Management Program Manager

 Northeast Regional Office

 Department of Environmental Protection

 2 Public Square

 Wilkes-Barre, PA 18701-1915

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

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**Analytical Report**

DEP Bureau of Laboratories

P.O. Box 1467

Harrisburg, PA 17105

Sample ID: 30MAR16MLG0745

Date of Analysis: 3/30/2016

Locations for sampling as determined by DEP Northeast Regional Office Staff

Upwind Spectrum\*: 28MAR16UPWIND1315

Sampling Location: Sherwood Park

Latitude: 41° 25' 17.63"N

Longitude: 75° 36 '56.00"W

Client: Roger Bellas, Waste Management Program Manager

 Northeast Regional Office

 Department of Environmental Protection

 2 Public Square

 Wilkes-Barre, PA 18701-1915

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 air upwind of analysis site. All subsequent sampling was compared to this upwind spectrum. 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: 30MAR16MLG1240

Date of Analysis: 3/30/2016

Locations for sampling as determined by DEP Northeast Regional Office Staff

Upwind Spectrum\*: 28MAR16UPWIND1315

Sampling Location: Swinick Neighborhood

 Latitude: 41° 25' 29.93"N

 Longitude: 75° 36' 46.66"W

Client: Roger Bellas, Waste Management Program Manager

 Northeast Regional Office

 Department of Environmental Protection

 2 Public Square

 Wilkes-Barre, PA 18701-1915

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

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**Analytical Report**

DEP Bureau of Laboratories

P.O. Box 1467

Harrisburg, PA 17105

Sample ID: 31MAR16MLG0730

Date of Analysis: 3/31/2016

Locations for sampling as determined by DEP Northeast Regional Office Staff

Upwind Spectrum\*: 28MAR16UPWIND1315

Sampling Location: Mid-Valley High School - Athletic Field

Latitude: 41° 26' 53.62"N

Longitude: 75° 36' 20.49"W

Client: Roger Bellas, Waste Management Program Manager

 Northeast Regional Office

 Department of Environmental Protection

 2 Public Square

 Wilkes-Barre, PA 18701-1915

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

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**Analytical Report**

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P.O. Box 1467

Harrisburg, PA 17105

Sample ID: 31MAR16MLG1210

Date of Analysis: 3/31/2016

Locations for sampling as determined by DEP Northeast Regional Office Staff

Upwind Spectrum\*: 28MAR16UPWIND1315

Sampling Location: Mid Valley High School - Parking Lot

Latitude: 41° 26' 50.91"N

Longitude: 75° 36' 9.99"W

Client: Roger Bellas, Waste Management Program Manager

 Northeast Regional Office

 Department of Environmental Protection

 2 Public Square

 Wilkes-Barre, PA 18701-1915

Method: EPA Compendium Method TO-16 Atmospheric Gases

Sample medium: Atmospheric Gas

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