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BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

October 31, 2018

Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Attn: Title V Reports

Director of the Air Division
USEPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
Attn: Air-3


SUBJECT: Combined Title V Semi-Annual and Partial 8-34 Annual Report
40 CFR 63 Subpart AAAA Semi-Annual Report Browning-
Ferris Industries of CA, Inc.
12310 San Mateo Road
Half Moon Bay, California 94019
Facility Number A2266

Dear Sir or Madam:

Browning-Ferris Industries of CA, Inc. Landfill (Ox Mountain Landfill) is pleased to submit the attached Semi-Annual Report (SAR) and Partial 8-34 Annual Report for the period of April 1, 2018 through September 30, 2018 to the Bay Area Air Quality Management District (BAAQMD) and the United States Environmental Protection Agency (USEPA), Region IX. As required by 40 Code of Federal Regulations (CFR) Part 63 Subpart AAAA, the Semi-Annual Startup, Shutdown and Malfunction (SSM) Report is also enclosed. The Combined Title V Semi-Annual and Partial 8-34 Annual Report satisfies the requirements of the Title V Permit listed in Title V Permit Condition Number 10164 Part 33 and Standard Condition I.F.

Based on the information and belief formed after reasonable inquiry, the statements and information contained in the document are true, accurate, and complete.

Sincerely,
Browning-Ferris Industries of CA, Inc.



Michael Mahoney
Responsible Official



Date Signed

1 INTRODUCTION

1.1 Purpose

This document is a Combined Semi-Annual Title V and Partial 8-34 Annual Report (Semi-annual report) for Browning-Ferries Industries of CA, Inc. (BFI) pursuant to Title V Permit Standard Condition 1.F and Condition Number 10164 Part 33. This report satisfies the requirements of the Bay Area Air Quality Management District's (BAAQMD) Regulation 8, Rule 34, Section 411 and Title 40 Code of Federal Regulations (CFR) Part 60 Subpart WWW, New Source Performance Standards (NSPS) for municipal solid waste (MSW) landfills. This Combined Report meets the requirements of Title V Standard Condition 1.F, BAAQMD Rule 8-34-411 and 40 CFR §60.757(f) and covers compliance activities conducted from April 1, 2018 through September 30, 2018. This Combined Report also includes the Semi-Annual Report of Start-up, Shutdown, and Malfunction (SSM) Plan activities pursuant to National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, Subpart AAAA for Landfills.

Section 2 of this Combined Report contains the elements required to satisfy both BAAQMD 8-34-411 and 40 CFR §60.757(f). Section 3 of this Combined Report contains a summary of the Performance Test Report requirements, and verifies compliance with BAAQMD Rule 8-34-413, 40 CFR §60.757(g), and Title V Permit Condition Number 10164 Part 30. Section 4 of this Combined Report includes the Semi-Annual Report of the SSM Plan activities pursuant to the NESHAP, 40 CFR Part 63, Subpart AAAA for Landfills.

1.2 Record Keeping and Reporting

Records are maintained and available for inspection at the Ox Mountain Landfill in accordance with BAAQMD Rule 8-34-501.12 and 40 CFR §60.758. Records are maintained at this location for a minimum of five years in accordance with federal regulations.

1.3 Report Preparation

This Combined Report has been prepared by Cornerstone Environmental Group, LLC, a Tetra Tech Company (Cornerstone) as authorized by BFI.

1.4 Major Facility Review Permit Renewal

The current Major Facility Review Permit for BFI, Title V Permit Number A2266, was issued on March 14, 2014, and expires on March 13, 2019. An application for the renewal of the Major Facility Review Permit was submitted to the BAAQMD on September 12, 2018.

2 COMBINED MONITORING REPORT

In accordance with Title V Permit Standard Condition 1.F, BAAQMD Rule 8-34-411 and §60.757(f) in the NSPS, this report is a Combined Semi-Annual Title V Report and Partial 8-34 Annual Report that is required to be submitted by BFI. The report contains monitoring data for the operation of the landfill gas (LFG) collection and control system (GCCS). The operational records have been reviewed and summarized. The timeframe covered by the report is April 1, 2018 through September 30, 2018. The following table lists the rules and regulations that are required to be included in this Combined Report.

TABLE 2-1 - COMBINED REPORT REQUIREMENTS

Rule	Requirement	Location in Report
8-34-501.1 §60.757(f)(4)	All collection system downtime, including individual well shutdown times and the reason for the shutdown.	Section 2.1, Appendices C, D & E
8-34-501.2 §60.757(f)(3)	All emission control system downtime and the reason for the shutdown.	Section 2.2, Appendix D
8-34-501.3, 8-34-507, §60.757(f)(1)	Continuous temperature for all operating flares and any enclosed combustor subject to Section 8-34-507.	Section 2.3, Appendix F
8-34-501.4, 8-34-510	Monitoring and/or testing performed to satisfy the requirements of the rules.	Section 2.4, Appendix G
8-34-501.6, 8-34-503, 8-34-506, §60.757(f)(5)	For operations subject to Section 8-34-503 and 8-34-506, records of all monitoring dates, leaks in excess of the limits in Section 8-34-301.2 or 8-34-303 that are discovered by the operator, including the location of the leak, leak concentration in parts per million by volume (ppmv), date of discovery, the action taken to repair the leak, date of the repair, date of any required re-monitoring, and the re-monitored concentration in ppmv.	Section 2.7 & 2.8, Appendices H & I
8-34-501.7	Annual waste acceptance rate and current amount of waste in-place.	Section 2.9
8-34-501.8	Records of the nature, location, amount, and date of deposition of non-degradable wastes, for any landfill areas excluded from the collection system requirement as documented in the GCCS Design Plan.	Section 2.10
8-34-501.4, 8-34-501.9, 8-34-505, §60.757(f)(1)	For operations subject to Section 8-34-505, records of all monitoring dates and any excesses of the limits stated in Section 8-34-305 that are discovered by the operator, including well identification number, the measured excess, the action taken to repair the excess, and the date of repair. Allowed higher operating value (HOV) wells excluded from the limits are listed here as well.	Section 2.11, 2.11.1, 2.11.2, Appendices J & K
8-34-501.10, 8-34-508, §60.757(f)(1)	Continuous gas flow rate and temperature records for any site subject to Section 8-34-508.	Section 2.12, Appendices F and L

2.2 Emission Control Device Downtime (BAAQMD 8-34-501.2 & §60.757(f)(3))

The emission control system consists of three flares (A-7, A-8, and A-9), which all began operation in 2004 and the six IC Engines operated by Ameresco. The six Internal Combustion (IC) Engines are under a separate permit and reporting is done by a third-party. The control system was not bypassed at any time during the reporting period. Raw LFG was not emitted during the reporting period. The SSM logs for the A-7, A-8, and A-9 Flares and the IC Engines are located in Appendix D.

2.2.1 LFG Bypass Operations (§60.757(f)(2))

Title 40 CFR §60.757(f)(2) is not applicable at Ox Mountain because a bypass line has not been installed. LFG cannot be diverted from the control equipment.

2.3 Temperature Monitoring Results (BAAQMD 8-34-501.3, 8-34-507, & §60.757(f)(1))

The combustion zone temperatures of the flares are monitored with Thermo-Electric Thermocouples. The temperature is displayed with a Yokogawa digital recorder, which is downloaded and archived. There were no temperature deviations during the reporting period. Appendix F contains the Flare Flow and Temperature Deviation/ Inoperative Monitor/ Missing Data Reports for April 1, 2018 through September 30, 2018.

2.4 Monthly Cover Integrity Monitoring (BAAQMD 8-34-501.4 & 8-34-510)

The cover integrity monitoring was performed on the following dates:

- April 8, 2018;
- May 29, 2018;
- June 30, 2018;
- July 31, 2018;
- August 6, 2018; and
- September 27, 2018.

The Monthly Cover Integrity Monitoring Logs are included in Appendix G.

2.8 Component Leak Testing (BAAQMD 8-34-501.6 & 8-34-503, CCR §95465(b)(1)(B))

Quarterly component leak testing, pursuant to BAAQMD Regulation 8-34-301.2 and California Air Resources Board (CARB) §95465(b)(1)(B), occurred during the reporting period on the following dates:

- Second Quarter 2018 – April 3 and 5, 2018; and
- Third Quarter 2018 – July 2 and 5, 2018.

Exceedances of 500 or 1000 ppmv detected were repaired as required by CARB Title 17 of California Code of Regulations Subchapter 10, Article 4, Subarticle 6, Section 95464(b)(1)(B) and BAAQMD Regulation 8-34-301.2.

The A-8 Flare was not monitored for component leak testing during the Second and Third Quarters of 2018 as it was inoperable.

Refer to the Quarterly LFG Component Leak Monitoring Logs, located in Appendix I, for detailed results.

2.9 Waste Acceptance Records (BAAQMD 8-34-501.7)

The amount of waste accepted during the reporting period of April 1, 2018 through September 30, 2018 was approximately 295,041 tons. The current Waste-In-Place (WIP) as of September 30, 2018 is approximately 23,614,247.32 tons.

Previous reports indicated a higher WIP value that was inaccurate. This report contains the corrected WIP value that will be utilized going forward and in future reporting.

2.10 Non-Degradable Waste Acceptance Records (BAAQMD 8-34-501.8)

The site does not currently contain an industrial waste facility that accepts friable asbestos and non-degradable materials. As such, the GCCS Design Plan for Ox Mountain does not exclude non-degradable waste areas from the collection system. Therefore, BAAQMD Regulation 8-34-501.8 is not applicable.

2.11 Wellhead Monitoring Data (BAAQMD 8-34-501.4 & 8-34-505)

Wellhead monitoring was performed on a monthly basis pursuant to 8-34-505. The well readings for April 1, 2018 through September 30, 2018 are included in Appendix J. Each well was monitored in accordance with the following requirements:

May 24, 2016 that the provided language was acceptable. The BAAQMD issued a revised Title V permit on September 22, 2016 approving the HOV wells. On June 15, 2017, Ox Mountain submitted a request to the BAAQMD for approval operate wells LTS-13 through LTS-20 under 8-34-404. The BAAQMD responded to this request on March 8, 2018 by providing updated language to the current Title V Permit. Pursuant to the updated Permit Condition 10164 Part 18, BAAQMD Regulation 8-34-305.3 and 8-34-305.4 shall not apply to wells LTS-13 through LTS-20, provided that the oxygen concentration does not exceed 15-percent by volume. Additionally, Permit Condition 10164 Part 18(d)(i) has been updated to reflect that the aforementioned wells may operate less than continuously.

Pursuant to Permit Condition 10164 Part 18(d)(iii), components that are connected to the vacuum system may be disconnected from the vacuum system if the oxygen content is equal to or greater than 15 percent or if the temperature is equal to or greater than 131 °F. Therefore, when the following wells are connected to the vacuum system, they may operate up to 15 percent oxygen. The wells to which these HOV values apply are as follows: LTS-1, LTS-2, LTS-3, LTS-4, LTS-5, LTS-6, LTS-7, LTS-8, LTS-9, LTS-10, LTS-11, LTS-12, LTS-13, LTS-14, LTS-15, LTS-16, LTS-17, LTS-18, LTS-19, and LTS-20.

Additionally, pursuant to the updated Title V Permit Condition Number 10164 Part 18(b), BAAQMD 8-34-305.3 and 8-34-305.4 shall not apply to the following wells, provided that the oxygen concentration does not exceed 15-percent: LTS-13, LTS-14, LTS-15, LTS-16, LTS-17, LTS-18, LTS-19, and LTS-20.

2.12 Gas Flow and Temperature Monitoring Results (BAAQMD 8-34-501.10, 8-34-508, & §60.757(f)(1))

The LFG flow rate is measured with a flow meter. The data panel displays the LFG flow and the digital Yokogawa data recorder records LFG flow every two minutes. The flow meter at each flare meets the requirements of BAAQMD Regulation 8-34-508 by recording data at least once every 15 minutes. The flow meter is maintained and calibrated pursuant to manufacturer's recommendations. The flow data for each flare is available for review at Ox Mountain.

Appendix L contains a summary of the monthly LFG flow rates for the flares. Appendix F contains the Flare Flow and Temperature Deviation/Inoperative Monitor/Missing Data Report for April 1, 2018 through September 30, 2018. There were no issues encountered during the reporting period.

2.13 Compliance with §60.757(f)(6)

"The date of installation and the location of each well or collection system expansion added pursuant to (a)(3), (b), (c)(4) of §60.755."

2.18 Compliance with Title V Permit Condition Number 10164, Part 9

On-site vehicle traffic volume did not exceed the number of round trips described in Table 2-2 during any one day:

TABLE 2-2 - ON-SITE VEHICLE TRAFFIC VOLUME

Vehicle Type	Daily Round Trip Limits
Transfer Trucks	178
Packer Trucks	52
Water Trucks	36
Soil Trucks	200
Misc. Heavy Duty Equipment	60
Light Duty Vehicles	250

2.19 Compliance with Title V Permit Condition Number 10164, Part 10

Except for the vehicles listed in Table 2-3, the on-site one way distance traveled by any heavy-duty vehicle (on paved roads only) did not exceed 8,000 feet. This limitation does not apply to the vehicles listed in Table 2-3, which may travel up to a maximum of 11,700 feet (one-way distance) on paved roads

TABLE 2-3 - VEHICLE TRAFFIC

Vehicle Type	Daily Round Trip Limits
Water Truck	36
Fuel Trucks	2
Employee - Light Duty Equipment	20

2.20 Compliance with Title V Permit Condition Number 10164, Part 13

No contaminated soil containing volatile organic compound (VOC) concentrations greater than 50 ppmv was received during this reporting period. VOC-laden soil (containing less than 50 ppmv of VOCs) was received during this reporting period. The total VOC-laden soil placed did not exceed the 118.75 ton daily limit or the 31,800 ton yearly limit.

2.24 Compliance with Draft Title V Permit Condition Number 10164, Part 21

Pursuant to Title V Permit Condition Number 10164 Part 21, the facility's total reduced sulfur (TRS) compounds in the collected landfill did not exceed 265 ppmv as hydrogen sulfide (H₂S) averaged over any consecutive rolling 12-month period. Monthly 12-month rolling averages of TRS as H₂S for the reporting period are included in Appendix P. These records are maintained at Ox Mountain and are available upon request.

2.25 Compliance with Draft Title V Permit Condition Number 10164, Part 22

Pursuant to Title V Permit Condition Number 10164 Part 22, the facility's annual average LFG generation did not exceed 6,600 scfm. Also, pursuant to Part 22, fugitive annual average LFG emissions rates, assumed to comprise 25 percent by volume of the LFG generation rate, did not exceed 1,650 scfm. The 12-month rolling LFG generation rates are included in Appendix L.

Pursuant to Title V Permit Condition Number 10164 Part 22, toxic air contaminant (TAC) emissions from waste decomposition (S-1) will be determined from the annual LFG characterization analysis (Source Test) to determine compliance with the emission rate limits listed in Part 22(b). The A-7 and A-8 Flares 2016 Source Tests were performed on September 13, 2016 and was included in Appendix N of the previous report submitted to the BAAQMD and the United States Environmental Protection Agency (USEPA) Region IX on October 31, 2016. Due to non-operation and ongoing maintenance on the A-7 and A-8 Flares, the 2017 Source Test was not performed by September 13, 2017. On October 27, 2017, a Change of Permit Application was submitted to the BAAQMD requesting that Title V Permit Condition Number 10164, Part 30 be changed to include language allowing the extension of the annual source test deadlines during times of prolonged inoperation or maintenance.

The 2017 Source Test was performed at the A-9 Flare on September 21, 2017. A copy of this report is included in Appendix Q of the October 1, 2017 through March 31, 2018 report, which was submitted to the BAAQMD and USEPA Region IX on April 30, 2018. The source tests for the A-7 and A-9 Flares were both conducted on September 5, 2018. However, the 2018 Source Test Reports for the A-7 and A-9 Flares were unavailable at the time of this submittal. Therefore, they will be included in the October 1, 2018 through March 31, 2019 report, which is due to the BAAQMD and USEPA Region IX on April 30, 2019.

3 PERFORMANCE TEST REPORT

In accordance with BAAQMD Rule 8-34-413 and 40 CFR §60.757(g) in the NSPS, a Performance Test Report is required to be submitted from affected facilities containing performance and monitoring data for the operation of the GCCS. The operational records listed in Table 3-1 have been reviewed, summarized, and are included in the following table. A copy of the most recent Performance Tests, conducted on September 13, 2016 for the A-7 and A-8 Flares, were included in Appendix N of the previous report, which was submitted to the BAAQMD and USEPA Region IX on October 31, 2016.

The 2017 Source Test was performed at the A-9 Flare on September 21, 2017. A copy of the report is included in Appendix Q of the October 1, 2017 through March 31, 2018 report, which was submitted to the BAAQMD and USEPA Region IX on April 30, 2018. The 2018 Source Test Reports for the A-7 and A-9 Flares were unavailable at the time of this submittal. Therefore, they will be included in the October 1, 2018 through March 31, 2019 report, which is due to the BAAQMD and USEPA Region IX on April 30, 2019.

Due to the non-operation of the A-8 Flare in 2018, it was not source tested. Additionally, the A-8 Flare is scheduled for decommissioned and will not operate again. On October 27, 2017, a Change of Permit Conditions Application was submitted to the BAAQMD requesting that the A-8 Flare be removed from the Title V Permit.

On October 27, 2017, a Change of Permit Conditions Application was submitted to the BAAQMD requesting that Title V Permit Condition Number 10164, Part 30 be changed to include language allowing the extension of the annual source test deadlines during times of prolonged inoperation or maintenance.

TABLE 3-1 – PERFORMANCE TEST REQUIREMENTS

Rule	Requirement	Location in Report
8-34-412, §60.8, §60.752(b)(2)(iii)(B), §60.754(d)	Compliance Demonstration Test	Section 3.1,
§60.757(g)(1)	A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for future collection system expansion.	Section 3.2, Appendix A
§60.757(g)(2)	The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based.	Section 3.3

3.2 Compliance with §60.757(g)(1)

"A diagram of the collection system showing collection system positioning including wells, horizontal collectors..."

A map of the LFG collection system showing the location of all vertical wells, horizontal collectors, and other LFG extraction devices is included in Appendix A.

3.3 Compliance with §60.757(g)(2)

"The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based."

The existing GCCS consists of LFG wells and collectors spaced in accordance with standard industry practices. Based on continuous compliance and operational experience the installed collector density appears adequate for controlling surface emissions and subsurface LFG migration.

The landfill operator will conduct routine monitoring in accordance with NSPS requirements. If the GCCS at the landfill does not meet the measures of performance set forth in the NSPS, the GCCS will be adjusted or modified as required.

The existing GCCS conveyance piping and emission control devices have sufficient capacity to handle all current and future LFG flow rates (based on quarterly SEM results and monthly wellhead readings). New emission control devices will be designed and permitted as appropriate for future LFG generation rates.

3.4 Compliance with §60.757(g)(3)

"The documentation of the presence of asbestos or non-degradable material for each area from which collection wells have been excluded based on the presence of asbestos or non-degradable material."

Segregated areas or accumulations of asbestos material were not documented for the site in the GCCS Design Plan. Therefore, §60.757(g)(3) is not applicable.

3.5 Compliance with §60.757(g)(4)

"The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area."

There are no non-productive areas that have been excluded from the coverage of the GCCS. Therefore, §60.757(g)(4) is not applicable.

construction is scheduled to begin October 15, 2018. Further discussion will be provided in the October 1, 2018 through March 31, 2019 report, which is due to the BAAQMD and USEPA Region IX by April 30, 2019.

The LFG Probe and In-Structure Monitoring Reports are included in Appendix M.

The Landfill operator will continue surface and perimeter monitoring in accordance with the approved monitoring plans. If the GCCS at the landfill does not meet the measures of performance set forth in the NSPS, the GCCS will be adjusted or modified in accordance with the NSPS requirements.

4 START-UP, SHUTDOWN, MALFUNCTION (SSM) PLAN

4.1 SSM Log for the GCCS at Ox Mountain

The NESHAP contained in 40 CFR Part 63, AAAA for MSW landfills include the regulatory requirements for submittal of a semi-annual report (under 40 CFR §63.10(d)(5) of the general provisions) if an SSM event occurred during the reporting period. The reports required by §63.1980(a) of the NESHAP and §60.757(f) of the NSPS summarize the GCCS exceedances. These two semi-annual reports contain similar information and have been combined as allowed by §63.10(d)(5)(i) of the General Provisions.

NESHAP 40 CFR part 63, AAAA became effective on January 16, 2004. Those SSM events that occurred during the NSPS semi-annual reporting period are reported in this section (April 1, 2018 through September 30, 2018). The following information is included as required:

- During the reporting period, there were 35 SSM events at the A-7 Flare. Additional details are available in the SSM log for the A-7 Flare located in Appendix D, Flare SSM Log.
- During the reporting period, the A-8 Flare did not operate therefore there were no SSM event. Additional details are available in the SSM log for the A-8 Flare located in Appendix D, Flare SSM Log.
- During the reporting period, 162 SSM events occurred at the A-9 Flare. Additional details are available in the SSM log for the A-9 Flare located in Appendix D, Flare SSM Log.
- During the reporting period, 34 SSM events occurred in the wellfield. Details are included in Appendix C, Well SSM Log.
- There were 231 vents in total. In all 231 events, automatic systems and operator actions were consistent with the standard operating procedures contained in the SSM Plan. There were no deviations from the SSM plan.
- There were no identified exceedances during the reporting period of any applicable emission limitation in the landfills NESHAP (§63.10(d)(5)(i)).
- Revisions of the SSM Plan to correct deficiencies in the landfill operations or procedures were neither required, nor prepared (§63.6(e)).

Attachments:

Combined Title V Semi-Annual and Partial 8-34 Annual Report

I certify the following:

*Based on information and belief formed after reasonable inquiry,
information on the startup, shutdown, malfunction forms, all
accompanying reports, and other required certifications are true,
accurate, and complete.*



Signature of Responsible Official

10/16/18

Date

Michael Mahoney

Name of Responsible Official