

December 15, 2020
File No. 01202092.00, Tasks 7 & 8

Mr. Jeffrey Gove
Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

TV Tracking #: 182

1. RECEIVED IN ENFORCEMENT: 12/16/2020

RECEIVED
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BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

Subject: SEMI-ANNUAL RULE 8-34/NSPS, SSM, AND TITLE V REPORT, SHORELINE AMPHITHEATRE, MOUNTAIN VIEW, CALIFORNIA (FACILITY NO. A2561)

Dear Mr. Gove:

On behalf of the Shoreline Amphitheatre, SCS Engineers (SCS) is submitting the Rule 8-34/New Source Performance Standards (NSPS) Semi-Annual, Start-up, Shutdown, and Malfunction (SSM) Plan Semi-Annual, and Title V Semi-Annual Reports for the Shoreline Amphitheatre, Mountain View, California.

The attached documents satisfy the sections within 40 Code of Federal Regulations (CFR) 63, Subpart AAAA (National Emissions Standards for Hazardous Air Pollutants [NESHAPs] for Landfills) and 40 CFR Subpart WWW (New Source Performance Standards [NSPS]), including 40 CFR 60.757(f) requirements, which describe the items to be submitted in semi-annual reports for landfills seeking to comply with NSPS using an active collection system. The reports also satisfy Bay Area Air Quality Management District (BAAQMD) requirements under Rule 8-34 and the facility's Title V permit for Rule 8-34, SSM Plan, and Title V semi-annual reports. The semi-annual reports cover the reporting period of June 1, 2020 through November 30, 2020.

Please contact Michael O'Connor at (707) 546-9461 if you have any questions or require any additional information.

Sincerely,

Haley M. DeLong
Project Professional
SCS ENGINEERS

Michael O'Connor, C.A.P.P.
Project Manager
SCS ENGINEERS



Mr. Jeffrey Gove
December 15, 2020
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cc: Brian Rutkowski, Shoreline Amphitheatre
Administrator, Air Division U.S. EPA Region IX
Pat Sullivan, SCS
Art Jones, SCSFS

Enclosures: NSPS/BAAQMD Rule 8-34 Semi-Annual Report
SSM Plan Semi-Annual Report (with Certification)
Semi-Annual Title V Report of Required Monitoring (with Certification)

SHORELINE AMPHITHEATRE

TITLE V SEMI-ANNUAL MONITORING REPORT

SITE: SHORELINE AMPHITHEATRE	FACILITY ID#: A2561
REPORTING PERIOD: from 6/01/2020 through 11/30/2020	

List of Permitted Sources and Abatement Device

Permit Unit Number	Equipment Description
S-1	Landfill and Gas Collection System
S-3	Diesel Engine for Emergency Standby Generator
A-1	Carbon Adsorption System
A-2	Landfill Gas Flare

The Bay Area Air Quality Management District (BAAQMD or District) issued Notices of Violation (NOVs) Nos. A53663 and A53664 on December 10, 2014.

- NOV No. A53663 references Rule 2-6-307 for not venting landfill gas (LFG) to a flare.
- NOV No. A53664 references the Title 17 California Code of Regulations (CCR) (Landfill Methane Rule [LMR]) Sections 95464(b)(3)(A)(1) and 95464(b)(4) for no LFG control and no source test, respectively

On behalf of Live Nation, SCS Engineers (SCS) submitted a 10-day NOV response letter to the BAAQMD on December 19, 2014.

The BAAQMD also issued NOV No. A56519 on March 1, 2018.

- NOV No. A56519 references the Title 17 CCR Section 95470(b)(3) for an incomplete annual LMR report for 2016.

SCS submitted a 10-day NOV response letter for this violation on March 9, 2018 and a revised 2016 LMR annual report was delivered to the BAAQMD office via FedEx on March 15, 2018.

Per the Notice to Comply (NTC) issued by the BAAQMD on September 6, 2018, Shoreline was required to submit an addendum to the June 2019 Title V Semi-Annual Monitoring Report referencing the three above-mentioned NOVs. Live Nation is working to resolve these issues with the BAAQMD and the City of Mountain View since Shoreline is unable to maintain combustion of the A-2 flare due to low gas quality. A Compliance and Enforcement Agreement, dated September 29, 2019, between Live Nation, the BAAQMD, and the City of Mountain View requires the landfill gas (LFG) collection and control system (GCCS) to be reconfigured to transport LFG from the Shoreline Amphitheatre collection system directly to the City of Mountain

View's flare station instead of directing the LFG to the CAS. As required by the September 2019 Compliance and Enforcement Agreement, SCS submitted a proposed plan for implementing the project on November 27, 2019. Brenda Cabral of the BAAQMD provided notification of District approval of the Plan via email on March 24, 2020. On May 5, 2020, SCS submitted a permit application on behalf of Live Nation to the BAAQMD to apply for the necessary permits to reconfigure the GCCS to the City of Mountain View's flare station. The permit application is currently under BAAQMD review.

These NOV's were not issued during the reporting period; however, these violations will continue to be noted in the Title V reports until the project is complete and compliance is achieved by destroying the LFG in the City of Mountain View's flares.

Please note that NOV No. A53664 and No. A56519 both reference sections of the LMR, and these citations are not federally enforceable, and not required by Rule 8-34 or the NSPS, but have been referenced herein, per directive from the BAAQMD inspector. Additionally, the LMR sections referenced in NOV Nos. A53664 and A56519 are not included in Shoreline's current Major Facility Review (MFR, Title V) permit.

NOV No. A53663 references BAAQMD Regulation 2-6-307 and Condition No. 876, Part 4, which requires LFG to be vented to the flare. Please note that Part 4 also allows the use of the A-1 carbon adsorption system (CAS). The CAS has been acting as the main control device due to insufficient landfill gas (LFG) generation to sustain flare operation.

Please note that SCS and Live Nation have requested that the application to modify the GCCS be processed under the District's accelerated permitting provision, which would enable the construction of the required modifications to the GCCS to commence upon the District's issuance of a temporary permit to operate (PTO) letter. Live Nation is currently awaiting issuance of that temporary PTO letter. Once construction commences, it is anticipated that the system could go online, resulting in the LFG being combusted in the City's flares and bringing Shoreline Amphitheatre into full compliance with the LMR, within two weeks.

SHORELINE AMPHITHEATRE

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Shoreline Amphitheatre	Facility ID#: A2561
Permitted Unit: S-1 – Landfill Gas Collection System	Reporting Period: from 6/01/2020 through 11/30/2020

Type of Limit or Criteria	Monitoring Requirement Citation	Parameters Monitored	Monitoring Frequency	Citation of Limit	Limit	Compliance Summary	Corrective Actions Taken
Collection System Installation Dates	BAAQMD 8-34-501.7 and 501.8	Records	Periodic / Event Basis	BAAQMD 8-34-304.1	For Inactive / Closed Areas: collection system components must be installed and operating by 2 years + 60 days after initial placement	Continuous	N/A
Gas Flow	BAAQMD 8-34-501.10 and 508	Gas Flow Meter and Recorder (every 15 minutes)	Continuous	BAAQMD 8-34-301.1	Landfill gas collection system shall operate continuously and all collected gases shall be vented to a properly operating control system	Continuous	N/A
Gas Flow	BAAQMD Condition # 876, Parts 10, 11, and 18b-e and BAAQMD Regulation 8-34-501.1 and 8-34-501.2	Gas Flow Meter, Flare Alarms, and Records of Landfill Gas Flow Rates, Collection and Control Systems Downtime, and Collection System Components	Periodic / Daily	BAAQMD Condition # 876, Parts 3 and 4	Landfill gas collection system shall operate continuously and all collected gases shall be vented to a properly operating control system	Continuous	N/A
Collection and Control Systems Shutdown Time	BAAQMD Condition # 876, Parts 18b, 18d, and 18e and BAAQMD 8-34-501.1	Operating Records	Periodic / Daily	BAAQMD 8-34-113.2	≤240 hours/year and 5 consecutive days	Continuous	N/A

SHORELINE AMPHITHEATRE

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Shoreline Amphitheatre	Facility ID#: A2561
Permitted Unit: S-1 – Landfill Gas Collection System	Reporting Period: from 6/01/2020 through 11/30/2020

Type of Limit or Criteria	Monitoring Requirement Citation	Parameters Monitored	Monitoring Frequency	Citation of Limit	Limit	Compliance Summary	Corrective Actions Taken
Periods of In-operation for Parametric Monitors	BAAQMD 1-523.4	Operating Records for All Parametric Monitors	Periodic / Daily	BAAQMD 1-523.2	≤15 consecutive days/incident and ≤30 days/12 month period	Continuous	N/A
Continuous monitors	40 CFR 60.7(b)	Operating Records for All Continuous Monitors	Periodic / Daily	40 CFR 60.13(e)	Requires Continuous Operation except for breakdowns, repairs, calibration, and required span adjustments	Continuous	N/A
Wellhead Pressure	BAAQMD 8-34-414, 501.9 and 505.1 and BAAQMD Condition # 876, Part 18i	Monthly Inspection and Records	Periodic / Monthly	BAAQMD 8-34-305.1 and BAAQMD Condition #876, Part 3b	< 0 psig (applies to each well or collector connected to vacuum)	Continuous	N/A
Temperature of Gas at Wellhead	BAAQMD 8-34-414, 501.9 and 505.2 and BAAQMD Condition # 876, Part 18i	Monthly Inspection and Records	Periodic / Monthly	BAAQMD 8-34-305.2 and BAAQMD Condition #876, Part 3b	<55° C (131° F) (applies to each well or collector connected to vacuum)	Continuous	N/A
Gas Concentrations at Wellhead	BAAQMD Condition # 876, Part 3d – e and 18i	Monthly Inspection and Records	Periodic / Monthly	BAAQMD Condition #876, Part 3c(i)	O ₂ ≤ 15% by volume (applies to all wells and collectors connected to vacuum, except as described in Part 3c (ii-iii))	Continuous	N/A
Collection System Component	BAAQMD Condition # 876, Parts 3d-e and	Monthly Inspection and Records	Periodic / Monthly	BAAQMD 8-34-404 and BAAQMD Condition # 876, Part	≥20 wells and collectors operating continuously at any one time and re-	Continuous	N/A

SHORELINE AMPHITHEATRE

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Shoreline Amphitheatre	Facility ID#: A2561
Permitted Unit: S-1 – Landfill Gas Collection System	Reporting Period: from 6/01/2020 through 11/30/2020

Type of Limit or Criteria	Monitoring Requirement Citation	Parameters Monitored	Monitoring Frequency	Citation of Limit	Limit	Compliance Summary	Corrective Actions Taken
Operating Requirements	18i			3a(i & iii)	connect wells and collectors to vacuum when wellhead CH ₄ > 20% by volume		
Well Shutdown Limits	BAAQMD 8-34-117.6 and 501.1	Records	Periodic / Daily	BAAQMD 8-34-117.4	No more than 5 wells at a time or 10% of total collection system, whichever is less	Continuous	N/A
Well Shutdown Limits	BAAQMD 8-34-117.6 and 501.1	Records	Periodic / Daily	BAAQMD 8-34-117.5	≤24 hours per well	Continuous	N/A
TOC (Total Organic Compounds Plus Methane)	BAAQMD 8-34-501.6 and 503 and BAAQMD Condition # 876, Part 18i	Quarterly Inspection of Collection and Control System Components with Portable Analyzer and Records	Periodic / Quarterly	BAAQMD 8-34-301.2	≤1000 ppmv as methane (component leak limit)	Continuous	N/A
Surface emission monitoring (TOC)	BAAQMD 8-34-415, 416, 501.6, 506 and 510 and BAAQMD Condition # 876, Part 18i	Monthly cover visual inspection of Cover; Quarterly Inspection with Portable Analyzer of Surface, Various Reinspection Times for Leaking Areas and Records	Periodic / Monthly, Quarterly, and Event Basis	BAAQMD 8-34-303	≤500 ppmv as methane at 2 inches above surface (surface leak limit)	Continuous	N/A
H ₂ S	None	N/A	None	BAAQMD 9-2-301	Property Line Ground Level Limits: ≤0.06 ppm, averaged over 3 minutes and ≤0.03 ppm, averaged over 60	Continuous	N/A

SHORELINE AMPHITHEATRE

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Shoreline Amphitheatre	Facility ID#: A2561
Permitted Unit: S-1 – Landfill Gas Collection System	Reporting Period: from 6/01/2020 through 11/30/2020

Type of Limit or Criteria	Monitoring Requirement Citation	Parameters Monitored	Monitoring Frequency	Citation of Limit	Limit	Compliance Summary	Corrective Actions Taken
Amount of Waste Accepted	BAAQMD Regulation 8-34-501.7	Records	Periodic / Annual	BAAQMD Condition # 876, Part 1	minutes. 0 tons/day and ≤366,000 tons (cumulative amount of all wastes) and ≤542,000 yd ³ (cumulative amount of all wastes and cover materials)	Continuous	N/A
Startup Shutdown or Malfunction Procedures	40 CFR 63.1980(a-b)	Records (all occurrences, duration of each, corrective actions)	Periodic/Event Basis	40 CFR 63.6(e)	Minimize Emissions by Implementing SSM Plan	Continuous	N/A

SHORELINE AMPHITHEATRE

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Shoreline Amphitheatre	Facility ID#: A2561
Permitted Unit: A-2 – Landfill Gas Flare	Reporting Period: from 6/01/2020 through 11/30/2020

Type of Limit or Criteria	Monitoring Requirement Citation	Parameters Monitored	Monitoring Frequency	Citation of Limit	Limit	Compliance Summary	Corrective Actions Taken
Non-Methane Organic Compounds (NIMOC)	BAAQMD 8-34-412 and 501.4 and BAAQMD Condition # 876, Parts 16 and 18i	Source Tests and Records	Periodic / Annual	BAAQMD 8-34-301.3	≥98% removal by weight OR < 30 ppmv, dry basis @ 3% O ₂ , expressed as methane (applies to A-2 Landfill Gas Flare only)	Continuous	Flare A-2 did not operate during the reporting period.
Temperature of Combustion Zone (CT)	BAAQMD 8-34-501.3 and 507 and SIP 8-34-501.3 and BAAQMD Condition # 876, Part 9	Temperature Sensor and Recorder (continuous)	Continuous	BAAQMD Condition # 876, Part 8a	CT ≥1400°F, averaged over any 3-hour period (applies to A-2 Landfill Gas Flare when A-2 is operated alone)	Continuous	Flare A-2 did not operate during the reporting period.
Temperature of Combustion Zone (CT)	BAAQMD 8-34-501.3 and 507 and SIP 8-34-501.3 and BAAQMD Condition # 876, Part 9	Temperature Sensor and Recorder (continuous)	Continuous	BAAQMD Condition # 876, Part 8b	CT ≥1200°F, averaged over any 3-hour period (applies to A-2 Landfill Gas Flare when A-2 is down stream of A-1)	Continuous	Flare A-2 did not operate during the reporting period.
Opacity	None	N/A	None	BAAQMD 6-1-301	Ringlemann No. 1 for <3 minutes/hour (applies to A-1 Carbon Adsorption System and A-2 Landfill Gas Flare)	Continuous	Flare A-2 did not operate during the reporting period.
FP	None	N/A	None	BAAQMD 6-1-310	≤0.15 grains/dscf (applies to A-1 Carbon Adsorption System and A-2 Landfill Gas Flare)	Continuous	Flare A-2 did not operate during the reporting period.

SHORELINE AMPHITHEATRE

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Shoreline Amphitheatre	Facility ID#: A2561
Permitted Unit: A-2 – Landfill Gas Flare	Reporting Period: from 6/01/2020 through 11/30/2020

Type of Limit or Criteria	Monitoring Requirement Citation	Parameters Monitored	Monitoring Frequency	Citation of Limit	Limit	Compliance Summary	Corrective Actions Taken
SO ₂	None	N/A	None	BAAQMD 9-1-301	Property Line Ground Level Limits: ≤0.5 ppmb for 3 minutes and ≤0.25 ppm for 60 min. and ≤0.05 ppm for 24 hours (applies to A-2 Landfill Gas Flare only)	Continuous	Flare A-2 did not operate during the reporting period.
SO ₂	BAAQMD Condition # 876, Parts 16g, or 17 and 18h-i	Annual TRS Analysis of Landfill Gas, or Annual SO ₂ Test at Flare, and Records	Periodic/ Annual	BAAQMD Regulation 9-1-302	≤ 300 ppm (dry basis) (applies to A-2 Landfill Gas Flare only)	Continuous	Flare A-2 did not operate during the reporting period.
Total Sulfur Content in Landfill Gas	BAAQMD Condition # 876, Parts 17 and 18h-i	Annual TRS Analysis of Landfill Gas and Records	Periodic/ Annual	BAAQMD Condition # 876, Part 15	≤1300 ppmv, express as H ₂ S	Continuous	Flare A-2 did not operate during the reporting period.
Heat Input	BAAQMD Condition # 876, Parts 11, 18c, 18e, and 18f	Gas Flow Meter and Records	Periodic/ Continuous, Monthly	BAAQMD Condition # 876, Parts 5	≤86.4 MM BTU per day and ≤31,536 MM BTU per year (applies to A-2 landfill Gas Flare only)	Continuous	Flare A-2 did not operate during the reporting period.
NO _x	BAAQMD Condition # 876, Parts 16d and 18i	Source Tests and Records	Annual	BAAQMD Condition # 876, Parts 6	≤30 ppmv of NO _x , corrected to 15% O ₂ , dry (applies to A-2 Landfill Gas Flare only)	Continuous	Flare A-2 did not operate during the reporting period.
CO	BAAQMD Condition # 876, Parts 16d and 18i	Source Tests and Records	Annual	BAAQMD Condition # 876, Parts 7	≤ 83 ppmv of CO, corrected to 15% O ₂ , dry (applies to A-2 Landfill Gas Flare only)	Continuous	Flare A-2 did not operate during the reporting period.

SHORELINE AMPHITHEATRE

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Shoreline Amphitheatre	Facility ID#: A2561
Permitted Unit: A-1 – Carbon Adsorption System	Reporting Period: from 6/01/2020 through 11/30/2020

Type of Limit or Criteria	Monitoring Requirement Citation	Parameters Monitored	Monitoring Frequency	Citation of Limit	Limit	Compliance Summary	Corrective Actions Taken
NMOC	BAAQMD 8-34-501.11 and 8-34-509 and BAAQMD Condition # 876, Parts 14 and 18g	Periodic Monitoring of A-1 Exhaust with a Portable Analyzer and Records	Periodic / Event Basis (at least once for every 16 hours of A-1 operation; after conc. is > 90 ppm, at least once for every 8 hours of A-1 operation)	BAAQMD 8-34-301.4	98% removal by weight OR < 120 ppmv, dry basis @ 3% O ₂ , expressed as methane (applies to A-1 Carbon Adsorption System only)	Continuous	
NMOC	BAAQMD Condition # 876, Parts 14 and 18g	Periodic Monitoring of A-1 Exhaust with a Portable Analyzer and Records	Periodic / Event Basis (at least once for every 16 hours of A-1 operation; after conc. is > 90 ppm, at least once for every 8 hours of A-1 operation)	BAAQMD Condition # 876, Parts 13	Replace carbon when exhaust concentration exceeds 108 ppmv, dry basis @ 3% O ₂ , expressed as methane (applies to A-1 Carbon Adsorption System only)	Continuous	BAAQMD inspector approved weekly sampling of carbon adsorption system due to consistently low NMOC concentrations.

SHORELINE AMPHITHEATRE

TITLE V SEMI-ANNUAL MONITORING REPORT

Site: Shoreline Amphitheatre	Facility ID#: A2561
Permitted Unit: S-3 – Diesel Engine	Reporting Period: from 06/01/2020 through 11/30/2020

Type of Limit or Criteria	Monitoring Requirement Citation	Parameters Monitored	Monitoring Frequency	Citation of Limit	Limit	Compliance Summary	Corrective Actions Taken
Opacity	None	N/A	No monitoring requirement	BAAQMD 6-1-303	Ringelmann No.2 for <3 minutes/hour	Continuous	N/A
FP	None	N/A	No monitoring requirement	BAAQMD 6-1-310	≤0.15 grains/dscf	Continuous	N/A
SO ²	None	N/A	No monitoring requirement	BAAQMD 9-1-301	Property Line Ground Level Limits: ≤0.5 ppm for 3 minutes and ≤0.25 ppm for 60 minn and ≤0.05 ppm for 24 hours	Continuous	N/A
Liquid Fuel Sulfur Content	BAAQMD Condition # 19912, Part 4f	Vendor certification	Periodic / Event Basis	BAAQMD Regulation 9-1-304	Fuel Sulfur Limit: 0.5% by weight	Continuous	N/A
Liquid Fuel Sulfur Content	BAAQMD Condition # 19912, Part 4f	Vendor certification	Periodic / Event Basis	CCR Title 17, Section 93115.5.9b) and CCR Title 13, Section 2281 (a)(1-5)	Standby Engines must use CARB Diesel Fuel or other CARB Approved Alternative Fuel, which has Fuel Sulfur Limits of: ≤500 ppmw of S (≤0.05% S, by weight) or ≤15 ppmw of S (for fuel sold after 6/1/06)	Continuous	N/A
Operating Hours	BAAQMD Regulation 9-8-502.1 and 9-8-530 and BAAQMD Condition # 19912, Parts 3 and 4a-d and CCR Title 17, Section 93115.10(e)(1) & (g)(1)	Meter to record either operating hours or fuel usage and records	Periodic / Continuous, Monthly	BAAQMD Condition # 19912, Part 1 and CCR Title 17, Section 93115.6(b)(3)(A)(1)(a)	Operating Hours for Reliability-Related Activities: ≤20 hours in a calendar year	Continuous	N/A

SHORELINE AMPHITHEATRE
TITLE V SEMI-ANNUAL MONITORING REPORT

SITE: SHORELINE AMPHITHEATRE	FACILITY ID#: A2561
REPORTING PERIOD: from 6/01/2020 through 11/30/2020	

CERTIFICATION:

I declare, under penalty of perjury under the laws of the State of California, that, based on information and belief formed after reasonable inquiry, all information provided in this reporting package is true, accurate, and addresses all deviations during the reporting period:



Signature of Responsible Official

12/14/2020

Date

Brian Rutkowski


Name of Responsible Official

General Manager, Shoreline Amphitheatre

Title of Responsible Official

Mail to:

*Director of Compliance and Enforcement
BAAQMD
375 Beale Street, Suite 600
San Francisco, CA 94105
Attn: Title V Reports*



NSPS/BAAQMD Rule 8-34 Semi-Annual Report
June 1, 2020 through November 30, 2020
Shoreline Amphitheatre
Mountain View, California (Facility No. A2561)

Prepared for:

Shoreline Amphitheatre
1 Amphitheatre Parkway
Mountain View, CA 94043

For Submittal to:

Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

SCS ENGINEERS

01202092.00, Task 8 | December 2020

3843 Brickway Boulevard, Suite 208
Santa Rosa, CA 95403
707-546-9461

This New Source Performance Standards (NSPS)/Bay Area Air Quality Management District (BAAQMD) Rule 8-34 Semi-Annual Report for the Shoreline Amphitheatre in Mountain View, California, dated December 2020, was prepared and reviewed by the following:



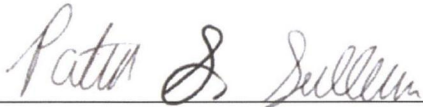
Haley M. DeLong
Project Professional

SCS ENGINEERS



Michael O'Connor, C.A.P.P.
Project Manager

SCS ENGINEERS



Patrick S. Sullivan, R.E.P.A., C.P.P., B.C.E.S.
Senior Vice President

SCS ENGINEERS

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Table 1 – GCCS Downtime

Table 2 – LFG Extraction Wells with Positive Pressure

Table 3 – Average Monthly Flow Meter Readings

Appendices

Appendix A – Drawing of LFG Collection and Control System

Appendix B – Quarterly Component Leak Monitoring Results

Appendix C – Excerpts from Carbon Vent Source Tests

Appendix D – Annual Surface Emissions Monitoring Results

Appendix E – Projected LFG and NMOC Generation Rate

1.0 INTRODUCTION

On behalf of Shoreline Amphitheatre (Shoreline or Landfill), SCS Engineers (SCS) submits this New Source Performance Standards (NSPS); 40 Code of Federal Regulations [CFR] Part 60, Subpart WWW and Cc) and Bay Area Air Quality Management District (BAAQMD) Rule 8-34 Semi-Annual Report to the BAAQMD. This Semi-Annual Report pertains to the landfill gas (LFG) collection and control system (GCCS) operated at Shoreline and covers the period of June 1, 2020 through November 30, 2020.

This report includes the following information, as required by BAAQMD Rule 8-34-411:

- All collection system and/or component downtime and reasons for the shutdown (8-34-501.1)
- All emission control system downtime and reason for the shutdown (8-34-501.2)
- Continuous temperature monitoring and dates of any excesses (8-34-501.3 and 507)
- Testing performed to satisfy of the requirements of this Rule (8-34-501.4)
- Monthly LFG flow rates and excesses (8-34-501.5)
- Collection and emission control system leak testing and any excesses, action taken to correct excesses, and re-monitored concentrations (8-34-501.6 and 503)
- Landfill surface monitoring, location of excesses, excess concentration, date discovered, actions taken to repair the excess, and re-monitored concentrations (8-34-501.6 and 506)
- Annual refuse acceptance rates, amount of refuse in place, and the nature, location, and amount of non-degradable waste (8-34-501.7 and 501.8).
- Well head monitoring including gauge pressure, LFG temperature, and LFG oxygen concentration (8-34-501.9 and 505)
- Continuous flow monitoring (8-34-501.10)
- Key emission control system operating parameters (8-34-509)

2.0 SITE BACKGROUND INFORMATION

Shoreline is a small portion of a much larger landfill site owned and operated by the City of Mountain View. The portion that includes Shoreline is referred to as the Vista site and was operated as a municipal landfill from 1980 to 1993. Bill Graham Presents, Inc. (BGP) began leasing the land on the northeast edge of the Vista site from the City of Mountain View in 1986 and developed it as the Shoreline Amphitheatre entertainment complex. The portion of the landfill operated as Shoreline Amphitheatre has not accepted waste since BGP began leasing the property. BGP installed a GCCS shortly after developing the site as an amphitheatre and has maintained it separately from the larger City of Mountain View Landfill.

2.1 EXISTING LANDFILL GAS CONTROL SYSTEM

The existing GCCS at Shoreline consists of 34 horizontal and 22 vertical extraction wells, five test ports, leachate and condensate collection systems, an enclosed flare and an activated carbon adsorption system (CAS), which act as control devices to destroy or remove organic constituents in the LFG. The system has a maximum flow capacity of 400 standard cubic feet per minute (scfm) of LFG. A site plan of the existing GCCS is provided in **Appendix A**. Maintenance of the GCCS is contracted to SCS Field Services (SCSFS).

3.0 MONITORING AND RECORDS

3.1 CONTINUOUSLY MONITORED PARAMETERS

Under BAAQMD Rule 8-34-301.1, the GCCS must be operated continuously. Occasionally it becomes necessary to shut down all or portions of the system for routine maintenance and repair. There are two continuous monitoring devices that report the running status of the two main system components: a continuous flow meter detects if the LFG collection/extraction system is running by reporting the presence or absence of flow, and a temperature gauge (thermocouple) detects if the emission control combustion device (flare) is running by the presence or absence of combustion-range temperatures. Because the LFG extraction system and control device are designed to work in concert, any downtime for the extraction system also results in downtime for the control device. When no flow is developed by the LFG extraction system, the flare will go off-line. Conversely, if combustion is not detected in the flare, the LFG extraction system will go off-line. However, the LFG extraction system can be restarted without the flare by diverting the LFG to the CAS (A-1) under Condition # 876, Part 4 of the Title V permit.

For the past several years, the CAS has been acting as the main control device due to low gas quality and quantity being collected at Shoreline, which is not sufficient to sustain the flare flame. However, due to the BAAQMD's concerns regarding the CAS operating as the main control device, which does not control methane, a greenhouse gas, the BAAQMD, Shoreline, and SCS have been working towards a solution as the gas quality continues to decline, and Shoreline is unable to maintain combustion using the A-2 flare.

Per a Compliance and Enforcement Agreement (CEA) dated November 6, 2018, between the BAAQMD and Live Nation Worldwide, Inc. (Live Nation), the owner/operator of Shoreline, the BAAQMD allowed Live Nation and SCSFS to conduct a study to assess the feasibility of operating the GCCS intermittently to enable use of the flare to control methane emissions from the collected LFG. The study involved shutting down the GCCS for an extended period to determine whether the methane concentration of the LFG could be elevated to a point where the LFG could be effectively flared, and whether this method could be implemented without causing surface or equipment leaks in excess of the standards set forth in BAAQMD Rule 8-34. This study was performed from December 10, 2018 through January 28, 2019, with daily, brief startups of the system in order to take LFG readings. During the study, methane levels never reached 35%, a level which would indicate a minimum combustible level of methane. The results of this study were submitted to the BAAQMD on March 1, 2019.

As methane concentrations during the study never elevated to the point where the LFG could be effectively flared, a revised CEA dated September 29, 2019 was issued, which required the GCCS to be reconfigured to transport LFG from the Shoreline Amphitheatre collection system directly to the

City of Mountain View's flare station instead of directing the LFG to the CAS. As required by the September 2019 CEA, SCS submitted a proposed plan for implementing the project on November 27, 2019. Brenda Cabral of the BAAQMD provided notification of District approval of the Plan via email on March 24, 2020. On May 5, 2020, SCS submitted a permit application on behalf of Live Nation to the BAAQMD to apply for the necessary permits to reconfigure the GCCS to the City of Mountain View's flare station. The permit application is currently under BAAQMD review.

3.1.1 Gas Extraction System Downtime

During the reporting period, the LFG extraction system went off-line on two (2) occasions due to maintenance or repair. SCSFS was able to bring the extraction system back on-line and maintain compliance after the maintenance was completed in both instances. Details of the extraction system downtime are provided in **Table 1**, including the date, total elapsed downtime, reason for the downtime, and a description of the corrective action.

3.1.2 Emission Control System Downtime

During the reporting period, the CAS went off-line on two (2) occasions. The total elapsed time for the reporting period when the entire GCCS was offline was 1.42 hours (**Table 1**). The downtime was due to a shutdown for maintenance, inspection, and/or repair as allowed by District Rule 8-34-113 and in accordance with the BAAQMD Compliance Advisory dated November 5, 2018.

During this reporting period, there were no instances when LFG flow passed through the flare or CAS uncontrolled (i.e., free venting), and the collected LFG stream was never diverted from the control devices.

3.1.3 Individual Well Downtime

Individual well downtime is permitted in accordance with Condition 876, Part 3 of the Landfill's permit, which allows less than continuous operation of a certain number of wells as long as there are a minimum of 20 wells operating continuously at any one time. Wells were temporarily disconnected at various dates and times when the methane concentration detected at the wellhead was less than 20% by volume, prior to disconnection. At all times during this reporting period, a minimum of 20 wells were continuously operating, in accordance with Condition 876, Part 3(a)(i).

3.1.4 Flow Meter and Temperature Gauge Downtime

A temperature monitoring device with a continuous recorder, and a gas flow rate measuring device, which records flow at least once every 15 minutes, must be installed at the flare station. The temperature and LFG flow rate monitoring data are used to determine the amount of time the LFG collection and control systems are online. The temperature data are also used to show compliance with the flare minimum temperature requirement. The monitoring devices must be operating continuously to be in compliance with 40 CFR 60.756 (b) and to show that the flare or CAS is online at any time that the collection system is sending LFG to the flare or CAS (in compliance with 40 CFR 60.753 (e) and (f)). There were no downtime events for the flow meter or temperature monitoring/recording equipment during the reporting period.

3.1.5 Minimum Flare Temperature

Flare A-2 did not operate during the reporting period because there was not enough fuel to sustain combustion. Additionally, due to LFG quality, annual performance testing of the flare did not occur. A performance test was conducted on the carbon vent station to demonstrate compliance with applicable BAAQMD Rules. The BAAQMD inspector, beginning several years ago, has been aware of the poor LFG quality at Shoreline and has understood that annual performance testing is conducted on the carbon vent station, the main control device at Shoreline, rather than the flare.

3.2 COMPONENT LEAK QUARTERLY MONITORING

3.2.1 Third Quarter 2020 Monitoring

The third quarter 2020 component leak monitoring, required by BAAQMD Rule 8-34-503, was conducted on August 6, 2020. Testing was performed by SCSFS using an organic vapor analyzer (OVA), which was calibrated on the day the testing occurred. Results of the monitoring event are provided in **Appendix B**.

No concentrations of methane gas over 500 ppmv were detected during the third quarter 2020 monitoring event. The highest reading detected during the third quarter 2020 leak testing was 3 ppmv.

3.2.2 Fourth Quarter 2020 Monitoring

The fourth quarter 2020 component leak monitoring, required by BAAQMD Rule 8-34-503, was conducted on October 16, 2020. Testing was performed by SCSFS using an OVA, which was calibrated on the day the testing occurred. Results of the monitoring event are provided in **Appendix B**.

No concentrations of methane gas over 500 ppmv were detected during the fourth quarter 2020 monitoring event. The highest reading detected the fourth quarter 2020 leak testing was 12 ppmv.

3.3 CONTROL EFFICIENCY

Due to poor gas quality preventing flare operation, a source test was not performed on flare A-2. Instead, a source test was performed on the carbon vent system, which is the only control device operating at Shoreline. The BAAQMD inspector, beginning several years ago, has been aware of the poor LFG quality causing the flare to remain inoperable, and has understood that performance testing is conducted on the carbon vent station, rather than on the flare. On September 2, 2020, testing was performed to demonstrate compliance with either the control efficiency standard of 98% non-methane organic compound (NMOC) destruction efficiency or the outlet concentration standard of 120 ppmv of NMOC as methane at 3% oxygen (O₂), as required by BAAQMD Rule 8-34-301.4, 8-34-412 and 8-304-413.

The NMOC outlet concentration was measured to be 21.6 ppmv as methane at 3% O₂ during the source test, and therefore demonstrated compliance with the rule. An excerpt from the source test report, dated September 30, 2020, is provided as **Appendix C**.

3.4 LANDFILL SURFACE MONITORING

Surface emissions monitoring (SEM) at Shoreline is conducted in accordance with BAAQMD Rule 8-34, and as required by the City of Mountain View Fire Department for health and safety purposes. Shoreline uses an alternative to the standard back and forth sweep monitoring pattern typically used for landfill SEM. A reading is taken over 134 pre-determined points and along 17 continuous paths including sweeps across the wellfield surface, all buildings on the landfill property, and all areas accessible to concert patrons. The surface is monitored before every event that takes place at Shoreline, resulting in almost weekly monitoring during the spring, summer, and fall months. Winter monitoring is less frequent; however, rarely is there a time period greater than one month between surface monitoring events. However, as Shoreline is a closed landfill, the facility is eligible to conduct SEM annually rather than quarterly, per 8-34-506. As such, only the results from the SEM conducted by SCSFS during the first quarter of 2020 are included in this report.

3.4.1 Annual 2020 Monitoring

Annual surface emissions testing for any leaks with a methane concentration of greater than 500 ppmv, as required by BAAQMD Rule 8-34-506, was conducted on February 26, 2020. SCSFS performed the quarterly testing using an OVA, which was calibrated on the testing date.

No methane gas concentrations in excess of 500 ppmv were detected during the annual 2020 monitoring event (**Appendix D**). The highest reading detected during the 2020 annual SEM was 5 ppmv. The next required annual SEM event is due by the end of 2021.

3.5 GAS COLLECTION SYSTEM INSTALLATIONS AND UPGRADES

No gas collection system upgrades, well installations, or well decommissions were implemented during this reporting period.

3.6 WELLHEAD MONTHLY MONITORING

During the reporting period, the extraction wells were monitored for pressure, oxygen, and temperature as required by Rule 8-34. Condition 876, Part 3 of the Landfill's permit allows for wells to be temporarily disconnected if the methane concentration at the wellhead is less than 20% by volume. In operational wells, the oxygen concentration is not permitted to exceed 15% by volume, unless the well contains less than 20% methane by volume, if the well is being operated in order to minimize exposure to LFG during an event, or if a well must be operated to fulfill the requirement of at least 20 wells operating continuously at any one time (Condition 876, Part 3(i)).

Please note that during the reporting period, several wells were unable to be monitored because they were covered by portable toilets and other items in storage and therefore inaccessible. These wells were offline prior to being inaccessible, and there were at least 20 wells operating while these wells were offline so that compliance was achieved. Specifically, wells EW-24, EW-25, EW-26, and EW-27 were unable to be monitored during June through November of 2020, and well EW-19 was unable to be monitored in September of 2020.

The wells at Shoreline are a sub-grade design with limited access, which only allows for operation of the valve. This is a necessity at Shoreline since the wellfield area is also used as a recreational amphitheatre. As such, it is sometimes difficult to get accurate readings of the gas quality at the

wellhead since the valve where the sample port is connected is not at the actual wellhead. In addition, because of the use of the closed landfill as an outdoor amphitheatre, there is no margin of error for LFG surface emissions or migration; therefore, the extraction wells are generally kept online throughout the year although they are pulling low quality gas with high oxygen.

Due to Shoreline's use as an amphitheatre, certain wells are inaccessible for monitoring at different times during the year.

3.6.1 Pressure

The majority of the operational extraction wells were operating under negative pressure during the monitoring events conducted during the reporting period, in accordance with BAAQMD Rule 8-34-305 and 8-34-414. For any operational wells that exhibited positive pressure during this reporting period, the identification number and dates that each well was operating with positive pressure are provided in **Table 2**. The table also includes corrective action and re-monitoring results. In all instances, corrective action and re-monitoring were performed the same day as the exceedances.

3.6.2 Oxygen

Efforts were made to operate all extraction wells with an oxygen content of less than 15% in accordance with the Landfill's permit. Because Shoreline cannot afford to allow surface leaks while recreational events are occurring on the premises, the LFG extraction system vacuum is often operated at a higher than optimal extraction rate; as such, oxygen concentrations in the collected LFG can be higher than in typical scenarios. During the reporting period, there were no exceedances of the oxygen limit based on the alternative wellhead limits that have been approved for the Landfill.

3.6.3 Temperature

As discussed above, the wells at Shoreline are a sub-grade design with limited access, which only allows for operation of the valve. Therefore, temperature monitoring of the individual wellheads is not always accurate, and any readings would not be representative of actual LFG temperatures at the actual wellhead. However, readings were taken in order to comply with BAAQMD Rule 8-34, and these temperature readings all show ambient temperatures below 131 degrees Fahrenheit (°F) (55 degrees Celsius [°C]).

3.7 COVER INTEGRITY MONITORING

The integrity of the landfill cover is monitored continuously at Shoreline. The use of the site as a recreational amphitheatre with the patrons actually sitting on the final grade of the landfill requires that the cover be no less than perfect. Shoreline employs a full-time grounds maintenance team that continuously monitors and makes any necessary repairs to the landfill cover to ensure its continuous integrity.

Additionally, a full inspection of the grounds is conducted prior to each event during the concert season and at least monthly during the remainder of the year. This monitoring schedule complies with and far exceeds the BAAQMD Rule 8-34-510 schedule requirement of monthly monitoring. Monthly cover integrity monitoring for purposes of BAAQMD Rule 8-34 was conducted on June 2, July 8, August 7, September 2, October 2, and November 20, 2020. Surface emissions and cover integrity monitoring results indicate that the plastic cover is intact and without leaks.

3.8 GAS GENERATION ESTIMATE AND MONTHLY FLOW METER READINGS

Shoreline is a small portion of the larger City of Mountain View Landfill, specifically the northeast edge of the Vista Site. Shoreline includes approximately 10 acres of the 84-acre Vista Site; however, it only represents one slope of the landfill, so the actual percentage of refuse is expected to be approximately 5% of the entire Vista Site. The LFG generation rate for Shoreline was estimated using a U.S. Environmental Protection Agency (EPA) LFG generation model. A LFG generation estimate for the Vista portion of the Mountain View Landfill is provided in **Appendix E**.

A gas flow rate meter is installed on the collection system between the blower and the flare (or CAS). Based on actual average monthly LFG flow meter readings (**Table 3**), the GCCS collected approximately 3.4 scfm of LFG (corrected to 50% methane) for the reporting period.

3.9 ANNUAL WASTE ACCEPTANCE RATE AND REFUSE IN PLACE

As discussed in Section 3.8, Shoreline is a small portion of the City of Mountain View Landfill, specifically the northeast edge of the Vista Site. The Landfill has not accepted waste since 1986. Detailed records for annual acceptance rates and refuse-in-place totals for the Mountain View Landfill are kept by the City of Mountain View. Shoreline currently has approximately 366,000 tons or less of refuse in place.

3.9.1 Non-Degradable Waste Areas

There are no landfill areas that are excluded from the collection system requirements. No areas of non-degradable waste deposition are known to exist.

Tables

Table 1. GCCS Downtime
Shoreline Amphitheatre, Mountain View, CA
(June 1, 2020 through November 30, 2020)

Date Offline	Date Online	Hours Down	Reason	Corrective Action
8/31/2020 7:37	8/31/2020 8:03	0.43	Shutdown for Carbon Change	Restart Plant Upon Completion of Carbon Change Out
9/2/2020 8:27	9/2/2020 9:26	0.98	Flow Meter Calibration	Restart Upon Completion
		No Downtime in June, July, October or November 2020.		
Total Downtime		1.42		

**Table 2. LFG Extraction Wells with Positive Pressure
 Shoreline Amphitheatre, Mountain View, California
 (June 1, 2020 through November 30, 2020)**

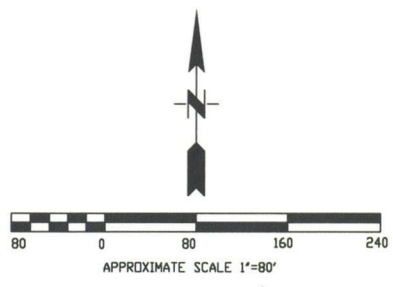
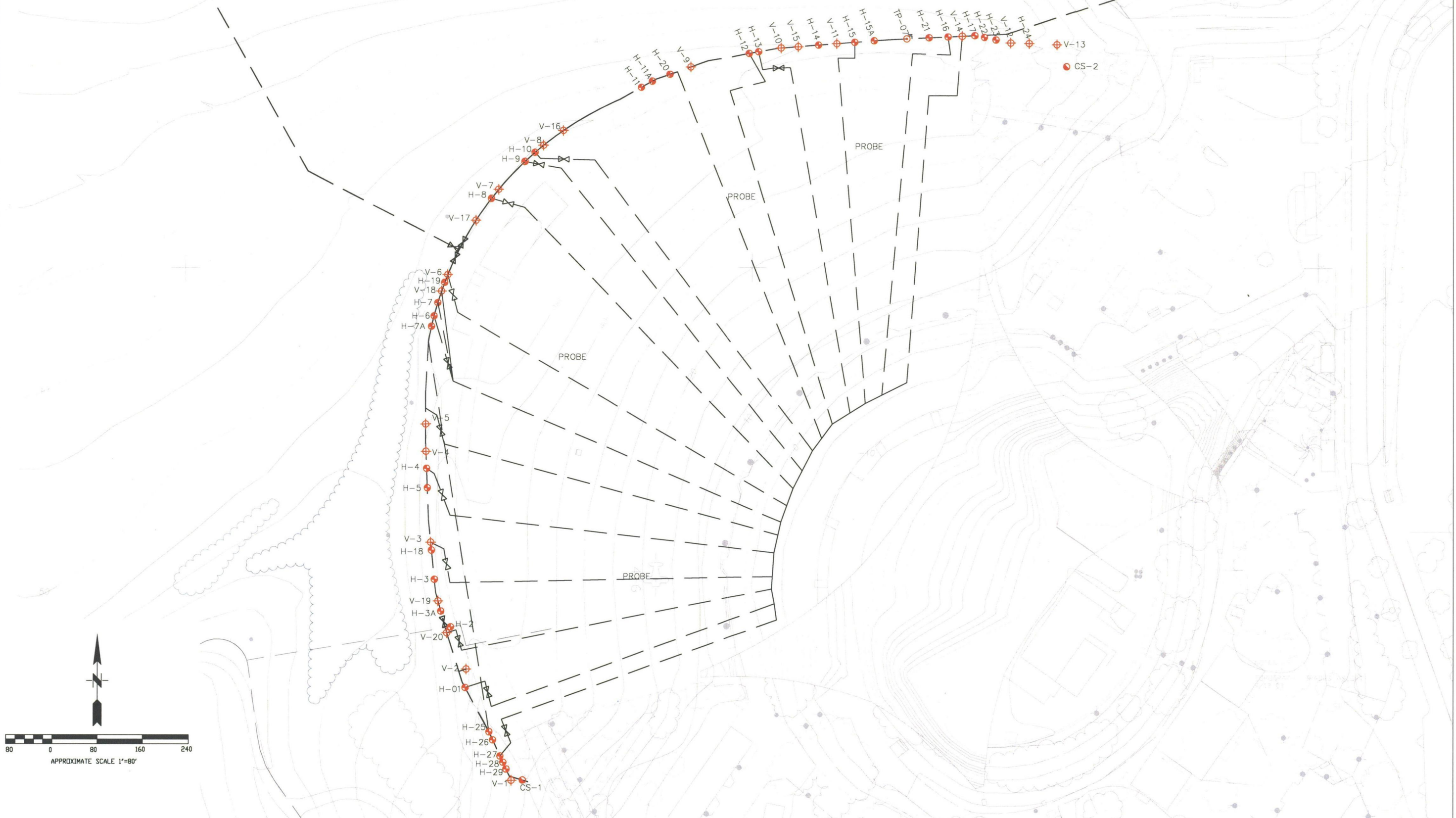
Name	Date Time	Initial Static Pressure ("H ₂ O)	Adjusted Static Pressure ("H ₂ O)	Comments
EW-22	8/7/20 10:09	0.07	-0.01	Adjusted Valve, In Compliance
EW-1	10/2/20 10:01	1.39	-0.78	Adjusted Valve, In Compliance

**Table 3. Average Monthly Flow Meter Readings
Shoreline Amphitheatre, Mountain View, CA
June 1, 2020 through November 30, 2020**

Month	Methane Content (%)	Average LFG Flow (scfm)	Average LFG Flow at 50% Methane (scfm)
Jun-20	2.9	55.0	3.1
Jul-20	2.9	54.0	3.1
Aug-20	3.0	57.2	3.4
Sep-20	2.8	55.7	3.2
Oct-20	3.1	62.2	3.8
Nov-20	3.2	61.2	3.9
Average During Reporting Period	3.0	57.6	3.4

Appendix A – LFG Collection and Control System Figure

APPROXIMATE
FLARE LOCATION
CS-3



ABBREVIATION
 TC TEST PORT
 CS CONDENSATE SUMP
 H HORIZONTAL COLLECTOR
 V VERTICAL

LEGEND
 — EXISTING HEADER AND LATERAL LINES
 ◆ LFG VERTICAL EXTRACTION WELL
 ● LFG HORIZONTAL EXTRACTION WELL
 ○ LFG TEST PIT
 ● LFG CONDENSATE SUMP

SCS ENGINEERS
 ENVIRONMENTAL CONSULTANTS
 3050 FITE CIRCLE, SUITE 106
 SACRAMENTO, CA 95827-1808
 PH. (916) 361-1297 FAX. (916) 361-1299

PROJ. NO. 01202192.00 DWN. BY: AB ACAD. FILE: SHORELINE.dwg
 DSN. BY: --- CHK. BY: --- APP. BY: ---

**THE SHORELINE AMPHITHEATRE
 CITY OF MOUNTAIN VIEW**

SHEET TITLE
 LFG COLLECTION SYSTEM

PROJECT TITLE
 SHORELINE AMPHITHEATRE LANDFILL

NO.	REVISION	DATE
▲		
▲		
▲		
▲		
▲		

DATE: 12/17/04
 SCALE: 1"=80'
 DRAWING NO.
 1 of 1

Appendix B – Quarterly Component Leak Monitoring Results

**Third Quarter 2020 Component Emissions Monitoring Results
Shoreline Amphitheatre, Mountain View, California**

Field Technician and Weather Conditions				
Technician	Date	Ambient Temp	Barometric Pressure (in - Hg)	General Weather
R Haslam	08/06/2020	61	29.9	Clear
		Wind Speed	Wind Direction	
		4	N	
Name		Valve Vault (ppm)	Test Port Vault (ppm)	Re-Testing
EW-1	08/06/2020	1-3ppm	1-3ppm	None
EW-10	08/06/2020	1-3ppm	1-3ppm	None
EW-11	08/06/2020	1-3ppm	1-3ppm	None
EW-12	08/06/2020	1-3ppm	1-3ppm	None
EW-13	08/06/2020	1-3ppm	1-3ppm	None
EW-14	08/06/2020	1-3ppm	1-3ppm	None
EW-15	08/06/2020	1-3ppm	1-3ppm	None
EW-16	08/06/2020	1-3ppm	1-3ppm	None
EW-17	08/06/2020	1-3ppm	1-3ppm	None
EW-18	08/06/2020	1-3ppm	1-3ppm	None
EW-19	08/06/2020	1-3ppm	1-3ppm	None
EW-2	08/06/2020	1-3ppm	1-3ppm	None
EW-20	08/06/2020	1-3ppm	1-3ppm	None
EW-21	08/06/2020	1-3ppm	1-3ppm	None
EW-22	08/06/2020	1-3ppm	1-3ppm	None
EW-23	08/06/2020	1-3ppm	1-3ppm	None
EW-24	08/06/2020	1-3ppm	1-3ppm	None
EW-25	08/06/2020	1-3ppm	1-3ppm	None
EW-26	08/06/2020	1-3ppm	1-3ppm	None
EW-27	08/06/2020	1-3ppm	1-3ppm	None
EW-28	08/06/2020	1-3ppm	1-3ppm	None
EW-29	08/06/2020	1-3ppm	1-3ppm	None
EW-3	08/06/2020	1-3ppm	1-3ppm	None
EW-30	08/06/2020	1-3ppm	1-3ppm	None
EW-31	08/06/2020	1-3ppm	1-3ppm	None
EW-32	08/06/2020	1-3ppm	1-3ppm	None
EW-33	08/06/2020	1-3ppm	1-3ppm	None
EW-34	08/06/2020	1-3ppm	1-3ppm	None
EW-35	08/06/2020	1-3ppm	1-3ppm	None
EW-36	08/06/2020	1-3ppm	1-3ppm	None
EW-37	08/06/2020	1-3ppm	1-3ppm	None
EW-38	08/06/2020	1-3ppm	1-3ppm	None
EW-39	08/06/2020	1-3ppm	1-3ppm	None
EW-4	08/06/2020	1-3ppm	1-3ppm	None
EW-40	08/06/2020	1-3ppm	1-3ppm	None
EW-41	08/06/2020	1-3ppm	1-3ppm	None
EW-42	08/06/2020	1-3ppm	1-3ppm	None
EW-43	08/06/2020	1-3ppm	1-3ppm	None
EW-44	08/06/2020	1-3ppm	1-3ppm	None
EW-45	08/06/2020	1-3ppm	1-3ppm	None
EW-46	08/06/2020	1-3ppm	1-3ppm	None
EW-47	08/06/2020	1-3ppm	1-3ppm	None
EW-48	08/06/2020	1-3ppm	1-3ppm	None
EW-49	08/06/2020	1-3ppm	1-3ppm	None
EW-5	08/06/2020	1-3ppm	1-3ppm	None
EW-50	08/06/2020	1-3ppm	1-3ppm	None



**Third Quarter 2020 Component Emissions Monitoring Results
Shoreline Amphitheatre, Mountain View, California**

Name		Valve Vault (ppm)	Test Port Vault (ppm)	Re-Testing
EW-51	08/06/2020	1-3ppm	1-3ppm	None
EW-52	08/06/2020	1-3ppm	1-3ppm	None
EW-53	08/06/2020	1-3ppm	1-3ppm	None
EW-54	08/06/2020	1-3ppm	1-3ppm	None
EW-55	08/06/2020	1-3ppm	1-3ppm	None
EW-6	08/06/2020	1-3ppm	1-3ppm	None
EW-7	08/06/2020	1-3ppm	1-3ppm	None
EW-8	08/06/2020	1-3ppm	1-3ppm	None
EW-9	08/06/2020	1-3ppm	1-3ppm	None

Flare Station	Date	Piping	Valves	Flex Hoses
	08/06/2020	3	3	3

Grass Area	Date	Low ppm	High ppm	Above 500 ppm
Surface Scan	08/06/2020	2	5	None



**Fourth Quarter 2020 Component Emissions Monitoring Results
Shoreline Amphitheatre, Mountain View, California**

Field Technician and Weather Conditions				
Technician	Date	Ambient Temp	Barometric Pressure (in - Hg)	General Weather
R.Haslam	10/16/2020	65	29.9	Clear
		Wind Speed	Wind Direction	
		6	W	
Name		Valve Vault (ppm)	Test Port Vault (ppm)	Re-Testing
EW-1	10/16/2020	2 to 7	2 to 7	None
EW-10	10/16/2020	2 to 7	2 to 7	None
EW-11	10/16/2020	2 to 7	2 to 7	None
EW-12	10/16/2020	2 to 7	2 to 7	None
EW-13	10/16/2020	2 to 7	2 to 7	None
EW-14	10/16/2020	2 to 7	2 to 7	None
EW-15	10/16/2020	2 to 7	2 to 7	None
EW-16	10/16/2020	2 to 7	2 to 7	None
EW-17	10/16/2020	2 to 7	2 to 7	None
EW-18	10/16/2020	2 to 7	2 to 7	None
EW-19	10/16/2020	2 to 7	2 to 7	None
EW-2	10/16/2020	2 to 7	2 to 7	None
EW-20	10/16/2020	2 to 7	2 to 7	None
EW-21	10/16/2020	2 to 7	2 to 7	None
EW-22	10/16/2020	2 to 7	2 to 7	None
EW-23	10/16/2020	2 to 7	2 to 7	None
EW-24	10/16/2020	2 to 7	2 to 7	None
EW-25	10/16/2020	2 to 7	2 to 7	None
EW-26	10/16/2020	2 to 7	2 to 7	None
EW-27	10/16/2020	2 to 7	2 to 7	None
EW-28	10/16/2020	2 to 7	2 to 7	None
EW-29	10/16/2020	2 to 7	2 to 7	None
EW-3	10/16/2020	2 to 7	2 to 7	None
EW-30	10/16/2020	2 to 7	2 to 7	None
EW-31	10/16/2020	2 to 7	2 to 7	None
EW-32	10/16/2020	2 to 7	2 to 7	None
EW-33	10/16/2020	2 to 7	2 to 7	None
EW-34	10/16/2020	2 to 7	2 to 7	None
EW-35	10/16/2020	2 to 7	2 to 7	None
EW-36	10/16/2020	2 to 7	2 to 7	None
EW-37	10/16/2020	2 to 7	2 to 7	None
EW-38	10/16/2020	2 to 7	2 to 7	None
EW-39	10/16/2020	2 to 7	2 to 7	None
EW-4	10/16/2020	2 to 7	2 to 7	None
EW-40	10/16/2020	2 to 7	2 to 7	None
EW-41	10/16/2020	2 to 7	2 to 7	None
EW-42	10/16/2020	2 to 7	2 to 7	None
EW-43	10/16/2020	2 to 7	2 to 7	None
EW-44	10/16/2020	2 to 7	2 to 7	None
EW-45	10/16/2020	2 to 7	2 to 7	None
EW-46	10/16/2020	2 to 7	2 to 7	None
EW-47	10/16/2020	2 to 7	2 to 7	None
EW-48	10/16/2020	2 to 7	2 to 7	None
EW-49	10/16/2020	2 to 7	2 to 7	None
EW-5	10/16/2020	2 to 7	2 to 7	None
EW-50	10/16/2020	2 to 7	2 to 7	None



Source Test Information

Source Location: Shoreline Amphitheatre Landfill
One Amphitheatre Pkwy
Mountain View, California

Facility Number: A2561

Engineering Firm: SCS Field Services
Phone: (209) 545-8490 ext. 103
Contact: Art Jones

Source Description: Landfill Gas Carbon Adsorption System (A-1)

PTO Number: Regulation 8-34-301.3, 8-34-412 and Condition 876

Test Parameters: NMOC

Emission Limits: NMOC: 120 ppmv @ 3% O₂

Emission Results: NMOC: <22 ppmv @ 3% O₂

Source Testing Firm: BEST ENVIRONMENTAL
339 Stealth Court
Livermore, CA 94551
Phone (925) 455-9474
Fax (925) 455-9479
Contact: Bobby Asfour

Test Date: September 2, 2020

Analytical Laboratories: BEST ENVIRONMENTAL (CH₄ & Fixed Gases)
339 Stealth Court
Livermore, CA 94551

Atmospheric Analysis & Consultants (Inlet VOC-M25C)
1534 Eastman Avenue, Ste. A
Ventura, CA 93003
Phone: (805) 650-1642

NST No.: 6098

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SECTION 1. INTRODUCTION

1.1. Test Purpose

Best Environmental (BE) was contracted by SCS Field Services to perform Title V emissions testing on one landfill gas carbon adsorption system (A-1) located at the Shoreline Amphitheatre Landfill (Facility # A2561). The purpose of the test was to demonstrate compliance with Bay Area Air Quality Management District (BAAQMD) Regulation 8-34-301.3, 8-34-412 and Condition 876 from the facility permit. Testing was performed at the outlet for Non-Methane Organic Compounds (NMOC) and at the inlet for a landfill gas characterization. The landfill gas characterization was analyzed for TRS and those organic compounds listed in EPA AP-42 Table 2.4-1. A copy of the permit is located Appendix F.

1.2. Test Location

The test was conducted on the landfill gas carbon adsorption system located at the Shoreline Amphitheatre Landfill, One Amphitheatre Pkwy, Mountain View, California.

1.3. Test Date

Testing was conducted on September 2, 2020.

1.4. Test Parameters and Methods

The following emission parameters were measured.

Parameter	Test Methodss
Inlet & Outlet NMOC	EPA Method 25C
LFG O ₂ , CH ₄ , TRS	ASTM-D-1945 & D-6228
LFG organics	Modified EPA TO-15

1.5. Sampling and Observing Personnel

The test notification was submitted to the BAAQMD on August 27, 2020 by BE and assigned a Notice of Source Test Number 6098. Bobby Asfour of BE performed the test. SES coordinated the test program. No representative of the BAAQMD was present to witness the test.

SECTION 2. SUMMARY OF RESULTS

2.1. Emission Results

Table 2.1 presents the Average Test Result. Table 2.2 presents only the detected compounds of the landfill gas characterization. Triplicate samples were collected at the outlet location. NMOC emissions compliance can be determined using the by 120 ppm limit or 98% Removal Efficiency (DE) limit. A more extensive summary of the emissions is presented in Table 1 on page 7.

**Table 2.1: Average Test Results
Carbon Adsorption System (A-1)**

Parameter	Average Results	Limits
NMOC, ppm @ 3% O ₂ as Methane	<21.6	120

2.2. Process Data

The carbon adsorption system flow rate was approximately 59 cubic feet per minute (CFM).

2.3. Allowable Emissions

The Carbon Bed System is in compliance with the NMOC ppm @ 3% O₂ outlet emission limit. The destruction efficiency could not be demonstrated due to low NMOC concentrations at the inlet.

2.4. Comments: Discussion of Quality Assurance and Errors

Quality assurance procedures listed in the above referenced test methods and referenced in the Source Test Plan were performed and documented. The QA/QC procedures are described in Section 4.4 of the report. Documentation of the QA/QC is provided in Appendix A & B.

The flowrate was manually recorded from the system flowrate monitoring system. A calibration report of the measuring device is located in Appendix C.

**Table 2.2: Landfill Gas Characterization
Detected Compounds**

AP-42 List of Compounds		
Total Reduced Sulfur as H₂S, ppm	<1.0	1300
Vinyl Chloride, ppb	6.55	N/A
Acetone, ppb	11.1	N/A
Hexane, ppb	29.8	N/A
Chloroform, ppb	7.92	N/A
Benzene, ppb	7.98	N/A
Toluene, ppb	11.5	N/A
Chlorobenzene, ppb	16.7	N/A
Ethyl Benzene, ppb	30.1	N/A
m, p-Xylene, ppb	38.2	N/A
o-xylene, ppb	9.97	N/A
1,1,2,2-Tetrachloroethane, ppb	<1.6	N/A
1,3-Dichlorobenzene, ppb	<1.6	N/A
1, 4-Dichlorobenzene, ppb	8.15	N/A
Methane, % (Inlet)	2.3	N/A
NMOC, ppm as methane	<4.2	N/A

The full list of compounds is presented in Appendix B.

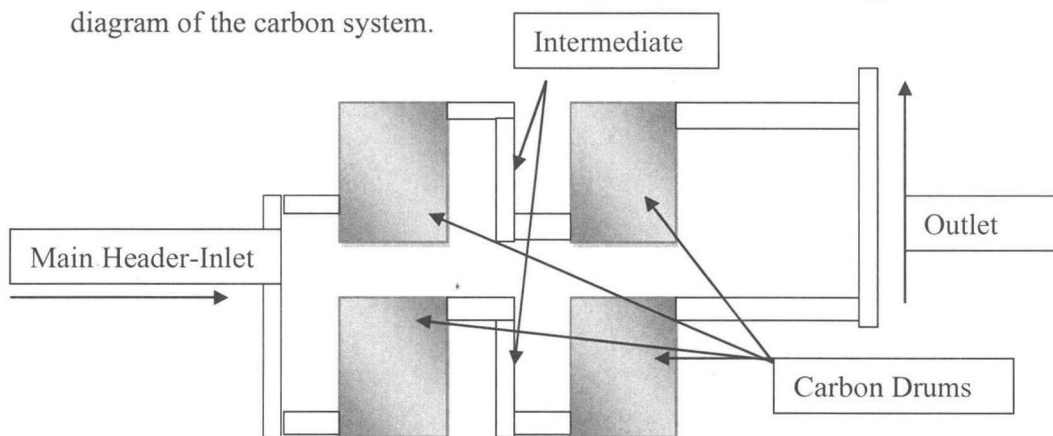
SECTION 3. SOURCE OPERATION

3.1. Process Description

Activated carbon is used for adsorption of organic substances and non-polar adsorbates and it is also usually used for waste gas (and waste water) treatment. It is the most widely used adsorbent. Its usefulness derives mainly from its large micropore and mesopore volumes and the resulting high surface area. Several 50 gallon drums are aligned in series and/or parallel and are used to remove VOC's from the onsite landfill gas. See diagram below.

3.2. Flow Diagram

A digital image of the adsorption system is contained in Appendix D. Below is a flow diagram of the carbon system.



3.3. Process and control operating parameters during testing

The carbon adsorption system was operated at ~59 SCFM according to the onsite monitoring device.

3.4. Normal Operating Parameters

The carbon adsorption system was operating normally during the test periods.

3.5. Testing or Process interruptions and changes

There were no process interruptions during the testing.

SECTION 4. SAMPLING AND ANALYSIS PROCEDURES

4.1. Port Location

Carbon Adsorption System (A-1)

Sampling of the carbon adsorption system inlet and outlet emissions was performed via 6-inch PVC pipes with inside diameters of 5.75 inches (Area SQFT = 0.18). Inlet sampling was performed from a single port/tap located approximately 1-foot downstream from the nearest disturbance and 10-feet upstream from the flare flame arrestor (during flare testing). Outlet sampling was performed from a single port/tap located approximately 3-foot downstream from the nearest disturbance and 4-feet upstream from the exhaust fan.

4.2. Point Description/Labeling – Ports/Stack

Inlet samples were collected via a sample pump into tedlar bags. Outlet gases were collected by positive pressure into the tedlar bags at each location.

4.3. Method Description, Equipment, Sampling, Analysis and QA/QC

Sampling and analytical procedures of the methods were followed as published in the BAAQMD Manual of Procedures, CARB Stationary Source Test Methods Volume I and the EPA "Quality Assurance Handbook for Air Pollution Measurement Systems" Volume III, US EPA 600/4-77-027b.

The following is an overview of the Testing Performed

Parameter	Location	Methods	Duration	# of Runs
NMOC	Inlet/Outlet	EPA Method 25C	30 mins	6
O ₂ , CH ₄ & TRS	Inlet	ASTM D-1945 & D-6228	15 mins	1
LFG Speciated VOCs	Inlet	Modified EPA TO-15 &	15 mins	1
Flow Rate	Inlet	Gas Metering System	--	3

EPA Method TO-15 analysis is used to determine emissions of Organic compounds. Inlet gases are filled into tedlar bags corresponding to the test program. The bags are labeled respectively then sent to a laboratory and analyzed for GC/MS (gas chromatography/mass spectrometer) within 72 hours. For more information on the lab analysis, refer to Appendix B for method description and QA/QC.

ASTM D-6228 analysis is used to determine emissions total reduced sulfur compounds. Inlet gases are filled into tedlar bags corresponding to the test program. The bags are labeled respectively then sent to a laboratory and analyzed for GC/SCD (gas chromatography/Sulfur Chemiluminescence Detector) within 24 hours. For more information on the lab analysis, refer to Appendix B for method description and QA/QC.

ASTM D-1945 analysis is used to determine the composition of fuel gas (e.g. methane, fixed gases & HHV). Inlet gases are filled into a tedlar bag using positive pressure from the fuel line. The

bag is labeled respectively then sent to a laboratory and analyzed for fixed gases (O₂, CO₂, N₂, ect.), methane and C₁-C₆ using GC/FID-TCD (gas chromatography/flame ionization detector and thermal conductivity detector). Many of these compounds have calorific values that are used to calculate the fuel higher heating values (HHV). The results are reported in percent levels.

EPA Method 25C is used to determine the emissions of NMOC and can also be used to identify and quantify fixed gases (O₂, CO₂, N₂ & CH₄) in conjunction with **EPA Method 3C**. Gaseous emissions are drawn through Teflon sample line to a tedlar bag. Positive pressure is adjusted to maintain an integrated sample flow between 30 to 60 minutes. The bag samples are taken to a laboratory and analyzed for Non-Methane Organic Compound (NMOC) referenced to methane and fixed gases using GC/FID-TCA (gas chromatography/flame ionization detector-total combustion analysis) within 72 hours.

4.4. Analytical Laboratories

BE analyzed samples for methane, TRS and fixed gases. Samples were sent to Atmospheric Analysis and Consulting, Inc. for NMOC and LFG characterization analysis. For more information on the analysis procedure and QA/QC refer to Appendix B.

TABLE 1
Shoreline Amphitheater Landfill
NMOC Emissions
Carbon Adsorption System (A-1)

RUN #	1		2		3		AVG		Limit
TEST LOCATION	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	
TEST DATE	9/2/2020		9/2/2020		9/2/2020				
TEST TIME	845-915		915-945		945-1015				
STANDARD TEMP., °F	70		70		70				
FLOW RATE, DSCFM	59	59	59	59	59	59	59	59	
O ₂ , %	18.7	18.5	18.5	18.5	18.7	18.3	18.7	18.4	
NMOC, ppm as methane	7.7	<3.0	17.2	<3.0	<3.0	<3.0	9.3	<3.0	
NMOC, ppm @ 3% O₂ as methane	N.A.	<21.9	N.A.	<22.4	N.A.	<20.7	N.A.	<21.6	120
NMOC, lbs/hr	0.0011	<0.0004	0.0025	<0.0004	<0.0004	<0.0004	0.0014	<0.0004	

WHERE:

DSCFM = Dry Standard Cubic Feet Per Minute
R.E. = Removal Efficiency
N.M. = Not Measured
N.A. = Not Applicable
ppm = Parts per Million
NMOC = Non-Methane Non-Ethane Organic Compounds
lbs/hr = Pounds Per Hour Emission Rate

CALCULATIONS:

R.E. = $100 * (\text{Inlet TNMHC lbs/hr} - \text{Outlet TNMHC lbs/hr}) / \text{Inlet TNMHC lbs/hr}$
lbs/hr (70°F) = ppm * DSCFM * MW * 60 / 386 x 10⁶
ppm @ 3% O₂ = ppm * (17.9/(20.9-O₂))

Shoreline Amphitheatre 1st Quarter 2020 Surface Scan

February 26, 2020
Jeremy Davis
Baro 29.89
Temp 65
Wind 4 mph SW
High Reading 5ppmv
Grid 1- 3.1 ppm
Grid 2 - 2.1 ppm
Grid 3 - 1.9 ppm

Legend
Walking Pathway



Google Earth

200 ft

**PROJECTED LFG AND NMOC GENERATION RATES
CITY OF MOUNTAINVIEW LANDFILL, MOUNTAIN VIEW, CALIFORNIA**

Year	Disposal Rate (tons/yr)	Refuse In-Place (tons)	Disposal Rate (Mg/yr)	Refuse In-Place (Mg)	Methane Generation Rates (m ³ /yr)	LFG Generation Rates (cfm)	LFG Generation Rates (Million ft ³ /yr)	NMOC Generation Rates (tons/yr)	NMOC Generation Rates (Mg/yr)
1968	0	0	0	0	0.000E+00	0	0	0	0
1969	0	0	0	0	0.000E+00	0	0	0	0
1970	0	0	0	0	0.000E+00	0	0	0	0
1971	0	0	0	0	0.000E+00	0	0	0	0
1972	0	0	0	0	0.000E+00	0	0	0	0
1973	0	0	0	0	0.000E+00	0	0	0	0
1974	0	0	0	0	0.000E+00	0	0	0	0
1975	0	0	0	0	0.000E+00	0	0	0	0
1976	0	0	0	0	0.000E+00	0	0	0	0
1977	0	0	0	0	0.000E+00	0	0	0	0
1978	0	0	0	0	0.000E+00	0	0	0	0
1979	0	0	0	0	0.000E+00	0	0	0	0
1980	0	0	0	0	0.000E+00	0	0	0	0
1981	261,619	0	237,337	0	0.000E+00	0	0	0	0
1982	266,852	261,619	242,084	237,337	8.065E+05	108	57	25	23
1983	272,189	528,471	246,926	479,421	1.613E+06	217	114	50	45
1984	277,632	800,660	251,864	726,347	2.420E+06	325	171	75	68
1985	283,185	1,078,292	256,901	978,210	3.228E+06	434	228	100	91
1986	288,849	1,361,477	262,039	1,235,111	4.037E+06	543	285	125	114
1987	294,626	1,650,326	267,280	1,497,151	4.848E+06	651	342	151	137
1988	300,518	1,944,952	272,625	1,764,431	5.660E+06	761	400	176	160
1989	306,529	2,245,470	278,078	2,037,056	6.474E+06	870	457	201	183
1990	312,659	2,551,999	283,639	2,315,135	7.291E+06	980	515	227	206
1991	318,912	2,864,658	289,312	2,598,774	8.110E+06	1,090	573	252	229
1992	325,291	3,183,570	295,099	2,888,086	8.933E+06	1,200	631	278	252
1993	331,797	3,508,861	301,001	3,183,185	9.759E+06	1,311	689	303	275
1994	0	3,840,658	0	3,484,186	1.059E+07	1,423	748	329	299
1995	0	3,840,658	0	3,484,186	1.038E+07	1,395	733	323	293
1996	0	3,840,658	0	3,484,186	1.017E+07	1,367	719	316	287
1997	0	3,840,658	0	3,484,186	9.972E+06	1,340	704	310	281
1998	0	3,840,658	0	3,484,186	9.774E+06	1,313	690	304	276
1999	0	3,840,658	0	3,484,186	9.581E+06	1,287	677	298	270
2000	0	3,840,658	0	3,484,186	9.391E+06	1,262	663	292	265
2001	0	3,840,658	0	3,484,186	9.205E+06	1,237	650	286	260
2002	0	3,840,658	0	3,484,186	9.023E+06	1,212	637	280	254
2003	0	3,840,658	0	3,484,186	8.844E+06	1,188	625	275	249
2004	0	3,840,658	0	3,484,186	8.669E+06	1,165	612	269	244
2005	0	3,840,658	0	3,484,186	8.497E+06	1,142	600	264	240
2006	0	3,840,658	0	3,484,186	8.329E+06	1,119	588	259	235
2007	0	3,840,658	0	3,484,186	8.164E+06	1,097	577	254	230
2008	0	3,840,658	0	3,484,186	8.002E+06	1,075	565	249	226
2009	0	3,840,658	0	3,484,186	7.844E+06	1,054	554	244	221
2010	0	3,840,658	0	3,484,186	7.689E+06	1,033	543	239	217
2011	0	3,840,658	0	3,484,186	7.536E+06	1,013	532	234	213
2012	0	3,840,658	0	3,484,186	7.387E+06	993	522	230	208
2013	0	3,840,658	0	3,484,186	7.241E+06	973	511	225	204
2014	0	3,840,658	0	3,484,186	7.098E+06	954	501	221	200
2015	0	3,840,658	0	3,484,186	6.957E+06	935	491	216	196
2016	0	3,840,658	0	3,484,186	6.819E+06	916	482	212	192
2017	0	3,840,658	0	3,484,186	6.684E+06	898	472	208	188
2018	0	3,840,658	0	3,484,186	6.552E+06	880	463	204	185
2019	0	3,840,658	0	3,484,186	6.422E+06	863	454	200	181
2020	0	3,840,658	0	3,484,186	6.295E+06	846	445	196	178
2021	0	3,840,658	0	3,484,186	6.170E+06	829	436	192	174
2022	0	3,840,658	0	3,484,186	6.048E+06	813	427	188	171
2023	0	3,840,658	0	3,484,186	5.928E+06	797	419	184	167
2024	0	3,840,658	0	3,484,186	5.811E+06	781	410	181	164
2025	0	3,840,658	0	3,484,186	5.696E+06	765	402	177	161
2026	0	3,840,658	0	3,484,186	5.583E+06	750	394	174	157
2027	0	3,840,658	0	3,484,186	5.473E+06	735	387	170	154
2028	0	3,840,658	0	3,484,186	5.364E+06	721	379	167	151

ESTIMATED NMOC CONCENTRATION IN LFG: 4000 ppmv
 ASSUMED METHANE CONTENT OF LFG: 50%
 SELECTED DECAY RATE CONSTANT: 0.02
 SELECTED ULTIMATE METHANE RECOVERY RATE: 5.443 ft³/ton
 METRIC EQUIVALENT: 169.9 cu m/Mg



Startup, Shutdown, and Malfunction Plan Report
June 1, 2020 through November 30, 2020
Shoreline Amphitheatre
Mountain View, California (Facility No. A2561)

Prepared for:

Shoreline Amphitheatre
1 Amphitheatre Parkway
Mountain View, CA 94043

For Submittal to:

Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

SCS ENGINEERS

01202092.00, Task 8 | December 2020

3843 Brickway Boulevard, Suite 208
Santa Rosa, CA 95403
707-546-9461

Semi-Annual SSM Report
Shoreline Amphitheatre
December 2020

This semi-annual startup, shutdown, and malfunction (SSM) plan report was prepared in order to comply with the requirements set forth in Shoreline Amphitheatre's SSM plan and in accordance with 40 Code of Federal Regulations (CFR) 63.6(d)(5)(i) requirements. Unless otherwise noted in this report, all actions taken during the reporting period were consistent with Shoreline's SSM Plan. This report contains information regarding the number, duration, and description of each SSM event. A copy of the SSM Plan and all revisions/addenda are kept on file at the facility for at least five (5) years and are available to appropriate regulatory agency personnel for inspection.

Name of Report Preparer: Haley DeLong, SCS Engineers 12/14/20
Date

Name of Report Reviewer: Michael O'Connor, SCS Engineers 12/14/20
Date

Approved:  12/14/2020
Brian Rutkowski, General Manager, Shoreline Amphitheatre Date

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1 Introduction	1
2 Startup Reporting Requirements	1
3 Shutdown Reporting Requirements	2
4 Malfunction Reporting Requirements.....	2
5 Startup, Shutdown, and Malfunction Plan Revisions.....	2

Table

- 1 GCCS Downtime

Appendices

- Appendix A – Startup/Shutdown Report Forms
- Appendix B – Malfunction Report Forms

1 INTRODUCTION

Shoreline Amphitheatre (Shoreline) is subject to 40 Code of Federal Regulations (CFR) Part 63, Subpart AAAA, the National Emission Standard for Hazardous Air Pollutants (NESHAPs) for Municipal Solid Waste (MSW) Landfills. A startup, shutdown, and malfunction (SSM) plan (SSM Plan) was prepared for Shoreline in accordance with NESHAPs requirements. The SSM Plan documents the procedures for operating and maintaining the affected elements of the landfill gas (LFG) collection and control system (GCCS) during startup, shutdown, and malfunction events.

In addition to the requirement to prepare a SSM Plan, 40 CFR §63.10(d)(5)(i) contains provisions requiring periodic SSM Reports. At a minimum, these reports must be prepared on a semi-annual basis and must be delivered or postmarked by the 30th day following the end of the reporting period (or other period specified by the regulatory agency or permit). This SSM Report covers the period of June 1, 2020 through November 30, 2020.

This SSM Report has been organized into four sections; one for startup reporting, one for shutdown reporting, one for malfunction reporting, and one for SSM Plan revisions. The SSM events include SSM for the GCCS and all components as well as GCCS monitoring equipment.

Please note that individual well downtime is permitted in accordance with Condition 876, Part 3 of the Landfill's permit, which allows less than continuous operation of a certain number of wells as long as 20 wells are operating continuously at any one time. Therefore, wells were temporarily disconnected at various dates and times when the methane concentration detected at the wellhead was less than 20% by volume for at least one month, prior to disconnection. At all times during this reporting period, a minimum of 20 wells were continuously operating, in accordance with Condition 876, Part 3(a)(i). As such, temporarily disconnected wells are not considered to be shutdown events.

In addition, during the reporting period, several wells were unable to be monitored because they were covered by portable toilets and other items in storage and therefore inaccessible. These wells were offline prior to being inaccessible, and there were at least 20 wells operating while these wells were offline so that compliance was achieved. Specifically, wells EW-24, EW-25, EW-26, and EW-27 were unable to be monitored during June through November of 2020, and well EW-19 was unable to be monitored in September of 2020.

All SSM events associated with monitoring equipment required for a GCCS under New Source Performance Standards must also be documented in the SSM Plan reports. This equipment includes flow and temperature meters (and data recording equipment) for the collected LFG. Temperature monitoring is required for flare operation, which is not applicable to GCCS operations at Shoreline.

2 STARTUP REPORTING REQUIREMENTS

Two (2) GCCS startup events occurred during the reporting period; these events were consistent with the provisions set forth in Shoreline's SSM Plan. The SSM Plan contains startup report forms that are filled out under certain conditions even when the actions taken during the startup are in accordance with the SSM Plan. Each startup event followed a shutdown, as described in Section 3 below. There were no periods of downtime for the flow meter or data recording equipment during the reporting period.

The SSM Plan was successfully implemented for the startup events that occurred during this reporting period. Specific information regarding the startup events is included in **Appendix A**.

3 SHUTDOWN REPORTING REQUIREMENTS

Two (2) GCCS shutdown events occurred during the reporting period; these events were consistent with the provisions set forth in Shoreline's SSM Plan. The SSM Plan contains shutdown report forms that are filled out under certain conditions even when the actions taken during the shutdown are in accordance with the SSM Plan. There were no periods of downtime for the flow meter or data recording equipment during the reporting period.

The SSM Plan was successfully implemented for the shutdown events that occurred during this reporting period. Specific information regarding the shutdown events is included in **Appendix A**.

4 MALFUNCTION REPORTING REQUIREMENTS

During the reporting period, there were no malfunction events, as defined in Shoreline's SSM Plan. The SSM Plan contains malfunction report forms that are filled out under certain conditions even when the actions taken during the malfunction are in accordance with the SSM Plan. Since there were no malfunction events, there are no report forms for this reporting period. There were also no malfunction events for the flow meter or data recording equipment during the reporting period.

5 STARTUP, SHUTDOWN, AND MALFUNCTION PLAN REVISIONS

No revisions were made to the SSM Plan during this reporting period. As previously mentioned, a copy of the SSM Plan and all revisions/addenda are kept on file at the facility for at least five (5) years and are available to appropriate regulatory agency personnel for inspection.

Per 40 CFR §63.6(e)(3)(viii) requirements, if Shoreline's SSM Plan fails to address or inadequately addresses an event that meets the definition of a startup, shutdown, or malfunction, the SSM Plan shall be revised within 45 days after the event to include procedures for operating and maintaining the appropriate equipment during a similar malfunction event, and the revised SSM Plan will be included in this semi-annual report. Additionally, if any revisions are made to the SSM Plan that alter the scope of SSM activities at Shoreline or otherwise modify the applicability of any emission limit, work practice requirement, or other requirement in 40 CFR §63, the revised SSM Plan is not effective until written notice is provided to the permitting authority describing the SSM Plan revision. In these cases, a copy of the written notification will be included in this semi-annual report along with a copy of the revised SSM Plan.

There were no events which occurred during the reporting period, that were not adequately addressed by the SSM Plan, and in each case, the SSM Plan was successfully implemented. Additionally, the SSM Plan required no revisions during the reporting period.

Table

**Table 1. GCCS Downtime
Shoreline Amphitheatre, Mountain View, CA
(June 1, 2020 through November 30, 2020)**

Date Offline	Date Online	Hours Down	Reason	Corrective Action
8/31/2020 7:37	8/31/2020 8:03	0.43	Shutdown for Carbon Change	Restart Plant Upon Completion of Carbon Change Out
9/2/2020 8:27	9/2/2020 9:26	0.98	Flow Meter Calibration	Restart Upon Completion
No Downtime in June, July, October or November 2020.				
Total Downtime		1.42		

Appendix A - Startup/Shutdown Report Forms

SSM CHECKLIST FORM
Shoreline Amphitheater
Landfill Gas Collection and Control System

This form is used to document actions taken during a planned startup, shutdown, or malfunction of any portion of the gas collection and control system. If any of the steps taken are not consistent with the SSM Plan, document the variations on a "SSM Plan Departure Form" and follow the reporting requirements in the SSM plan.

1. Type of Event (check all that apply) **Startup** **Shutdown** **Malfunction**

2. Beginning of Event: *Date:* 8/31/2020 *Time:* 07:37

3. End of Event: *Date:* 8/31/2020 *Time:* 08:03

4. Duration of Event (hours): 0.43 hours

5. Description of Affected Equipment: (Circle the applicable Equipment)

Carbon System

6. Cause/Reason for Startup/Shutdown/Malfunction (Circle appropriate Reason):

Shutdown to change carbon

7. Name and Title (please print): Jon Silva

8. Signature: Jonathon Silva

9. Date: 8/31/2020

10. Did the actual steps taken vary from the procedure specified in the SSM Plan?

If response is "Yes," proceed to box 11 below and complete an SSM Plan Departure Report Form. If "No," stop.

YES

NO

11. Did this event result in an exceedance of any applicable emission limitation?

If response is "Yes," proceed to box 12 below. If "No," stop.

YES

NO

12. Describe the emission standard that was exceeded below.

[Notify the BAAQMD verbally or by fax within 2 working days after commencing the actions that an event inconsistent with the SSM Plan and which resulted in an exceedance of an applicable emission limitation has occurred. Follow up in writing within 7 working days after the end of the event.]

SSM CHECKLIST FORM
Shoreline Amphitheater
Landfill Gas Collection and Control System

This form is used to document actions taken during a planned startup, shutdown, or malfunction of any portion of the gas collection and control system. If any of the steps taken are not consistent with the SSM Plan, document the variations on a "SSM Plan Departure Form" and follow the reporting requirements in the SSM plan.

1. Type of Event (check all that apply) **Startup** **Shutdown** **Malfunction**

2. Beginning of Event: *Date: 9/2/2020* *Time: 08:27*

3. End of Event: *Date: 9/2/2020* *Time: 09:26*

4. Duration of Event (hours): 0.98 hours

5. Description of Affected Equipment: (Circle the applicable Equipment)

Carbon System

6. Cause/Reason for Startup/Shutdown/Malfunction (Circle appropriate Reason):

Shutdown for flow meter calibration

7. Name and Title (please print): Jon Silva

8. Signature: Jonathon Silva

9. Date: 9/2/2020

10. Did the actual steps taken vary from the procedure specified in the SSM Plan?

If response is "Yes," proceed to box 11 below and complete an SSM Plan Departure Report Form. If "No," stop.

YES

NO

11. Did this event result in an exceedance of any applicable emission limitation?

If response is "Yes," proceed to box 12 below. If "No," stop.

YES

NO

12. Describe the emission standard that was exceeded below.

[Notify the BAAQMD verbally or by fax within 2 working days after commencing the actions that an event inconsistent with the SSM Plan and which resulted in an exceedance of an applicable emission limitation has occurred. Follow up in writing within 7 working days after the end of the event.]

Appendix B – Malfunction Report Forms

(No malfunction events occurred during the June 1, 2020 through November 30, 2020 reporting period)