Land-Tech
LANDFILL TECHNOLOGIES OF ARECIBO, LLC.

July 18, 2017.

Donald Frankel
Senior Counsel
Environmental Enforcement Section
Department of Justice
Suite 616
One Gateway Center
Newton, MA 02458
By email to donald.frankel@usdoj.gov and certified mail number 7015 3010 0001 9857 0674.

RE: CAA SEMIANNUAL REPORT
UNITED STATES V. LANDFILL TECHNOLOGIES OF ARECIBO, CORP.
CONSENT DECREE CIVIL NO. 3:14-CV-01438;
DOJ CASE NO. 90-5-2-1-09629.

Dear Mr. Frankel:

Pursuant to Section VI, CAA Injunctive Relief, of the Consent Decree Civil No. 3:14-cv-01438, Landfill Technologies of Arecibo, LLC[1] (LTA), submits the following information:

1. Calibrations of the equipment used to monitor data. *Exhibit 1.*

2. Surface Methane Gas Monitoring, Quarterly Event Report: January to March 2017. *Exhibit 2*

3. Surface Methane Gas Monitoring, Quarterly Event Report: April to June 2017. *Exhibit 3.*

[1] Previously, Landfill Technologies of Arecibo, Corp.

4. Monthly Monitoring, Gas Extraction Wells: January to June 2017. *Exhibit 4.*

5. Start Up, Shut Down and Malfunction Report: January to June 2017. *Exhibit 5.*

If additional information is required, please don't hesitate to contact LTA at your convince at 787-273-7639 or via email, Javier Vázquez, Esq. jvazquez@landfillpr.com; Maribelle Marrero, mmarrero@landfillpr.com.

Best Regards,

Javier J. Vázquez Bravo, ESQ.
Vice-president of Operations

Cc. United States Department of Justice,
Chief Environmental Enforcement Section
Certified mail number: 7015 1520 0003 4169 1858

EPA, CAA
Certified mail number: 7014 2870 0000 2741 7420

EPA RCRA,
Carl Plössl;
Certified mail number: 7014 2870 0000 2741 7437

EPA ORC,
Carolina Jordan-Garcia, Esq.;
Certified mail number: 7014 2870 0000 2741 7444

EQB,
Eng. Luis Sierra

PRLA,
Alberto L. Ramos.

Arecibo Municipality
Mayor

EXHIBIT 1

Equipment Calibrations

CERTIFICATION OF CALIBRATION

ISSUED BY: QED Environmental Systems, Inc. Services Facility

Date Of Calibration: July 22, 2016

Certificate Number: GM13655_8/30146

PJLA Calibration

No. 66916

Approved By Signatory

Bill Campbell

Bill Campbell
Laboratory Inspection

LANDTEC

QED Environmental Systems, Inc. Services Facility,
2355 Bishop Circle West, Dexter, MI 48130
www.qedenv.com

Customer: ***Diamond Systems LLC***

55 East Broad Street
Titusville, FL 32796
USA

Description: Gas Analyser

Model: GEM2000

Serial Number: GM13655

Accredited Results:

Methane (CH4)		
Certified Gas (%)	**Instrument Reading (%)**	**Uncertainty (%)**
5.0	5.0	0.41
15.0	15.0	0.65
50.0	49.4	1.05

Carbon Dioxide (CO2)		
Certified Gas (%)	**Instrument Reading (%)**	**Uncertainty (%)**
5.0	4.8	0.43
15.0	14.7	0.71
50.0	49.9	1.20

Oxygen (O2)		
Certified Gas (%)	**Instrument Reading (%)**	**Uncertainty (%)**
20.7	20.7	0.25

Gas cylinders are traceable and details can be provided if requested.

CH4, CO2 readings recorded at: 33.2 °C/91.8 °F

Barometric Pressure: 29.00 "Hg

O2 readings recorded at: 24.5 °C/76.1 °F

Method of Test: The analyzer is calibrated in a temperature controlled chamber using reference gases. All analyzers are calibrated in accordance with our procedure ISP-17 using high purity grade gas.

All calibrations are performed in accordance with ISO 17025 at LANDTEC, an ISO 17025:2005 – accredited service facility through PJLA.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NIST requirements.

The calibration results published in this certificate were obtained using equipment capable of producing results that are traceable through NIST to the International System of Units (SI). Certification only applies to results shown. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

CERTIFICATION OF CALIBRATION

PJLA ACCREDITED CALIBRATION LABORATORY NO. 66916

Certificate Number
GM13655_8/30146

Non Accredited results:

Pressure Transducers (inches of water column)					
Transducer	**Certified (Low)**	**Reading (Low)**	**Certified (High)**	**Reading (High)**	**Accuracy**
Static	0"	0.0"	40"	39.7"	2.0"
Differential	0"	0.0"	4"	3.99"	0.7"

Barometer (mbar)	
Reference	**Instrument Reading**
0982 mbar / 29.00 "Hg	0981 mbar / 28.97 "Hg

As received gas check readings:

Methane (CH4)	
Certified Gas (%)	**Instrument Reading (%)**
5.0	6.1
15.0	16.5
50.0	51.3

Carbon Dioxide (CO2)	
Certified Gas (%)	**Instrument Reading (%)**
5.0	5.2
15.0	15.5
50.0	50.5

Oxygen (O2)	
Certified Gas (%)	**Instrument Reading (%)**
20.7	0.0

As received Gas readings recorded at: 33.2 °C/91.8 °F
As received Barometric Pressure recorded at: 24.5 °C/76.1 °F

End of Certificate

LP015LNANIST-1.1

LANDTEC

Prepared for **Diamond Systems**

Certificate of Calibration for SEM – 424408047

On Friday, June 10, 2016

	Date	Time	Known Concentration	Measured Calibration Value	Comments
SPAN1	6/10/2016	7:57:05 PM	500	114507	OK
ZERO	6/10/2016	7:54:02 PM	0	3243	OK

CALIBRATION CHECK	ACTUAL
Air Zero Grade	0.0 PPM
Methane Reading with 100 PPM	95 PPM
Methane Reading with 500 PPM	500 PPM

WE RECOMMEND THAT:-

1. Calibration is checked regularly by LANDTEC.
2. The unit has a full service every year.

NEXT SERVICE DUE June 10, 2017

Calibration Checked By

LANDTEC North America
850 S. Via Lata Street • Suite 112 • Colton, CA 92324
Tel: 800-LANDTEC or 800-526-3832 • Fax: 909-825-059
www.landtecna.com

Thermo Scientific TVA1000B Toxic Vapor Analyzer

The Only Portable Intrinsically Safe Dual PID/FID Analyzer

Thermo SCIENTIFIC

Portable Toxic Vapor Analyzer

The Thermo Scientific TVA1000B is the only over-the-shoulder portable vapor analyzer that offers both PID (Photo Ionization Detection) and FID (Flame Ionization Detection) in a single, easy-to-use instrument. The ability to utilize both technologies in this field proven instrument provides benefits in reduced weight and a single user interface. The user can easily monitor and log inorganic and organic vapors simultaneously.

FID Detection

Users can measure a wide variety of organic vapors over an impressive dynamic range (0-50,000 ppm), monitoring some compounds that the PID will not detect. The flame ionization detector operates by breaking hydrocarbon bonds and is not limited by a low ionization potential of the molecule.

Simultaneous FID/PID Detection

No other instrument offers both Photo Ionization and Flame Ionization Detection operating simultaneously in a single portable vapor analyzer. Dual detection eliminates the time, expense and trouble of purchasing and maintaining two separate analyzers.

With PID detection, the user has not only the ability to monitor for organic compounds, but also can detect many inorganic compounds. Some compounds detected by PID and not FID are ammonia, carbon disulfide, carbon tetrachloride, formaldehyde, and hydrogen sulfide. The PID also has the advantage of not requiring fuel or air to operate. In anaerobic environments, the TVA1000B PID can be used.

Key Features

- Simultaneous FID/PID or Single FID detector(s)
- Portable and lightweight
- Multiple response factors and curves
- Multi-point calibration
- On-board datalogging
- 8 hour battery life

Probe Options

Standard Probe
Display measurement values on a 4-character LCD, with measurement units displayed on %, ppm, or ppb. Additionally, a bar graph indicator provides an indication of concentration level. Function keys allow selection of analyzer functions.

Enhanced Probe
Originally designed for Fugitive Emissions monitoring, the enhanced probe has a larger display area than the basic probe. This provides a display of up to 6 lines x 20 characters, plus a double height concentration value. It displays all the same information as the standard probe and has menu-driven access to many of the analyzer functions, allowing them to be easily initiated and/or changed at the probe.

TVA1000B
Data Manager Accessory: Route Management Probe

Powerful field capabilities
The TVA1000B Data Manager allows users to modify or create route data in the field, eliminating the need for manual recording of data. This helps you comply with the electronic data storage requirements within most consent decrees. The probe has a highly visible 360 degree LED with a pulsed rate linked to concentration.

The DataManager provides access to all of the features previously available only through the sidepack. Users can also easily search and navigate between tags in a route by simply entering the desired tag identifier.

Flexibility and control
The DataManager allows control of how data is viewed and accessed in the field. This allows the user to customize the view to best meet the monitoring needs at your facility, as each route may have different fields and screen displays. Fields may be designated as non-editable to enhance data integrity and database security.

An optional comment field allows the user to make electronic notes about each tag monitored. An alpha-numeric keypad makes data entry a snap.

Key Features for the DataManager

- Custom field labels for more clearly identified route information
- Definable screen layouts optimize user efficiency
- Pick lists lead to consistent data entry and minimize chance of data entry errors
- One button selections to access most commonly used functions
- New sample probe provides 360 degree visual indicator of concentration level
- Cable management system eliminates snagging sample line and electronic cable
- Existing TVA1000 units may be upgraded
- Enhanced filtering system removes dirt and water more efficiently.

ThermoConnect Software

ThermoConnect enables users of the TVA1000B to transfer, display, analyze, and configure data from the instrument using a computer. ThermoConnect is Windows® based and facilitates the importing of data into other Windows® based applications making it easier to retrieve logged data.

Added capability to maximize the TVA DataManager's features

ThermoConnect has been updated with a powerful new utility to create new route database template files. This utility allows you to easily build your own route database and design the screen appearance through a four-step process. Also, any existing route files in the old file format are still recognized by the TVA and may be upgraded to the new format.

Windows® is a registered trademark of Microsoft Coporation

Applications

Fugitive Emissions Monitoring
The unique dual detector FID/PID design can handle a wide range of compound vapors present at processing plants. The TVA1000B permits monitoring at lower ppm levels.

Emergency Response
For reliable measurements of hazardous spills or emissions, the TVA1000B responds quickly in an emergency. The ability to quickly detect the presence of "hot spots" is key to locating the source of the hazard.

Hazardous Waste Site Evaluation
The TVA1000B allows quick and easy identification of the hazard location and quantifies the level of contamination.

Underground Storage Tanks
The TVA1000B is a primary tool for determining if a UST is leaking and the extent of the contamination.

Industrial Hygiene
The TVA1000B can help you maximize the effectiveness of your plant ventilation system, and identifies trouble spots. Use it to survey ambient vapor levels in specific breathing zones or in general plant environments, and log for furthur follow-up action.

Natural Gas Leak Detection
The TVA1000B enables quick and easy detection of natural gas leaks.

The Thermo Scientific **TVA1000B** is a benchmark for experience and reliability in Fugitive Emissions Monitoring

Thermo Scientific TVA1000B Specifications

Safety certifications	FM (Class 1, Div. 1, Groups A,B,C&D Hazardous Location, Temp. Class T4)
Datalogging	Onboard
Readout	Bar graph & 4- digit LCD
Dynamic Range	0.5-2,000 ppm (PID) isobutylene; 0.5-50,000 ppm (FID) methane
Linear Range	0.5-500 ppm (PID) isobutylene; 0.5-10,000 ppm (FID) methane
Response Time	3.5 seconds
Minimum Detectable Limit	100 ppb benzene (PID); 300 ppb hexane (FID) (laboratory conditions)
Alarms	Low, high, STEL
Sample Flow Rate	1,000 cc/min nominal
Power	Rechargeable NiCd Battery
Logging Capacity	900-18,000 points mode specific
Temperature Range	0-40°C (32°F - 104°F)
Fuel	None required (PID); 99.995% hydrogen (FID)
Portable Operation Time	8 hours (with reference operating conditions)
Approximate Mass	5.8 kg (13 pounds)
Nominal Dimensions	13.5 x 10.3 x 3.2 inches (343 x 262 x 81 mm)
Analog Output	0-2V dc (non-calibrated)
Repeatability	+/- 1% (PID); +/- 2% (FID)
Autoranging	Yes
Diagnostics	Yes

Other Available Options:

Carrying Case	P/N CR012XL
Charcoal Filter	P/N 510095-1
FID Calibration Kit	P/N CR009UY
PID/FID Calibration Kit	P/N CR012UH

Thermo Scientific products represent a broad range of high-end analytical instruments, chemistry and consumable supplies, laboratory equipment, software and services that enable integrated laboratory workflow solutions. Thermo Scientific is the new name for a trusted brand – Thermo Electron – that the world's most renowned researchers, clinicians and scientists already count on to solve their analytical challenges. The brand is strengthened by the additions equipment, consumables and reagents acquired from Fisher Scientific.

TÜV MANAGEMENT SERVICE ISO 9001

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Environmental Instruments
First Responder Industrial Hygiene Products
www.thermo.com/ih

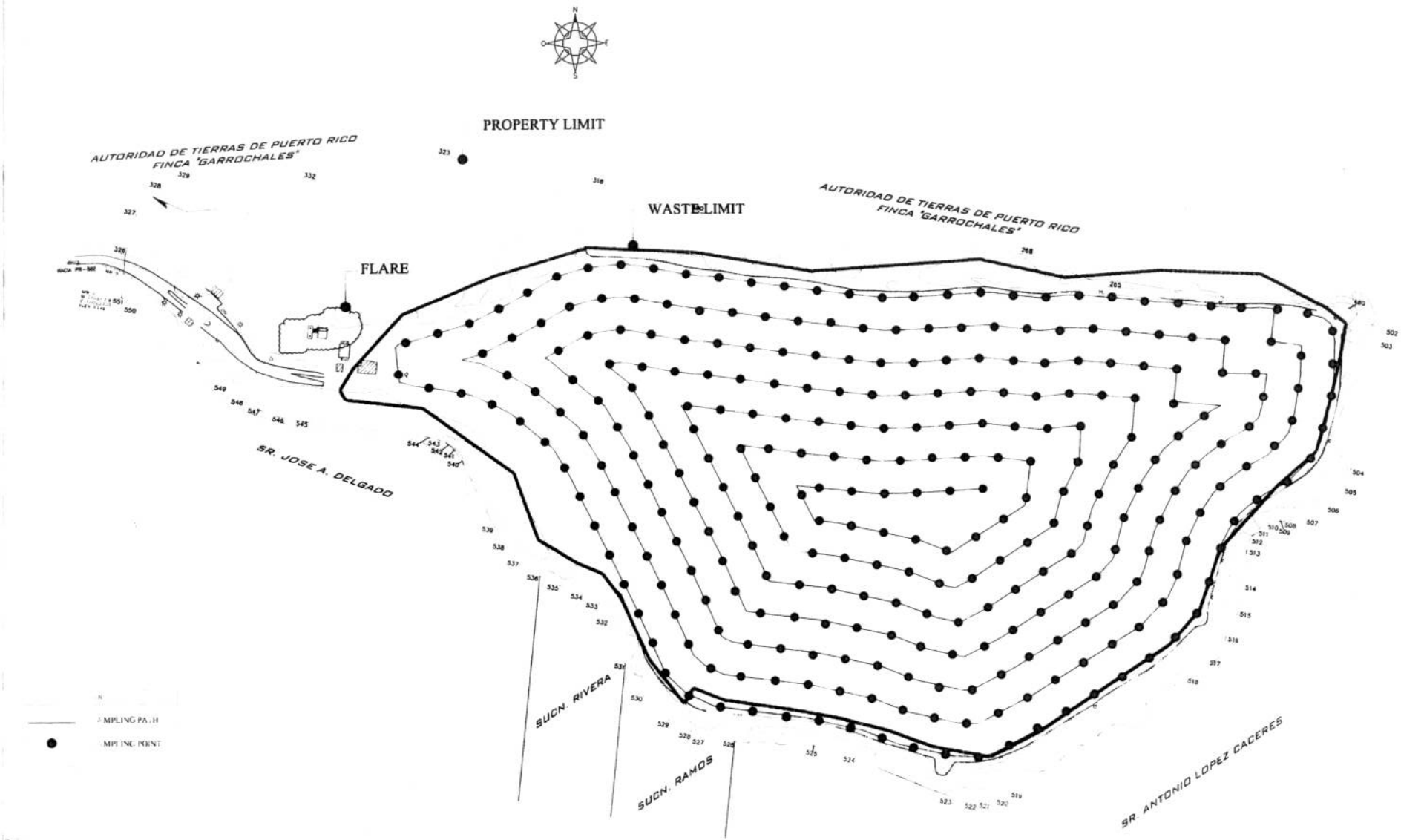
22 Forge Parkway
Franklin, MA
02038

1 866 282 0430
1 508 520 1460 fax

Thermo SCIENTIFIC

APPENDIX B

Sampling Points Locations from Arecibo Municipal Landfill



REVISION

ARECIBO MUNICIPAL SOLID WASTE LANDFILL
ARECIBO, P.R

LANDFILL TECHNOLOGY OF ARECIBO, CORP

SURFACE EMISSIONS MONITORING
SAMPLING PATH

DRAWING S-100
SCALE
DATE 01/2010

APPENDIX C

Surface Emission Readings

LANDFILL TECHNOLOGIES CORP.

SURFACE METHANE GAS MONITORING ARECIBO LANDFILL

NOVEMBER 2016

TAG	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
UPWIND	FID	30.41	PPM	FE
DOWNWIND	FID	2.58	PPM	FE
POINT1	FID	29.09	PPM	FE
POINT2	FID	2.19	PPM	FE
POINT3	FID	29.43	PPM	FE
POINT4	FID	1.86	PPM	FE
POINT5	FID	1.87	PPM	FE
POINT6	FID	0.92	PPM	FE
POINT7	FID	0.95	PPM	FE
POINT8	FID	4.71	PPM	FE
POINT9	FID	3.43	PPM	FE
POINT10	FID	0.83	PPM	FE
POINT11	FID	0.72	PPM	FE
POINT12	FID	1.17	PPM	FE
POINT13	FID	0.77	PPM	FE
POINT14	FID	0.84	PPM	FE
POINT15	FID	1.34	PPM	FE
POINT16	FID	4.27	PPM	FE
POINT17	FID	1.09	PPM	FE
POINT18	FID	1.25	PPM	FE
POINT19	FID	0.62	PPM	FE
POINT20	FID	0.08	PPM	FE
POINT21	FID	0.29	PPM	FE
POINT22	FID	0.26	PPM	FE
POINT23	FID	1.11	PPM	FE
POINT24	FID	3.16	PPM	FE
POINT25	FID	1.5	PPM	FE
POINT26	FID	1.15	PPM	FE
POINT27	FID	0.58	PPM	FE
POINT28	FID	0.6	PPM	FE
POINT29	FID	0.85	PPM	FE
POINT30	FID	1.41	PPM	FE
POINT31	FID	0.52	PPM	FE
POINT32	FID	1.09	PPM	FE
POINT33	FID	0.79	PPM	FE
POINT34	FID	0.46	PPM	FE
POINT35	FID	0.64	PPM	FE
POINT36	FID	1.18	PPM	FE

LANDFILL TECHNOLOGIES CORP.

SURFACE METHANE GAS MONITORING ARECIBO LANDFILL

NOVEMBER 2016

TAG	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
POINT37	FID	0.44	PPM	FE
POINT38	FID	0.3	PPM	FE
POINT39	FID	0.53	PPM	FE
POINT40	FID	0.02	PPM	FE
POINT41	FID	0.18	PPM	FE
POINT42	FID	0.81	PPM	FE
POINT43	FID	0.46	PPM	FE
POINT44	FID	0.91	PPM	FE
POINT45	FID	1.19	PPM	FE
POINT46	FID	1.33	PPM	FE
POINT47	FID	0.92	PPM	FE
POINT48	FID	1.37	PPM	FE
POINT49	FID	2.4	PPM	FE
POINT50	FID	2.11	PPM	FE
POINT51	FID	4.13	PPM	FE
POINT52	FID	6.65	PPM	FE
POINT53	FID	14.7	PPM	FE
POINT54	FID	22.8	PPM	FE
POINT55	FID	23.02	PPM	FE
POINT56	FID	39.69	PPM	FE
POINT57	FID	43.96	PPM	FE
POINT58	FID	30.85	PPM	FE
POINT59	FID	41.87	PPM	FE
POINT60	FID	41.89	PPM	FE
POINT61	FID	28.16	PPM	FE
POINT62	FID	26.54	PPM	FE
POINT63	FID	31.6	PPM	FE
POINT64	FID	26.73	PPM	FE
POINT65	FID	33.32	PPM	FE
POINT66	FID	32.28	PPM	FE
POINT67	FID	32.78	PPM	FE
POINT68	FID	4.55	PPM	FE
POINT69	FID	5	PPM	FE
POINT70	FID	7.64	PPM	FE
POINT71	FID	24.41	PPM	FE
POINT72	FID	24.44	PPM	FE
POINT73	FID	37.24	PPM	FE
POINT74	FID	56.25	PPM	FE

LANDFILL TECHNOLOGIES CORP.

SURFACE METHANE GAS MONITORING ARECIBO LANDFILL

NOVEMBER 2016

TAG	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
POINT75	FID	58.88	PPM	FE
POINT76	FID	52.72	PPM	FE
POINT77	FID	36	PPM	FE
POINT78	FID	30.76	PPM	FE
POINT79	FID	28.57	PPM	FE
POINT80	FID	37.66	PPM	FE
POINT81	FID	31.18	PPM	FE
POINT82	FID	25.8	PPM	FE
POINT83	FID	33.39	PPM	FE
POINT84	FID	29.35	PPM	FE
POINT85	FID	24.65	PPM	FE
POINT86	FID	22.77	PPM	FE
POINT87	FID	22.19	PPM	FE
POINT88	FID	25.44	PPM	FE
POINT89	FID	40.66	PPM	FE
POINT90	FID	46.21	PPM	FE
POINT91	FID	41.96	PPM	FE
POINT92	FID	31.84	PPM	FE
POINT93	FID	31.03	PPM	FE
POINT94	FID	24.18	PPM	FE
POINT95	FID	24.42	PPM	FE
POINT96	FID	15.92	PPM	FE
POINT97	FID	11.59	PPM	FE
POINT98	FID	2.1	PPM	FE
POINT99	FID	2.43	PPM	FE
POINT100	FID	0.29	PPM	FE
POINT101	FID	1.09	PPM	FE
POINT102	FID	0.92	PPM	FE
POINT103	FID	2.93	PPM	FE
POINT104	FID	1.99	PPM	FE
POINT105	FID	0.6	PPM	FE
POINT106	FID	2.99	PPM	FE
POINT107	FID	1.73	PPM	FE
POINT108	FID	0.96	PPM	FE
POINT109	FID	0.73	PPM	FE
POINT110	FID	0.5	PPM	FE
POINT111	FID	0.92	PPM	FE
POINT112	FID	2.85	PPM	FE

LANDFILL TECHNOLOGIES CORP.

SURFACE METHANE GAS MONITORING ARECIBO LANDFILL

NOVEMBER 2016

TAG	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
POINT113	FID	0.27	PPM	FE
POINT114	FID	0.29	PPM	FE
POINT115	FID	0.25	PPM	FE
POINT116	FID	0.51	PPM	FE
POINT117	FID	0.38	PPM	FE
POINT118	FID	0.38	PPM	FE
POINT119	FID	0.29	PPM	FE
POINT120	FID	0.3	PPM	FE
POINT121	FID	0.33	PPM	FE
POINT122	FID	0.3	PPM	FE
POINT123	FID	0.47	PPM	FE
POINT124	FID	0.09	PPM	FE
POINT125	FID	0.13	PPM	FE
POINT126	FID	0.1	PPM	FE
POINT127	FID	0.63	PPM	FE
POINT128	FID	0.23	PPM	FE
POINT129	FID	0.2	PPM	FE
POINT130	FID	0.13	PPM	FE
POINT131	FID	0.16	PPM	FE
POINT132	FID	0.46	PPM	FE
POINT133	FID	0.13	PPM	FE
POINT134	FID	0.19	PPM	FE

Exhibit 4

Land-Tech

LANDFILL TECHNOLOGIES OF ARECIBO, LLC

January 31th, 2017

Eng. Luis R. Sierra Torres
Inspection and Compliance Division
Air Quality Area
Puerto Rico Environmental Quality Board
PO Box 11488
Santurce, Puerto Rico 00910

RE: MONITORING MONTHLY GAS EXTRACTION WELLS ARECIBO MUNICIPAL SOLID WASTE LANDFILL

Dear Mr. Sierra:

Landfill Technologies of Arecibo, LLC. is respectfully submitting for your review the reports of the monitoring monthly of the gas extraction wells of the Gas Collection and Control System for the Arecibo Municipal Solid Waste Landfill, corresponding to the months July to December 2016.

If you need additional information, please contact us to our office at (787) 273-7639 or by email, cotero@landfillpr.com.

Cordially,

Cynthia B Otero Cordova

Eng. Cynthia B. Otero Cordova
Project Engineer

Data Collected Arecibo GCCS July 2016

Device ID	CH4	CO2	O2	Balance	Static Press.	Gas Temp.	Flow
	%	%	%	%	inches H2O	DegF	Scfm
ARWG0001	67.5	25.1	0.3	7.1	-0.01	98.8	4.9
ARWG0002	56.7	35.9	0.1	7.3	-0.41	98.9	6.9
ARWG0003	59.1	26	0	14.9	-0.03	102.6	3.5
ARWG0004	54.1	34.6	0	11.3	-0.2	102	9
ARWG0005	42.3	30.9	0.1	26.7	-0.31	99.7	6.5
ARWG0006	60.6	33.9	0.3	5.2	-0.73	97.6	9.5
ARWG0007	37.9	29.3	0.1	32.7	-0.38	99.5	7.7
ARWG0008	35.2	25.3	2.6	36.9	-0.08	88.1	4.3
ARWG0009	56.3	33.5	0.1	10.1	-0.99	90.5	2.1
ARWG0010	55.1	24.4	0.1	20.4	-2.7	98.4	25.1
ARWG0011	50.2	27.9	0.2	21.7	-0.19	93.5	5.8
ARWG0012	42.6	33.1	0	24.3	-0.06	92.1	2.1
ARWG0013	74	25.5	0	0.5	-0.05	99.2	9.7
ARWG0015	38.1	29.6	0.3	32	-0.45	98.7	9.9
ARWG0016	27.2	27.6	0.3	44.9	-0.02	98.6	30.2
ARWG0017	14.1	26.2	0.3	59.4	-0.02	97.5	<<>>
ARWG0018	60.8	28.9	0.1	10.2	-0.12	103.7	23.5
ARWG0019	32.6	33.8	0.2	33.4	-0.23	105.4	10.1
ARWG0020	43.8	32.5	0.2	23.5	-0.05	103.7	9.5
ARWG0021	57.9	39.6	0	2.5	-0.22	103.4	15.5
ARWG0022	59.8	39.4	0.1	0.7	0	87.8	11
ARWG0023	67.4	31.3	0	1.3	-0.01	103.8	6.1
ARWG0024	54.4	31.3	1.3	13	-0.05	100	7.7
ARWG0025	54.3	34.9	0.9	9.9	-0.41	102.8	27.8
ARWG0026	53.3	38.6	0.8	7.3	-0.3	106.6	2.8
ARWG0027	46	36	0	18	-0.07	103.3	10.1
ARWG0028	27.8	25.3	3.6	43.3	-0.37	94.5	<<>>
ARWG0029	46	31.4	0.1	22.5	-0.59	96.7	9.8
ARWG0030	69.1	30.8	0.1	0	0.04	97.9	4.9
ARWG0031	54.8	32.8	0.1	12.3	0.03	100	6.6
ARWG0032	29.5	28.1	0.2	42.2	-0.15	95.6	5.7
ARWG0033	25.5	26.8	0.1	47.6	-0.03	96.2	5.1
ARWG0034	48.7	28.6	0	22.7	-0.02	100.5	5
ARWG0035	58.4	39.2	0.3	2.1	-2.4	96.3	10.2
ARWG0036	61.8	35.7	0.4	2.1	-7.52	99	8.7
ARWG0037	60.7	39.3	0	0	-8.12	88.8	187.4
ARWG0038	62.1	35.2	0.5	2.2	-2.64	86.4	6.2
ARWG0039	54.2	30.5	0.3	15	-0.23	105.1	7.1
ARWG0040	26.2	27.7	0.9	45.2	-0.52	111.2	18.9

Data Collected Arecibo GCCS July 2016

ARWG0041	61.9	33.2	0	4.9	-0.01	107.8	15.3
ARWG0042	60.4	34.5	0	5.1	-0.76	105	13.1
ARWG0043	58	38.4	0	3.6	-0.72	106.6	15.2
ARWG0044	61.2	36.8	0.5	1.5	-1.6	107.8	28.4
ARWG0045	50	33.1	0.1	16.8	-0.57	107.8	8.1
ARWG0046	58.9	37.9	0.3	2.9	-1.63	90.3	15.3
ARWG0047	60.1	36.4	0.5	3	-3.94	91.9	13.4
ARWG0048	64.2	35.9	0	N/A	-5.92	96.2	5.6
ARWG0050	57.4	38.3	0.7	3.6	-0.01	101.2	6.1
ARWG0051	53.2	38.1	0.6	8.1	-0.2	119	11.8
ARWG0052	57.6	38.3	0.6	3.5	-4.22	109.8	6.2
ARWG0053	58.9	41.1	0	0	-1	114.1	17.5
ARWG0053	56.6	38.6	0.5	4.3	-1.03	118	9.5
ARWG0054	57.8	39.8	0.1	2.3	-0.07	114.9	7.4
ARWG0055	45.6	32.9	0.4	21.1	-0.75	108.2	15.1
ARWG0056	61.1	38.6	0.3	0	0.26	101.1	0
ARWG0057	10.2	11.3	14.6	63.9	1.45	96.7	3.6
ARWG0058	45.8	31.6	4.8	17.8	3.6	105.4	0
ARWG0059	37.1	24.3	8.2	30.4	-8.55	95	5.4
ARWG0060	39.6	29.1	6.6	24.7	-6.49	111.1	12.1
ARWG0061	38.3	28.7	6.9	26.1	-8.96	108	6.5
ARWG0062	57.9	42.1	0	0	-2.54	110.7	23.2
ARWG0063	54.4	40.2	0.4	5	-6.29	115.6	12
ARWG0064	55.5	41.7	0.5	2.3	-4.71	108.8	7.4
ARWG0065	42.7	30.2	4.7	22.4	-3.43	107	5.7
ARWG0066	35.8	26.4	7.3	30.5	-5.83	107	3.1
ARWG0067	34.5	25.8	7.9	31.8	-8.45	111.9	35.9
ARWG0068	36.3	24.3	8.5	30.9	-7.65	106.9	18.7
ARWG0072	50.7	37.5	2.6	9.2	-1.51	112.8	15.5
ARWG0074	58.9	41	0.1	0	3.83	106.4	18.7
ARWG0075	58.5	41.4	0.1	0	16.51	117.2	21.2
ARWG0076	61.4	38.5	0.1	0	4.83	115.1	25.3
ARWG0078	59.4	40.7	0	N/A	-0.12	115.1	25.5
ARWG0079	56.2	43.7	0.1	0	-1.87	105.4	9.9
ARWG0080	59.1	40.8	0	0.1	-0.72	101.6	30
ARWG0081	54.4	38.4	1.1	6.1	-4.45	108.9	30.2
ARWG0083	59.9	39.8	0.1	0.2	-1.83	115.6	30
ARWG0084	57.2	38.2	0.1	4.5	0.02	117.9	34.6
ARWG0085	57.3	38.5	0.1	4.1	0.06	113.9	31.2

Data Collected Arecibo GCCS August 2016

Device ID	CH4	CO2	O2	Balance	Static Press.	Gas Temp.	Flow
	%	%	%	%	inches H2O	DegF	Scfm
ARWG0001	0.2	0.9	19.4	79.5	0	103	0
ARWG0002	22.8	25.8	1	50.4	0	95	4
ARWG0003	11.8	23.3	0.3	64.6	0	95	2
ARWG0004	39.4	30.8	0.3	29.5	0	102	5
ARWG0005	30.8	27.9	0.3	41	0	97	2
ARWG0006	65.4	34.2	0.3	0.1	0	95	9
ARWG0007	40.6	30	0.3	29.1	0	98	2
ARWG0008	16	24.4	0.3	59.3	0	92	3
ARWG0009	19.7	16.5	8.4	55.4	-0.1	95	3
ARWG0009	42.2	29.1	1.2	27.5	0	97	5
ARWG0010	36.2	25.3	0.4	38.1	-0.1	98	2
ARWG0011	64.9	25.1	0.4	9.6	0	98	9
ARWG0012	24.7	24.2	0.4	50.7	0	97	4
ARWG0013	26.3	27	0.2	46.5	0.04	97.1	2.6
ARWG0014	31.6	28.4	0.2	39.8	-0.01	95	3
ARWG0015	19	23.9	0	57.1	-0.03	102.9	2.9
ARWG0016	48.6	29	0.1	22.3	-0.41	106.7	11.2
ARWG0018	10.5	23.9	0.2	65.4	-0.03	105.9	5.8
ARWG0019	20.5	23.7	0.9	54.9	-0.26	108.8	10.8
ARWG0020	19.7	27	0.2	53.1	-0.2	103.6	5.5
ARWG0021	35.3	32.5	0.1	32.1	-0.01	101.3	7.6
ARWG0022	63.1	36.8	0.1	0	0.08	97.5	8.8
ARWG0023	48	35	1.1	15.9	-0.02	79.4	9.1
ARWG0024	23	27.8	0.3	48.9	-0.07	97.1	0
ARWG0025	31.8	33.7	0.1	34.4	-0.37	94.2	0
ARWG0026	56.1	37.9	0.3	5.7	0	101	5
ARWG0027	61.3	36.6	0.2	1.9	-0.1	103	6
ARWG0028	50.7	33.8	0.2	15.3	-0.14	97.7	1.9
ARWG0029	67.7	31.9	0.1	0.3	0.03	96.8	3.2
ARWG0030	62.8	37.1	0.1	0	0.12	97.3	5.6
ARWG0031	46.4	31.8	0.1	21.7	0.08	95.9	1.5
ARWG0032	35.7	27.8	0.1	36.4	0.08	94.8	4.1
ARWG0033	45.8	27.6	0	26.6	0.12	98	7.1
ARWG0034	26	30.5	0.9	42.6	-0.6	98	3
ARWG0035	60.5	35.4	0.8	3.3	-5.3	105	10
ARWG0036	58.8	38.7	1	1.5	-5.6	93	10
ARWG0037	62.5	36.9	0.5	0.1	-4.9	98	5
ARWG0038	62.4	31.9	0.3	5.4	-0.2	107	14
ARWG0039	27.5	28.5	0.6	43.4	-0.2	113	7

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ARWG0040	51.2	31.1	0.3	17.4	-0.1	108	6
ARWG0041	35.3	30.8	0.5	33.4	-0.9	106	9
ARWG0042	50.8	38.3	0.3	10.6	-0.7	107	11
ARWG0043	54.4	36	0.4	9.2	-1.7	110	18
ARWG0044	42.6	31.7	0.4	25.3	-0.2	105	6
ARWG0045	48.4	34.4	0.8	16.4	-1.6	94	7
ARWG0046	61.4	37.9	0.5	0.2	-5.5	100	8
ARWG0047	61.5	37.9	0.4	0.2	-5.6	99	6
ARWG0048	63.2	35.9	0.5	0.4	-4.5	103	13
ARWG0049	59.4	40.1	0.3	0.2	4.2	117	16
ARWG0050	58.5	41.1	0.3	0.1	-0.2	114	16
ARWG0051	56.5	40.1	0.7	2.7	-4.3	110	11
ARWG0052	56.6	41.3	0.5	1.6	-1.9	114	18
ARWG0053	57.3	41.6	0.4	0.7	-0.3	115	23
ARWG0054	42.9	33.6	0.6	22.9	-0.7	107	4
ARWG0055	59.6	39.9	0.3	0.2	0.1	96	10
ARWG0056	57.1	41.2	0.5	1.2	-5.6	108	15
ARWG0057	10.6	15.5	10.6	63.3	0.3	101	4
ARWG0058	58.1	39.4	0.5	2	-3.6	102	14
ARWG0059	55.6	42	0.5	1.9	-2.5	117	14
ARWG0060	56.2	42.2	1.1	0.5	-4.6	117	14
ARWG0061	56	43.2	0.6	0.2	-2.8	109	22
ARWG0062	59.3	39.8	0.8	0.1	-2.3	107	13
ARWG0063	57.6	41.5	0.8	0.1	-2.3	110	11
ARWG0064	56.8	42.6	0.4	0.2	-4	118	26
ARWG0065	56	41	1	2	-5.1	113	9
ARWG0068	59.1	37.5	0.6	2.8	-5.7	101	12
ARWG0070	57.1	42.4	0.4	0.1	-0.2	117	11
ARWG0071	56.3	43.2	0.3	0.2	-0.2	120	20
ARWG0073	57	40.4	0.8	1.8	-5	103	6
ARWG0074	55.8	42.4	0.6	1.2	-5	94	12
ARWG0075	53.3	42.3	0.2	4.2	-1.01	113.9	30.1
ARWG0079	55.2	39.9	0.1	4.8	-0.45	107.2	25.9
ARWG0080	56	40.5	0.2	3.3	-1.67	107.3	10.4
ARWG0081	57.1	40	0.2	2.7	-1.15	113.2	13
ARWG0082	58.9	39.9	0	1.2	-0.47	116.6	15.3
ARWG0083	58.5	40.7	0.1	0.7	-1.09	115.1	9
ARWG0084	58.1	40.9	0.1	0.9	0.27	104.9	5.2

Data Collected Arecibo GCCS September 2016

Device ID	CH4	CO2	O2	Balance	Static Press.	Gas Temp.	Flow
	%	%	%	%	inches H2O	DegF	Scfm
ARWG0001	28.7	21	0.4	49.9	0	102	8
ARWG0002	50.1	32.8	0.3	16.8	0	99	5
ARWG0003	71.5	28.1	0.3	0.1	0	99	4
ARWG0004	59.5	36.4	0.2	3.9	0	102	8
ARWG0005	40.5	29.7	0.3	29.5	-0.1	100	2
ARWG0006	64.9	32.4	0.3	2.4	-0.1	100	11
ARWG0007	67	32.7	0.2	0.1	0	111	6
ARWG0008	34.5	27.7	0.2	37.6	0	99	2
ARWG0009	32.9	24.3	3.6	39.2	-0.2	104	4
ARWG0010	37.9	27.1	0.5	34.5	-0.5	95	4
ARWG0011	25.7	23	0.3	51	-0.4	97	4
ARWG0012	19.6	24.2	0.9	55.3	0	104	3
ARWG0013	35.6	27.4	0.2	36.8	0	97	3
ARWG0014	57.4	30.7	0.2	11.7	0	100	8
ARWG0015	63.1	33.6	0.2	3.1	0	95	5
ARWG0016	51.5	27	0.2	21.3	0	108	1
ARWG0017	11.1	21.4	0.8	66.7	0	97	2
ARWG0018	69.7	28.9	0.4	1	-0.1	107	16
ARWG0019	56.1	36	0.3	7.6	0	106	8
ARWG0020	33.3	27.6	0.3	38.8	0	107	1
ARWG0021	42.7	32.3	0.2	24.8	0	105	3
ARWG0022	58.9	40.7	0.2	0.2	0	109	11
ARWG0023	63.4	36.2	0.2	0.2	0	109	9
ARWG0024	53.3	34.6	0.2	11.9	0.1	102	9
ARWG0025	60.3	37.3	0.2	2.2	0.2	103	10
ARWG0026	55.3	39.8	0.2	4.7	0.3	117	7
ARWG0027	14.3	23.1	0.2	62.4	-0.1	103	1
ARWG0028	34.9	26.6	0.3	38.2	-0.6	101	4
ARWG0029	27.4	25.7	0.3	46.6	-0.4	98	2
ARWG0030	49.4	31.2	0.3	19.1	-0.1	97	3
ARWG0031	49.7	33.2	0.2	16.9	-0.2	99	7
ARWG0032	55.9	26.1	0.2	17.8	0	101	4
ARWG0033	50.7	30.5	0.2	18.6	0	102	3
ARWG0034	63.2	29.4	0.3	7.1	0	99	5
ARWG0035	61.3	38.1	0.4	0.2	-0.6	103	8
ARWG0036	62.6	35.1	0.8	1.5	-6.2	105	12
ARWG0037	59.6	39.7	0.5	0.2	-6.5	98	10
ARWG0038	62.7	36.8	0.4	0.1	-6.4	100	6
ARWG0039	54.2	30.9	0.3	14.6	-0.2	106	10

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ARWG0040	25.7	28.2	0.5	45.6	-0.1	111	4
ARWG0041	57.6	31.6	0.3	10.5	-0.1	108	8
ARWG0042	46.1	32.1	0.3	21.5	-0.5	106	7
ARWG0043	55.5	39.3	0.2	5	-0.7	107	11
ARWG0044	58.2	36.3	0.4	5.1	-1.7	110	17
ARWG0045	61.8	33.6	0.3	4.3	-0.1	106	9
ARWG0046	60.6	35.9	0.5	3	-1.2	99	10
ARWG0047	61.1	38.3	0.5	0.1	-6.7	101	6
ARWG0048	61.5	37.8	0.5	0.2	-6.6	99	7
ARWG0049	63.3	36.2	0.4	0.1	-5.3	103	13
ARWG0050	58.1	39.3	1	1.6	-3.3	109	11
ARWG0051	54.7	39.9	0.8	4.6	-0.2	116	12
ARWG0052	58.2	40.8	0.6	0.4	-4.7	109	11
ARWG0053	57.8	41.6	0.5	0.1	-2.5	114	18
ARWG0054	57.4	41.4	0.5	0.7	-0.6	114	24
ARWG0055	53.4	35.1	0.4	11.1	-0.4	106	6
ARWG0056	59	40.6	0.3	0.1	0	110	11
ARWG0057	11.6	19.4	7.8	61.2	0	107	5
ARWG0058	55.5	43.9	0.5	0.1	-6.8	107	14
ARWG0059	56.6	42.9	0.3	0.2	-4.8	102	13
ARWG0060	53.4	44.1	0.5	2	-3.2	117	13
ARWG0061	46.8	42	0.8	10.4	-4.8	118	11
ARWG0062	43.4	39.9	0.7	16	-1.3	110	9
ARWG0063	46.5	41	0.7	11.8	-1.9	115	8
ARWG0064	59	40.1	0.8	0.1	-1.8	115	12
ARWG0065	59	39.9	1	0.1	-3.9	108	11
ARWG0066	57.2	42	0.6	0.2	-3	111	13
ARWG0067	56.6	42.8	0.4	0.2	-5.2	117	17
ARWG0068	56.7	40.8	0.9	1.6	-6.2	110	10
ARWG0070	54.9	41.7	1.1	2.3	-5.2	110	10
ARWG0071	54.6	43.5	0.8	1.1	-5.4	116	13
ARWG0072	55.5	43.8	0.5	0.2	-1.4	115	12
ARWG0073	61	38.3	0.5	0.2	-6.8	100	12
ARWG0074	59	40.2	0.7	0.1	-5.6	102	6
ARWG0075	53.7	40.5	1.8	4	-6.1	98	11
ARWG0078	58.4	40.3	0.8	0.5	-2.6	110	12
ARWG0079	39	36.5	0.6	23.9	-2.1	115	6
ARWG0080	45.1	37.1	0.3	17.5	-0.4	109	6
ARWG0081	47.9	38.7	0.5	12.9	-2.7	108	7
ARWG0082	45	36.6	0.5	17.9	-2.4	113	7
ARWG0083	56.6	38.9	0.4	4.1	-1.3	115	12

ARWG0085	58.2	41.5	0.2	0.1	-0.1	112	6

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Device ID	CH4	CO2	O2	Balance	Static Press.	Gas Temp.	Flow
	%	%	%	%	inches H2O	DegF	Scfm
ARWG0001	44.5	22.6	0.4	32.5	-0.1	102	4
ARWG0002	51.8	34.4	0.3	13.5	-0.1	98	4
ARWG0003	34.3	26.3	0.3	39.1	-0.1	98	1
ARWG0004	44.2	33.5	0.3	22	-0.1	102	2
ARWG0005	32.4	28.4	0.3	38.9	-0.1	94	4
ARWG0006	64.2	32.4	0.4	3	-0.3	99	11
ARWG0007	53.3	30.8	0.4	15.5	-0.1	100	4
ARWG0008	51.1	30.6	0.3	18	-0.1	93	2
ARWG0009	41.3	24.8	3.9	30	-0.1	95	3
ARWG0010	66	25.7	0.3	8	-0.1	99	7
ARWG0011	52.1	24.4	0.3	23.2	-0.2	99	6
ARWG0012	22.7	24.2	0.2	52.9	-0.2	110	0
ARWG0013	42.7	26.6	0.2	30.5	-0.1	98	3
ARWG0014	57.1	30	0.4	12.5	-0.1	96	8
ARWG0015	62.1	34.8	0.3	2.8	-0.1	101	9
ARWG0016	44	25.9	0.2	29.9	-0.2	106	7
ARWG0017	54.9	24.3	0.3	20.5	-0.2	95	4
ARWG0018	59.9	28.3	0.3	11.5	-0.1	105	14
ARWG0019	33.9	28.6	0.2	37.3	-0.1	103	6
ARWG0020	68.7	30.9	0.2	0.2	-0.1	104	10
ARWG0021	62.7	36.8	0.3	0.2	-0.1	104	7
ARWG0022	58.5	41	0.3	0.2	-0.2	107	13
ARWG0023	62.1	37.4	0.4	0.1	-0.1	110	15
ARWG0024	59.9	39.7	0.3	0.1	-0.1	106	13
ARWG0025	60.9	38.8	0.2	0.1	-0.1	109	12
ARWG0026	57.5	42.1	0.2	0.2	-0.1	114	10
ARWG0027	61.4	38.2	0.2	0.2	-0.1	102	10
ARWG0028	63.2	36.4	0.2	0.2	-0.2	102	7
ARWG0029	54.1	32.9	0.3	12.7	-0.1	96	5
ARWG0030	65.1	34.5	0.3	0.1	-0.1	97	9
ARWG0031	63.2	36.4	0.2	0.2	-0.1	100	10
ARWG0032	40.8	28.4	0.2	30.6	-0.1	97	3
ARWG0033	56.8	31.1	0.2	11.9	-0.1	102	4
ARWG0034	60.7	29.4	0.2	9.7	-0.1	100	6
ARWG0035	49.3	34.9	0.7	15.1	-0.7	100	7
ARWG0036	58.2	34.7	1.1	6	-7.9	104	9
ARWG0037	57.5	37.3	1.8	3.4	-8.9	93	9
ARWG0038	62.2	37.2	0.5	0.1	-8.4	91	5
ARWG0039	63.9	32.4	0.3	3.4	-0.1	106	13

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ARWG0040	40.5	32.4	0.3	26.8	-0.1	106	6
ARWG0041	64.2	31.8	0.3	3.7	-0.1	107	10
ARWG0042	53.7	32.7	0.4	13.2	-0.5	104	8
ARWG0043	55.5	39.2	0.3	5	-0.9	107	11
ARWG0044	57.1	36.3	0.4	6.2	-2	108	17
ARWG0045	50.5	32.6	0.4	16.5	-0.2	103	6
ARWG0046	45.9	33.1	0.8	20.2	-1.7	95	6
ARWG0047	48.9	35.9	0.5	14.7	-6.8	97	3
ARWG0048	60.3	39.2	0.3	0.2	-9.1	93	6
ARWG0049	62.4	37.1	0.3	0.2	-7	97	15
ARWG0050	59	39.9	0.9	0.2	-5.8	106	12
ARWG0051	58.4	40.9	0.6	0.1	-0.2	115	14
ARWG0052	57	42.1	0.8	0.1	-6.7	109	11
ARWG0053	56.8	42.5	0.5	0.2	-3.9	112	21
ARWG0054	56.1	40.2	1.2	2.5	-0.9	115	26
ARWG0055	47.8	34.6	0.4	17.2	-0.2	105	4
ARWG0056	44.3	36.6	0.3	18.8	-0.2	110	6
ARWG0057	7.6	12.2	10.7	69.5	-0.1	95	0
ARWG0058	56.8	42.6	0.4	0.2	-9	104	14
ARWG0059	59	40.4	0.4	0.2	-5.5	100	13
ARWG0060	56.9	42.4	0.5	0.2	-4.2	116	14
ARWG0061	56.9	42.3	0.7	0.1	-6.5	116	12
ARWG0062	56.8	42.7	0.4	0.1	-1.7	111	12
ARWG0063	56.6	42.6	0.6	0.2	-0.8	114	11
ARWG0064	51.8	38.6	0.9	8.7	-1.6	114	8
ARWG0065	59.1	39	1	0.9	-4	109	10
ARWG0066	57.2	40.8	0.8	1.2	-3.9	118	6
ARWG0067	57.6	41.9	0.4	0.1	-4	117	21
ARWG0070	56	41.6	1.1	1.3	-7.2	110	11
ARWG0071	54.8	42.6	0.9	1.7	-7.5	116	12
ARWG0072	55.9	42.5	0.6	1	-1.4	115	13
ARWG0073	59.6	36.5	1.1	2.8	-8.3	108	12
ARWG0074	59	40.3	0.6	0.1	-7.1	106	11
ARWG0075	55.6	40.8	1.2	2.4	-7.4	103	12
ARWG0078	58.2	41.4	0.2	0.2	0.4	119	16
ARWG0079	55	44.6	0.2	0.2	-0.4	116	9
ARWG0080	57.3	37.8	0.4	4.5	-0.5	110	9
ARWG0081	57.9	40.5	0.5	1.1	-1.2	109	11
ARWG0082	58.3	41.3	0.3	0.1	-0.5	116	11
ARWG0085	59.2	40.3	0.3	0.2	-0.4	118	11

Data Collected Arecibo GCCS November 2016

Device ID	CH4	CO2	O2	Balance	Static Press.	Gas Temp.	Flow
	%	%	%	%	inches H2O	DegF	Scfm
ARWG0001	50	23.6	0.3	26.1	0	96	0
ARWG0002	49.8	31.9	0.3	18	0	98	4
ARWG0003	65.3	24.7	0.2	9.8	0	94	4
ARWG0004	59.1	34.1	0.3	6.5	0	100	8
ARWG0005	53.2	32.7	0.2	13.9	0	94	7
ARWG0006	60.4	32.9	0.3	6.4	-0.3	99	9
ARWG0007	53.8	31.1	0.2	14.9	0	96	4
ARWG0009	47	25	4.1	23.9	-0.1	97	2
ARWG0010	69.4	26.1	0.3	4.2	0	91	7
ARWG0011	46	25.8	2.7	25.5	-0.1	94	4
ARWG0012	45.5	28.6	0.3	25.6	0	97	2
ARWG0013	46.6	29.4	0.3	23.7	0	92	3
ARWG0014	26.9	27.4	0.2	45.5	0	93	2
ARWG0015	32.2	28.7	0.3	38.8	0	95	3
ARWG0016	34.7	26	0.3	39	0	94	0
ARWG0017	17.7	24	0.3	58	0	95	34
ARWG0018	70.4	29.2	0.2	0.2	0	104	14
ARWG0019	63.6	34.1	0.3	2	0	95	9
ARWG0020	38.1	28.9	0.3	32.7	-0.1	106	4
ARWG0021	43.8	32.5	0.2	23.5	0	101	0
ARWG0022	48	36.5	0.3	15.2	-0.1	105	8
ARWG0023	62.6	37	0.2	0.2	0	107	15
ARWG0024	59.6	40	0.2	0.2	0	105	14
ARWG0025	35.5	31.8	0.8	31.9	-0.3	108	7
ARWG0026	57	41.6	0.3	1.1	-0.2	107	12
ARWG0027	54.9	37.2	0.2	7.7	0	91	6
ARWG0027	54.9	37.2	0.2	7.7	0	91	7
ARWG0028	64.6	35.1	0.2	0.1	-0.1	87	36
ARWG0029	60.8	32.5	0.4	6.3	0	90	10
ARWG0030	64.8	34.8	0.3	0.1	-0.2	94	9
ARWG0031	62.9	36.7	0.2	0.2	0	92	6
ARWG0032	62.3	27.7	0.3	9.7	0	91	4
ARWG0033	42	27.2	0.3	30.5	0	91	2
ARWG0034	54.6	29.2	0.2	16	0	95	5
ARWG0035	59.4	40.1	0.3	0.2	-0.6	98	10
ARWG0036	63.5	35.5	0.9	0.1	-8.5	106	12
ARWG0037	59.4	39.9	0.6	0.1	-6.1	103	12
ARWG0038	59.4	39.9	0.5	0.2	-8.3	103	5
ARWG0039	66.3	33.2	0.3	0.2	-0.1	109	16

Data Collected Arecibo GCCS November 2016

ARWG0040	63.2	36.4	0.3	0.1	0	103	10
ARWG0041	66.4	33.2	0.2	0.2	-0.2	108	14
ARWG0042	65.1	34.4	0.4	0.1	-0.5	107	10
ARWG0043	60	39.5	0.3	0.2	-0.5	107	14
ARWG0044	62.3	37.2	0.4	0.1	-1	109	16
ARWG0045	65.2	34.4	0.2	0.2	-0.1	107	9
ARWG0046	58.1	34.3	0.5	7.1	-1.7	97	9
ARWG0047	62	37.5	0.4	0.1	-2	101	6
ARWG0048	60.6	38.9	0.4	0.1	-8.6	100	6
ARWG0049	62.2	36.8	0.8	0.2	-5.8	101	17
ARWG0050	58.9	40.1	0.8	0.2	-5.1	109	13
ARWG0051	53.8	38.8	1.4	6	-0.3	116	15
ARWG0052	58.1	41	0.8	0.1	-5.9	109	12
ARWG0053	57.5	41.8	0.6	0.1	-2.9	112	22
ARWG0054	56.7	40.8	1	1.5	-0.7	112	28
ARWG0055	62.9	36.7	0.3	0.1	-0.1	99	7
ARWG0056	58.5	41.1	0.3	0.1	-0.1	109	10
ARWG0057	8.9	17.5	7.8	65.8	0.2	86	2
ARWG0058	56.9	42.5	0.4	0.2	-8.3	97	15
ARWG0059	59.5	39.5	0.9	0.1	-3.4	106	15
ARWG0060	56.1	43.2	0.5	0.2	-3.3	117	15
ARWG0061	56.4	42.4	1	0.2	-6.1	117	13
ARWG0062	55.9	43.6	0.4	0.1	-1.3	112	13
ARWG0063	55.7	43.4	0.7	0.2	-1.5	114	12
ARWG0064	58.5	40.8	0.5	0.2	-1.2	113	9
ARWG0065	57.5	42.1	0.3	0.1	-0.5	114	12
ARWG0066	57.1	42.5	0.2	0.2	-0.8	119	11
ARWG0070	56.4	42.5	1	0.1	-5.2	109	11
ARWG0071	55.3	43.7	0.8	0.2	-5.5	115	17
ARWG0072	54.5	44.9	0.4	0.2	-0.4	113	13
ARWG0073	58.9	39.8	1.1	0.2	-6	104	12
ARWG0074	58.9	40.2	0.7	0.2	-3.9	100	10
ARWG0079	57.8	41.5	0.6	0.1	-2.8	112	11
ARWG0080	57.7	39.5	0.5	2.3	-0.6	107	9
ARWG0081	56.7	42.9	0.3	0.1	0	93	4
ARWG0082	57.5	42.1	0.3	0.1	0	96	2
ARWG0085	57.6	41.9	0.3	0.2	-0.6	115	11

Data Collected Arecibo GCCS December 2016

Device ID	CH4	CO2	O2	Balance	Static Press.	Gas Temp.	Flow
	%	%	%	%	inches H2O	DegF	SFCM
ARWG0001	50	23.6	0.3	26.1	0.002	3	91
ARWG0002	52.5	33	0.2	14.3	-0.1	91	6
ARWG0003	32	25.1	0.3	42.6	-0.1	89	2
ARWG0004	43.6	31.7	0.3	24.4	-0.1	97	4
ARWG0005	25.8	25.5	0.3	48.4	-0.2	86	1
ARWG0006	52	31.1	0.4	16.5	-0.4	96	10
ARWG0007	34.4	26.5	0.4	38.7	-0.1	91	2
ARWG0008	43.9	29.6	0.3	26.2	-0.1	97	6
ARWG0009	32.5	22.7	4.7	40.1	-0.1	93	1
ARWG0010	68.2	25	0.3	6.5	-0.2	89	9
ARWG0011	46.5	25	0.2	28.3	-0.1	93	3
ARWG0012	27.6	24.7	0.2	47.5	-0.1	97	6
ARWG0013	37.4	27.3	0.2	35.1	-0.1	91	1
ARWG0014	38.2	27.3	0.3	34.2	-0.1	92	4
ARWG0015	53	32.2	0.3	14.5	-0.2	93	8
ARWG0016	41.8	24.3	0.3	33.6	-0.1	97	3
ARWG0017	35	23	0.3	41.7	-0.1	99	3
ARWG0018	65	28.1	0.2	6.7	-0.2	103	15
ARWG0019	16	23.9	0.2	59.9	-0.1	101	0
ARWG0020	52.9	29.4	0.2	17.5	-0.2	103	10
ARWG0021	50.7	33.4	0.2	15.7	-0.1	101	8
ARWG0022	50.7	36.4	0.3	12.6	-0.1	103	10
ARWG0023	59.8	36.1	0.3	3.8	-0.2	109	14
ARWG0024	60.4	39.2	0.2	0.2	-0.2	105	14
ARWG0025	61	38.7	0.2	0.1	-0.4	105	11
ARWG0026	56.7	40.3	0.6	2.4	-0.1	110	14
ARWG0027	42.3	33.2	0.3	24.2	-0.1	85	6
ARWG0028	51.3	31.5	0.6	16.6	-0.1	86	10
ARWG0029	62.2	32.7	0.3	4.8	-0.1	89	10
ARWG0030	64.9	34.6	0.3	0.2	-0.5	92	10
ARWG0031	62.9	36.7	0.3	0.1	-0.1	93	7
ARWG0032	50.2	32	0.2	17.6	-0.1	91	2
ARWG0033	51.9	28.1	0.6	19.4	-0.1	88	2
ARWG0034	63.3	29	0.2	7.5	-0.1	86	8
ARWG0035	49.6	35.3	0.7	14.4	-0.3	95	4
ARWG0036	58.7	33	0.9	7.4	-6.5	101	11
ARWG0037	57.5	37.7	1.3	3.5	-10	87	11
ARWG0038	62.8	36.6	0.4	0.2	-9.5	94	6
ARWG0039	59.3	30.7	0.3	9.7	-0.1	106	13

Data Collected Arecibo GCCS December 2016

ARWG0040	34.2	29.5	0.3	36	-0.1	108	6
ARWG0041	56.6	31.6	0.2	11.6	-0.1	104	10
ARWG0042	55.4	32.3	0.3	12	-0.2	102	6
ARWG0043	57.6	39	0.3	3.1	-0.6	105	15
ARWG0044	61.5	36.4	0.3	1.8	-1.2	110	14
ARWG0045	52.9	32.3	0.3	14.5	-0.1	105	6
ARWG0046	53.8	34	0.5	11.7	-2.2	95	9
ARWG0047	62.2	37.3	0.3	0.2	-3.7	98	6
ARWG0048	60.9	38.6	0.4	0.1	-8.9	95	6
ARWG0049	62.7	36.9	0.3	0.1	-6.8	95	17
ARWG0050	58.7	39.8	0.8	0.7	-6.7	106	12
ARWG0051	57.1	42.5	0.3	0.1	-0.4	108	16
ARWG0052	58	41.2	0.6	0.2	-7.1	105	12
ARWG0053	57.5	41.9	0.5	0.1	-3.6	110	18
ARWG0054	57.2	42.1	0.5	0.2	-0.7	110	28
ARWG0055	49	34.4	0.4	16.2	-0.4	100	5
ARWG0056	58.5	41.1	0.3	0.1	-0.1	108	11
ARWG0057	9.7	20.5	7.7	62.1	0	84	7
ARWG0058	57.2	42.3	0.3	0.2	-9.4	95	16
ARWG0059	59.3	40.3	0.3	0.1	-9	93	13
ARWG0060	57.1	42.1	0.6	0.2	-4.2	114	14
ARWG0061	55.4	41.7	1	1.9	-7.5	114	15
ARWG0062	56.7	42.9	0.2	0.2	-1.4	110	15
ARWG0063	55.6	42.8	0.8	0.8	-2.7	109	13
ARWG0064	52.6	38.3	0.7	8.4	-1.9	109	9
ARWG0065	58.1	41.3	0.5	0.1	-1.5	108	12
ARWG0070	55.5	41.8	1.1	1.6	-4.5	109	13
ARWG0071	55.1	42.7	1	1.2	-8.7	115	14
ARWG0072	55.8	43.6	0.4	0.2	-1	113	13
ARWG0073	58.6	39.9	0.9	0.6	-5.8	103	13
ARWG0074	58.8	40.8	0.3	0.1	-7.4	95	11
ARWG0078	58.2	41	0.7	0.1	-5	112	17
ARWG0079	45.8	39.8	0.6	13.8	-1.2	112	8
ARWG0080	50.9	38.1	0.4	10.6	-0.5	105	7
ARWG0081	56.6	43.1	0.2	0.1	-0.6	90	5
ARWG0082	56.8	42.9	0.2	0.1	-0.6	102	7
ARWG0085	53.5	40.3	0.5	5.7	-1	115	11

Exhibit 5

Land-Tech

LANDFILL TECHNOLOGIES OF ARECIBO, LLC

Semi-Annual Report
Shutdown and Malfunction Report
Arecibo Municipal Solid Waste Landfill

July to December 2016

Prepared by:
Landfill Technologies of Arecibo, LLC

Bo. Mamey, Carretera 189 km. 9.0, Gurabo, PR 00778 • PO Box 1322 Gurabo, Puerto Rico 00778 • Tel. (787) 273-7639 • Fax (787) 687-0337

Landfill Technologies of Arecibo, LLC

Shutdown and Malfunction Report

July to December 2016

Arecibo Municipal Solid Waste Landfill

Date	Shutdown	Description	Corrective Action
7/5/2016	Shutdown	The shutdown was due to maintanence	The maintenance was completed and the system was restarted and was kept on operation throught the day as expected.
7/7/2016	Shutdown	The shutdown was due to maintanence	The testing was completed and the system was restarted and was kept on operation throught the day as expected.
7/11/2016	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
7/29/2016	Shutdown	The shutdown was due to maintanence	The testing was completed and the system was restarted and was kept on operation throught the day as expected.
8/5/2016	Shutdown	The shutdown was due to maintanence	The testing was completed and the system was restarted and was kept on operation throught the day as expected.
8/27/2016	Flare Fault	Flare fault of high tempeture	Thermocouple was replaced and system was restarted and was kept on operation throught the day as expected.
8/16/2016	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
9/26/2016	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
9/30/2016	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.

Carr. 682 km. 10.6 Barrio Factor II Sector Garrochales, Arecibo, PR | PO Box 1322 Gurabo, Puerto Rico, 00778 | Tel. (787) 273-7639 | Fax. (787) 687-0337

Landfill Technologies of Arecibo, LLC

Shutdown and Malfunction Report

July to December 2016

Arecibo Municipal Solid Waste Landfill

Date	Shutdown	Description	Corrective Action
10/17/2016	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
10/26/2016	Low Air Pressure	Failure in compressor	Spare compressor was turn on and the system was restarted and was kept on operation throughout the day as expected.
11/2/2016	Flare Fault	Header pipe broke	The header pipe was repaired. The system was turned on and was kept on operation throughout the day as expected.
11/14/2016	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
11/17/2016	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.

Carr. 682 km. 10.6 Barrio Factor II Sector Garrochales, Arecibo, PR | PO Box 1322 Gurabo, Puerto Rico, 00778 | Tel. (787) 273-7639 | Fax. (787) 687-0337

Quality Control Check List

Model No.:	SEM-500	Serial No.:	424408047
RA No.:	51317		
Technician:	dvenditto	Date:	6/13/2016
Repair Tech :	dvenditto	Time:	3:46 PM

Options

Software Version:	✓
Key 3 Cold Start:	
Key 8 Options:	
Service Date:	✓

Display

Function:	✓
Contrast Adjustment:	
Company Name:	
'Ex' Warning Screen:	

Time/Date

Current Time:	✓
Current Date:	✓
Date Format:	

Display

Cal Cert Figure Check:	✓
Baro. Press. Reading:	
Temp Reading:	
Gas Pod Registers:	
Flow Pod Registers:	
CH4 Zero:	✓
Raw Values CH4 CO2:	

Gas Check

O2 Air:	
O2 5%:	
O2 0%:	
0.5% CH4/CO2:	
5.0% CH4/CO2:	
15.0% CH4/CO2:	
60.0/40.0% CH4/CO2:	
(GEM Only) Balance%:	

Transducer Check (GEM Only)

Differential Leak Test:	
Static Leak Test:	
Differential Press. Test:	
Static Pressure Test:	
Side To Side:	

Memory Comms.

Store Readings:	✓
Reading View:	✓
Down Load:	✓
Memory Clear:	✓

MK II Batt. & Charger

MKII Charging:	
MKII Off Current:	
MKII On Current:	
MKII Display:	
Battery Voltage Correct:	

Completed?

N/A

Physical Condition

Case:	✓
Membrane:	
Case Fittings:	
Case Back Fitting:	
Lemo Plug:	
Carrying Strap:	
Inlet Filter:	✓
Housings Secure:	

Labels

Unit Label:	✓
Serial Number:	
Battery Warning:	
GI (UK):	
Void Labels:	
'CE' Label:	
Case Screen Printing:	

Flow

Vacuum:	
Flow > 300cc:	✓
200cc Check:	
Flow fail Occurs:	
Affect on Baro. Press:	

Calibration Certificate:	✓

Western Region/Corporate Offices
850 South Via Lata, Suite 112, Colton, California 92324
Telephone: (909) 783-3636 Fax: (909) 825-0591
WWW.CES-LANDTEC.COM

CERTIFICATION OF CALIBRATION

ISSUED BY: QED Environmental Systems, Inc. Services Facility

Date Of Calibration: February 8, 2017

Certificate Number: GM13655_10/31439

PJLA Calibration

No. 66916

Approved By Signatory

Dan McCarty

Laboratory Inspection

LANDTEC

QED Environmental Systems, Inc. Services Facility,
2355 Bishop Circle West, Dexter, MI 48130
www.qedenv.com

Customer: ***Diamond Scientific***

55 East Broad St.
Titusville FL 32796
USA

Description: Gas Analyser

Model: GEM2000

Serial Number: GM13655

Accredited Results:

Methane (CH4)		
Certified Gas (%)	**Instrument Reading (%)**	**Uncertainty (%)**
5.0	5.1	0.41
15.0	15.1	0.65
50.0	49.7	1.05

Carbon Dioxide (CO2)		
Certified Gas (%)	**Instrument Reading (%)**	**Uncertainty (%)**
5.0	4.8	0.43
15.0	14.7	0.71
50.0	49.7	1.20

Oxygen (O2)		
Certified Gas (%)	**Instrument Reading (%)**	**Uncertainty (%)**
20.7	20.7	0.25

Gas cylinders are traceable and details can be provided if requested.

CH4, CO2 readings recorded at: 32.1 °C/89.8 °F

O2 readings recorded at: 22.2 °C/71.9 °F

Barometric Pressure: 28.89 "Hg

Method of Test: The analyzer is calibrated in a temperature controlled chamber using reference gases. All analyzers are calibrated in accordance with our procedure ISP-17 using high purity grade gas.

All calibrations are performed in accordance with ISO 17025 at LANDTEC, an ISO 17025:2005 – accredited service facility through PJLA.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NIST requirements.

The calibration results published in this certificate were obtained using equipment capable of producing results that are traceable through NIST to the International System of Units (SI). Certification only applies to results shown. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

CERTIFICATION OF CALIBRATION

PJLA ACCREDITED CALIBRATION LABORATORY NO. 66916

Certificate Number
GM13655_10/31439

Non Accredited results:

Pressure Transducers (inches of water column)					
Transducer	**Certified (Low)**	**Reading (Low)**	**Certified (High)**	**Reading (High)**	**Accuracy**
Static	0"	0.0"	40"	39.7"	2.0"
Differential	0"	0.0"	4"	4.0"	0.7"

Barometer (mbar)	
Reference	**Instrument Reading**
0978 mbar / 28.89 "Hg	0978 mbar / 28.89 "Hg

As received gas check readings:

Methane (CH4)	
Certified Gas (%)	**Instrument Reading (%)**
5.0	5.5
15.0	15.7
50.0	51.1

Carbon Dioxide (CO2)	
Certified Gas (%)	**Instrument Reading (%)**
5.0	5.3
15.0	15.3
50.0	49.3

Oxygen (O2)	
Certified Gas (%)	**Instrument Reading (%)**
20.7	19.5

As received Gas readings recorded at: 32.1 °C/89.8 °F
As received Barometric Pressure recorded at: 22.2 °C/71.9 °F

End of Certificate

LP015LNANIST-1.1

flare#1

SAGE METERING INC.

PRODUCT QUALITY CERTIFICATE OF CONFORMANCE

Product Inspection & Quality Statement

All individual parts and components which make up the product being provided have been inspected and approved for manufacture. In addition, subassemblies have been inspected, tested, and accepted for final assembly. Each completed assembly has been final tested and approved for shipment.

Conformance Statement

SAGE Metering Incorporated certifies this instrument was tested in compliance with ANSI/NCSL Z540 and ISO/IEC 17025 requirements. SAGE Metering, Inc. calibration services are derived from MIL-STD-45662A. The Prime DC24 model is Met Labs approved and Met Labs is a Nationally Recognized Testing Laboratory (NRTL) which is recognized by OSHA. The tests are performed using measuring & test equipment with certified NIST traceability. (Applicable NIST numbers are available upon request). Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission is granted by SAGE Metering, Inc.

CUSTOMER:	Excellent Engineering	
PURCHASE ORDER:	RMA 178232	
SAGE SALES ORDER:	22231	
MODEL:	SIP-05-12-DC24-BIOGAS	
POWER REQUIREMENT:	DC24	
OPTIONAL OUTPUT:	Flow, 4 - 20mA	100 SCF/PULSE, 250 ms
SAGE UNIT/SENSOR SERIAL NUMBERS:	72551-38876	Slave ID = 31 HEX
TAG:		
PRIME BAUD RATE / PRIME PARITY	19200.00	EVEN
SUGGESTED CALIB/VALIDATION INTERVAL:	12 months after Calibration	
CALIBRATION DATE:	1/27/2017	
OPERATING PRESSURE RANGE:	(14.7 PSIA + PSIG) ± 20%	
MAXIMUM PRESSURE RATING:	500 PSIG	
SENSOR TEMPERATURE RANGE:	STD: -40 to 200 F	
ELECTRONICS TEMPERATURE RANGE:	0° to +150°F (-18° to +65.56°C)	
ACCURACY AT THE NORMAL 100:1 TURNDOWN:	+/- 1% Rdg + 0.5% FS	
CALIBRATION REFERENCE CONDITIONS:	70°F and 29.92" Hg	
PROCESS GAS / PROCESS GAS SPECIFIC GRAVITY	BIOGAS: (58% CH4, 38% C02, 0.9416	
PROCESS FLOW (FS, 4-20 mA)/LowFlowCutoff	0 - 1000 SCFM	
CALIBRATED FLOW	1000 SCFM	
PROCESS LINE SIZE	6 in sch 10	
PROCESS TEMPERATURE:	120 F	
PROCESS PRESSURE:	60 INH2OG	
CALIBRATION TECHNICIANS:	Gabe Flores	
ROOTS METERs	8C175 - SN 1628163; 23M232 - SN 1623164	

SPECIAL NOTES:

SOFTWARE REV#	2.06	
AMBIENT AIR ZERO in mW/GAS FLOW ZERO in mW	76	80

Authorization: Kyle Tyler

Date: January 27, 2017

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SAGE METERING INC.

Calibration Certificate

SAGE Sales Number: 22231
SAGE Serial Number: 72551
Sensor SN: 38876
Model: SIP-05-12-DC24-BIOGAS
4-20mA: 1,000 SCFM
Process Line Size: 6 in sch 10
Process Area: 0.2204 ft²

Date: 1/27/2017
Customer: Excellent Engineering
Process Gas: 4, 38% C02, 3.6% N2, .
Process Temperature: 120F
Process Pressure: 60 INH2OG

Flow Meter Non-linear mW Output	Measured Flow	Output Signal 4-20 mA	Indicated Flow (Display Reading)	Deviation	Allowable Deviation	Result
mW	SCFM	4 - 20 mA	SCFM	SCFM	+/-1% Rdg + ½% Full Scale	Pass / Fail
80	0.0	4.00	0.0	0.0	5.000	Pass
210	101.1	5.64	101.0	-0.1	6.011	Pass
300	307.4	8.88	306.0	-1.4	8.074	Pass
353	497.9	11.90	493.0	-4.9	9.979	Pass
400	715.4	15.17	704.0	-11.4	12.154	Pass
428	858.5	17.45	850.0	-8.5	13.585	Pass

Authorization: Kyle Lyle

Date: 1-31-2017

SAGE Metering Incorporated certifies this instrument was tested in compliance with ANSI/NCSL Z540 and ISO/IEC 17025 requirements. The tests are performed using measuring & test equipment with certified NIST traceability. (Applicable NIST numbers are available upon request). Authorization signature verifies the performance of this instrument meets the intended, published accuracy targets of the manufacturer. Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission is granted by SAGE Metering, Inc.

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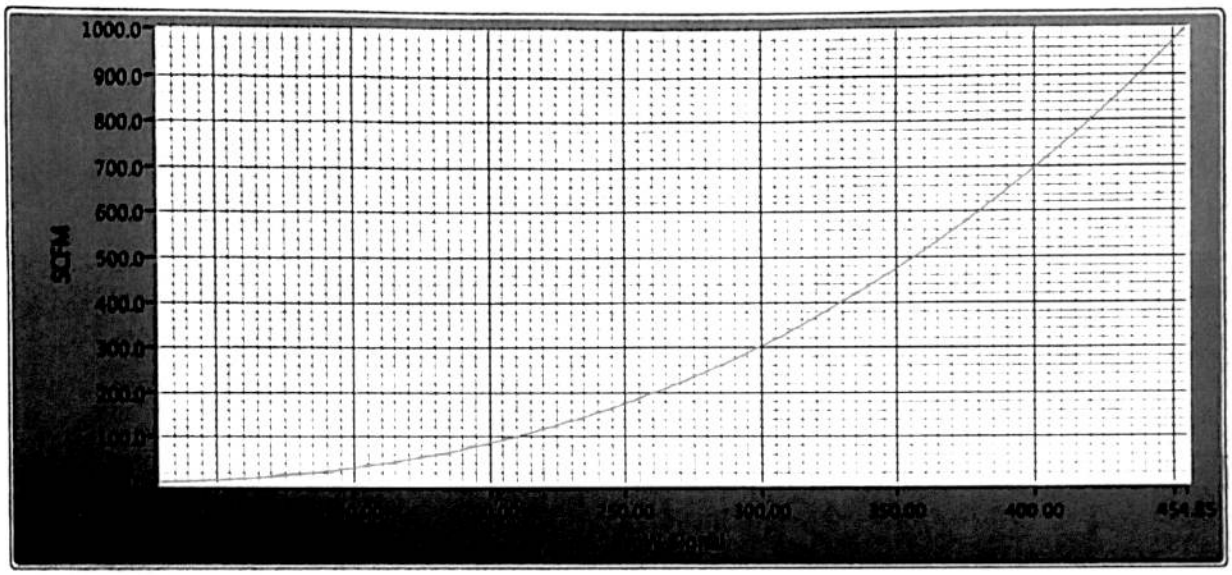
Date: 1/30/2017

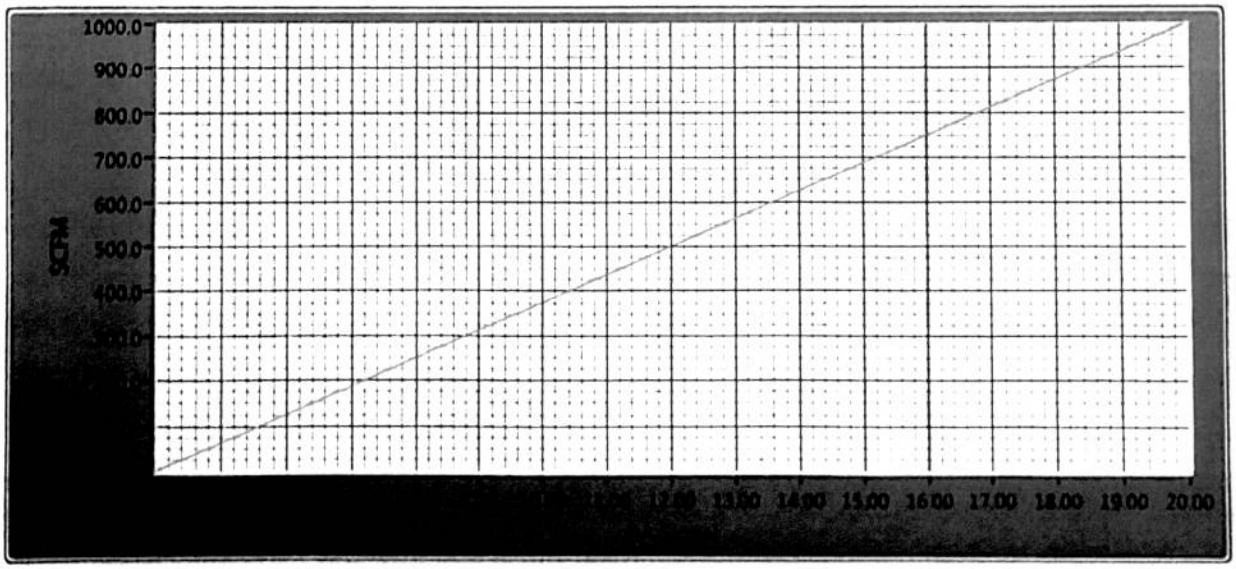
SAGE METERING, INC.

mW0 Air: 76.0

mW0 Gas: 80.0

SAGE CALIBRATION DATA





Meter Full Scale: 1000 SCFM

Serial #: 72551

Customer: Excellent Engineering

Model: SIP-05-12-DC24-BIOGAS

STP Conditions: 70°F and 29.92" Hg

Signature:

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flare #2

SAGE METERING INC

PRODUCT QUALITY CERTIFICATE OF CONFORMANCE

Product Inspection & Quality Statement

All individual parts and components which make up the product being provided have been inspected and approved for manufacture. In addition, subassemblies have been inspected, tested, and accepted for final assembly. Each completed assembly has been final tested and approved for shipment.

Conformance Statement

SAGE Metering Incorporated certifies this instrument was tested in compliance with ANSI/NCSL Z540 and ISO/IEC 17025 requirements. SAGE Metering, Inc. calibration services are derived from MIL-STD-45662A. The Prime DC24 model is Met Labs approved and Met Labs is a Nationally Recognized Testing Laboratory (NRTL) which is recognized by OSHA. The tests are performed using measuring & test equipment with certified NIST traceability. (Applicable NIST numbers are available upon request). Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission is granted by SAGE Metering, Inc.

CUSTOMER:	Excellent Engineering	
PURCHASE ORDER:	PO 217081 RMA 181303	
SAGE SALES ORDER:	22640	
MODEL:	SIP-05-12-DC24-BIOGAS	
POWER REQUIREMENT:	DC24	
OPTIONAL OUTPUT:	Flow, 4 - 20mA	100 SCF/PULSE, 250 ms
SAGE UNIT/SENSOR SERIAL NUMBERS:	85117-44527	Slave ID = 31 HEX
TAG:		
PRIME BAUD RATE / PRIME PARITY	19200.00	EVEN
SUGGESTED CALIB/VALIDATION INTERVAL:	12 months after Calibration	
CALIBRATION DATE:	3/14/2017	
OPERATING PRESSURE RANGE:	(14.7 PSIA + PSIG) ± 20%	
MAXIMUM PRESSURE RATING:	500 PSIG	
SENSOR TEMPERATURE RANGE:	STD: -40 to 200 F	
ELECTRONICS TEMPERATURE RANGE:	0° to +150°F (-18° to +65.56°C)	
ACCURACY AT THE NORMAL 100:1 TURNDOWN:	+/- 1% Rdg + 0.5% FS	
CALIBRATION REFERENCE CONDITIONS:	70°F and 29.92" Hg	
PROCESS GAS / PROCESS GAS SPECIFIC GRAVITY	BIOGAS: (58% CH4, 38% CO2, 0.9416	
PROCESS FLOW (FS, 4-20 mA)/LowFlowCutoff	0 - 1000 SCFM	
CALIBRATED FLOW	1000 SCFM	
PROCESS LINE SIZE	6 in sch 10	
PROCESS TEMPERATURE:	120 F	
PROCESS PRESSURE:	60 INH2OG	
CALIBRATION TECHNICIANS:	GF	
ROOTS METERs	8C175 - SN 1628163; 23M232 - SN 1623164	

SPECIAL NOTES:

SOFTWARE REV#	2.09	
AMBIENT AIR ZERO in mW/GAS FLOW ZERO in mW	72	75

Authorization: Tyler Tyler

Date: March 14, 2017

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SAGE METERING INC.

As Found Calibration Certificate

SAGE Sales Number: 22640
SAGE Serial Number: 85117
Sensor SN: 44527
Model: SIP-05-12-DC24-BIOGAS
4-20mA: 60,000.00 SCFH
Process Line Size: 6 in sch 10
Process Area: 0.1529 ft^2

Date: 3/13/2017
Customer: Excellent Engineering
Process Gas: BIOGAS: (50% CH4, 47
Process Temperature: 125F
Process Pressure: 3 PSIG

Flow Meter Non-linear mW Output	Measured Flow	Output Signal 4-20 mA	Indicated Flow (Display Reading)	Deviation	Allowable Deviation	Result
mW	SCFH	4 - 20 mA	SCFH	SCFH	+/-1% Rdg + ½% Full Scale	Pass / Fail
72	0.0	4.00	0.0	0.0	300.000	Pass
236	8329.3	5.93	7204.0	-1125.3	383.293	Fail
298	16817.0	7.89	14739.0	-2078.0	468.170	Fail
343	25437.1	9.80	21884.0	-3553.1	554.371	Fail
361	29536.6	10.67	25159.0	-4377.6	595.366	Fail
389	35774.9	12.10	30709.0	-5065.9	657.749	Fail

Authorization: _____ Date: 3-15-2017

SAGE Metering Incorporated certifies this instrument was tested in compliance with ANSI/NCSL Z540 and ISO/IEC 17025 requirements. The tests are performed using measuring & test equipment with certified NIST traceability. (Applicable NIST numbers are available upon request). Authorization signature verifies the performance of this instrument meets the intended, published accuracy targets of the manufacturer. Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission is granted by SAGE Metering, Inc.

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SAGE
METERING INC.

Calibration Certificate

SAGE Sales Number: 22640
SAGE Serial Number: 85117
Sensor SN: 44527
Model: SIP-05-12-DC24-BIOGAS
4-20mA: 1,000 SCFM
Process Line Size: 6 in sch 10
Process Area: 0.1529 ft²

Date: 3/14/2017
Customer: Excellent Engineering
Process Gas: 4, 38% CO2, 3.6% N2, .
Process Temperature: 120F
Process Pressure: 60 INH2OG

Flow Meter Non-linear mW Output	Measured Flow	Output Signal 4-20 mA	Indicated Flow (Display Reading)	Deviation	Allowable Deviation	Result
mW	SCFM	4 - 20 mA	SCFM	SCFM	+/-1% Rdg + ½% Full Scale	Pass / Fail
75	0.0	4.00	0.0	0.0	5.000	Pass
203	79.0	5.20	75.2	-3.9	5.790	Pass
278	211.1	7.24	208.0	-3.1	7.111	Pass
330	352.9	9.40	349.7	-3.2	8.529	Pass
372	492.4	11.64	482.9	-9.5	9.924	Pass
400	589.8	13.24	585.8	-3.9	10.898	Pass

Authorization: Kyle Tyler

Date: 3-16-2017

SAGE Metering Incorporated certifies this instrument was tested in compliance with ANSI/NCSL Z540 and ISO/IEC 17025 requirements. The tests are performed using measuring & test equipment with certified NIST traceability. (Applicable NIST numbers are available upon request). Authorization signature verifies the performance of this instrument meets the intended, published accuracy targets of the manufacturer. Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission is granted by SAGE Metering, Inc.

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EXHIBIT 2

Surface Methane Gas Monitoring
Quarterly Event Report
January-March 2017

Land-Tech

LANDFILL TECHNOLOGIES OF ARECIBO, LLC

Surface Methane Gas Monitoring at the Arecibo Municipal Solid Waste Landfill

Quarterly Event Report

Prepared by:
Landfill Technologies of Arecibo, LLC.

January to March 2017

Bo. Mamey, Carretera 189 km. 9.0, Gurabo, PR 00778 • PO Box 1322 Gurabo, Puerto Rico 00778 • Tel. (787) 273-7639 • Fax (787) 687-0337

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Objectives 3

Description 3

Sampling Locations and Results 4

Conclusions and Recommendations 4

Appendixes 5

Appendix A: Thermo Scientific Portable Toxic Analyzer – TVA1000B Surface Emission Monitor Specifications
Appendix B: Sampling Points Locations form Arecibo Municipal Landfill
Appendix C: Surface Emission Readings

Introduction

Landfill Technologies of Arecibo, LLC has conducted on January, February and March of 2017 the surface and perimeter methane gas monitoring event at the Arecibo Municipal Solid Waste Landfill as part of the operation of the Gas Collection and Control System (GCCS). This event is also performed as part of the state and federal agency's for environment requirements for solid waste landfills.

The surface methane gas monitoring was performed by Landfill Technologies of Arecibo, LLC (LTA) personnel during March 2017 according to the following rule of the "Enmiendas al Reglamento para el Control de la Contaminación Atmosférica de la Junta de Calidad Ambiental para cumplir con los requisitos para Planes Estatales de la Sección 111 (d) de la Ley Federal de Aire Limpio para Implantar las Guías de Emisiones para Sistemas de Relleno Sanitario". This monitoring consisted of obtaining readings with a portable instrument (TVA1000B) surface detector, please refer to Appendix A for specifications of instrument) from landfill surface, groundwater monitoring wells, gas collection system and ambient monitoring.

Objectives

The objective of this event (the surface methane gas monitoring) is to ensure that the concentration of methane (CH_4) generated by the landfill does not exceed the lower explosive limit (LEL) of methane at the facility. The LEL for this monitoring is 500 ppm (parts per million) or 25%. If the personnel of LTA detect any release that exceeds the LEL it will require notification to the owner or operator and an expansion of the monitoring program to determine the vertical and horizontal extent of the release.

Description

The surface methane operational standards consist of monitoring the surface emissions of methane along the entire perimeter of the collection area and along a serpentine patter 30 meter apart (or site specific established spacing) for each collection area using a portable surface detector (TVA1000B – Appendix A).

Sampling Locations and Results

Landfill Technologies of Arecibo, LLC has created samplings locations at the Arecibo Municipal Solid Waste Landfill site where the surface emission readings have been collected. LTA presents the sampling locations at Appendix B. These readings were collected with the portable surface detector (TVA1000B) and are presented in Appendix C.

Conclusions and Recommendations

The surface emissions readings were performed for January, February and March of 2017 monitoring event from the Arecibo Municipal Solid Waste Landfill. This monitoring is part of conclusions quarterly monitoring program aimed to detect abnormal gas release at the landfill. During this event of monitoring the active area (area where the waste was deposited) was located at East side of the landfill. The LTA personnel inspect the area and there were no cracks that present a hazard to the surface.

Also the results of the surface emission monitoring for January, February and March of 2017 events by LTA personnel indicates that during that period no sampling point monitored exceed the LEL for methane which means that the landfill location does not represent a high risk of explosiveness.

APPENDIX A

Thermo Scientific Portable Toxic Analyzer – TVA1000B
Surface Emission Monitor Specifications

Thermo Scientific TVA1000B Toxic Vapor Analyzer

The Only Portable Intrinsically Safe Dual PID/FID Analyzer

Part of Thermo Fisher Scientific

Thermo SCIENTIFIC

Portable Toxic Vapor Analyzer

The Thermo Scientific TVA1000B is the only over-the-shoulder portable vapor analyzer that offers both PID (Photo Ionization Detection) and FID (Flame Ionization Detection) in a single, easy-to-use instrument. The ability to utilize both technologies in this field proven instrument provides benefits in reduced weight and a single user interface. The user can easily monitor and log inorganic and organic vapors simultaneously.

FID Detection

Users can measure a wide variety of organic vapors over an impressive dynamic range (0-50,000 ppm), monitoring some compounds that the PID will not detect. The flame ionization detector operates by breaking hydrocarbon bonds and is not limited by a low ionization potential of the molecule.

Simultaneous FID/PID Detection

No other instrument offers both Photo Ionization and Flame Ionization Detection operating simultaneously in a single portable vapor analyzer. Dual detection eliminates the time, expense and trouble of purchasing and maintaining two separate analyzers.

With PID detection, the user has not only the ability to monitor for organic compounds, but also can detect many inorganic compounds. Some compounds detected by PID and not FID are ammonia, carbon disulfide, carbon tetrachloride, formaldehyde, and hydrogen sulfide. The PID also has the advantage of not requiring fuel or air to operate. In anaerobic environments, the TVA1000B PID can be used.

Key Features

- Simultaneous FID/PID or Single FID detector(s)
- Portable and lightweight
- Multiple response factors and curves
- Multi-point calibration
- On-board datalogging
- 8 hour battery life

Probe Options

Standard Probe
Display measurement values on a 4-character LCD, with measurement units displayed on %, ppm, or ppb. Additionally, a bar graph indicator provides an indication of concentration level. Function keys allow selection of analyzer functions.

Enhanced Probe
Originally designed for Fugitive Emissions monitoring, the enhanced probe has a larger display area than the basic probe. This provides a display of up to 6 lines x 20 characters, plus a double height concentration value. It displays all the same information as the standard probe and has menu-driven access to many of the analyzer functions, allowing them to be easily initiated and/or changed at the probe.

TVA1000B
Data Manager Accessory: Route Management Probe

Powerful field capabilities
The TVA1000B Data Manager allows users to modify or create route data in the field, eliminating the need for manual recording of data. This helps you comply with the electronic data storage requirements within most consent decrees. The probe has a highly visible 360 degree LED with a pulsed rate linked to concentration.

The DataManager provides access to all of the features previously available only through the sidepack. Users can also easily search and navigate between tags in a route by simply entering the desired tag identifier.

Flexibility and control
The DataManager allows control of how data is viewed and accessed in the field. This allows the user to customize the view to best meet the monitoring needs at your facility, as each route may have different fields and screen displays. Fields may be designated as non-editable to enhance data integrity and database security.

An optional comment field allows the user to make electronic notes about each tag monitored. An alpha-numeric keypad makes data entry a snap.

Key Features for the DataManager

- Custom field labels for more clearly identified route information
- Definable screen layouts optimize user efficiency
- Pick lists lead to consistent data entry and minimize chance of data entry errors
- One button selections to access most commonly used functions
- New sample probe provides 360 degree visual indicator of concentration level
- Cable management system eliminates snagging sample line and electronic cable
- Existing TVA1000 units may be upgraded
- Enhanced filtering system removes dirt and water more efficiently.

Analyzer bag protects TVA1000 and may be used with standard shoulder strap or optional automobile backpack.

ThermoConnect Software

ThermoConnect enables users of the TVA1000B to transfer, display, analyze, and configure data from the instrument using a computer. ThermoConnect is Windows® based and facilitates the importing of data into other Windows® based applications making it easier to retrieve logged data.

Added capability to maximize the TVA DataManager's features

ThermoConnect has been updated with a powerful new utility to create new route database template files. This utility allows you to easily build your own route database and design the screen appearance through a four-step process. Also, any existing route files in the old file format are still recognized by the TVA and may be upgraded to the new format.

Windows® is a registered trademark of Microsoft Coporation.

Cable management system

Applications

Fugitive Emissions Monitoring
The unique dual detector FID/PID design can handle a wide range of compound vapors present at processing plants. The TVA1000B permits monitoring at lower ppm levels.

Emergency Response
For reliable measurements of hazardous spills or emissions, the TVA1000B responds quickly in an emergency. The ability to quickly detect the presence of "hot spots" is key to locating the source of the hazard.

Hazardous Waste Site Evaluation
The TVA1000B allows quick and easy identification of the hazard location and quantifies the level of contamination.

Underground Storage Tanks
The TVA1000B is a primary tool for determining if a UST is leaking and the extent of the contamination.

Industrial Hygiene
The TVA1000B can help you maximize the effectiveness of your plant ventilation system, and identifies trouble spots. Use it to survey ambient vapor levels in specific breathing zones or in general plant environments, and log for furthur follow-up action.

Natural Gas Leak Detection
The TVA1000B enables quick and easy detection of natural gas leaks.

The Thermo Scientific **TVA1000B** is a benchmark for experience and reliability in Fugitive Emissions Monitoring

Thermo Scientific TVA1000B Specifications

Safety certifications	FM (Class 1, Div. 1, Groups A,B,C&D Hazardous Location, Temp. Class T4)
Datalogging	Onboard
Readout	Bar graph & 4- digit LCD
Dynamic Range	0.5-2,000 ppm (PID) isobutylene; 0.5-50,000 ppm (FID) methane
Linear Range	0.5-500 ppm (PID) isobutylene; 0.5-10,000 ppm (FID) methane
Response Time	3.5 seconds
Minimum Detectable Limit	100 ppb benzene (PID); 300 ppb hexane (FID) (laboratory conditions)
Alarms	Low, high, STEL
Sample Flow Rate	1,000 cc/min nominal
Power	Rechargeable NiCd Battery
Logging Capacity	900-18,000 points mode specific
Temperature Range	0-40°C (32°F - 104°F)
Fuel	None required (PID); 99.995% hydrogen (FID)
Portable Operation Time	8 hours (with reference operating conditions)
Approximate Mass	5.8 kg (13 pounds)
Nominal Dimensions	13.5 x 10.3 x 3.2 inches (343 x 262 x 81 mm)
Analog Output	0-2V dc (non-calibrated)
Repeatability	+/- 1% (PID); +/- 2% (FID)
Autoranging	Yes
Diagnostics	Yes
Other Available Options:	
Carrying Case	P/N CR012XL
Charcoal Filter	P/N 510095-1
FID Calibration Kit	P/N CR009UY
PID/FID Calibration Kit	P/N CR012UH

Thermo Scientific products represent a broad range of high-end analytical instruments, chemistry and consumable supplies, laboratory equipment, software and services that enable integrated laboratory workflow solutions. Thermo Scientific is the new name for a trusted brand – Thermo Electron – that the world's most renowned researchers, clinicians and scientists already count on to solve their analytical challenges. The brand is strengthened by the additions equipment, consumables and reagents acquired from Fisher Scientific.

TÜV MANAGEMENT SERVICE ISO 9001

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www.thermo.com/ih

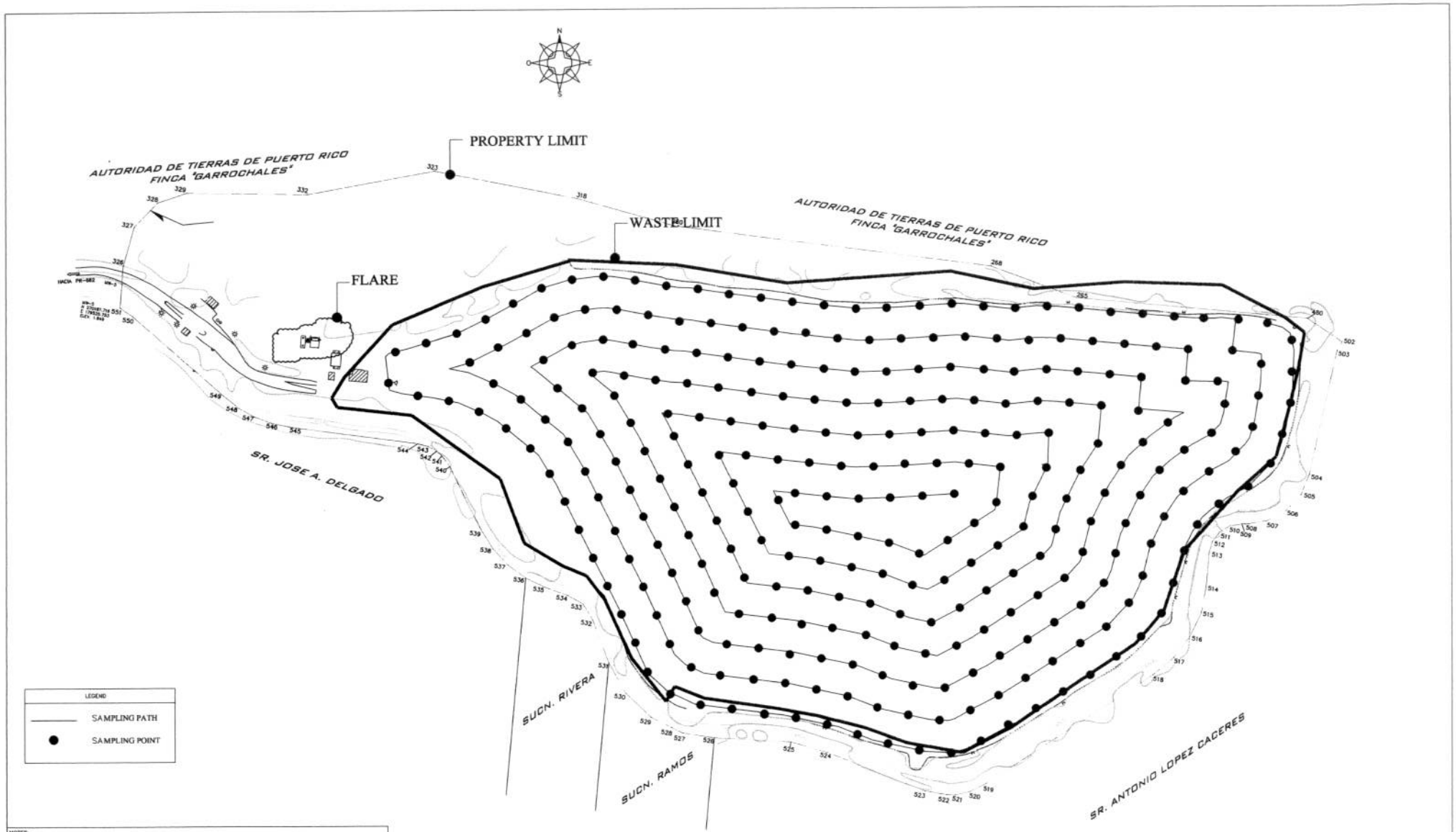
27 Forge Parkway
Franklin, MA
02038

1.866.282.0430
1.508.520.1460 fax

Thermo SCIENTIFIC

APPENDIX B

Sampling Points Locations from Arecibo Municipal Landfill



NOTES:

1. SEM PATH SHOWN IS FOR FINAL GRADES. SEM CONDUCTED WHILE THE LANDFILL IS AT INTERIM GRADES MAY VARY FROM THE PATH SHOWN. RECORDS OF THE PATH FOLLOWED WILL BE MAINTAINED BY THE FACILITY.
2. SEM PATH WILL BE SPACED 30 M APART IN ACCORDANCE WITH NSPS RULES.

REVISION

DATE	BY	#

ARECIBO MUNICIPAL SOLID WASTE LANDFILL
ARECIBO, P.R

LANDFILL TECHNOLOGIES OF ARECIBO, CORP.

SURFACE EMISSIONS MONITORING
SAMPLING PATH

DRAWING: S-100
SCALE:
DATE: 01/2010

APPENDIX C

Surface Emission Readings

LANDFILL TECHNOLOGIES CORP.

SURFACE EMISSION MONITORING – ARECIBO LANDFILL

MARCH 2017

TAG	DATE	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
DOWNWIND	3/2/2017	FID	0.23	PPM	FE
UPWIND	3/2/2017	FID	1.27	PPM	FE
POINT1	3/2/2017	FID	0.51	PPM	FE
POINT2	3/2/2017	FID	0.77	PPM	FE
POINT3	3/2/2017	FID	3.99	PPM	FE
POINT4	3/2/2017	FID	0.22	PPM	FE
POINT5	3/2/2017	FID	0.37	PPM	FE
POINT6	3/2/2017	FID	0.92	PPM	FE
POINT7	3/2/2017	FID	0.75	PPM	FE
POINT8	3/2/2017	FID	2.65	PPM	FE
POINT9	3/2/2017	FID	1.9	PPM	FE
POINT10	3/2/2017	FID	1.56	PPM	FE
POINT11	3/2/2017	FID	0.39	PPM	FE
POINT12	3/2/2017	FID	2.08	PPM	FE
POINT13	3/2/2017	FID	0.86	PPM	FE
POINT14	3/2/2017	FID	4.01	PPM	FE
POINT15	3/2/2017	FID	0.93	PPM	FE
POINT16	3/2/2017	FID	8.76	PPM	FE
POINT17	3/2/2017	FID	4.86	PPM	FE
POINT18	3/2/2017	FID	2.55	PPM	FE
POINT19	3/2/2017	FID	8.07	PPM	FE
POINT20	3/2/2017	FID	5.97	PPM	FE
POINT21	3/2/2017	FID	6.21	PPM	FE
POINT22	3/2/2017	FID	6.49	PPM	FE
POINT23	3/2/2017	FID	12.73	PPM	FE
POINT24	3/2/2017	FID	10.94	PPM	FE
POINT25	3/2/2017	FID	1.2	PPM	FE
POINT26	3/2/2017	FID	1.09	PPM	FE
POINT27	3/2/2017	FID	2.8	PPM	FE
POINT28	3/2/2017	FID	-0.04	PPM	FE
POINT29	3/2/2017	FID	1.69	PPM	FE
POINT30	3/2/2017	FID	1.8	PPM	FE
POINT31	3/2/2017	FID	1.12	PPM	FE
POINT32	3/2/2017	FID	1.61	PPM	FE
POINT33	3/2/2017	FID	0.38	PPM	FE
POINT34	3/2/2017	FID	0.5	PPM	FE
POINT35	3/2/2017	FID	0.48	PPM	FE
POINT36	3/2/2017	FID	0.02	PPM	FE

LANDFILL TECHNOLOGIES CORP.

SURFACE EMISSION MONITORING – ARECIBO LANDFILL

MARCH 2017

TAG	DATE	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
POINT37	3/2/2017	FID	0.36	PPM	FE
POINT38	3/2/2017	FID	3.61	PPM	FE
POINT39	3/2/2017	FID	4.44	PPM	FE
POINT40	3/2/2017	FID	1.23	PPM	FE
POINT41	3/2/2017	FID	0.77	PPM	FE
POINT42	3/2/2017	FID	1.97	PPM	FE
POINT43	3/2/2017	FID	12.92	PPM	FE
POINT44	3/2/2017	FID	4.48	PPM	FE
POINT45	3/2/2017	FID	1.18	PPM	FE
POINT46	3/2/2017	FID	5.99	PPM	FE
POINT47	3/2/2017	FID	5.9	PPM	FE
POINT48	3/2/2017	FID	1.98	PPM	FE
POINT49	3/2/2017	FID	1.12	PPM	FE
POINT50	3/2/2017	FID	3.11	PPM	FE
POINT51	3/2/2017	FID	2.77	PPM	FE
POINT52	3/2/2017	FID	4.16	PPM	FE
POINT53	3/2/2017	FID	1.37	PPM	FE
POINT54	3/2/2017	FID	0.2	PPM	FE
POINT55	3/2/2017	FID	110	PPM	FE
POINT56	3/2/2017	FID	6.28	PPM	FE
POINT57	3/2/2017	FID	3.73	PPM	FE
POINT58	3/2/2017	FID	4.08	PPM	FE
POINT59	3/2/2017	FID	347	PPM	FE
POINT60	3/2/2017	FID	5.19	PPM	FE
POINT61	3/2/2017	FID	43.04	PPM	FE
POINT62	3/2/2017	FID	16.15	PPM	FE
POINT63	3/2/2017	FID	1.26	PPM	FE
POINT64	3/2/2017	FID	17.34	PPM	FE
POINT65	3/2/2017	FID	8.34	PPM	FE
POINT66	3/2/2017	FID	2.38	PPM	FE
POINT67	3/2/2017	FID	102	PPM	FE
POINT68	3/2/2017	FID	76.5	PPM	FE
POINT69	3/2/2017	FID	4.36	PPM	FE
POINT70	3/2/2017	FID	1.07	PPM	FE
POINT71	3/2/2017	FID	186	PPM	FE
POINT72	3/2/2017	FID	11.81	PPM	FE
POINT73	3/2/2017	FID	27.4	PPM	FE
POINT74	3/2/2017	FID	20.42	PPM	FE

LANDFILL TECHNOLOGIES CORP.

SURFACE EMISSION MONITORING – ARECIBO LANDFILL

MARCH 2017

TAG	DATE	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
POINT75	3/2/2017	FID	20.41	PPM	FE
POINT76	3/2/2017	FID	4.19	PPM	FE
POINT77	3/2/2017	FID	5.01	PPM	FE
POINT78	3/2/2017	FID	2.73	PPM	FE
POINT79	3/2/2017	FID	7.54	PPM	FE
POINT80	3/2/2017	FID	2.18	PPM	FE
POINT81	3/2/2017	FID	1.44	PPM	FE
POINT82	3/2/2017	FID	6.24	PPM	FE
POINT83	3/2/2017	FID	3.83	PPM	FE
POINT84	3/2/2017	FID	4.38	PPM	FE
POINT85	3/2/2017	FID	4.1	PPM	FE
POINT86	3/2/2017	FID	2.93	PPM	FE
POINT87	3/2/2017	FID	9.72	PPM	FE
POINT88	3/2/2017	FID	1.32	PPM	FE
POINT89	3/2/2017	FID	5.61	PPM	FE
POINT90	3/2/2017	FID	6.93	PPM	FE
POINT91	3/2/2017	FID	3.2	PPM	FE
POINT92	3/2/2017	FID	10.42	PPM	FE
POINT93	3/2/2017	FID	6.99	PPM	FE
POINT94	3/2/2017	FID	6.69	PPM	FE
POINT95	3/2/2017	FID	4.88	PPM	FE
POINT96	3/2/2017	FID	5.13	PPM	FE
POINT97	3/2/2017	FID	7.41	PPM	FE
POINT98	3/2/2017	FID	2.54	PPM	FE
POINT99	3/2/2017	FID	4.67	PPM	FE
POINT100	3/2/2017	FID	8.65	PPM	FE
POINT101	3/2/2017	FID	8.05	PPM	FE
POINT102	3/2/2017	FID	3.27	PPM	FE
POINT103	3/2/2017	FID	0.73	PPM	FE
POINT104	3/2/2017	FID	4.33	PPM	FE
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POINT106	3/2/2017	FID	4.85	PPM	FE
POINT107	3/2/2017	FID	2.72	PPM	FE
POINT108	3/2/2017	FID	8.41	PPM	FE
POINT109	3/2/2017	FID	16.56	PPM	FE
POINT110	3/2/2017	FID	6.3	PPM	FE
POINT111	3/2/2017	FID	2.81	PPM	FE
POINT112	3/2/2017	FID	7.59	PPM	FE

LANDFILL TECHNOLOGIES CORP.

SURFACE EMISSION MONITORING – ARECIBO LANDFILL

MARCH 2017

TAG	DATE	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
POINT113	3/2/2017	FID	12.43	PPM	FE
POINT114	3/2/2017	FID	8.34	PPM	FE
POINT115	3/2/2017	FID	5.21	PPM	FE
POINT116	3/2/2017	FID	5.36	PPM	FE
POINT117	3/2/2017	FID	1.99	PPM	FE
POINT118	3/2/2017	FID	13.74	PPM	FE
POINT119	3/2/2017	FID	16.87	PPM	FE
POINT120	3/2/2017	FID	18.75	PPM	FE
POINT121	3/2/2017	FID	14.72	PPM	FE
POINT122	3/2/2017	FID	24.31	PPM	FE
POINT123	3/2/2017	FID	20.81	PPM	FE
POINT124	3/2/2017	FID	19.41	PPM	FE
POINT125	3/2/2017	FID	23.56	PPM	FE
POINT126	3/2/2017	FID	22.77	PPM	FE
POINT127	3/2/2017	FID	21.56	PPM	FE
POINT128	3/2/2017	FID	15.66	PPM	FE
POINT129	3/2/2017	FID	16.83	PPM	FE
POINT130	3/2/2017	FID	14.78	PPM	FE
POINT131	3/2/2017	FID	16.13	PPM	FE
POINT131	3/2/2017	FID	15.14	PPM	FE
POINT131	3/2/2017	FID	15.32	PPM	FE
POINT132	3/2/2017	FID	15.17	PPM	FE

EXHIBIT 3

Surface Methane Gas Monitoring
Quarterly Event Report
April – June 2017

Land-Tech

LANDFILL TECHNOLOGIES OF ARECIBO, LLC

Surface Methane Gas Monitoring at the Arecibo Municipal Solid Waste Landfill

Quarterly Event Report

Prepared by:
Landfill Technologies of Arecibo, LLC.

April to June 2017

Bo. Mamey, Carretera 189 km. 9.0, Gurabo, PR 00778 • PO Box 1322 Gurabo, Puerto Rico 00778 • Tel. (787) 273-7639 • Fax (787) 687-0337

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Objectives 3

Description 3

Sampling Locations and Results 4

Conclusions and Recommendations 4

Appendixes 5

Appendix A: LandTEC – SEM 500 Surface Emission Monitor Specifications
Appendix B: Sampling Points Locations form Arecibo Municipal Landfill
Appendix C: Surface Emission Readings

Introduction

Landfill Technologies of Arecibo, LLC has conducted on April, May and June of 2017 the surface and perimeter methane gas monitoring event at the Arecibo Municipal Solid Waste Landfill as part of the operation of the Gas Collection and Control System (GCCS). This event is also performed as part of the state and federal agency's for environment requirements for solid waste landfills.

The surface methane gas monitoring was performed by Landfill Technologies of Arecibo, LLC (LTA) personnel during May 2017 according to the following rule of the "Enmiendas al Reglamento para el Control de la Contaminación Atmosférica de la Junta de Calidad Ambiental para cumplir con los requisitos para Planes Estatales de la Sección 111 (d) de la Ley Federal de Aire Limpio para Implantar las Guías de Emisiones para Sistemas de Relleno Sanitario". This monitoring consisted of obtaining readings with a portable instrument (SEM 500) surface detector, please refer to Appendix A for specifications of instrument) from landfill surface, groundwater monitoring wells, gas collection system and ambient monitoring.

Objectives

The objective of this event (the surface methane gas monitoring) is to ensure that the concentration of methane (CH_4) generated by the landfill does not exceed the lower explosive limit (LEL) of methane at the facility. The LEL for this monitoring is 500 ppm (parts per million) or 25%. If the personnel of LTA detect any release that exceeds the LEL it will require notification to the owner or operator and an expansion of the monitoring program to determine the vertical and horizontal extent of the release.

Description

The surface methane operational standards consist of monitoring the surface emissions of methane along the entire perimeter of the collection area and along a serpentine patter 30 meter apart (or site specific established spacing) for each collection area using a portable surface detector (SEM 500 – Appendix A).

Sampling Locations and Results

Landfill Technologies of Arecibo, LLC has created samplings locations at the Arecibo Municipal Solid Waste Landfill site where the surface emission readings have been collected. LTA presents the sampling locations at Appendix B. These readings were collected with the portable surface detector (SEM 500) and are presented in Appendix C.

Conclusions and Recommendations

The surface emissions readings were performed for April, May and June of 2017 monitoring event from the Arecibo Municipal Solid Waste Landfill. This monitoring is part of conclusions quarterly monitoring program aimed to detect abnormal gas release at the landfill. During this event of monitoring the active area (area where the waste was deposited) was located at East side of the landfill. The LTA personnel inspect the area and there were no cracks that present a hazard to the surface.

Also the results of the surface emission monitoring for April, May and June of 2017 events by LTA personnel indicates that during that period no sampling point monitored exceed the LEL for methane which means that the landfill location does not represent a high risk of explosiveness.

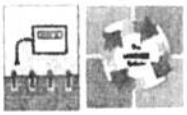
APPENDIX A

LandTEC SEM 500 Surface Emission Monitor Specifications
Surface Emission Monitor Specifications

LANDTEC

SEM™500

LANDFILL GAS
SURFACE EMISSION MONITOR



LFG Surface Emission Monitoring For NSPS / EG Compliance

NSPS/EG Compliant

The **LANDTEC SEM™500** Surface Emission Monitor was designed specifically to meet NSPS/EG and other similar regulations for landfill gas surface emission monitoring. NSPS/EG stipulates that instantaneous monitoring be conducted on a routine basis over the landfill surface, at gas extraction wells and along extraction/conveyance lines. NSPS, and other local regulations, require remedial action if the total organic compound (TOC) concentrations exceed 500ppmv (1/50 of 1% measured as Methane) at any single point source. There is a concern throughout the industry that instantaneous TOC levels over 500ppmv can be prevalent over the surface of a landfill. Whereas, integrating (averaging) the emissions measured at the surface as you walk may provide a better indication of the real extent of emission. Integrating the landfill values will filter out these anomalous 500ppm + measurements and provide the user with average surface emissions equivalents. Typically average values greater than 50ppmv would indicate a need to remediate. Often integrated results are well below 50ppmv, usually 0-10ppmv. Even when numerous "500ppmv" instantaneous measurements are found in the same area, this integrated data could be provided to regulators to counter the need to

remediate the many 500ppmv instantaneous measurements you may find over the surface of your landfill. Some agencies may soon require both instantaneous and integrated monitoring be conducted on a routine basis.

Currently, the **LANDTEC SEM™500** is the only instrument on the market capable of simultaneously doing both instantaneous and integrated surface emission monitoring. The **SEM™500** is a compact, microprocessor based instrument used for the analysis of organic and inorganic compounds contained in the air and above the surface of landfills. The **SEM™500** functions as a continuous monitor in the survey mode of operation. A flame ionization-detector (FID) is provided with the analyzer. It is field replaceable and can be cleaned by the user. The FID is provided with a hydrogen tank and a Hydrogen refill adapter.

Features Included with the LANDTEC Sem™500

- Portable Flame Ionization Detector (FID) Instrument
- DataField Software provides a seamless transition from Field Data Acquisition to sophisticated LFG Data Management, Analysis and Reporting
- Can be carried in an optional Backpack since all operations are controlled and displayed on Hand-held Enhanced Probe
- Enhanced Probe Assembly offers Menu-Driven operation
- Logs and stores all pertinent NSPS data
- DataField Software includes mapping capabilities

OPERATING MODES

The instrument has four modes of operation; Setup, Info, Run, and PC Link/Memory. The user configures the instrument to operate in any of the four modes by means of the front panel keyboard. The **SEM™500** couples the technology of a F.I.D. unit with a software package specifically designed to meet the requirements of the Landfill Gas Industry. "Tag Points" are loaded directly into the instrument from the software. While sampling, all operations necessary to operate the unit are done through the Enhanced Probe, with the instrument easily carried in the optional backpack. **REPORTING IS AS SIMPLE AS DOWNLOADING THE DATA AND SELECTING A REPORT FORMAT!**

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Visit our web site at http://l

SEM™500 Simplifies LFG Surface Emissions Monitoring and Regulatory Compliance

Operational Features

Repeatability...Less than + 2% at 100 ppm of Methane
Analog Output...Analog output signal, 0 to 2 V-DC, proportional to the raw count output from the FID detector
Dynamic Range...1.0 to 50,000 ppm of Methane
Linear Range...1.0 to 10, 000 ppm of Methane
Minimum Detectable Level...The minimum detectable level is defined as two times the peak noise. 300 ppb of Hexane
Response Time...Less than 3.5 seconds for 90% of final value using 10,000 ppm of Methane
Recovery Time...Less than five seconds to return to 10% original values using 10,000 ppm of Methane
Data Storage Rate...From 1 per second to 1 per 999 minutes, user selectable
Sample Flow Rate...1 L/min. nominal, at sample probe inlet
Battery...The battery can be fully charged in 16 hours. Battery operating time is 8 hr minimum at 20°C (68°F), and 4 hr minimum at 0°C (32°F). Use of the backlight feature of the analyzer display will shorten battery life. The battery is easily replaceable (replace in a non-hazardous area only) by removing the bottom cover of the instrument. A special tool is provided for this purpose.
Battery Charger...The battery charger is a separate unit, capable of operating the analyzer, while simultaneously charging its internal battery. An adapter is' provided to safely charge an external battery from the charger. Maximum time to re-charge a fully discharged battery is 16 hours. The charger is capable of operating from 120 V ac or 230 V ac, 50/60 Hz.
FID Capsule Life...Greater than 2000 hr
Audio Output Level...Greater than 75 dB
Mechanical Inter Connections...Two mechanical connections are provided on the side surfaces of the enclosure for Sample Input and for Vent Outlet.

Alarms

Alarms set by the user are High Ceiling and Low Ceiling Level, and the STEL (short-term exposure limit) Level. These alarms monitor the gas samples while the instrument is in any of the RUN modes. They are enabled whenever the levels set have been exceeded, and generate an audible output and flashing display. The **SEM™500** is also equipped with a Geiger counter audible alarm.

Hydrogen Carrier Gas

The Hydrogen carrier gas is stored in an easily removable, left hand threaded, high-pressure gas cylinder. Operating time greater than eight hours of continuous operation can be achieved with a cylinder charged up to 15.3 MPa (2200 psi). Pressure gauges are provided to allow easy viewing of cylinder and operating pressures. The gas cylinder is removable for refilling or certificate pressure testing. The tank is pressure rated at 15.3 MPa (2200 psi). Local sources for the Hydrogen gas must be utilized. The pressurized cylinder can not be shipped or carried via public or commercial transportation.

Additional Information

The **LANDTEC** team is committed to introducing new and more efficient technologies into an industry which recognizes innovation.

The **SEM™500** is part of **LANDTEC's** family of products developed specifically for the landfill industry. Other **LANDTEC** products and services include the **GEM™500**, **GEM™2000**, **Accu-Flo Wellheads**, **DataField**, **EnviroComp Report Service**, and more

An involved and contributing member of the Solid Waste Association of America

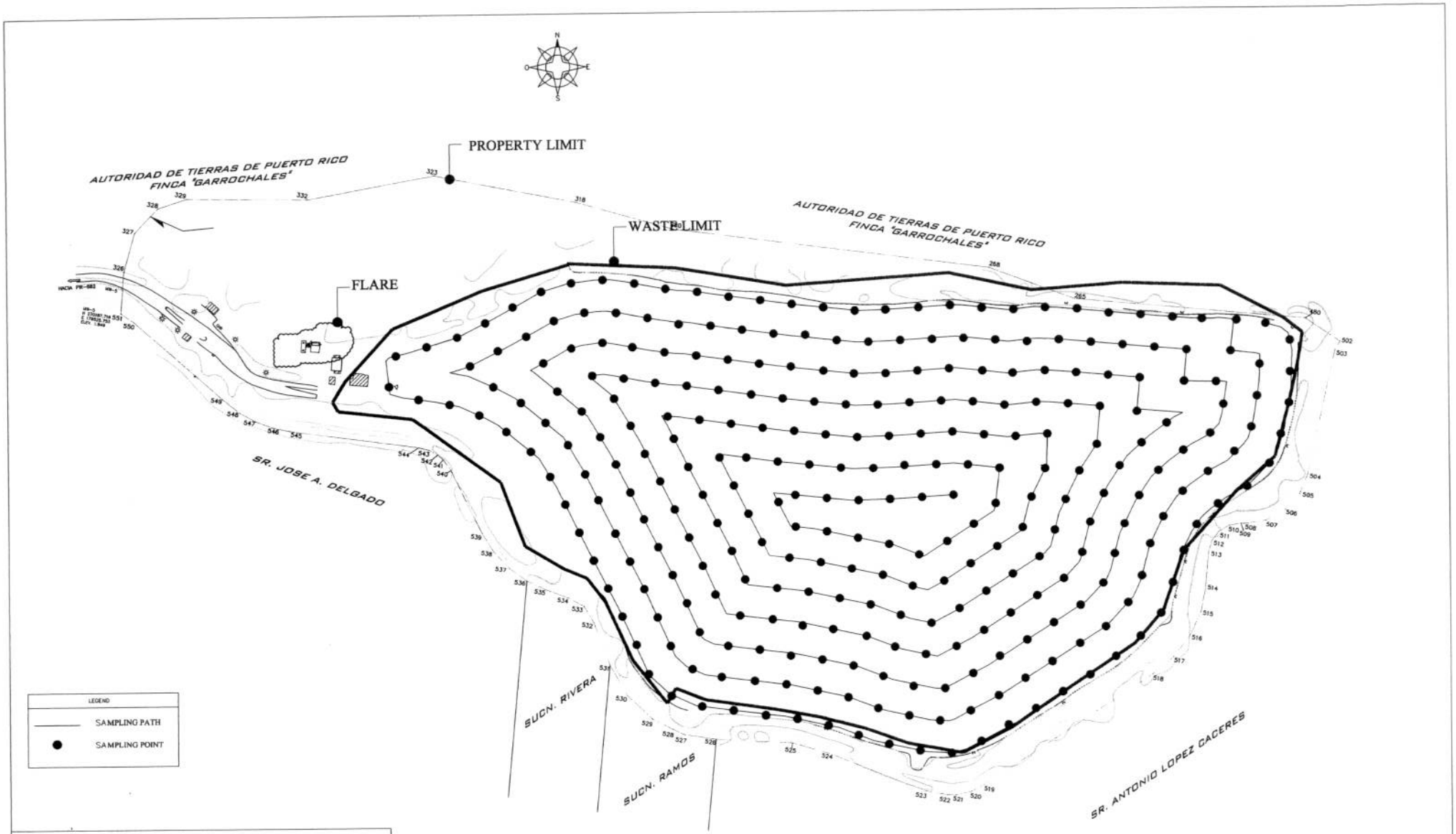
Western Sales Office
(800) 821-0496 • Fax (909) 825-0591

Eastern Sales Office
(800) 390-7745 • Fax (301) 391-6546

Product designs and specifications are subject to change without notice. User is responsible for determining suitability of product.
LANDTEC, GEM and LAPS are registered with the U.S. Patent and Trademark Office

APPENDIX B

Sampling Points Locations from Arecibo Municipal Landfill



NOTES:

1. SEM PATH SHOWN IS FOR FINAL GRADES. SEM CONDUCTED WHILE THE LANDFILL IS AT INTERIM GRADES MAY VARY FROM THE PATH SHOWN. RECORDS OF THE PATH FOLLOWED WILL BE MAINTAINED BY THE FACILITY.
2. SEM PATH WILL BE SPACED 30 M APART IN ACCORDANCE WITH NSPS RULES.

REVISION	DATE	BY	#

ARECIBO MUNICIPAL SOLID WASTE LANDFILL
ARECIBO, P.R

LANDFILL TECHNOLOGY OF ARECIBO, CORP.

SURFACE EMISSIONS MONITORING
SAMPLING PATH

DRAWING: S-100
SCALE:
DATE: 01/2010

APPENDIX C

Surface Emission Readings

LANDFILL TECHNOLOGIES CORP.

SURFACE EMISSION MONITORING – ARECIBO LANDFILL

MAY 2017

TAG	DATE	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
UPWIND	5/23/2017	FID	2.35	PPM	OK
DOWNWIND	5/23/2017	FID	2.4	PPM	OK
POINT1	5/23/2017	FID	3.32	PPM	OK
POINT2	5/23/2017	FID	3.32	PPM	OK
POINT3	5/23/2017	FID	3.85	PPM	OK
POINT3	5/23/2017	FID	3.55	PPM	OK
POINT4	5/23/2017	FID	3.67	PPM	OK
POINT5	5/23/2017	FID	3.55	PPM	OK
POINT6	5/23/2017	FID	3.93	PPM	OK
POINT7	5/23/2017	FID	3.69	PPM	OK
POINT8	5/23/2017	FID	3.56	PPM	OK
POINT9	5/23/2017	FID	3.58	PPM	OK
POINT10	5/23/2017	FID	3.39	PPM	OK
POINT11	5/23/2017	FID	3.52	PPM	OK
POINT12	5/23/2017	FID	3.28	PPM	OK
POINT13	5/23/2017	FID	3.45	PPM	OK
POINT15	5/23/2017	FID	2.46	PPM	OK
POINT16	5/23/2017	FID	2.6	PPM	OK
POINT17	5/23/2017	FID	2.48	PPM	OK
POINT18	5/23/2017	FID	2.96	PPM	OK
POINT19	5/23/2017	FID	2.66	PPM	OK
POINT20	5/23/2017	FID	2.4	PPM	OK
POINT21	5/23/2017	FID	2.67	PPM	OK
POINT22	5/23/2017	FID	2.55	PPM	OK
POINT22	5/23/2017	FID	2.51	PPM	OK
POINT23	5/23/2017	FID	3.1	PPM	OK
POINT24	5/23/2017	FID	11.33	PPM	OK
POINT25	5/23/2017	FID	2.35	PPM	OK
POINT26	5/23/2017	FID	2.39	PPM	OK
POINT27	5/23/2017	FID	2.33	PPM	OK
POINT28	5/23/2017	FID	2.35	PPM	OK
POINT29	5/23/2017	FID	2.42	PPM	OK
POINT30	5/23/2017	FID	2.55	PPM	OK
POINT31	5/23/2017	FID	2.35	PPM	OK
POINT33	5/23/2017	FID	2.67	PPM	OK
POINT34	5/23/2017	FID	2.75	PPM	OK
POINT35	5/23/2017	FID	2.38	PPM	OK
POINT36	5/23/2017	FID	5.63	PPM	OK

LANDFILL TECHNOLOGIES CORP.

SURFACE EMISSION MONITORING – ARECIBO LANDFILL

MAY 2017

TAG	DATE	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
POINT37	5/23/2017	FID	4.55	PPM	OK
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POINT40	5/23/2017	FID	2.48	PPM	OK
POINT41	5/23/2017	FID	2.2	PPM	OK
POINT42	5/23/2017	FID	2.34	PPM	OK
POINT43	5/23/2017	FID	2.5	PPM	OK
POINT44	5/23/2017	FID	2.51	PPM	OK
POINT45	5/23/2017	FID	2.59	PPM	OK
POINT46	5/23/2017	FID	2.51	PPM	OK
POINT47	5/23/2017	FID	2.3	PPM	OK
POINT48	5/23/2017	FID	2.64	PPM	OK
POINT49	5/23/2017	FID	2.54	PPM	OK
POINT50	5/23/2017	FID	2.7	PPM	OK
POINT51	5/23/2017	FID	3.15	PPM	OK
POINT52	5/23/2017	FID	2.83	PPM	OK
POINT53	5/23/2017	FID	3.3	PPM	OK
POINT54	5/23/2017	FID	3.52	PPM	OK
POINT55	5/23/2017	FID	2.36	PPM	OK
POINT56	5/23/2017	FID	2.26	PPM	OK
POINT57	5/23/2017	FID	2.09	PPM	OK
POINT58	5/23/2017	FID	2.4	PPM	OK
POINT59	5/23/2017	FID	2.48	PPM	OK
POINT60	5/23/2017	FID	2.36	PPM	OK
POINT61	5/23/2017	FID	2.34	PPM	OK
POINT62	5/23/2017	FID	2.48	PPM	OK
POINT63	5/23/2017	FID	2.47	PPM	OK
POINT64	5/23/2017	FID	2.69	PPM	OK
POINT65	5/23/2017	FID	2.98	PPM	OK
POINT66	5/23/2017	FID	2.2	PPM	OK
POINT67	5/23/2017	FID	3.46	PPM	OK
POINT68	5/23/2017	FID	4.75	PPM	OK
POINT69	5/23/2017	FID	9.64	PPM	OK
POINT70	5/23/2017	FID	2.19	PPM	OK
POINT71	5/23/2017	FID	2.29	PPM	OK
POINT72	5/23/2017	FID	2.26	PPM	OK
POINT73	5/23/2017	FID	2.57	PPM	OK
POINT74	5/23/2017	FID	2.47	PPM	OK

LANDFILL TECHNOLOGIES CORP.

SURFACE EMISSION MONITORING – ARECIBO LANDFILL

MAY 2017

TAG	DATE	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
POINT75	5/23/2017	FID	2.41	PPM	OK
POINT76	5/23/2017	FID	2.16	PPM	OK
POINT77	5/23/2017	FID	2.41	PPM	OK
POINT78	5/23/2017	FID	2.51	PPM	OK
POINT79	5/23/2017	FID	2.15	PPM	OK
POINT80	5/23/2017	FID	2.18	PPM	OK
POINT82	5/23/2017	FID	19.37	PPM	OK
POINT83	5/23/2017	FID	15.97	PPM	OK
POINT84	5/23/2017	FID	16.65	PPM	OK
POINT85	5/23/2017	FID	20.37	PPM	OK
POINT86	5/23/2017	FID	14.53	PPM	OK
POINT87	5/23/2017	FID	12.7	PPM	OK
POINT88	5/23/2017	FID	15.16	PPM	OK
POINT89	5/23/2017	FID	12.34	PPM	OK
POINT90	5/23/2017	FID	17.39	PPM	OK
POINT91	5/23/2017	FID	8.38	PPM	OK
POINT92	5/23/2017	FID	4.15	PPM	OK
POINT93	5/23/2017	FID	2.73	PPM	OK
POINT94	5/23/2017	FID	2.24	PPM	OK
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POINT104	5/23/2017	FID	2.77	PPM	OK
POINT105	5/23/2017	FID	2.56	PPM	OK
POINT106	5/23/2017	FID	2.57	PPM	OK
POINT107	5/23/2017	FID	2.25	PPM	OK
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POINT111	5/23/2017	FID	2.34	PPM	OK
POINT112	5/23/2017	FID	2.38	PPM	OK
POINT113	5/23/2017	FID	2.54	PPM	OK

LANDFILL TECHNOLOGIES CORP.

SURFACE EMISSION MONITORING – ARECIBO LANDFILL

MAY 2017

TAG	DATE	DETECTOR	CONCENTRATION	CONCENTRATION UNITS	TYPE
POINT114	5/23/2017	FID	2.75	PPM	OK
POINT115	5/23/2017	FID	2.5	PPM	OK
POINT116	5/23/2017	FID	2.92	PPM	OK
POINT117	5/23/2017	FID	2.77	PPM	OK
POINT118	5/24/2017	FID	5.2	PPM	OK
POINT119	5/24/2017	FID	11.25	PPM	OK
POINT120	5/24/2017	FID	11.1	PPM	OK
POINT121	5/24/2017	FID	14.44	PPM	OK
POINT122	5/24/2017	FID	15.14	PPM	OK
POINT123	5/24/2017	FID	17.01	PPM	OK
POINT124	5/24/2017	FID	2.68	PPM	OK
POINT125	5/24/2017	FID	1.39	PPM	OK
POINT126	5/24/2017	FID	1.48	PPM	OK
POINT127	5/24/2017	FID	1.03	PPM	OK
POINT128	5/24/2017	FID	3.86	PPM	OK
POINT129	5/24/2017	FID	4.67	PPM	OK
POINT130	5/24/2017	FID	9.47	PPM	OK
POINT131	5/24/2017	FID	9.05	PPM	OK
POINT132	5/24/2017	FID	13.11	PPM	OK

EXHIBIT 4

Gas Extraction Wells
Monthly Monitoring Report
January – June 2017

Data Collected Arecibo GCCS January 2017

Device ID GEM™5000;	CH4 %	CO2 %	O2 %	Balance %	Static Press. inches H2O	Gas Temp. DegF	Flow SCFM
ARWG0001	55.4	24	0	20.6	0.04	104.5	3.3
ARWG0002	44.8	29.2	0	26	0.1	100.5	1.5
ARWG0003	48.1	24.2	0	27.7	0.1	89.9	4.5
ARWG0004	49.3	31.8	0	18.9	0.13	94.8	3.2
ARWG0005	42.2	28.6	0	29.2	0.03	90.4	3
ARWG0006	58.8	31.9	0	9.3	0.06	95.7	5.3
ARWG0007	55.6	31.2	0	13.2	0.11	87.4	5.6
ARWG0008	44.3	29.6	0	26.1	0.03	97.1	2.1
ARWG0009	49	35	0	16	-0.18	94	6
ARWG0010	65.7	25.9	0.2	8.2	-0.01	97.2	6.4
ARWG0011	63.9	24.6	0.1	11.4	0.12	100.5	7.8
ARWG0012	23.4	24.1	0.1	52.4	0.09	107.1	1.4
ARWG0013	64.6	26.7	0	8.7	0.04	103.1	6.2
ARWG0014	20.2	24.5	0.1	55.2	-0.03	101.9	28.3
ARWG0015	34	28.6	0	37.4	0.04	100.1	3.3
ARWG0016	22	23.4	0.4	54.2	0.07	116.1	1
ARWG0017	32.2	22.9	0.1	44.8	0.03	105.9	1
ARWG0018	55.6	28.1	0.1	16.2	-0.06	105.8	6
ARWG0019	23.8	24.9	0	51.3	0.05	107.6	2
ARWG0020	51.7	29.4	0	18.9	0.08	104.7	4.4
ARWG0021	32.8	29.3	0	37.9	0.03	99.7	1
ARWG0022	46	35.3	0	18.7	0.01	105.5	4.4
ARWG0023	55.2	35.1	0	9.7	-0.06	108.9	8.8
ARWG0024	60	39	0	1	0.12	105.7	5.8
ARWG0025	60.2	39	0	0.8	0.11	109.2	8.3
ARWG0026	52.9	38.5	0.4	8.2	-0.25	110.6	9.4
ARWG0027	61.4	38.5	0.1	0	0.02	97.1	3.6
ARWG0028	61.7	34.8	0.2	3.3	-1.84	94	5.6
ARWG0029	47.4	30.5	0	22.1	0	94.5	2.4
ARWG0030	55.6	32.7	0	11.7	-0.41	94.8	5.2
ARWG0031	62.1	35.2	0	2.7	0.1	94.5	1.9
ARWG0032	50.5	27.2	0	22.3	0.11	95.3	4.1
ARWG0033	36.3	26.8	0	36.9	0.03	96.6	2.1
ARWG0034	48.7	27.9	0	23.4	0.17	95.8	5.5
ARWG0035	45.6	34.1	0.4	19.9	-0.55	97	3
ARWG0036	57.7	32.9	0.7	8.7	-5.24	101.6	8.5
ARWG0037	55	36	1.7	7.3	-10.48	86.1	0
ARWG0038	62.2	36	0.4	1.4	-9.43	96	10.2
ARWG0039	63.1	31.2	0.2	5.5	-0.17	106.2	12

Data Collected Arecibo GCCS January 2017

ARWG0040	28.8	28.7	0	42.5	-0.1	108.9	2.3
ARWG0041	58.7	31.5	0.1	9.7	-0.06	106.2	8.2
ARWG0042	59.4	32.1	0	8.5	-0.02	103.3	12.1
ARWG0043	56.6	37.2	0.1	6.1	-0.69	105.7	15
ARWG0044	60.3	35.2	0.1	4.4	-0.99	108.1	16
ARWG0045	54.5	31.4	0	14.1	0.03	108.7	5.4
ARWG0046	51.2	33.2	0.6	15	-1.82	96.3	8
ARWG0047	57.4	36.3	0.2	6.1	-3.26	99.1	5
ARWG0048	60.7	38.2	0.1	1	-10.05	93.4	5.2
ARWG0049	63.3	36.5	0.2	0	-7.62	89	15.3
ARWG0050	57.4	39	0.8	2.8	-7.26	104.9	6.2
ARWG0051	45.5	35.1	2.6	16.8	-0.21	114.1	9.8
ARWG0052	58.9	39.9	0.7	0.5	-7.82	102.6	6.9
ARWG0053	57.7	40.5	0.3	1.5	-4.34	108.5	26.9
ARWG0054	51.8	37.2	2	9	-1.04	108.7	33.3
ARWG0055	48.9	33.3	0.1	17.7	-0.23	105.4	3.5
ARWG0056	58.1	39.8	0	2.1	-0.16	110.1	5.9
ARWG0057	9.5	24.2	3.5	62.8	-0.49	89.5	3
ARWG0058	48.4	36.2	3	12.4	-9.8	90.9	1.4
ARWG0059	60	39.8	0.2	0	-9.88	94	5.4
ARWG0060	55.8	41	0.4	2.8	-5.17	111.6	10.2
ARWG0061	54.1	40.8	0.9	4.2	-8.49	112.8	14.3
ARWG0062	58.2	41.4	0.4	0	-2.74	105	17
ARWG0063	55.1	41.5	0.8	2.6	-3.83	109.3	6.8
ARWG0064	51.7	38.1	0.5	9.7	-1.44	111.8	4.9
ARWG0065	58.5	40.5	0	1	-0.27	112.1	17.2
ARWG0070	53	40.4	1	5.6	-7.38	109.1	8.2
ARWG0071	53.1	42	0.6	4.3	-8.46	115.3	11.8
ARWG0072	52.4	40.8	0.4	6.4	-2.13	113.6	9.7
ARWG0073	55.6	37.9	1.1	5.4	-6.28	102.8	6
ARWG0078	56.6	39.7	0.4	3.3	-5.32	113.5	12.9
ARWG0079	48.3	39.8	0.3	11.6	-0.72	112	4.6
ARWG0080	56.8	38.6	0	4.6	-0.4	107.1	29.3
ARWG0081	59.4	39.8	0	0.8	1.11	98.9	2.1
ARWG0082	58	40.8	0	1.2	0.06	90.8	5.1
ARWG0085	43.7	36.9	0.4	19	-0.44	113.5	6.9

Data Collected Arecibo GCCS February 2017

Device ID	CH4	CO2	O2	Balance	Static Press.	Gas Temp.	Flow
	%	%	%	%	inches H2O	DegF	SCFM
ARWG0001	55.4	23.4	0	21.2	0.14	98.4	6.2
ARWG0002	52.1	28.1	0.2	19.6	0.02	98.9	6.5
ARWG0003	73.6	26.3	0.1	0	0.06	92.4	9.9
ARWG0004	60.6	38.4	0	1	-0.01	93.6	3.7
ARWG0005	57.6	30.6	0	11.8	0.02	92.1	9
ARWG0006	65.8	31.5	0	2.7	-0.06	94.3	4.6
ARWG0007	54.6	29.4	0	16	0.03	93.7	4.8
ARWG0008	49.7	28	0	22.3	-0.01	89.9	6.8
ARWG0009	35.9	20	6.9	37.2	-0.11	89.2	2
ARWG0010	71.5	25.1	0	3.4	-0.08	86.9	5.7
ARWG0011	64.1	24.7	0	11.2	0.02	92.3	5.9
ARWG0012	39.1	26	0	34.9	0.04	95.1	2
ARWG0013	75.6	24.5	0	0	-0.01	91.2	5.5
ARWG0014	59.3	27.5	0	13.2	0.06	90.8	4.3
ARWG0015	60.5	32.5	0.1	6.9	-0.01	92	4.9
ARWG0016	47.8	24.3	0	27.9	0.05	95.1	1.9
ARWG0017	39.3	23	0	37.7	0	96.3	1
ARWG0018	72.3	27.5	0	0.2	-0.01	102.7	13.1
ARWG0019	54.6	31.6	0	13.8	0.02	93.8	10.6
ARWG0020	62.4	30.6	0	7	-0.01	105.5	11.3
ARWG0021	68.1	31.9	0	0	-0.02	100	10.1
ARWG0022	51.3	37.1	0	11.6	-0.01	101.3	4.5
ARWG0023	63.5	35.6	0	0.9	-0.01	109.5	12
ARWG0024	61.2	38.8	0	0	-0.03	106.2	9.8
ARWG0025	43	33.7	0.1	23.2	-0.77	111.2	18.3
ARWG0026	51.1	38	0.2	10.7	-0.11	111.1	9.8
ARWG0027	54.6	36.8	0	8.6	-0.06	100.3	6.3
ARWG0028	57.5	33.9	0	8.6	-0.02	91.9	2.9
ARWG0029	62.6	34	0	3.4	0	97.5	7.2
ARWG0030	65.5	34	0	0.5	-0.12	95.9	7.1
ARWG0031	64.5	35.5	0	0	-0.02	93.7	4.1
ARWG0032	65.4	27.4	0	7.2	-0.02	92.4	5.5
ARWG0033	54.1	28.6	0	17.3	0.1	91.1	5.6
ARWG0034	61.1	27.9	0	11	0.17	95.1	6.2
ARWG0035	61.8	38	0.2	0	-0.45	96.7	7.5
ARWG0036	63	33.6	0.5	2.9	-2.86	105.2	6
ARWG0037	31.9	21.8	8.4	37.9	-5.08	93.3	1.8
ARWG0038	63.5	36.2	0.3	0	-3.82	97.7	11.2
ARWG0039	68.9	31.1	0	0	0.22	107.4	10.2
ARWG0040	61.6	35.9	0	2.5	-0.04	113	16.1

Data Collected Arecibo GCCS February 2017

ARWG0041	67.4	30.5	0	2.1	0.14	107.8	8
ARWG0042	65.1	32.3	0	2.6	-0.18	104.8	7.6
ARWG0043	59	37.2	0	3.8	-0.14	103.3	10.3
ARWG0044	62.1	35	0.1	2.8	-0.39	111.9	11.6
ARWG0045	61.6	31.7	0	6.7	0.12	105.7	6.5
ARWG0046	60.6	36.1	0	3.3	-0.44	93.7	5.2
ARWG0047	60.1	36.6	0.2	3.1	-1.93	101.5	8.9
ARWG0048	60.8	37.8	0.4	1	-4.83	98.4	8.1
ARWG0049	63.1	36.5	0.2	0.2	-2.41	100	7.6
ARWG0050	57.9	40	0.5	1.6	-2.72	110.7	8.2
ARWG0051	59.7	40.3	0	0	0.07	113.9	9.4
ARWG0052	57.2	39.9	0.5	2.4	-3.17	108	3.8
ARWG0053	57.5	41.3	0.1	1.1	-1.65	113.5	15.7
ARWG0054	52.6	39	1.1	7.3	-0.41	113.7	19.4
ARWG0055	55.3	34	0.1	10.6	-0.09	103.1	4
ARWG0056	59.5	40.5	0	0	0.04	108.6	8.8
ARWG0057	10.1	25.4	1.3	63.2	0.42	92.1	3.6
ARWG0058	57.7	42.3	0	0	-4.7	101	16.3
ARWG0059	59.3	40.1	0.1	0.5	-4.77	96.5	7.6
ARWG0060	56.5	42.7	0	0.8	-1.98	119.5	8.7
ARWG0061	53.6	41.6	0.8	4	-3.18	119.3	10.3
ARWG0062	56.8	42.5	0	0.7	-0.86	111.5	9.7
ARWG0063	55.3	42.9	0.2	1.6	-2.03	116.1	8.2
ARWG0064	58.1	40.1	0	1.8	-0.2	113	6.8
ARWG0065	58.4	41.6	0	0	-0.41	113.9	16
ARWG0070	55.8	42.2	0.6	1.4	-3.44	111.3	9.9
ARWG0071	55.8	44.1	0.1	0	-3.79	119.7	9.4
ARWG0072	55.3	43	0.1	1.6	-0.55	116.4	8.5
ARWG0073	58.9	41.1	0	0	-1.82	109.1	10.3
ARWG0078	58.2	40.7	0.4	0.7	-2.67	115.8	10.2
ARWG0079	55.2	43.3	0	1.5	-0.56	111.4	5.1
ARWG0080	57.8	39.6	0.1	2.5	-0.14	105.9	6.5
ARWG0081	58.8	41	0.2	0	-0.61	95.2	5.3
ARWG0082	57.6	42.4	0	0	0.29	101.6	8.2
ARWG0085	58.5	40.4	0	1.1	-0.17	111.6	9.9

Data Collected Arecibo GCCS March 2017

Device ID	CH4	CO2	O2	Balance	Static Press.	Gas Temp.	Flow
	%	%	%	%	inches H2O	DegF	SCFM
AFLR0001	59.1	38	0.8	2.1	0	108	<<>>
ARWG0001	62.7	24.2	0.2	12.9	-0.1	96	1
ARWG0002	59.4	30.4	0.2	10	-0.1	100	4
ARWG0003	71	28.5	0.3	0.2	-0.1	93	4
ARWG0004	60.3	39.3	0.3	0.1	-0.1	97	7
ARWG0005	65.6	34	0.2	0.2	-0.1	96	5
ARWG0006	66.2	33.4	0.2	0.2	-0.1	94	5
ARWG0007	66.3	33.3	0.2	0.2	-0.1	91	7
ARWG0008	52.6	28.4	0.2	18.8	-0.1	92	3
ARWG0009	48.1	28.4	1.9	21.6	-0.1	91	4
ARWG0010	73.7	26	0.2	0.1	-0.1	90	4
ARWG0011	75	24.7	0.2	0.1	-0.1	95	8
ARWG0012	60.6	31.9	0.2	7.3	-0.1	95	6
ARWG0013	33.7	27.8	0.4	38.1	-0.2	92	2
ARWG0014	52.9	26.7	0.3	20.1	-0.1	88	0
ARWG0015	37.6	30.4	0.3	31.7	-0.1	94	1
ARWG0016	46.5	25.6	0.3	27.6	-1	95	2
ARWG0017	65.4	26.3	0.2	8.1	-1.8	94	5
ARWG0018	69.6	29.9	0.3	0.2	-0.3	103	10
ARWG0019	64.2	35.2	0.3	0.3	-0.1	98	9
ARWG0020	40.5	30.4	0.3	28.8	-0.1	104	2
ARWG0021	62.4	36.5	0.2	0.9	-0.1	102	10
ARWG0022	57.3	39.6	0.3	2.8	-0.1	101	11
ARWG0023	52.3	36.2	0.2	11.3	-0.1	107	10
ARWG0024	59.8	39.8	0.2	0.2	-0.1	104	11
ARWG0025	60.4	39.3	0.2	0.1	-0.1	97	7
ARWG0026	55.2	39.3	1	4.5	-0.2	107	11
ARWG0027	28.2	29.8	0.2	41.8	-0.2	98	4
ARWG0028	60.5	35.8	0.4	3.3	-0.2	91	6
ARWG0029	64.1	35.5	0.2	0.2	-0.2	89	4
ARWG0030	65.3	34.2	0.4	0.1	-0.2	95	6
ARWG0031	63.2	36.4	0.3	0.1	-0.1	95	6
ARWG0032	45.7	31.7	0.2	22.4	0	94	7
ARWG0033	62.6	29.3	0.2	7.9	-0.1	95	6
ARWG0034	70.3	28.2	0.2	1.3	0	99	2
ARWG0035	61.8	37.7	0.3	0.2	-0.4	96	7
ARWG0035	61.8	37.7	0.3	0.2	-0.4	97	8
ARWG0036	64.2	35.1	0.6	0.1	-2.5	103	8
ARWG0037	59.7	39	0.6	0.7	-4.3	87	7
ARWG0038	62.6	36.8	0.5	0.1	-3.5	94	9
ARWG0039	67.3	31.4	0.3	1	-0.2	107	11

Data Collected Arecibo GCCS March 2017

ARWG0040	31	28.7	0.3	40	-0.3	110	0
ARWG0041	63.7	31.7	0.2	4.4	-0.3	106	9
ARWG0042	60.7	33.4	0.3	5.6	-0.6	108	9
ARWG0043	60.9	38.7	0.2	0.2	-0.3	107	13
ARWG0044	62.9	36.7	0.3	0.1	-0.6	110	12
ARWG0045	52.2	31.6	0.4	15.8	-0.2	105	2
ARWG0046	59.7	36.7	0.4	3.2	-0.3	96	6
ARWG0047	62.3	37.1	0.5	0.1	-0.8	99	7
ARWG0048	60.4	39	0.5	0.1	-3.3	97	9
ARWG0049	62.7	36.7	0.4	0.2	-2.7	100	12
ARWG0050	58.8	40.4	0.6	0.2	-3	109	9
ARWG0051	58.9	40.8	0.2	0.1	-0.1	110	11
ARWG0052	58.4	40.8	0.7	0.1	-3.6	107	9
ARWG0053	58	41.4	0.4	0.2	-1.9	111	13
ARWG0054	54.5	39.6	1.1	4.8	-0.3	109	15
ARWG0055	56	34.4	0.3	9.3	-0.2	103	5
ARWG0057	11.4	27.1	0.2	61.3	0.5	93	4
ARWG0058	8.6	12.1	15.3	64	5.7	99	2
ARWG0059	58.5	41	0.3	0.2	-4.3	96	11
ARWG0060	56.5	42.9	0.5	0.1	-2.4	116	10
ARWG0061	56.1	42.6	0.7	0.6	-3.4	117	10
ARWG0064	56.3	38.5	0.6	4.6	-3.5	113	12
ARWG0065	57.3	41.8	0.7	0.2	-2.9	107	9
ARWG0068	57.1	42.2	0.5	0.2	-0.1	113	12
ARWG0069	55.4	41	1.1	2.5	-2.7	110	11
ARWG0070	56.3	42.2	0.7	0.8	-1.2	111	11
ARWG0071	56.2	43.1	0.6	0.1	-4.3	114	11
ARWG0072	56.3	43	0.5	0.2	-0.8	111	10
ARWG0073	58.4	40.4	0.8	0.4	-4.1	104	11
ARWG0076	58.8	40.9	0.2	0.1	-0.5	117	11
ARWG0077	58.4	41.2	0.2	0.2	-0.2	115	11
ARWG0078	58.2	40.6	0.7	0.5	-2.2	112	11
ARWG0079	47.7	40.4	0.5	11.4	-0.7	113	5
ARWG0080	58.5	41	0.3	0.2	-0.3	106	6
ARWG0081	57.8	41.6	0.4	0.2	-0.6	97	6
ARWG0082	56.6	43	0.2	0.2	-0.6	110	11
ARWG0083	58	41.6	0.2	0.2	-0.1	109	9
ARWG0084	58.1	41.6	0.2	0.1	-0.1	108	10
ARWG0085	57.8	41.7	0.4	0.1	-0.1	111	6

Data Collected Arecibo GCCS April 2017

Device ID	CH4 %	CO2 %	O2 %	Balance %	Static Press. inches H2O	Gas Temp. DegF	Flow SCFM
AFLR0001	59.4	38.2	0.8	1.6	0	108	<<>>
ARWG0001	64	24.4	0.3	11.3	-0.1	95	6
ARWG0002	56.6	35.1	0.3	8	-0.1	97	7
ARWG0003	59.3	30.6	0.2	9.9	0	92	6
ARWG0004	60	37.8	0.4	1.8	-0.1	99	7
ARWG0005	44.9	33.5	0.3	21.3	-0.1	95	2
ARWG0006	60.5	34.8	0.3	4.4	-0.1	96	8
ARWG0007	52	31.5	0.2	16.3	-0.1	90	4
ARWG0008	59.1	28.5	0.3	12.1	0	96	5
ARWG0009	43.2	23.5	4.5	28.8	-0.3	97	1
ARWG0010	66	28.2	0.4	5.4	-0.2	95	6
ARWG0011	65.6	28.4	0.2	5.8	-0.1	95	8
ARWG0012	56.9	34.9	0.2	8	-0.1	99	7
ARWG0013	75.1	24.5	0.2	0.2	-0.1	95	10
ARWG0014	65.9	29.6	0.2	4.3	-0.1	94	6
ARWG0015	64.7	34.8	0.4	0.1	-0.1	92	7
ARWG0016	62	27.7	0.2	10.1	-0.1	96	5
ARWG0017	27.7	28	0.2	44.1	0	97	6
ARWG0018	69.4	30.2	0.2	0.2	-0.1	103	10
ARWG0019	43.3	33.6	0.2	22.9	0	101	3
ARWG0020	67.6	32	0.2	0.2	-0.1	102	10
ARWG0021	54.8	35.9	0.2	9.1	-0.1	103	10
ARWG0022	42.7	36	0.2	21.1	-0.1	101	3
ARWG0023	57.8	35.5	0.2	6.5	-0.1	106	10
ARWG0024	41.5	35.4	0.2	22.9	0	104	4
ARWG0025	36.9	34.2	0.3	28.6	-0.4	105	2
ARWG0026	53.4	39.6	1.1	5.9	-0.2	105	10
ARWG0027	54.1	38.2	0.3	7.4	-0.3	100	7
ARWG0028	61.1	38.2	0.5	0.2	-0.2	88	9
ARWG0029	63.8	35.4	0.3	0.5	-0.1	92	8
ARWG0030	64.4	35	0.4	0.2	-0.3	95	9
ARWG0031	62.5	37	0.3	0.2	-0.1	94	5
ARWG0032	61.4	30	0.3	8.3	0	92	6
ARWG0033	56.4	29.1	0.2	14.3	0	91	3
ARWG0034	67.5	30.7	0.2	1.6	0	93	1
ARWG0035	60.5	36.9	0.4	2.2	-0.6	100	10
ARWG0036	63.2	34.9	0.7	1.2	-2.9	103	8
ARWG0037	59.7	39.7	0.4	0.2	-4.9	94	8
ARWG0038	62.9	36.8	0.2	0.1	-3.5	98	12
ARWG0039	64.2	35.1	0.2	0.5	0	106	12

Data Collected Arecibo GCCS April 2017

ARWG0040	63.1	34.3	0.2	2.4	-0.1	110	9
ARWG0041	63.9	35.3	0.2	0.6	-0.1	105	12
ARWG0042	62.8	36.2	0.4	0.6	-0.4	102	9
ARWG0043	60.8	38.9	0.2	0.1	-0.2	103	11
ARWG0044	61.7	37.9	0.2	0.2	-0.4	105	12
ARWG0045	65.4	34.2	0.2	0.2	-0.2	103	11
ARWG0046	67.7	31.3	0.8	0.2	-0.1	97	6
ARWG0047	58.6	40.8	0.4	0.2	-1.3	103	7
ARWG0048	58.1	41.3	0.5	0.1	-4.3	102	9
ARWG0049	57.9	37.6	0.5	4	-1.8	102	10
ARWG0050	41.9	38.3	0.5	19.3	-2.7	110	4
ARWG0051	33.8	35.3	0.9	30	0	109	2
ARWG0052	34.8	36	0.4	28.8	-2.2	105	2
ARWG0053	34.3	36	0.5	29.2	-0.9	111	0
ARWG0054	40.9	37.8	0.2	21.1	-0.1	111	4
ARWG0055	61.3	38.3	0.3	0.1	0	103	7
ARWG0056	58.9	40.7	0.2	0.2	-0.1	108	9
ARWG0057	12.1	28.1	0.2	59.6	0.1	105	0
ARWG0058	56.4	42.3	0.7	0.6	-1.9	107	10
ARWG0059	58.5	40.1	0.6	0.8	-4.8	103	13
ARWG0060	55.4	42.3	0.6	1.7	-3.2	117	13
ARWG0061	54.4	42.1	0.8	2.7	-3.7	118	11
ARWG0065	57.5	41.3	0.4	0.8	-2.1	109	13
ARWG0068	57	42.2	0.6	0.2	-0.1	115	13
ARWG0069	57.5	41.6	0.8	0.1	-2	113	12
ARWG0070	56.1	43.3	0.4	0.2	-0.9	115	11
ARWG0072	55.6	43.9	0.3	0.2	-0.2	114	12
ARWG0073	56.4	39.4	0.9	3.3	-2.4	107	12
ARWG0076	58.7	40.8	0.4	0.1	-1.6	115	13
ARWG0077	57.9	40.4	0.6	1.1	-1.6	111	12
ARWG0078	57.3	41	0.5	1.2	-2	114	10
ARWG0079	53.9	43.7	0.7	1.7	-1.1	112	7
ARWG0080	58.4	40.7	0.3	0.6	-0.3	108	8
ARWG0081	57.9	41.6	0.3	0.2	-0.6	101	9
ARWG0082	55.5	42.3	2	0.2	-0.7	109	12
ARWG0083	58.9	40.7	0.3	0.1	-0.2	113	13
ARWG0084	57.8	41.5	0.3	0.4	-0.2	110	10
ARWG0085	57.8	41.9	0.2	0.1	-0.2	113	8

Data Collected Arecibo GCCS May 2017

Device ID	CH4	CO2	O2	Balance	Static Press.	Gas Temp.	Flow
	%	%	%	%	inches H2O	DegF	SCFM
AFLR0001	54.6	34.7	0.9	9.8	-0.1	110	121
ARWG0001	61.5	23.2	0.2	15.1	0	96	3
ARWG0002	54.5	31	0.2	14.3	0	99	4
ARWG0003	43.4	26.9	0.2	29.5	0	95	2
ARWG0004	53.6	34.3	0.2	11.9	0	99	5
ARWG0005	45.9	33.7	0.2	20.2	-0.1	93	4
ARWG0006	58.4	32.2	0.2	9.2	0	98	7
ARWG0007	49.7	29.6	0.2	20.5	0	89	2
ARWG0008	23.9	26.1	0.3	49.7	0	84	1
ARWG0009	15.6	14.3	9.6	60.5	-0.1	82	2
ARWG0010	60.6	26.5	0.4	12.5	-0.2	88	6
ARWG0011	34.1	26.4	0.3	39.2	-0.1	93	2
ARWG0012	22.6	28.9	0.3	48.2	0	88	2
ARWG0013	27.9	24.9	0.6	46.6	-0.1	96	4
ARWG0014	29.3	27.1	0.2	43.4	0	90	1
ARWG0015	45.5	32.2	0.3	22	0	89	1
ARWG0016	31.7	25.6	0.3	42.4	0	94	2
ARWG0017	45.6	26.3	0.3	27.8	0	87	3
ARWG0018	68	31.5	0.3	0.2	0	103	11
ARWG0019	61.3	38.2	0.3	0.2	0	99	7
ARWG0020	65.3	33.8	0.2	0.7	-0.1	104	12
ARWG0021	34.5	32.1	0.2	33.2	0	103	4
ARWG0022	39.4	34	0.3	26.3	0	99	3
ARWG0023	50.7	33.3	0.2	15.8	0	106	7
ARWG0024	37	34.6	0.2	28.2	0	102	4
ARWG0025	50.4	33.8	2.2	13.6	-0.1	96	5
ARWG0026	45.3	37.4	1.8	15.5	-0.2	105	4
ARWG0027	28.9	32.2	0.3	38.6	0	99	1
ARWG0028	59	36.8	0.5	3.7	-0.2	89	8
ARWG0029	49.1	32.2	0.3	18.4	0	97	1
ARWG0030	56.3	33.3	0.3	10.1	-0.1	95	5
ARWG0031	58.1	35.5	0.2	6.2	-0.1	97	6
ARWG0032	59	29.9	0.2	10.9	-0.1	93	17
ARWG0032	59	29.9	0.2	10.9	-0.1	94	5
ARWG0033	61.5	29.4	0.2	8.9	0	97	6
ARWG0034	69.6	28	0.2	2.2	0	97	3
ARWG0035	51.4	32.7	0.6	15.3	-0.5	99	6
ARWG0036	64.7	30.8	0.9	3.6	-3.9	103	9
ARWG0037	59.4	39.2	0.7	0.7	-6.4	90	11
ARWG0038	61.8	37.8	0.3	0.1	-4.2	93	11
ARWG0039	52	31	0.3	16.7	-0.3	104	9

Data Collected Arecibo GCCS May 2017

ARWG0040	20.9	25.7	1.9	51.5	-0.2	115	3
ARWG0042	47.6	32.4	0.3	19.7	0	101	5
ARWG0043	59.7	39.7	0.4	0.2	-0.6	107	13
ARWG0045	58.5	34.3	0.3	6.9	-0.2	107	8
ARWG0046	70.5	28.8	0.5	0.2	0	89	4
ARWG0047	58.8	40.7	0.4	0.1	-2.8	98	7
ARWG0048	60.5	39	0.4	0.1	-4.4	92	9
ARWG0049	62	35.8	0.8	1.4	-0.8	97	11
ARWG0050	58.4	40.8	0.6	0.2	-1.5	108	5
ARWG0051	60.5	39.2	0.2	0.1	-0.2	108	8
ARWG0052	55.2	38.6	1.6	4.6	-0.7	91	8
ARWG0057	12.9	30.1	0.2	56.8	0	89	4
ARWG0058	52.7	40.3	1.6	5.4	-0.4	96	13
ARWG0059	58.5	41.1	0.3	0.1	-6.1	95	11
ARWG0060	55.1	42.3	0.8	1.8	-4.6	115	9
ARWG0061	52.7	41	1.2	5.1	-3.5	115	10
ARWG0065	55.5	40.5	1.2	2.8	-4.1	107	12
ARWG0068	56	42.3	0.7	1	-3.1	109	13
ARWG0069	56	41.7	0.9	1.4	-4.2	112	11
ARWG0070	55.5	43	0.7	0.8	-2.7	113	12
ARWG0072	55.7	44	0.2	0.1	-1.5	113	11
ARWG0073	58.4	40.8	0.7	0.1	-4.5	100	12
ARWG0076	57.8	41	0.7	0.5	-3.3	113	14
ARWG0077	57	40.4	0.8	1.8	-2.4	111	12
ARWG0078	57.7	41.5	0.6	0.2	-1.7	113	10
ARWG0079	40.3	38	0.7	21	-1.9	114	1
ARWG0080	58.7	41	0.2	0.1	-0.5	104	7
ARWG0081	58.2	41.4	0.2	0.2	-1.5	101	11
ARWG0082	58.6	40.3	0.5	0.6	-1.1	112	13
ARWG0083	60.1	39.3	0.5	0.1	-0.8	112	13
ARWG0084	57.7	41.8	0.3	0.2	-0.4	107	10
ARWG0085	56	41.1	0.4	2.5	-0.4	113	9

Data Collected Arecibo GCCS June 2017

Device ID	CH4	CO2	O2	Balance	Static Press.	Gas Temp.	Flow
	%	%	%	%	inches H2O	DegF	SCFM
AFLR0001	59.4	38.2	1	1.4	0	105	<<>>
ARWG0001	62.3	24.5	0.3	12.9	0	94	6
ARWG0002	61.4	33.1	0.3	5.2	0	99	9
ARWG0003	69.6	25.7	0.3	4.4	-0.1	97	10
ARWG0004	59.8	34	0.2	6	-0.1	101	7
ARWG0005	10.1	7.2	13.9	68.8	0	95	1
ARWG0006	55.8	31.6	0.4	12.2	0	99	5
ARWG0007	35.9	27.4	0.3	36.4	0	95	2
ARWG0008	38.8	27.4	0.3	33.5	0	96	2
ARWG0009	34.7	22	4.6	38.7	-0.1	96	1
ARWG0010	72.7	25.6	0.2	1.5	-0.1	95	10
ARWG0011	72.2	25.9	0.2	1.7	-0.1	97	9
ARWG0012	66.3	28.1	0.2	5.4	-0.1	97	8
ARWG0013	75.6	24.1	0.2	0.1	-0.1	98	9
ARWG0014	64.2	29.5	0.2	6.1	0	96	16
ARWG0014	64.2	29.5	0.2	6.1	-0.1	96	8
ARWG0015	64.5	33.8	0.2	1.5	-0.1	94	8
ARWG0016	56.8	27.4	0.2	15.6	0	94	3
ARWG0017	63.5	24.6	0.2	11.7	0	95	5
ARWG0018	60.8	30.2	0.2	8.8	0	102	11
ARWG0019	30.8	29.5	0.2	39.5	0	96	1
ARWG0020	52.5	30	0.2	17.3	0	105	6
ARWG0021	48	32.4	0.2	19.4	0	98	4
ARWG0022	23.8	29.2	0.2	46.8	0	99	2
ARWG0023	63.5	31.3	0.2	5	-0.1	106	10
ARWG0024	19.6	27.9	0.1	52.4	0	100	0
ARWG0025	42.3	32.1	0.1	25.5	0	106	3
ARWG0026	56.8	42.8	0.2	0.2	-0.1	102	10
ARWG0027	60.1	39.5	0.2	0.2	0	100	7
ARWG0028	62.3	37.4	0.2	0.1	-0.1	93	8
ARWG0028	62.3	37.4	0.2	0.1	-0.3	91	7
ARWG0029	64.5	35.1	0.2	0.2	-0.1	97	6
ARWG0030	59.9	33	0.3	6.8	-0.1	94	6
ARWG0031	47.7	33.5	0.3	18.5	0	96	3
ARWG0032	19.2	25.3	0.2	55.3	0	95	0
ARWG0033	65.6	30.3	0.2	3.9	0	95	4
ARWG0034	70.7	28.2	0.2	0.9	-0.1	99	4
ARWG0035	61.4	38.2	0.3	0.1	-0.3	98	7
ARWG0036	57.3	33.9	1	7.8	-5.3	101	10
ARWG0037	54.1	36.1	2	7.8	-9.8	91	6
ARWG0038	62.8	36.7	0.4	0.1	-8	101	11

Data Collected Arecibo GCCS June 2017

ARWG0039	66.9	32.4	0.2	0.5	-0.1	107	11
ARWG0040	52.8	36.3	2.5	8.4	-0.1	93	3
ARWG0041	61.3	31.4	0.2	7.1	-0.1	108	14
ARWG0042	69.1	30.5	0.2	0.2	-0.1	97	10
ARWG0043	55.9	36.8	0.5	6.8	-1.7	108	15
ARWG0046	40.7	17.3	7.2	34.8	-0.5	89	2
ARWG0047	54.6	38.1	0.7	6.6	-5.9	95	6
ARWG0048	60.3	39.2	0.3	0.2	-8.4	97	8
ARWG0049	62.6	36.9	0.4	0.1	-3.5	100	12
ARWG0050	57.2	40.4	0.7	1.7	-4.1	108	9
ARWG0051	58	40.7	0.5	0.8	-0.1	113	10
ARWG0052	58.2	41.5	0.2	0.1	-4.5	94	6
ARWG0057	12.5	29.1	0.2	58.2	0	95	3
ARWG0058	56.2	43.3	0.3	0.2	-3.1	99	11
ARWG0059	58.9	40.5	0.3	0.3	-9	98	13
ARWG0060	56.3	42.6	1	0.1	-6.9	114	19
ARWG0061	55.9	42.7	0.6	0.8	-4.9	116	10
ARWG0065	56	41.4	0.6	2	-4	108	12
ARWG0066	57	42.4	0.4	0.2	-4.3	115	10
ARWG0067	0.1	0	18.2	81.7	-1.5	91	2
ARWG0068	54	41.3	1.1	3.6	-4.9	110	12
ARWG0069	55	41	0.9	3.1	-4.5	112	12
ARWG0070	55.6	42.7	0.5	1.2	-0.1	118	16
ARWG0071	55.6	44	0.2	0.2	-0.1	121	12
ARWG0072	56.1	42.3	0.7	0.9	-2.4	113	12
ARWG0073	57.5	39.9	0.8	1.8	-5.3	102	12
ARWG0074	58.8	40.5	0.6	0.1	-6.7	93	11
ARWG0075	50	41	2	7	-3.8	97	13
ARWG0076	57.5	40.6	0.6	1.3	-3.8	112	13
ARWG0077	56.5	39.9	0.9	2.7	-3.1	111	12
ARWG0078	56.3	40.9	0.7	2.1	-3	112	11
ARWG0079	55	44.6	0.2	0.2	-0.1	103	6
ARWG0080	54	39.4	0.2	6.4	-0.5	110	6
ARWG0081	56.2	40.5	0.5	2.8	-1.4	103	9
ARWG0082	50.9	38.7	0.5	9.9	-0.6	111	9
ARWG0083	56	38.3	0.3	5.4	-0.8	113	10
ARWG0084	51.5	39.4	0.6	8.5	-0.6	110	7
ARWG0085	42.2	37.4	0.4	20	-0.1	113	1

EXHIBIT 5

Start-up, Shutdown, Malfunction Report
January – June 2017

Land-Tech

LANDFILL TECHNOLOGIES OF ARECIBO, LLC

Semi-Annual Report
Shutdown and Malfunction Report
Arecibo Municipal Solid Waste Landfill

January to June 2017

Prepared by:
Landfill Technologies of Arecibo, LLC

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Landfill Technologies of Arecibo, LLC

Shutdown and Malfunction Report

January to June 2017

Arecibo Municipal Solid Waste Landfill

Date	Shutdown	Description	Corrective Action
1/2/2017	Flare Fault	Lateral 6" pipe broked.	The lateral pipe was repaired. The system was turned on and was kept on operation throughout the day as expected.
2/5/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
2/7/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
2/13/2017	Regular Maintenance of the flow meter	Regular Maintenance of the flow meter	The second flare turned and the system was restarted and was kept on operation throughout the day as expected.
2/16/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
2/21/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
3/4/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
3/11/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
3/17/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
3/20/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
3/29/2017	Flare Fault	Flare Fault by Hi High Temperature	The thermocouple was replaced and the system was restarted and was kept on operation throughout the day as expected.
4/12/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.

Landfill Technologies of Arecibo, LLC

Shutdown and Malfunction Report

January to June 2017

Arecibo Municipal Solid Waste Landfill

Date	Shutdown	Description	Corrective Action
4/12/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
4/19/2017	Shutdown	The shutdown was due to a regular maintenance and installation of new a blower	The maintenance was completed and the new blower was installed, and the system was restarted and was kept on operation throughout the day as expected.
4/28/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
5/5/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
5/6/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.
6/17/2017	Shutdown	The recollection system was turned off for the installation of new equipment.	The equipment was installed and the system was restarted and was kept on operation throughout the day as expected.
6/21/2017	Flare Fault	This was caused by power failure of electricity.	The energy was re-established and the system was restarted and was kept on operation throughout the day as expected.

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