ATTACHMENT 11

THIRD PARTY CALIBRATION GAS INFORMATION

RN: 102-610-102

CN: 602-820-599

BLUE RIDGE LANDFILL

FREEPORT, BRAZORIA COUNTY

INVESTIGATION # 1370033

OCTOBER 18, 2016 TO NOVEMBER 10, 2016

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.

1016 West Eigth Ave
King of Prussia, PA 19406

Pine Environmental Services, Inc.

Instrument ID 15624
Description Photovac MicroFID
Calibrated 8/8/2016 3:49:23PM

Manufacturer Photovac
Model Number Micro FID
Serial Number/ Lot Number CZWD 316
Location Philly
Department

State Certified
Status Pass
Temp °C 22
Humidity % 56

Calibration Specifications

Group # 1
Group Name Methane
Stated Accy Pct of Reading

Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
100.00 / 100.00	PPM	100.00	PPM	99.70	100.00	0.00%	Pass

Test Instruments Used During the Calibration (As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date
KOP METHANE 10,000PPM	KOP Methane 10,000 ppm	American Gas Group	GP12049			10/14/2017
KOP METHANE 100PPM LTK093-RR-CM	KOP methane 100 ppm	Liquid Technology		LTK093-RR-CM		10/31/2016

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Allie Gibat

All instruments are calibrated by Pine Environmental Services, LLC. according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services, LLC. of any defect within 24 hours of receipt of equipment
Please call 866-960-7463 for Technical Assistance

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INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.
10635 Richmond Ave., Suite 100
Houston, TX 77042
Toll-free: 713-331-3924

Pine Environmental Services, Inc.

Instrument ID 14217
Description Photovac MicroFID
Calibrated 2/4/2016 6:57:19PM

Manufacturer Photovac
Model Number Micro FID
Serial Number/ Lot Number czvf305
Location Texas
Department

State Certified
Status Pass
Temp °C 22
Humidity % 48

Calibration Specifications

Group # 1
Group Name METHANE
Stated Accy Pct of Range

Range Acc % 0.0000
Reading Acc % 0.0000
Plus/Minus 3.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
100.00 / 100.00	PPM	100.00	PPM	100.00	100.00	0.00%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date
TX 100PPM CH4 KM150A-100-4	TX 100PPM CH4 KM150A-100-4	Gasco	TX 100PPM CH4 KM150A-100-4	TX 100PPM CH4 KM150A-100-4		10/17/2016

Sensor Information

Sensor Type	Manufacturer	Serial Number	Date Installed

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.
10635 Richmond Ave., Suite 100
Houston, TX 77042
Toll-free: 713-331-3924

Pine Environmental Services, Inc.

Instrument ID 14217
Description Photovac MicroFID
Calibrated 2/4/2016 6:57:19PM

Maintenance Log

Date	Entered By	Details
12/17/2012	Robert Poe	Found exshaust filter clogged, & check valve leaking replaced o-ring, then calibrated..
1/11/2013	Juan Hernandez	WONT LIGHT
1/21/2013	Kemar Rumble	Unit had a leaking chamber. Chamber was replaced.
8/22/2013	Daniel Teller	Input flow too low and no suction. Placing in Repair Dept.
8/23/2013	Kemar Rumble	cleaned pump.
4/18/2014	Juan Hernandez	wont light said by georgia office but received no battery
5/7/2014	Kemar Rumble	Replaced battery and tested functionality of the unit. Unit lights up and calibrates fine.
5/16/2014	Juan Hernandez	still wont light tried all day
7/10/2014	Daniel Teller	Received in with Red Repair Form saying H2 leak. I found a Bad H2 fill valve. Can't release H2 line, gas leaks out. Placing in Repair Dept.
9/24/2014	Kemar Rumble	Repaired check valve, tested for additional leaks, adjusted H2 flow, cleaned pump.
12/4/2014	Daniel Teller	Unt flames up but there is a problem with the H2 refill port, it leaks out when trying to release the line. Placing in Repair Dept.
6/4/2015	William Bass	unt is worekin fin . no more H2 leaks
4/19/2016	Nasser Elsowiny	recived it from anther office and hydrogen chamber leaks . i replace o'ring and adjust h2 flow calibrations it is o.k.
6/17/2016	Nasser Elsowiny	instal h2 nop
7/21/2016	Nasser Elsowiny	it was a h2 leak . i replace o'ring and replace the glow plug . test and calibrations unit tested fine

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Walker Valco

All instruments are calibrated by Pine Environmental Services, LLC. according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services, LLC. of any defect within 24 hours of receipt of equipment
Please call 866-960-7463 for Technical Assistance

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.
10635 Richmond Ave., Suite 100
Houston, TX 77042
Toll-free: 713-331-3924

Pine Environmental Services, Inc.

Instrument ID 31936
Description Micro-Fid
Calibrated 5/4/2016 9:13:21AM

Manufacturer Photovac
Model Number Micro FID
Serial Number/ Lot Number CZVK308
Location Texas
Department

State Certified
Status Pass
Temp °C 22
Humidity % 48

Calibration Specifications

Group # 1
Group Name Methane
Stated Accy Pct of Reading

Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.0

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
100.0 / 100.0	PPM	100.0	PPM	100.0	100.0	0.00%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date
TX 100PPM CH4 KM150A-100-4	TX 100PPM CH4 KM150A-100-4	Gasco	TX 100PPM CH4 KM150A-100-4	TX 100PPM CH4 KM150A-100-4		10/17/2016

Sensor Information

Sensor Type	Manufacturer	Serial Number	Date Installed

Maintenance Log

Date	Entered By	Details
9/8/2015	Daniel Teller	This ID replaces the original one 15035.
11/17/2015	Daniel Teller	Pump flow and suction were low. Cleaned pump, flow around 639 ML, in and out O.K. Hydrogen was too high. Lowered to 6.5 ML on photovac air gauge. Tested O.K.
8/25/2016	Nasser Elsowiny	replace the pump adjust h2 .tested o.k.

Notes about this calibration

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.

10635 Richmond Ave., Suite 100
Houston, TX 77042
Toll-free: 713-331-3924

Pine Environmental Services, Inc.

Instrument ID 31936
Description Micro-Fid
Calibrated 5/4/2016 9:13:21AM

Calibration Result Calibration Successful
Who Calibrated Edgar Hernandez

All instruments are calibrated by Pine Environmental Services, LLC. according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

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INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.
6380 Tomken Road, Unit 1 & 2
Mississauga, ONTARIO L5T1Y4
Toll-free: (866) 688-0388

Pine Environmental Services, Inc.

Instrument ID 13734
Description Photovac Micro FID
Calibrated 2/19/2015 10:01:04AM

Manufacturer Photovac
Model Number Micro FID
Serial Number/ Lot Number CZUN318
Location Ontario
Department

State Certified
Status Pass
Temp °C 23
Humidity % 11

Calibration Specifications

Group # 1
Group Name Methane
Stated Accy Pct of Reading

Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
100.00 / 100.00	PPM	100.00	PPM	100.00	100.00	0.00%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Next Cal Date / Last Cal Date/ Expiration Date Opened Date

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Vick Nathan

All instruments are calibrated by Pine Environmental Services, LLC. according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

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Please call 866-960-7463 for Technical Assistance

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.
10635 Richmond Ave., Suite 100
Houston, TX 77042
Toll-free: 713-331-3924

Pine Environmental Services, Inc.

Instrument ID 10334
Description Photovac Micro FID
Calibrated 7/31/2015 9:04:27PM

Manufacturer Photovac
Model Number Micro FID
Serial Number/ Lot Number czsh302
Location Texas
Department

State Certified
Status Pass
Temp °C 22
Humidity % 58

Calibration Specifications

Group # 1
Group Name Methane
Stated Accy Pct of Range

Range Acc % 3.0000
Reading Acc % 0.0000
Plus/Minus 3.0

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
10000.0 / 10000.0	PPM	10000	PPM	10,000	10,000	0.00%	Pass
100.0 / 100.0	PPM	100.0	PPM	100.0	100.0	0.00%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date
TX 100PPM CH4 KM150A-100-4	TX 100PPM CH4 KM150A-100-4	Gasco	TX 100PPM CH4 KM150A-100-4	TX 100PPM CH4 KM150A-100-4		10/17/2016
TX CH4 10K KAL-150A-100 00-1	METHANE (CH4) 10,000 PPM LOT # KAL-150A-10000-1	Pine Environmental Services, Inc.	GP12048	KAL-150A-100 00-1		10/11/2015

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Edgar Hernandez

All instruments are calibrated by Pine Environmental Services, LLC. according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

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INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.
10635 Richmond Ave., Suite 100
Houston, TX 77042
Toll-free: 713-331-3924

Pine Environmental Services, Inc.

Instrument ID 15031
Description Photovac Micro FID
Calibrated 11/24/2015 5:58:37PM

Manufacturer Photovac
Model Number Micro FID
Serial Number/ Lot Number CZVK309
Location Texas
Department

State Certified
Status Pass
Temp °C 22
Humidity % 48

Calibration Specifications

Group # 1
Group Name Methane
Stated Accy Pct of Reading

Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.0

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
100.0 / 100.0	PPM	100.0	PPM	100.0	100.0	0.00%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date
TX 100PPM CH4 KM150A-100-4	TX 100PPM CH4 KM150A-100-4	Gasco	TX 100PPM CH4 KM150A-100-4	TX 100PPM CH4 KM150A-100-4		10/17/2016

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Edgar Hernandez

All instruments are calibrated by Pine Environmental Services, LLC. according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services, LLC. of any defect within 24 hours of receipt of equipment
Please call 866-960-7463 for Technical Assistance

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.
10635 Richmond Ave., Suite 100
Houston, TX 77042
Toll-free: 713-331-3924

Pine Environmental Services, Inc.

Instrument ID 14661
Description Photovac Micro FID
Calibrated 3/6/2015 3:57:10PM

Manufacturer Photovac
Model Number Micro FID
Serial Number/ Lot Number CZVH302
Location Texas
Department

State Certified
Status Pass
Temp °C 24
Humidity % 40

Calibration Specifications

Group # 1
Group Name Methane
Stated Accy Pct of Reading

Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
500.00 / 500.00	PPM	500.00	PPM	500.00	500.00	0.00%	Pass
10000.00 / 10000.00	PPM	10000.00	PPM	10,000.00	10,000.00	0.00%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Next Cal Date / Last Cal Date/ Expiration Date Opened Date

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Walker Valco

All instruments are calibrated by Pine Environmental Services, LLC. according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services, LLC. of any defect within 24 hours of receipt of equipment
Please call 866-960-7463 for Technical Assistance

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.
10635 Richmond Ave., Suite 100
Houston, TX 77042
Toll-free: 713-331-3924

Pine Environmental Services, Inc.

Instrument ID R152331
Description MiniRae 3000
Calibrated 9/2/2016 10:22:06AM

Manufacturer Rae Systems
Model Number MiniRAE 3000
Serial Number/ Lot Number 592-908392
Location Texas
Department

State Certified
Status Pass
Temp °C 22
Humidity % 48

Calibration Specifications

Group # 1
Group Name Isobutylene
Stated Accy Pct of Reading

Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
100.00 / 100.00	PPM	100.00	PPM	100.00	100.00	0.00%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date
TX 100PPM ISO THAP-248-100-10	TX 100PPM ISO THAP-248-100-10	Gasco	GP11010	THAP-248-100 -10		8/28/2019

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Edgar Hernandez

All instruments are calibrated by Pine Environmental Services, LLC. according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

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INSTRUMENT QC/ PACKING LIST

Description	RAE Systems MiniRAE 3000
Instrument ID	
Date Calibrated	

PINE
www.pine-environmental.com

Standard Items	Prepared	QC check	Received by customer	Returned to Pine
MiniRAE 3000 w/ _____eV lamp and carry case	_____	_____	_____	_____
Protective rubber boot	_____	_____	_____	_____
Manual	_____	_____	_____	_____
Quick reference card	_____	_____	_____	_____
Probe tip	_____	_____	_____	_____
Charger/ adapter, or charger and cradle	_____	_____	_____	_____
(2) Hydrophobic filters	_____	_____	_____	_____
Alkaline battery adapter	_____	_____	_____	_____
(4) AA Alkaline batteries	_____	_____	_____	_____
ProCal calibration sheet	_____	_____	_____	_____
Supporting Items				
100 ppm isobutylene calibration gas	_____	_____	_____	_____
100 ppm Isobutylene SDS ✓ *Must match cylinder with setup*	_____	_____	_____	_____
Gas regulator	_____	_____	_____	_____
Tedlar bag	_____	_____	_____	_____
Datalogging software	_____	_____	_____	_____
Communications cable	_____	_____	_____	_____

Prepared by: _____
QC checked by: _____
Date: _____

This packing list is to ensure that every item needed to operate the unit was sent and received. Upon receiving a shipment, please fill out the "Received by customer" column. Call Pine within 24 hours of receiving the equipment if any pieces are missing, damaged, or malfunctioning. Thank you for choosing Pine Environmental Services LLC

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.
10635 Richmond Ave., Suite 100
Houston, TX 77042
Toll-free: 713-331-3924

Pine Environmental Services, Inc.

Instrument ID R152331
Description MiniRae 3000
Calibrated 9/2/2016 10:22:06AM

Manufacturer Rae Systems
Model Number MiniRAE 3000
Serial Number/ Lot Number 592-908392
Location Texas
Department

State Certified
Status Pass
Temp °C 22
Humidity % 48

Calibration Specifications

Group # 1
Group Name Isobutylene
Stated Accy Pct of Reading

Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
100.00 / 100.00	PPM	100.00	PPM	100.00	100.00	0.00%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date
TX 100PPM ISO THAP-248-100-10	TX 100PPM ISO THAP-248-100-10	Gasco	GP11010	THAP-248-100 -10		8/28/2019

Sensor Information

Sensor Type	Manufacturer	Serial Number	Date Installed

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Edgar Hernandez

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GASCO
320 Scarlet Blvd.
Oldsmar, FL 34677
Phone: (800)910-0051
Fax: (866)755-8920
www.gascogas.com

Precision Gas Mixtures

GASCO Statement of Product Quality

Gasco gas mixtures for filling disposable and returnable cylinders are produced by major gas suppliers such as Airgas, Matheson Tri-Gas and other specialty gas suppliers. We have teamed with our suppliers to make our gas mixtures gravimetrically (by weight) in large gas cylinders using sensitive gas scales and exacting specifications. These specialized scales have the commonality of NIST traceable weights used for calibration. This method is accepted industry wide and eliminates potential errors due to temperature expansion and gas compressibility. Other gas mixtures are analyzed by comparing the results with a SRM purchased directly from NIST.

The small size and capacity of the gas cylinders we supply makes it impractical to fill the gas by weight, therefore we fill the smaller cylinders from the large cylinders of gas from our suppliers. Our proprietary filling processes are fully documented in our ISO 9001 accredited procedures. Each cylinder we make is identified by a specific Lot Code that provides traceability to the large cylinder from which it was filled. For reactive gases such as Hydrogen Sulfide, we maintain NIST traceable gas standards for calibrating our analyzers prior to testing the gas we produce. This comparative testing on actual gas measurement instrumentation ensures the reactive component is within the specified value. Batch testing is NOT used in this process; all cylinders are tested before shipment. The reactive component is tested a second time by our Quality Assurance Department before the cylinder is shipped. This ensures the mixture has maintained stability from the time it was filled.

Gasco Precision Gas Mixtures are produced in accordance with ISO 9001 procedures. All incoming materials are checked and inspected for conformance to agreed specifications. All products are fully tested and inspected prior to shipment

Each cylinder of gas made by Gasco is accompanied by a Certificate of Analysis listing the certified concentration of the gas contained in the cylinder as compared to our NIST traceable standards. The Cylinder label will indicate the nominal value of the gas while the Certificate of Analysis will list the actual analyzed value within +-2%.

nqa.
ISO 9001
Registered

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