ATTACHMENT 4

QUARTERLY SEM REPORTS

RN: 102-610-102

CN: 602-820-599

BLUE RIDGE LANDFILL

FRESNO, FORT BEND COUNTY

INVESTIGATION # 1370033

OCTOBER 18, 2016 TO NOVEMBER 10, 2016

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Surface Emissions Monitoring

1st Quarter Report 2015

Prepared By:

American Environmental Group
3600 Brecksville Road
Richfield, Ohio 44286
(330) 659-5930

American Environmental Group Ltd.

March 31, 2015

Mr. Burgess Stengl
District Environmental Manager
Republic Services, Inc.
5757A Oates Road
Houston, TX 77078

RE: **NSPS Surface Emissions Monitoring at Blue Ridge Landfill – 1st Quarter 2015**

Dear Mr. Stengl,

American Environmental Group, Ltd. (AEG) prepared the enclosed report documenting the results of the 1st Quarter 2015 NSPS surface scan at Blue Ridge Landfill. The initial monitoring event was performed on March 30, 2015. There were ***no*** exceedances detected at the facility during the initial scan event. Field monitoring forms are attached for your files.

Weather Conditions

Weather condition recorded during the monitoring event was as follows:

March 30, 2015:

- Temperature approximately 70° Fahrenheit
- Relative humidity of 84 percent
- Barometric pressure of 30.16"Hg
- Wind East-Southeast at 4 mph
- Overcast skies

In accordance with NSPS regulations, this monitoring event was performed during typical meteorological conditions.

The survey was conducted in accordance with the regulations set forth in the New Source Performance Standard (NSPS), 40 CFR 60.755 (c) and (d); (2) 40 CFR 60, 40 CFR 60.753(d) - Surface Scan Requirements, Appendix A – Method 21. A Photovac (MicroFID) flame ionization detector (FID) was used to perform the emissions monitoring. During the event, attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and areas with unusual odors. The FID was calibrated at the beginning of each day, prior to performing the monitoring, in accordance with Method 21 compliance requirements. The calibration log was completed by the field technician performing the work, and is included in Attachment: Daily Calibration Log. During the monitoring event, AEG observed that the ground surface appeared to be in good condition overall and there were no unusual odors noted. Results are presented in the attached forms.

Please forward any questions regarding this report, attachments, or data to Michael Widner at (682) 557-4697.

Sincerely,

Steven Paul
Environmental Data Coordinator
American Environmental Group, Ltd.

On Behalf of
Mike Widner
Regional Manager – American Environmental Group, Ltd.

Attachment: Daily Calibration Log
Attachment: Daily Surface Monitoring Log
Attachment: Site Drawing

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Calibration Logs

CALIBRATION PRECISION TEST RECORD

Initial Event: March 30, 2015

LANDFILL NAME: Blue Ridge **EVENT:** 1st Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVH302

PERFORMED BY: Keegan Wagner **TIME:** 9:30 **DATE:** March 30, 2015

Calibration Gas Standard: 500ppm CH4

MEASUREMENT # 1:

Meter Reading for Zero Air: 0.0 **ppm (1)**

Meter Reading for Calibration Gas: 499.7 **ppm (2)**

MEASUREMENT # 2:

Meter Reading for Zero Air: 0.0 **ppm (3)**

Meter Reading for Calibration Gas: 502.3 **ppm (4)**

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 **ppm (5)**

Meter Reading for Calibration Gas: 501.8 **ppm (6)**

CALCULATE PRECISION:

Must be less than 10%

$$\frac{|500 - (2)| + |500 - (4)| + |500 - (6)|}{3} \times \frac{1}{500} \times \frac{100}{1}$$

$$= 0.293\%$$

INSTRUMENT RESPONSE TIME TEST RECORD

Initial Event: March 30, 2015

LANDFILL NAME: Blue Ridge **EVENT:** 1st Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVH302

PERFORMED BY: Keegan Wagner **TIME:** 9:35 **DATE:** March 30, 2015

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas: 500.3 **ppm**

90% of the Stabilized Reading: 450.3 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: **8.0** **seconds (1)**

MEASUREMENT # 2:

Stabilized Reading Using Calibration Gas: 497.9 **ppm**

90% of the Stabilized Reading: 448.1 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: **8.0** **seconds (2)**

MEASUREMENT # 3:

Stabilized Reading Using Calibration Gas: 500.1 **ppm**

90% of the Stabilized Reading: 450.1 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: **6.0** **seconds (3)**

CALCULATE RESPONSE TIME:

Must be less than 30 seconds

$$\frac{(1) + (2) + (3)}{3} = 7.333 \text{ seconds}$$

CALIBRATION PROCEDURE & BACKGROUND DETERMINATION REPORT

Initial Event: March 30, 2015

LANDFILL NAME: Blue Ridge **EVENT:** 1st Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVH302

PERFORMED BY: Keegan Wagner **TIME:** 9:45 **DATE:** March 30, 2015

CALIBRATION PROCEDURE

1. **Allow instrument to internally zero itself while introducing zero air.**
2. **Introduce the calibration gas into the probe.**
   Stable Reading = 501.6
3. **Adjust meter to read 500 ppm.**

BACKGROUND DETERMINATION PROCEDURE

1. **Upwind Reading (highest in 30 seconds):**
   Location: South access road near entrance 0.1 **ppm (1)**
2. **Downwind Reading (highest in 30 seconds):**
   Location: Access road North side of Landfill 2.2 **ppm (2)**

CALCULATE BACKGROUND VALUE

$$\frac{(1) + (2)}{2} = 1.2 \text{ ppm}$$

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Surface Monitoring Logs

Individual Monitoring Exceedance
Surface Monitoring Design Plan

Exceedance #: No Exceedances

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

Location of monitored exceedance (include description of field marker used): _____

Describe cover maintenance or adjustments to the vacuum of adjacent wells to increase gas collection in vicinity of measured exceedance before remonitoring in 10 days: _____

Remonitor location within 10 calendar days of Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If 10 day remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 days: _____

If the 10 day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal quarterly monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Remonitor location within 10 calendar days of 2nd Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 10 Day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Use additional forms if necessary

If monitoring shows 3 Exceedances within a quarterly period, a new well or other collection device must be installed within 120 Days of the Initial Exceedance or alternative remedies/timelines may be submitted to the Administrator for approval. Further monitoring is not necessary until the remedy is completed.
The 3 Exceedances do NOT have to be consecutive.

Use this form to record an individual monitoring exceedance and follow-up monitoring activities.
This form is only to be used when a reading of 500 ppm above background is encountered during the surface monitoring.
Use a separate form for each initial exceedance.

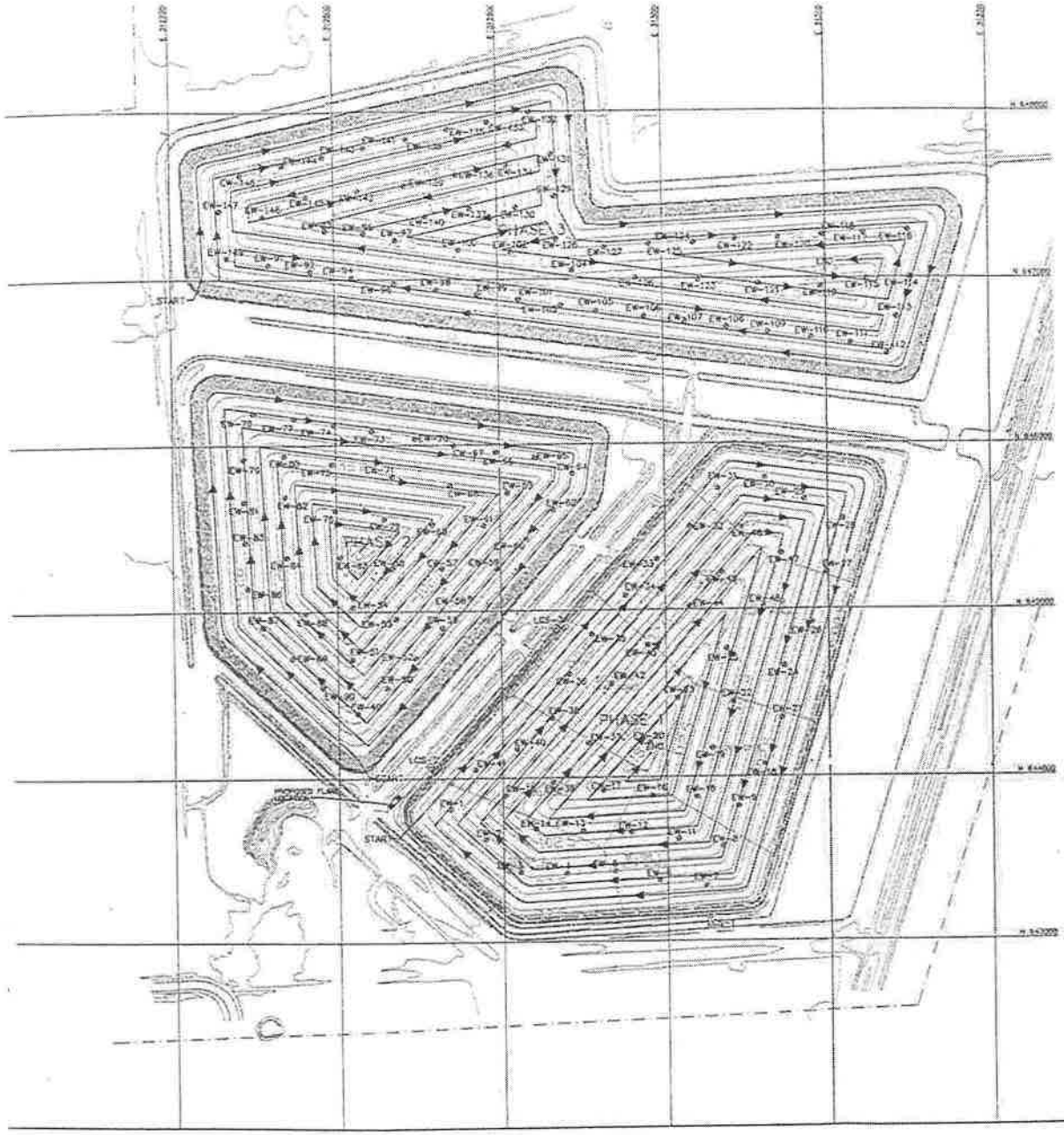
REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Surface Emissions Exceedance Locations

Blue Ridge Landfill
Event: 1st Quarter 2015 SEM
Technician: Keegan Wagner
Date: 3/30/15
Exceedances: 0



NOTES

1. EPA GRADES PROVIDED BY SHAWSHEEN ENGINEERING CORP.
2. SURFACE EMISSIONS WILL BE MONITORED QUARTERLY.
3. SURFACE EMISSIONS MONITORING SHALL BE CONDUCTED AT 100 FT. ON 50 INTERVALS AS SHOWN. MONITORING WILL NOT INCLUDE STEEP OR UNSTABLE AREAS, INCLUDING THE SLOPES AND THE ACTIVE FACE.
4. MONITORING ROUTE SHOWN IS FOR THE COMPLETED FACILITY. WHEN COLLECTION SYSTEM IS COMPLETE, THE SURFACE MONITORING ROUTE WILL MIRROR MONITORING UNDER THE CONSTRUCTION PHASE OF THE LANDFILL GAS IMPROVEMENT SYSTEM.

LEGEND

EW-1 — INDIVIDUAL GAS EXTRACTION WELL (SEE DETAILS 1/4, 2/4, AND 3/4)
— — — LANDFILL FOOTPRINT
— · — PROPERTY BOUNDARY
—◄— SURFACE EMISSIONS MONITORING PATHWAY

N
SCALE: 1" = 300'
300' 150' 0 300'

PERMIT DESIGN DRAWINGS

PRINTED:

REV.	DATE	DESCRIPTION	BY	APP'D

SHAWSHEEN ENGINEERING & CONSULTING, INC.
ENGINEERS & CONSULTANTS
17 MUSH HILL, ALBANY, NEW YORK

DES. BY: WC
DR. BY: [illegible]
CHK. BY: [illegible]
APP. BY: [illegible]

WC PROJECT NO. 2000047
LANDFILL GAS EXTRACTION SYSTEM
FMSD (BLUERIDGE) LANDFILL

SCALE: 1" = 300'
MAY 2002

SHEET TITLE:
SURFACE EMISSIONS MONITORING PLAN

DRAWING NO. 3
SHEET 4 OF 10

Investigation Type: AIRFIMON
Air Account No.: FG-0536-E
Attachment No.: 4
Page No.: 11 of 90

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REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Surface Emissions Monitoring

2nd Quarter Report 2015

Prepared By:

American Environmental Group
3600 Brecksville Road
Richfield, Ohio 44286
(330) 659-5930

American Environmental Group Ltd.

June 8, 2015

Mr. Burgess Stengl
District Environmental Manager
Republic Services, Inc.
5757A Oates Road
Houston, TX 77078

RE: **NSPS Surface Emissions Monitoring at Blue Ridge Landfill – 2nd Quarter 2015**

Dear Mr. Stengl,

American Environmental Group, Ltd. (AEG) prepared the enclosed report documenting the results of the 2nd Quarter 2015 NSPS surface scan at Blue Ridge Landfill. The initial monitoring event was performed on May 20, 2015. There were ***no*** exceedances detected at the facility during the initial scan event. Field monitoring forms are attached for your files.

Weather Conditions

Weather condition recorded during the monitoring event was as follows:

May 20, 2015:
- Temperature approximately 78° Fahrenheit
- Relative humidity of 91 percent
- Barometric pressure of 29.96"Hg
- Wind Calm
- Mostly cloudy skies

In accordance with NSPS regulations, this monitoring event was performed during typical meteorological conditions.

The survey was conducted in accordance with the regulations set forth in the New Source Performance Standard (NSPS), 40 CFR 60.755 (c) and (d); (2) 40 CFR 60, 40 CFR 60.753(d) - Surface Scan Requirements, Appendix A – Method 21. A Photovac (MicroFID) flame ionization detector (FID) was used to perform the emissions monitoring. During the event, attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and areas with unusual odors. The FID was calibrated at the beginning of each day, prior to performing the monitoring, in accordance with Method 21 compliance requirements. The calibration log was completed by the field technician performing the work, and is included in Attachment: Daily Calibration Log. During the monitoring event, AEG observed that the ground surface appeared to be in good condition overall and there were no unusual odors noted. Results are presented in the attached forms.

Please forward any questions regarding this report, attachments, or data to Michael Widner at (682) 557-4697.

Sincerely,

Steven Paul
Environmental Data Coordinator
American Environmental Group, Ltd.

On Behalf of
Mike Widner
Regional Manager – American Environmental Group, Ltd.

Attachment: Daily Calibration Log
Attachment: Daily Surface Monitoring Log
Attachment: Site Drawing

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Calibration Logs

CALIBRATION PRECISION TEST RECORD

Initial Event: May 20, 2015

LANDFILL NAME: Blue Ridge **EVENT:** 2nd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZUN308

PERFORMED BY: Jared Urrey **TIME:** 7:35 **DATE:** May 20, 2015

Calibration Gas Standard: 500ppm CH4

MEASUREMENT # 1:

Meter Reading for Zero Air: 1.0 **ppm (1)**

Meter Reading for Calibration Gas: 500.0 **ppm (2)**

MEASUREMENT # 2:

Meter Reading for Zero Air: 1.0 **ppm (3)**

Meter Reading for Calibration Gas: 501.0 **ppm (4)**

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 **ppm (5)**

Meter Reading for Calibration Gas: 501.0 **ppm (6)**

CALCULATE PRECISION:

Must be less than 10%

$$\frac{|500 - (2)| + |500 - (4)| + |500 - (6)|}{3} \times \frac{1}{500} \times \frac{100}{1}$$

$$= 0.133\%$$

INSTRUMENT RESPONSE TIME TEST RECORD

Initial Event: May 20, 2015

LANDFILL NAME: Blue Ridge EVENT: 2nd Quarter SEM

INSTRUMENT MAKE: Photovac MODEL: MicroFID SERIAL #: CZUN308

PERFORMED BY: Jared Urrey TIME: 8:00 DATE: May 20, 2015

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas:	500.0	ppm
90% of the Stabilized Reading:	450.0	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	3.0	seconds (1)

MEASUREMENT # 2:

Stabilized Reading Using Calibration Gas:	500.0	ppm
90% of the Stabilized Reading:	450.0	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	2.0	seconds (2)

MEASUREMENT # 3:

Stabilized Reading Using Calibration Gas:	500.0	ppm
90% of the Stabilized Reading:	450.0	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	1.0	seconds (3)

CALCULATE RESPONSE TIME:

Must be less than 30 seconds

$$\frac{(1) + (2) + (3)}{3} = 2.000 \text{ seconds}$$

CALIBRATION PROCEDURE & BACKGROUND DETERMINATION REPORT

Initial Event: May 20, 2015

LANDFILL NAME: Blue Ridge **EVENT:** 2nd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZUN308

PERFORMED BY: Jared Urrey **TIME:** 8:15 **DATE:** May 20, 2015

CALIBRATION PROCEDURE

1. **Allow instrument to internally zero itself while introducing zero air.**
2. **Introduce the calibration gas into the probe.**
   Stable Reading = **501.6**
3. **Adjust meter to read 500 ppm.**

BACKGROUND DETERMINATION PROCEDURE

1. **Upwind Reading (highest in 30 seconds):**
   Location: South access road near entrance 30.0 **ppm (1)**
2. **Downwind Reading (highest in 30 seconds):**
   Location: Access road North side of Landfill 34.0 **ppm (2)**

CALCULATE BACKGROUND VALUE

$$\frac{(1) + (2)}{2} = 32.0 \text{ ppm}$$

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Surface Monitoring Logs

Individual Monitoring Exceedance
Surface Monitoring Design Plan

Exceedance #: No Exceedances

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

Location of monitored exceedance (include description of field marker used): _____

Describe cover maintenance or adjustments to the vacuum of adjacent wells to increase gas collection in vicinity of measured exceedance before remonitoring in 10 days: _____

Remonitor location within 10 calendar days of Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If 10 day remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 days: _____

If the 10 day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal quarterly monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Remonitor location within 10 calendar days of 2nd Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 10 Day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Use additional forms if necessary

If monitoring shows 3 Exceedances within a quarterly period, a new well or other collection device must be installed within 120 Days of the Initial Exceedance or alternative remedies/timelines may be submitted to the Administrator for approval. Further monitoring is not necessary until the remedy is completed.
The 3 Exceedances do NOT have to be consecutive.

Use this form to record an individual monitoring exceedance and follow-up monitoring activities.
This form is only to be used when a reading of 500 ppm above background is encountered during the surface monitoring.
Use a separate form for each initial exceedance.

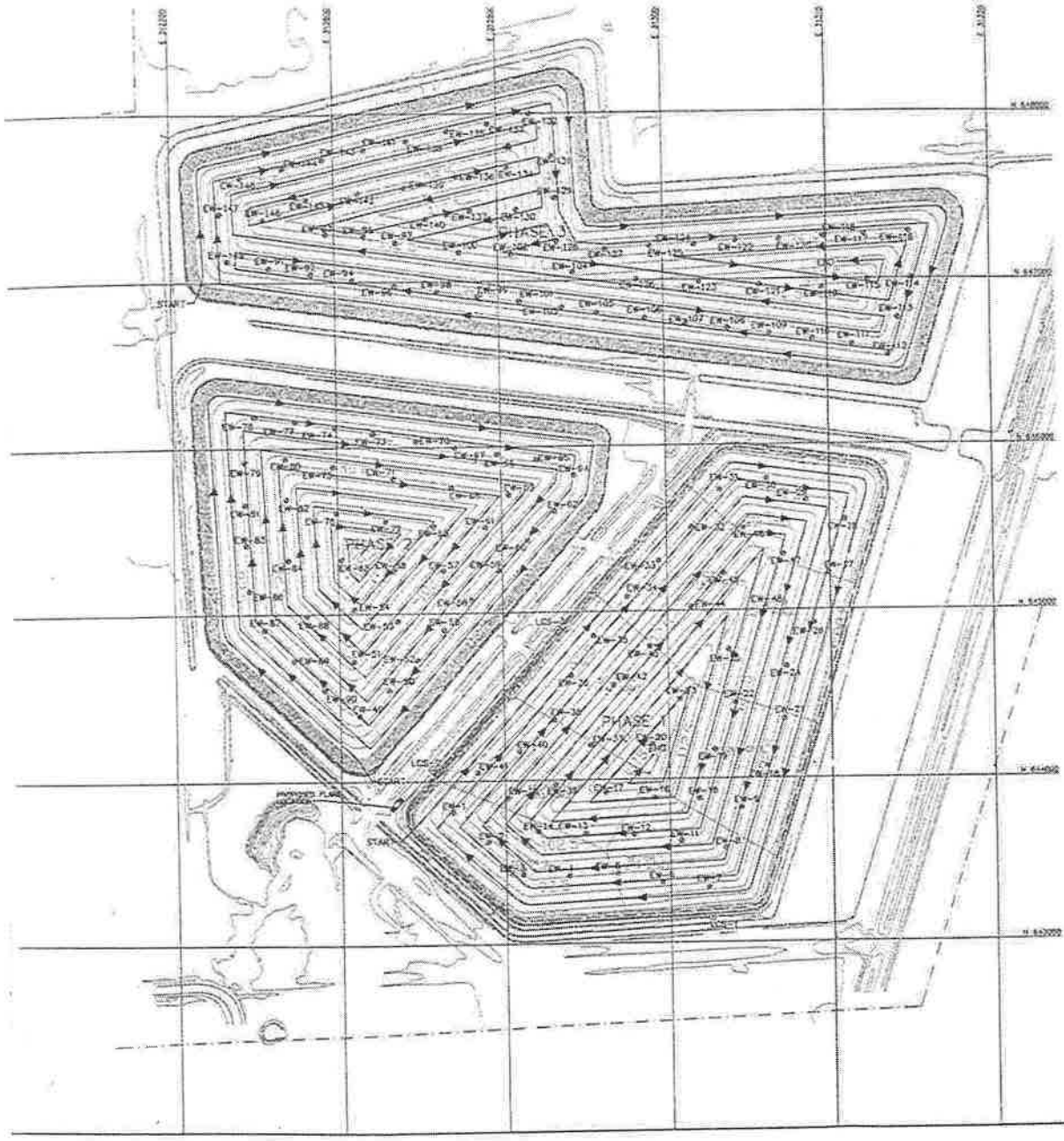
REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Surface Emissions Exceedance Locations

Blue Ridge Landfill
Event: 2nd Quarter 2015 SEM
Technician: Jared Urrey
Date: 5/20/15
Exceedances: 0



NOTES

LEGEND

PERMIT DESIGN DRAWINGS

LANDFILL GAS EXTRACTION SYSTEM
(NSD) (BLUERIDGE) LANDFILL

SURFACE EMISSIONS MONITORING PLAN

MAY 2002

3

Investigation Type: AIRFIMON
Air Account No.: FG-0536-E
Attachment No.: 4
Page No.: 23 of 90

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REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Surface Emissions Monitoring

3rd Quarter Report 2015

Prepared By:

American Environmental Group
3600 Brecksville Road
Richfield, Ohio 44286
(330) 659-5930

American Environmental Group Ltd.

September 10, 2015

Mr. Burgess Stengl
District Environmental Manager
Republic Services, Inc.
5757A Oates Road
Houston, TX 77078

RE: **NSPS Surface Emissions Monitoring at Blue Ridge Landfill – 3rd Quarter 2015**

Dear Mr. Stengl,

American Environmental Group, Ltd. (AEG) prepared the enclosed report documenting the results of the 3rd Quarter 2015 NSPS surface scan at Blue Ridge Landfill. The initial monitoring event was performed on September 2, 2015. There were ***no*** exceedances detected at the facility during the initial scan event. Field monitoring forms are attached for your files.

Weather Conditions

Weather condition recorded during the monitoring event was as follows:

September 2, 2015:

- Temperature approximately 78° Fahrenheit
- Relative humidity of 83 percent
- Barometric pressure of 30.00"Hg
- Wind East-Southeast at 4.6 mph
- Mostly cloudy skies

In accordance with NSPS regulations, this monitoring event was performed during typical meteorological conditions.

The survey was conducted in accordance with the regulations set forth in the New Source Performance Standard (NSPS), 40 CFR 60.755 (c) and (d); (2) 40 CFR 60, 40 CFR 60.753(d) - Surface Scan Requirements, Appendix A – Method 21. A Photovac (MicroFID) flame ionization detector (FID) was used to perform the emissions monitoring. During the event, attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and areas with unusual odors. The FID was calibrated at the beginning of each day, prior to performing the monitoring, in accordance with Method 21 compliance requirements. The calibration log was completed by the field technician performing the work, and is included in Attachment: Daily Calibration Log. During the monitoring event, AEG observed that the ground surface appeared to be in good condition overall and there were no unusual odors noted. Results are presented in the attached forms.

Please forward any questions regarding this report, attachments, or data to Michael Widner at (682) 557-4697.

Sincerely,

Steven Paul
Environmental Data Coordinator
American Environmental Group, Ltd.

On Behalf of
Mike Widner
Regional Manager – American Environmental Group, Ltd.

Attachment: Daily Calibration Log
Attachment: Daily Surface Monitoring Log
Attachment: Site Drawing

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Calibration Logs

CALIBRATION PRECISION TEST RECORD

Initial Event: September 2, 2015

LANDFILL NAME: Blue Ridge **EVENT:** 3rd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZSH302

PERFORMED BY: Keegan Wagner **TIME:** 9:15 **DATE:** September 2, 2015

Calibration Gas Standard: 500ppm CH4

MEASUREMENT # 1:

Meter Reading for Zero Air: 0.0 **ppm (1)**

Meter Reading for Calibration Gas: 500.4 **ppm (2)**

MEASUREMENT # 2:

Meter Reading for Zero Air: 0.0 **ppm (3)**

Meter Reading for Calibration Gas: 500.9 **ppm (4)**

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 **ppm (5)**

Meter Reading for Calibration Gas: 502.3 **ppm (6)**

CALCULATE PRECISION:

Must be less than 10%

$$\frac{|500 - (2)| + |500 - (4)| + |500 - (6)|}{3} \times \frac{1}{500} \times \frac{100}{1}$$

$$= \underline{0.240\%}$$

INSTRUMENT RESPONSE TIME TEST RECORD

Initial Event: September 2, 2015

LANDFILL NAME: Blue Ridge **EVENT:** 3rd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZSH302

PERFORMED BY: Keegan Wagner **TIME:** 9:20 **DATE:** September 2, 2015

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas:	500.4	**ppm**
90% of the Stabilized Reading:	450.4	**ppm**
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	**6.0**	**seconds (1)**

MEASUREMENT # 2:

Stabilized Reading Using Calibration Gas:	500.9	**ppm**
90% of the Stabilized Reading:	450.8	**ppm**
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	**8.0**	**seconds (2)**

MEASUREMENT # 3:

Stabilized Reading Using Calibration Gas:	502.3	**ppm**
90% of the Stabilized Reading:	452.1	**ppm**
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	**8.0**	**seconds (3)**

CALCULATE RESPONSE TIME:

Must be less than 30 seconds

$$\frac{(1) + (2) + (3)}{3} = \mathbf{7.333} \text{ seconds}$$

CALIBRATION PROCEDURE & BACKGROUND DETERMINATION REPORT

Initial Event: September 2, 2015

LANDFILL NAME: Blue Ridge **EVENT:** 3rd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZSH302

PERFORMED BY: Keegan Wagner **TIME:** 9:35 **DATE:** September 2, 2015

CALIBRATION PROCEDURE

1. **Allow instrument to internally zero itself while introducing zero air.**
2. **Introduce the calibration gas into the probe.**
   Stable Reading = 500.4
3. **Adjust meter to read 500 ppm.**

BACKGROUND DETERMINATION PROCEDURE

1. **Upwind Reading (highest in 30 seconds):**
   Location: Access road North side of Landfill 0.1 **ppm (1)**
2. **Downwind Reading (highest in 30 seconds):**
   Location: Scale House 2.3 **ppm (2)**

CALCULATE BACKGROUND VALUE

$$\frac{(1) + (2)}{2} = 1.2 \text{ ppm}$$

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Surface Monitoring Logs

Individual Monitoring Exceedance
Surface Monitoring Design Plan

Exceedance #: No Exceedances

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

Location of monitored exceedance (include description of field marker used): _____

Describe cover maintenance or adjustments to the vacuum of adjacent wells to increase gas collection in vicinity of measured exceedance before remonitoring in 10 days: _____

Remonitor location within 10 calendar days of Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If 10 day remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 days: _____

If the 10 day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal quarterly monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Remonitor location within 10 calendar days of 2nd Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 10 Day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Use additional forms if necessary

If monitoring shows 3 Exceedances within a quarterly period, a new well or other collection device must be installed within 120 Days of the Initial Exceedance or alternative remedies/timelines may be submitted to the Administrator for approval. Further monitoring is not necessary until the remedy is completed.
The 3 Exceedances do NOT have to be consecutive.

Use this form to record an individual monitoring exceedance and follow-up monitoring activities.
This form is only to be used when a reading of 500 ppm above background is encountered during the surface monitoring.
Use a separate form for each initial exceedance.

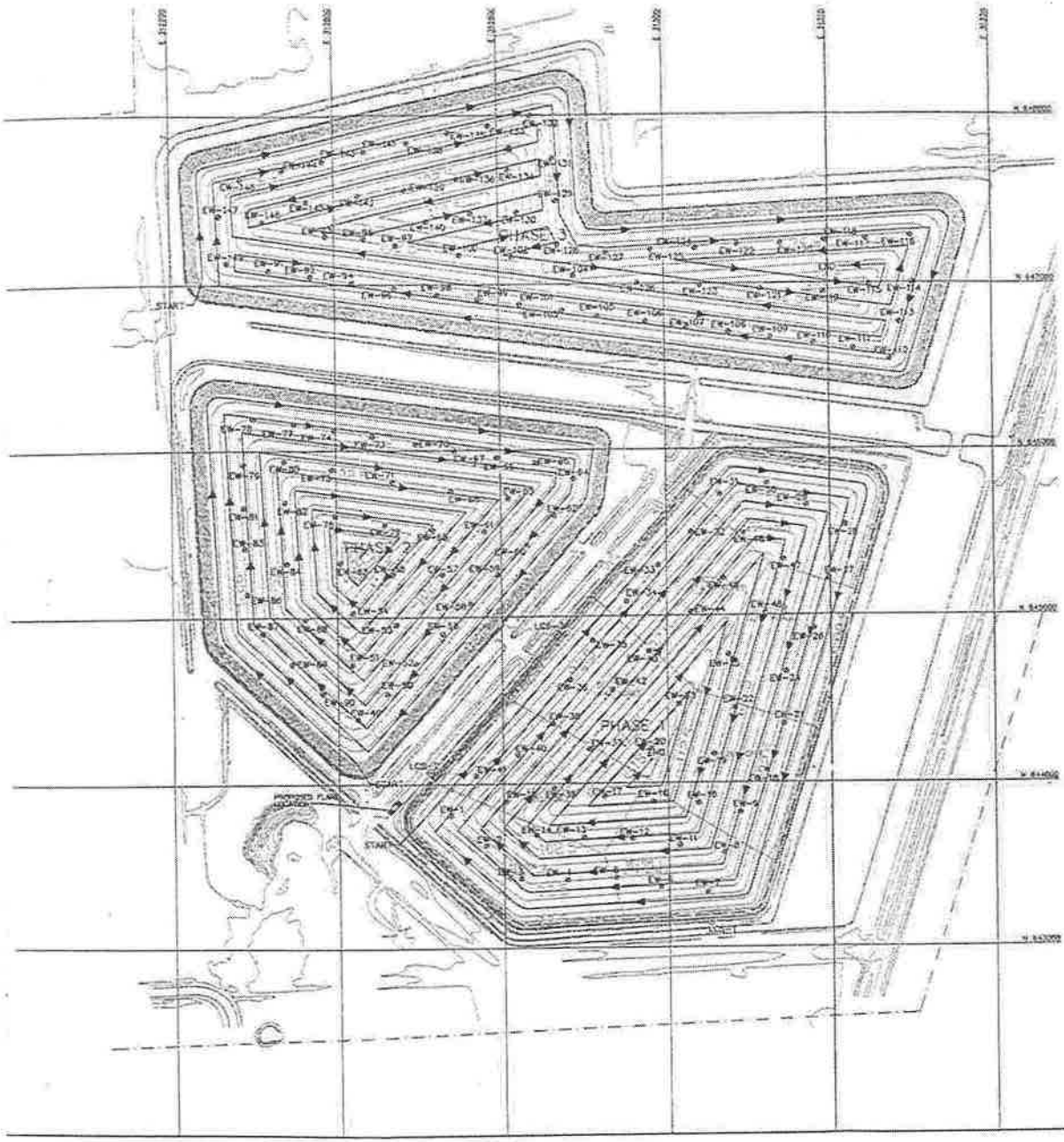
REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Surface Emissions Exceedance Locations

Blue Ridge Landfill
Event: 3rd Quarter 2015 SEM
Technician: Keegan Wagner
Date: 9/02/15
Exceedances: 0



NOTES

1. FINAL GRADES PROVIDED BY SUMMERSAIR ENGINEERING CORP.
2. SURFACE EMISSIONS WILL BE MONITORED QUARTERLY.
3. SURFACE EMISSIONS MONITORING SHALL BE CONDUCTED AT THE ST. CAT SO INTERVALS AS SHOWN. MONITORING WILL NOT INCLUDE AREAS ON VERTICAL AREAS, WHICH ARE TWO SLOPES AND THE SIDING PAGE.
4. MONITORING ROUTE SHOWN IS FOR THE COMPLETED FACILITY. BEFORE COLLECTION SYSTEM IS COMPLETE, THE SURFACE MONITORING ROUTE WILL VARY TEMPORARILY UNTIL THE EXTRACTION PLANE OF THE LANDFILL GAS MANAGEMENT SYSTEM.

LEGEND

EW-1 ⊗ PROPOSED GAS EXTRACTION WELL (EW-1, EW-2, EW-3, AND EW-4)
LANDFILL FOOTPRINT
PROPERTY BOUNDARY
SURFACE EMISSIONS MONITORING PATHWAY

N

100' 150' 0 300'

PERMIT DESIGN DRAWINGS

PRINTED:

REV.	DATE	DESCRIPTION	BY	APP'D

SMITH STREET TECHNOLOGIES, INC.
SUMMERSAIR MANAGEMENT CONSULTANTS & CONTRACTORS
P.O. BOX 1, ELMIRA, ELMIRA, NY

DES. BY: MT
DR. BY: PSB
CHK. BY: MW
APP. BY: JAB

WC PROJECT NO. 200007
LANDFILL GAS EXTRACTION SYSTEM
FA021 (BLUERIDGE) LANDFILL

SCALE: 1" = 300'
MAY 2002

SHEET TITLE
SURFACE EMISSIONS MONITORING PLAN

DRAWING NO. 3
SHEET 4 OF 10

Investigation Type: AIRFIMON
Air Account No.: FG-0536-E
Attachment No.: 4
Page No.: 35 of 90

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REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Surface Emissions Monitoring

4th Quarter Report 2015

Prepared By:

American Environmental Group
3600 Brecksville Road
Richfield, Ohio 44286
(330) 659-5930

American Environmental Group Ltd.

December 10, 2015

Mr. Burgess Stengl
District Environmental Manager
Republic Services, Inc.
5757A Oates Road
Houston, TX 77078

RE: **NSPS Surface Emissions Monitoring at Blue Ridge Landfill – 4th Quarter 2015**

Dear Mr. Stengl,

American Environmental Group, Ltd. (AEG) prepared the enclosed report documenting the results of the 4th Quarter 2015 NSPS surface scan at Blue Ridge Landfill. The initial monitoring event was performed on December 1, 2015. There were ***no*** exceedances detected at the facility during the initial scan event. Field monitoring forms are attached for your files.

Weather Conditions

Weather condition recorded during the monitoring event was as follows:

December 1, 2015:

- Temperature approximately 56° Fahrenheit
- Relative humidity of 86 percent
- Barometric pressure of 30.01"Hg
- Wind North at 6.9 mph
- Overcast skies

In accordance with NSPS regulations, this monitoring event was performed during typical meteorological conditions.

The survey was conducted in accordance with the regulations set forth in the New Source Performance Standard (NSPS), 40 CFR 60.755 (c) and (d); (2) 40 CFR 60, 40 CFR 60.753(d) - Surface Scan Requirements, Appendix A – Method 21. A Photovac (MicroFID) flame ionization detector (FID) was used to perform the emissions monitoring. During the event, attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and areas with unusual odors. The FID was calibrated at the beginning of each day, prior to performing the monitoring, in accordance with Method 21 compliance requirements. The calibration log was completed by the field technician performing the work, and is included in Attachment: Daily Calibration Log. During the monitoring event, AEG observed that the ground surface appeared to be in good condition overall and there were no unusual odors noted. Results are presented in the attached forms.

Please forward any questions regarding this report, attachments, or data to Michael Widner at (682) 557-4697.

Sincerely,

Steven Paul
Environmental Data Coordinator
American Environmental Group, Ltd.

On Behalf of
Mike Widner
Regional Manager – American Environmental Group, Ltd.

Attachment: Daily Calibration Log
Attachment: Daily Surface Monitoring Log
Attachment: Site Drawing

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Calibration Logs

CALIBRATION PRECISION TEST RECORD

Initial Event: December 1, 2015

LANDFILL NAME: Blue Ridge **EVENT:** 4th Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVK309

PERFORMED BY: Keegan Wagner **TIME:** 8:45 **DATE:** December 1, 2015

Calibration Gas Standard: 500ppm CH4

MEASUREMENT # 1:

Meter Reading for Zero Air: 0.0 **ppm (1)**

Meter Reading for Calibration Gas: 496.4 **ppm (2)**

MEASUREMENT # 2:

Meter Reading for Zero Air: 0.0 **ppm (3)**

Meter Reading for Calibration Gas: 499.7 **ppm (4)**

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 **ppm (5)**

Meter Reading for Calibration Gas: 501.8 **ppm (6)**

CALCULATE PRECISION:

Must be less than 10%

$$\frac{|500 - (2)| + |500 - (4)| + |500 - (6)|}{3} \times \frac{1}{500} \times \frac{100}{1}$$

$$= 0.380\%$$

INSTRUMENT RESPONSE TIME TEST RECORD

Initial Event: December 1, 2015

LANDFILL NAME: Blue Ridge EVENT: 4th Quarter SEM

INSTRUMENT MAKE: Photovac MODEL: MicroFID SERIAL #: CZVK309

PERFORMED BY: Keegan Wagner TIME: 8:55 DATE: December 1, 2015

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas:	502.7	ppm
90% of the Stabilized Reading:	452.4	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	8.0	seconds (1)

MEASUREMENT # 2:

Stabilized Reading Using Calibration Gas:	500.3	ppm
90% of the Stabilized Reading:	450.3	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	7.0	seconds (2)

MEASUREMENT # 3:

Stabilized Reading Using Calibration Gas:	500.1	ppm
90% of the Stabilized Reading:	450.1	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	7.0	seconds (3)

CALCULATE RESPONSE TIME:

Must be less than 30 seconds

$$\frac{(1) + (2) + (3)}{3} = 7.333 \text{ seconds}$$

CALIBRATION PROCEDURE & BACKGROUND DETERMINATION REPORT

Initial Event: December 1, 2015

LANDFILL NAME: Blue Ridge **EVENT:** 4th Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVK309

PERFORMED BY: Keegan Wagner **TIME:** 9:10 **DATE:** December 1, 2015

CALIBRATION PROCEDURE

1. **Allow instrument to internally zero itself while introducing zero air.**
2. **Introduce the calibration gas into the probe.**
   Stable Reading = 504.6
3. **Adjust meter to read 500 ppm.**

BACKGROUND DETERMINATION PROCEDURE

1. **Upwind Reading (highest in 30 seconds):**
   Location: Access road north of landfill 0.3 **ppm (1)**
2. **Downwind Reading (highest in 30 seconds):**
   Location: Main entrance road south of landfill 2.8 **ppm (2)**

CALCULATE BACKGROUND VALUE

$$\frac{(1) + (2)}{2} = 1.6 \text{ ppm}$$

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Surface Monitoring Logs

Individual Monitoring Exceedance
Surface Monitoring Design Plan

Exceedance #: No Exceedances

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

Location of monitored exceedance (include description of field marker used): _____

Describe cover maintenance or adjustments to the vacuum of adjacent wells to increase gas collection in vicinity of measured exceedance before remonitoring in 10 days: _____

Remonitor location within 10 calendar days of Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If 10 day remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 days: _____

If the 10 day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal quarterly monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Remonitor location within 10 calendar days of 2nd Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 10 Day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Use additional forms if necessary

If monitoring shows 3 Exceedances within a quarterly period, a new well or other collection device must be installed within 120 Days of the Initial Exceedance or alternative remedies/timelines may be submitted to the Administrator for approval. Further monitoring is not necessary until the remedy is completed.
The 3 Exceedances do NOT have to be consecutive.

Use this form to record an individual monitoring exceedance and follow-up monitoring activities.
This form is only to be used when a reading of 500 ppm above background is encountered during the surface monitoring.
Use a separate form for each initial exceedance.

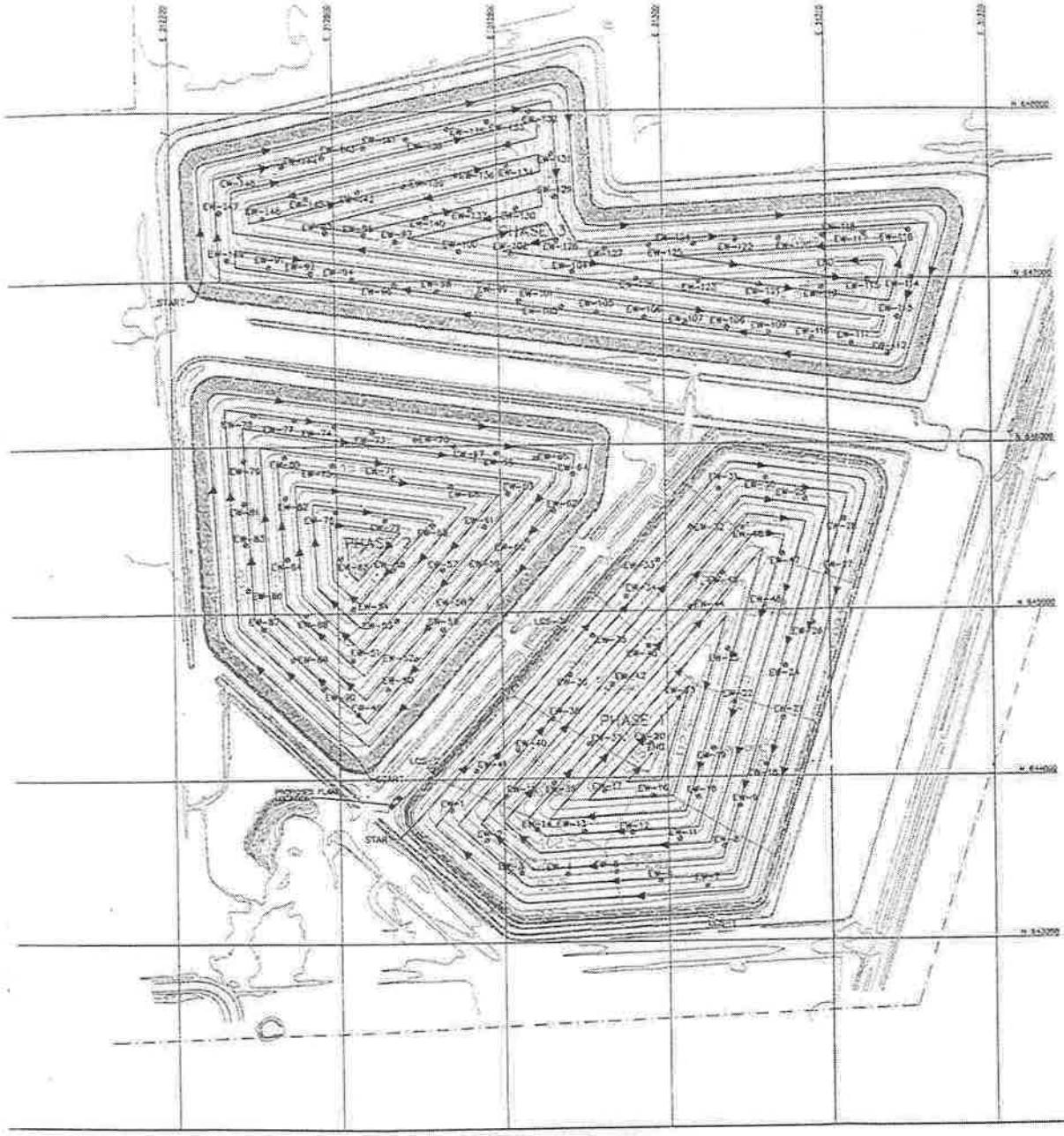
REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Surface Emissions Exceedance Locations

Blue Ridge Landfill
Event: 4th Quarter 2015 SEM
Technician: Keegan Wagner
Date: 12/01/15
Exceedances: 0



NOTES

LEGEND

PERMIT DESIGN DRAWINGS

LANDFILL GAS EXTRACTION SYSTEM
FMSCI (BLUERIDGE) LANDFILL

SURFACE EMISSIONS MONITORING PLAN

MAY 2003

3

Investigation Type: AIRFIMON
Air Account No.: FG-0536-E
Attachment No.: 4
Page No.: 47 of 90

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Feb '16

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Attachment F

Quarterly Surface Emissions Monitoring

American Environmental Group Ltd.

February 19, 2016

Mr. Burgess Stengl
District Environmental Manager
Republic Services, Inc.
5757A Oates Road
Houston, TX 77078

RE: **NSPS Surface Emissions Monitoring at Blue Ridge Landfill – 1st Quarter 2016**

Dear Mr. Stengl,

American Environmental Group, Ltd. (AEG) prepared the enclosed report documenting the results of the 1st Quarter 2016 NSPS surface scan at Blue Ridge Landfill. The initial monitoring event was performed on February 18, 2016. There were ***no*** exceedances detected at the facility during the initial scan event. Field monitoring forms are attached for your files.

Weather Conditions

Weather condition recorded during the monitoring event was as follows:

February 18, 2016
- Temperature approximately 68° Fahrenheit
- Relative humidity of 77 percent
- Barometric pressure of 30.17"Hg
- Wind South-Southeast at 10.4 mph
- Scattered skies

In accordance with NSPS regulations, this monitoring event was performed during typical meteorological conditions.

The survey was conducted in accordance with the regulations set forth in the New Source Performance Standard (NSPS), 40 CFR 60.755 (c) and (d); (2) 40 CFR 60, 40 CFR 60.753(d) - Surface Scan Requirements, Appendix A – Method 21. A Photovac (MicroFID) flame ionization detector (FID) was used to perform the emissions monitoring. During the event, attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and areas with unusual odors. The FID was calibrated at the beginning of each day, prior to performing the monitoring, in accordance with Method 21 compliance requirements. The calibration log was completed by the field technician performing the work, and is included in Attachment: Daily Calibration Log. During the monitoring event, AEG observed that the ground surface appeared to be in good condition overall and there were no unusual odors noted. Results are presented in the attached forms.

Please forward any questions regarding this report, attachments, or data to Michael Widner at (682) 557-4697.

Sincerely,

Steven Paul
Environmental Data Coordinator
American Environmental Group, Ltd.

On Behalf of
Mike Widner
Regional Manager – American Environmental Group, Ltd.

Attachment: Daily Calibration Log
Attachment: Daily Surface Monitoring Log
Attachment: Site Drawing

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Calibration Logs

CALIBRATION PRECISION TEST RECORD

Initial Event: February 18, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 1st Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVF305

PERFORMED BY: Keegan Wagner **TIME:** 9:00 **DATE:** February 18, 2016

Calibration Gas Standard: 500ppm CH4

MEASUREMENT # 1:

Meter Reading for Zero Air: 0.0 **ppm (1)**

Meter Reading for Calibration Gas: 500.6 **ppm (2)**

MEASUREMENT # 2:

Meter Reading for Zero Air: 0.0 **ppm (3)**

Meter Reading for Calibration Gas: 500.2 **ppm (4)**

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 **ppm (5)**

Meter Reading for Calibration Gas: 498.8 **ppm (6)**

CALCULATE PRECISION:
Must be less than 10%

$$\frac{|500 - (2)| + |500 - (4)| + |500 - (6)|}{3} \times \frac{1}{500} \times \frac{100}{1}$$

$$= 0.133\%$$

INSTRUMENT RESPONSE TIME TEST RECORD

Initial Event: February 18, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 1st Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVF305

PERFORMED BY: Keegan Wagner **TIME:** 9:05 **DATE:** February 18, 2016

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas: 500.5 **ppm**

90% of the Stabilized Reading: 450.5 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: 8.0 **seconds (1)**

MEASUREMENT # 2:

Stabilized Reading Using Calibration Gas: 501.6 **ppm**

90% of the Stabilized Reading: 451.4 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: 8.0 **seconds (2)**

MEASUREMENT # 3:

Stabilized Reading Using Calibration Gas: 501.3 **ppm**

90% of the Stabilized Reading: 451.2 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: 8.0 **seconds (3)**

CALCULATE RESPONSE TIME:

Must be less than 30 seconds

$$\frac{(1) + (2) + (3)}{3} = 8.000 \text{ seconds}$$

CALIBRATION PROCEDURE & BACKGROUND DETERMINATION REPORT

Initial Event: February 18, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 1st Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVF305

PERFORMED BY: Keegan Wagner **TIME:** 9:15 **DATE:** February 18, 2016

CALIBRATION PROCEDURE

1. **Allow instrument to internally zero itself while introducing zero air.**
2. **Introduce the calibration gas into the probe.**
   Stable Reading = 499.8
3. **Adjust meter to read 500 ppm.**

BACKGROUND DETERMINATION PROCEDURE

1. **Upwind Reading (highest in 30 seconds):**
   Location: Main entrance SE corner of landfill 0.2 **ppm (1)**
2. **Downwind Reading (highest in 30 seconds):**
   Location: Access rd near NW corner of landfill 1.8 **ppm (2)**

CALCULATE BACKGROUND VALUE

$$\frac{(1) + (2)}{2} = 1.0 \text{ ppm}$$

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Surface Monitoring Logs

Individual Monitoring Exceedance
Surface Monitoring Design Plan

Exceedance #: No Exceedances

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

Location of monitored exceedance (include description of field marker used): _____

Describe cover maintenance or adjustments to the vacuum of adjacent wells to increase gas collection in vicinity of measured exceedance before remonitoring in 10 days: _____

Remonitor location within 10 calendar days of Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If 10 day remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 days: _____

If the 10 day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal quarterly monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Remonitor location within 10 calendar days of 2nd Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 10 Day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Use additional forms if necessary

If monitoring shows 3 Exceedances within a quarterly period, a new well or other collection device must be installed within 120 Days of the Initial Exceedance or alternative remedies/timelines may be submitted to the Administrator for approval. Further monitoring is not necessary until the remedy is completed.
The 3 Exceedances do NOT have to be consecutive.

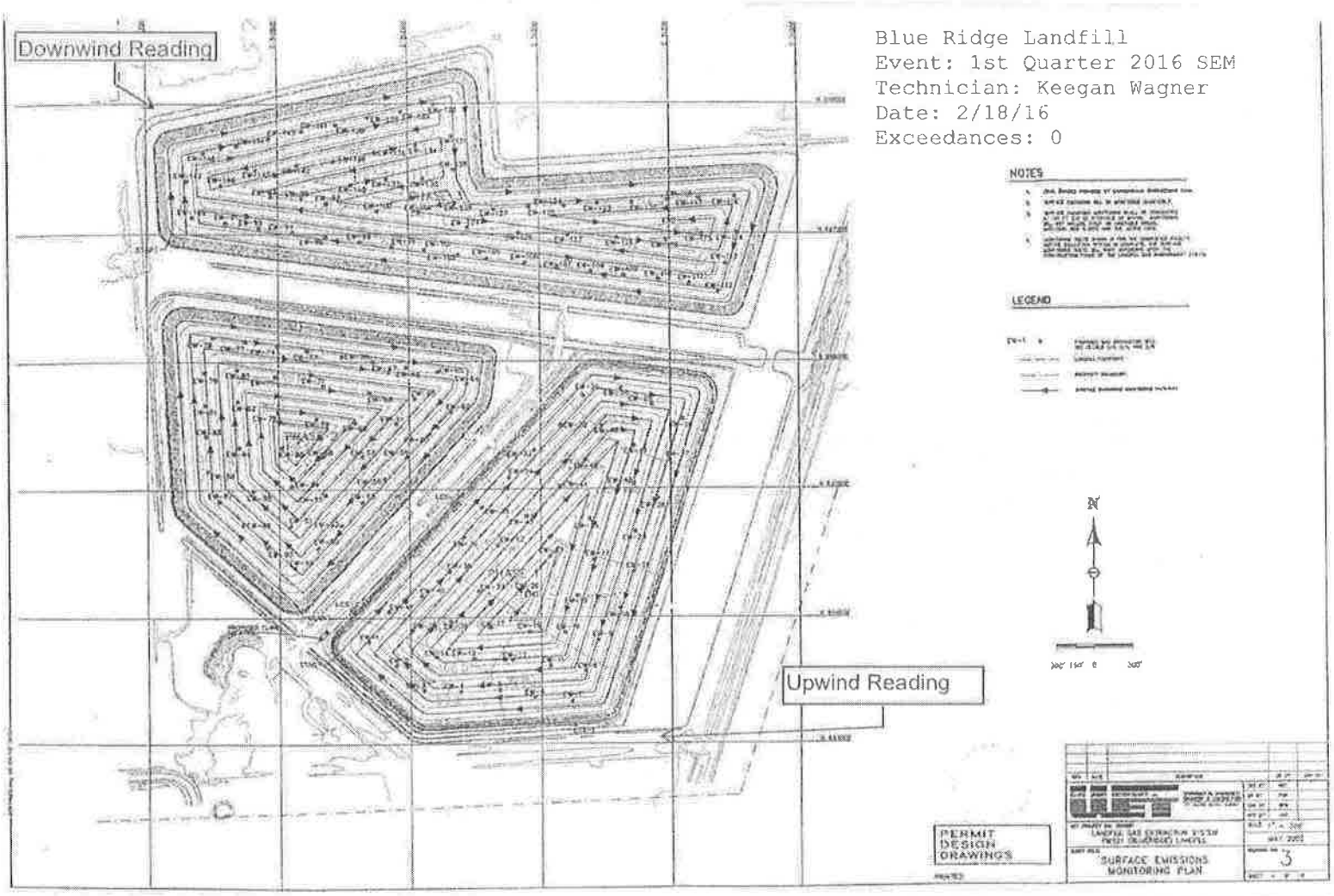
Use this form to record an individual monitoring exceedance and follow-up monitoring activities.
This form is only to be used when a reading of 500 ppm above background is encountered during the surface monitoring.
Use a separate form for each initial exceedance.

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Surface Emissions Exceedance Locations


Downwind Reading
Upwind Reading
Blue Ridge Landfill
Event: 1st Quarter 2016 SEM
Technician: Keegan Wagner
Date: 2/18/16
Exceedances: 0
NOTES
LEGEND
N
PERMIT DESIGN DRAWINGS
SURFACE EMISSIONS MONITORING PLAN
3

American Environmental Group Ltd.

February 19, 2016

Mr. Burgess Stengl
District Environmental Manager
Republic Services, Inc.
5757A Oates Road
Houston, TX 77078

RE: **Class I Surface Emissions Monitoring at Blue Ridge Landfill – February 2016**

Dear Mr. Stengl,

American Environmental Group, Ltd. (AEG) prepared the enclosed report documenting the results of the Class I surface emissions monitoring at Blue Ridge Landfill for February 2016. The initial monitoring event was performed on February 18, 2016. There were ***no*** exceedances detected at the facility during the initial scan event. Field monitoring forms are attached for your files.

Weather Conditions

Weather condition recorded during the monitoring event was as follows:

February 18, 2016
- Temperature approximately 68° Fahrenheit
- Relative humidity of 77 percent
- Barometric pressure of 30.17"Hg
- Wind South-Southeast at 10.4 mph
- Scattered skies

This monitoring event was performed during typical meteorological conditions.

The survey was conducted in accordance with the monitoring procedures agreed upon between Republic Waste Services and the City of Pearland. Results are presented in the attached forms.

Please forward any questions regarding this report, attachments, or data to Michael Widner at (682) 557-4697.

Sincerely,

Steven Paul
American Environmental Group, Ltd.

On Behalf of
Mike Widner
Regional Manager – American Environmental Group, Ltd.

Attachment: Daily Calibration Logs
Attachment: Daily Surface Monitoring Logs

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Calibration Logs

CALIBRATION PRECISION TEST RECORD

Initial Event: February 18, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 1st Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVF305

PERFORMED BY: Keegan Wagner **TIME:** 9:00 **DATE:** February 18, 2016

Calibration Gas Standard: 500ppm CH4

MEASUREMENT # 1:

Meter Reading for Zero Air: 0.0 **ppm (1)**

Meter Reading for Calibration Gas: 500.6 **ppm (2)**

MEASUREMENT # 2:

Meter Reading for Zero Air: 0.0 **ppm (3)**

Meter Reading for Calibration Gas: 500.2 **ppm (4)**

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 **ppm (5)**

Meter Reading for Calibration Gas: 498.8 **ppm (6)**

CALCULATE PRECISION:

Must be less than 10%

$$\frac{|500 - (2)| + |500 - (4)| + |500 - (6)|}{3} \times \frac{1}{500} \times \frac{100}{1}$$

$$= 0.133\%$$

INSTRUMENT RESPONSE TIME TEST RECORD

Initial Event: February 18, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 1st Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVF305

PERFORMED BY: Keegan Wagner **TIME:** 9:05 **DATE:** February 18, 2016

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas: 500.5 **ppm**

90% of the Stabilized Reading: 450.5 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: 8.0 **seconds (1)**

MEASUREMENT # 2:

Stabilized Reading Using Calibration Gas: 501.6 **ppm**

90% of the Stabilized Reading: 451.4 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: 8.0 **seconds (2)**

MEASUREMENT # 3:

Stabilized Reading Using Calibration Gas: 501.3 **ppm**

90% of the Stabilized Reading: 451.2 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: 8.0 **seconds (3)**

CALCULATE RESPONSE TIME:

Must be less than 30 seconds

$$\frac{(1) + (2) + (3)}{3} = 8.000 \text{ seconds}$$

CALIBRATION PROCEDURE & BACKGROUND DETERMINATION REPORT

Initial Event: February 18, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 1st Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVF305

PERFORMED BY: Keegan Wagner **TIME:** 9:15 **DATE:** February 18, 2016

CALIBRATION PROCEDURE

1. **Allow instrument to internally zero itself while introducing zero air.**
2. **Introduce the calibration gas into the probe.**
   Stable Reading = 499.8
3. **Adjust meter to read 500 ppm.**

BACKGROUND DETERMINATION PROCEDURE

1. **Upwind Reading (highest in 30 seconds):**
   Location: Main entrance SE corner of landfill 0.2 **ppm (1)**
2. **Downwind Reading (highest in 30 seconds):**
   Location: Acces rd near NW corner of landfill 1.8 **ppm (2)**

CALCULATE BACKGROUND VALUE

$$\frac{(1) + (2)}{2} = 1.0 \text{ ppm}$$

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Surface Monitoring Logs

Individual Monitoring Exceedance
Surface Monitoring Design Plan

Exceedance #: No Exceedances

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

Location of monitored exceedance (include description of field marker used): _____

Describe cover maintenance or adjustments to the vacuum of adjacent wells to increase gas collection in vicinity of measured exceedance before remonitoring in 10 days: _____

Remonitor location within 10 calendar days of Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If 10 day remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 days: _____

If the 10 day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal quarterly monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Remonitor location within 10 calendar days of 2nd Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 10 Day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Use additional forms if necessary

If monitoring shows 3 Exceedances within a quarterly period, a new well or other collection device must be installed within 120 Days of the Initial Exceedance or alternative remedies/timelines may be submitted to the Administrator for approval. Further monitoring is not necessary until the remedy is completed.
The 3 Exceedances do NOT have to be consecutive.

Use this form to record an individual monitoring exceedance and follow-up monitoring activities.
This form is only to be used when a reading of 500 ppm above background is encountered during the surface monitoring.
Use a separate form for each initial exceedance.

June 2016

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Attachment E

Quarterly Surface Emissions Monitoring

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Surface Emissions Monitoring

2nd Quarter Report 2016

Prepared By:

American Environmental Group
3600 Brecksville Road
Richfield, Ohio 44286
(330) 659-5930

American Environmental Group Ltd.

June 14, 2016

Mr. Burgess Stengl
District Environmental Manager
Republic Services, Inc.
5757A Oates Road
Houston, TX 77078

RE: **NSPS Surface Emissions Monitoring at Blue Ridge Landfill – 2nd Quarter 2016**

Dear Mr. Stengl,

American Environmental Group, Ltd. (AEG) prepared the enclosed report documenting the results of the 2nd Quarter 2016 NSPS surface scan at Blue Ridge Landfill. The initial monitoring event was performed on June 8, 2016 and June 9, 2016. There were ***no*** exceedances detected at the facility during the initial scan event. Field monitoring forms are attached for your files.

Weather Conditions

Weather condition recorded during the monitoring event was as follows:

June 8, 2016
- Temperature approximately 80° Fahrenheit
- Relative humidity of 75 percent
- Barometric pressure of 29.91"Hg
- Wind North at 3.5 mph
- Clear skies

June 9, 2016
- Temperature approximately 80° Fahrenheit
- Relative humidity of 81 percent
- Barometric pressure of 29.93"Hg
- Wind Northeast at 5.8 mph
- Clear skies

In accordance with NSPS regulations, this monitoring event was performed during typical meteorological conditions.

The survey was conducted in accordance with the regulations set forth in the New Source Performance Standard (NSPS), 40 CFR 60.755 (c) and (d); (2) 40 CFR 60, 40 CFR 60.753(d) - Surface Scan Requirements, Appendix A – Method 21. A Photovac (MicroFID) flame ionization detector (FID) was used to perform the emissions monitoring. The FID was calibrated at the beginning of each day, prior to performing the monitoring, in accordance with Method 21 compliance requirements. The calibration log was completed by the field technician performing the work, and is included in Attachment: Daily Calibration Log.Results are presented in the attached forms.

Please forward any questions regarding this report, attachments, or data to Michael Widner at (682) 557-4697.

Sincerely,

Steven Paul
Environmental Data Coordinator
American Environmental Group, Ltd.

On Behalf of
Mike Widner
Regional Manager – American Environmental Group, Ltd.

Attachment: Daily Calibration Logs
Attachment: Daily Surface Monitoring Logs
Attachment: Site Drawing

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Calibration Logs

CALIBRATION PRECISION TEST RECORD

Initial Event: June 8, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 2nd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVK308

PERFORMED BY: Keegan Wagner **TIME:** 8:05 **DATE:** June 8, 2016

Calibration Gas Standard: 500ppm CH4

MEASUREMENT # 1:

Meter Reading for Zero Air: 0.0 **ppm (1)**

Meter Reading for Calibration Gas: 496.8 **ppm (2)**

MEASUREMENT # 2:

Meter Reading for Zero Air: 0.0 **ppm (3)**

Meter Reading for Calibration Gas: 499.9 **ppm (4)**

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 **ppm (5)**

Meter Reading for Calibration Gas: 498.2 **ppm (6)**

CALCULATE PRECISION:

Must be less than 10%

$$\frac{|500 - (2)| + |500 - (4)| + |500 - (6)|}{3} \times \frac{1}{500} \times \frac{100}{1}$$

$$= 0.340\%$$

INSTRUMENT RESPONSE TIME TEST RECORD

Initial Event: June 8, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 2nd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVK308

PERFORMED BY: Keegan Wagner **TIME:** 14:20 **DATE:** June 8, 2016

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas:	497.8	**ppm**
90% of the Stabilized Reading:	448.0	**ppm**
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	6.0	**seconds (1)**

MEASUREMENT # 2:

Stabilized Reading Using Calibration Gas:	500.6	**ppm**
90% of the Stabilized Reading:	450.5	**ppm**
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	8.0	**seconds (2)**

MEASUREMENT # 3:

Stabilized Reading Using Calibration Gas:	499.3	**ppm**
90% of the Stabilized Reading:	449.4	**ppm**
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas:	8.0	**seconds (3)**

CALCULATE RESPONSE TIME:

Must be less than 30 seconds $\frac{(1) + (2) + (3)}{3}$ = 7.333 **seconds**

CALIBRATION PROCEDURE & BACKGROUND DETERMINATION REPORT

Initial Event: June 8, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 2nd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVK308

PERFORMED BY: Keegan Wagner **TIME:** 14:30 **DATE:** June 8, 2016

CALIBRATION PROCEDURE

1. **Allow instrument to internally zero itself while introducing zero air.**
2. **Introduce the calibration gas into the probe.**
   Stable Reading = 501.1
3. **Adjust meter to read 500 ppm.**

BACKGROUND DETERMINATION PROCEDURE

1. **Upwind Reading (highest in 30 seconds):**
   Location: Access road north of landfill 0.1 **ppm (1)**
2. **Downwind Reading (highest in 30 seconds):**
   Location: Main entrance road south of landfill 3.8 **ppm (2)**

CALCULATE BACKGROUND VALUE

$$\frac{(1) + (2)}{2} = 2.0 \text{ ppm}$$

CALIBRATION PRECISION TEST RECORD

Initial Event: June 8, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 2nd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVK308

PERFORMED BY: Keegan Wagner **TIME:** 8:20 **DATE:** June 9, 2016

Calibration Gas Standard: 500ppm CH4

MEASUREMENT # 1:

Meter Reading for Zero Air: 0.0 **ppm (1)**

Meter Reading for Calibration Gas: 499.8 **ppm (2)**

MEASUREMENT # 2:

Meter Reading for Zero Air: 0.0 **ppm (3)**

Meter Reading for Calibration Gas: 499.2 **ppm (4)**

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 **ppm (5)**

Meter Reading for Calibration Gas: 500.3 **ppm (6)**

CALCULATE PRECISION:
Must be less than 10%

$$\frac{|500 - (2)| + |500 - (4)| + |500 - (6)|}{3} \times \frac{1}{500} \times \frac{100}{1}$$

= **0.087%**

INSTRUMENT RESPONSE TIME TEST RECORD

Initial Event: June 8, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 2nd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVK308

PERFORMED BY: Keegan Wagner **TIME:** 14:20 **DATE:** June 9, 2016

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas: 500.1 **ppm**

90% of the Stabilized Reading: 450.1 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: **7.0** **seconds (1)**

MEASUREMENT # 2:

Stabilized Reading Using Calibration Gas: 499.7 **ppm**

90% of the Stabilized Reading: 449.7 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: **8.0** **seconds (2)**

MEASUREMENT # 3:

Stabilized Reading Using Calibration Gas: 499.9 **ppm**

90% of the Stabilized Reading: 449.9 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: **8.0** **seconds (3)**

CALCULATE RESPONSE TIME:

Must be less than 30 seconds

$$\frac{(1) + (2) + (3)}{3} = 7.667 \text{ seconds}$$

CALIBRATION PROCEDURE & BACKGROUND DETERMINATION REPORT

Initial Event: June 8, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 2nd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVK308

PERFORMED BY: Keegan Wagner **TIME:** 14:30 **DATE:** June 9, 2016

CALIBRATION PROCEDURE

1. **Allow instrument to internally zero itself while introducing zero air.**
2. **Introduce the calibration gas into the probe.**
   Stable Reading = 500.2
3. **Adjust meter to read 500 ppm.**

BACKGROUND DETERMINATION PROCEDURE

1. **Upwind Reading (highest in 30 seconds):**
   Location: Access road north of landfill 0.3 **ppm (1)**
2. **Downwind Reading (highest in 30 seconds):**
   Location: Main entrance road south of landfill 4.2 **ppm (2)**

CALCULATE BACKGROUND VALUE

$$\frac{(1) + (2)}{2} = 2.3 \text{ ppm}$$

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

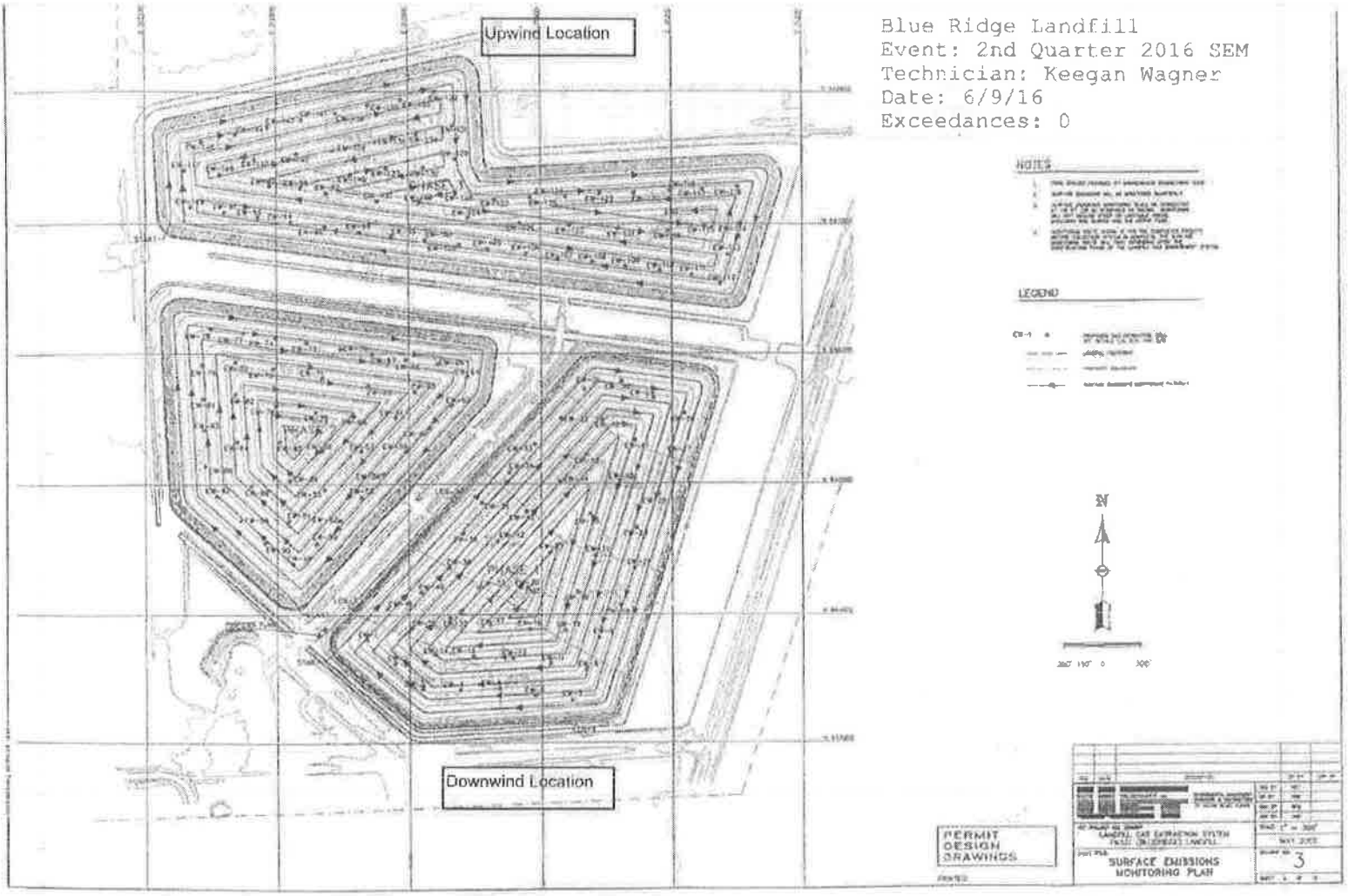
Daily Surface Monitoring Logs

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Site Drawing


Upwind Location
Downwind Location
Blue Ridge Landfill
Event: 2nd Quarter 2016 SEM
Technician: Keegan Wagner
Date: 6/9/16
Exceedances: 0
NOTES
LEGEND
N
PERMIT DESIGN DRAWINGS
SURFACE EMISSIONS MONITORING PLAN
3

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Surface Emissions Monitoring

2nd Quarter Class I Report 2016

Prepared By:

American Environmental Group
3600 Brecksville Road
Richfield, Ohio 44286
(330) 659-5930

American Environmental Group Ltd.

June 14, 2016

Mr. Burgess Stengl
District Environmental Manager
Republic Services, Inc.
5757A Oates Road
Houston, TX 77078

RE: **Class I Surface Emissions Monitoring at Blue Ridge Landfill – June 2016**

Dear Mr. Stengl,

American Environmental Group, Ltd. (AEG) prepared the enclosed report documenting the results of the Class I surface emissions monitoring at Blue Ridge Landfill for June 2016. The initial monitoring event was performed on June 8, 2016. There were ***no*** exceedances detected at the facility during the initial scan event. Field monitoring forms are attached for your files.

Weather Conditions

Weather condition recorded during the monitoring event was as follows:

June 8, 2016
- Temperature approximately 80° Fahrenheit
- Relative humidity of 75 percent
- Barometric pressure of 29.91"Hg
- Wind North at 3.5 mph
- Clear skies

This monitoring event was performed during typical meteorological conditions.

The survey was conducted in accordance with the monitoring procedures agreed upon between Republic Waste Services and the City of Pearland. Results are presented in the attached forms.

Please forward any questions regarding this report, attachments, or data to Michael Widner at (682) 557-4697.

Sincerely,

Steven Paul
American Environmental Group, Ltd.

On Behalf of
Mike Widner
Regional Manager – American Environmental Group, Ltd.

Attachment: Daily Calibration Logs
Attachment: Daily Surface Monitoring Logs

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Calibration Logs

CALIBRATION PRECISION TEST RECORD

Initial Event: June 8, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 2nd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVK308

PERFORMED BY: Keegan Wagner **TIME:** 8:05 **DATE:** June 8, 2016

Calibration Gas Standard: 500ppm CH4

MEASUREMENT # 1:

Meter Reading for Zero Air: 0.0 **ppm (1)**

Meter Reading for Calibration Gas: 496.8 **ppm (2)**

MEASUREMENT # 2:

Meter Reading for Zero Air: 0.0 **ppm (3)**

Meter Reading for Calibration Gas: 499.9 **ppm (4)**

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 **ppm (5)**

Meter Reading for Calibration Gas: 498.2 **ppm (6)**

CALCULATE PRECISION:
Must be less than 10%

$$\frac{|500 - (2)| + |500 - (4)| + |500 - (6)|}{3} \times \frac{1}{500} \times \frac{100}{1}$$

$$= 0.340\%$$

INSTRUMENT RESPONSE TIME TEST RECORD

Initial Event: June 8, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 2nd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVK308

PERFORMED BY: Keegan Wagner **TIME:** 14:20 **DATE:** June 8, 2016

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas: 497.8 **ppm**

90% of the Stabilized Reading: 448.0 **ppm**

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Stabilized Reading Using Calibration Gas: 500.6 **ppm**

90% of the Stabilized Reading: 450.5 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: **8.0** **seconds (2)**

MEASUREMENT # 3:

Stabilized Reading Using Calibration Gas: 499.3 **ppm**

90% of the Stabilized Reading: 449.4 **ppm**

Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas: **8.0** **seconds (3)**

CALCULATE RESPONSE TIME:

Must be less than 30 seconds

$$\frac{(1) + (2) + (3)}{3} = \mathbf{7.333} \text{ seconds}$$

CALIBRATION PROCEDURE & BACKGROUND DETERMINATION REPORT

Initial Event: June 8, 2016

LANDFILL NAME: Blue Ridge **EVENT:** 2nd Quarter SEM

INSTRUMENT MAKE: Photovac **MODEL:** MicroFID **SERIAL #:** CZVK308

PERFORMED BY: Keegan Wagner **TIME:** 14:30 **DATE:** June 8, 2016

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   Location: Access road north of landfill 0.1 **ppm (1)**
2. **Downwind Reading (highest in 30 seconds):**
   Location: Main entrance road south of landfill 3.8 **ppm (2)**

CALCULATE BACKGROUND VALUE

$$\frac{(1) + (2)}{2} = 2.0 \text{ ppm}$$

REPUBLIC SERVICES

Blue Ridge Landfill

Fresno, Texas

Daily Surface Monitoring Logs

Individual Monitoring Exceedance
Surface Monitoring Design Plan

Exceedance #: No Exceedances

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

Location of monitored exceedance (include description of field marker used): _____

Describe cover maintenance or adjustments to the vacuum of adjacent wells to increase gas collection in vicinity of measured exceedance before remonitoring in 10 days: _____

Remonitor location within 10 calendar days of Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If 10 day remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 days: _____

If the 10 day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal quarterly monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Remonitor location within 10 calendar days of 2nd Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 10 Day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Use additional forms if necessary

If monitoring shows 3 Exceedances within a quarterly period, a new well or other collection device must be installed within 120 Days of the Initial Exceedance or alternative remedies/timelines may be submitted to the Administrator for approval. Further monitoring is not necessary until the remedy is completed.
The 3 Exceedances do NOT have to be consecutive.

Use this form to record an individual monitoring exceedance and follow-up monitoring activities.
This form is only to be used when a reading of 500 ppm above background is encountered during the surface monitoring.
Use a separate form for each initial exceedance.

Individual Monitoring Exceedance
Surface Monitoring Design Plan

Exceedance #: No Exceedances

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

Location of monitored exceedance (include description of field marker used): _____

Describe cover maintenance or adjustments to the vacuum of adjacent wells to increase gas collection in vicinity of measured exceedance before remonitoring in 10 days: _____

Remonitor location within 10 calendar days of Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If 10 day remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 days: _____

If the 10 day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 1 Month remonitoring is <500 ppm, resume normal quarterly monitoring.

If the 1 Month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 Days: _____

Remonitor location within 10 calendar days of 2nd Exceedance:

Date: _____ Time: _____ Monitoring Technician Initials: _____
Instrument reading - Background reading: _____ ppm - _____ ppm = 0 ppm

If the 10 Day remonitoring is <500 ppm, remonitor 1 Month from Initial Exceedance:

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If monitoring shows 3 Exceedances within a quarterly period, a new well or other collection device must be installed within 120 Days of the Initial Exceedance or alternative remedies/timelines may be submitted to the Administrator for approval. Further monitoring is not necessary until the remedy is completed.
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Blank