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PART 70 OPERATING PERMIT

SOURCE ID: 15033

Sunrise Municipal Solid Waste Landfill
1 ½ miles east of the intersection of Vegas
Valley Drive and Hollywood Boulevard
Las Vegas, NV 89142

ISSUED ON: October 6, 2022

EXPIRES: October 5, 2027

Current action: Renewal and Significant Revision

Issued to:

Republic Silver State Disposal, Inc
770 East Sahara Avenue
Las Vegas, Nevada 89104

Responsible Official:

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NATURE OF BUSINESS:

SIC code 4953, "Refuse Systems"
NAICS code 562212, "Solid Waste Landfill"

Issued by the Clark County Department of Environment and Sustainability, Division of Air Quality in accordance with Section 12.5 of the Clark County Air Quality Regulations.

A handwritten signature in blue ink that reads "Theodore A. Lendis".

Theodore A. Lendis, Permitting Manager

EXECUTIVE SUMMARY

The Republic Silver State Disposal, Inc., Sunrise Municipal Solid Waste Landfill (Sunrise Landfill) is a major source for SO₂ and a minor source for PM₁₀, PM_{2.5}, NO_x, CO, VOC, HAP, H₂S, and NMOC. The source is under SIC code 4953, “Refuse Systems” (NAICS code 562212, “Solid Waste Landfill”), and is located 1.5 miles east of the intersection of Vegas Valley Drive and Hollywood Boulevard in the Las Vegas Valley (Hydrographic Area 212), Las Vegas, Nevada 89142 (T21S, R62E, Sections 1 and 12). The Las Vegas Valley is classified as a marginal nonattainment area for the 2015 ozone NAAQS and an attainment area for all other regulated air pollutants. Hydrographic Area 212 is subject to a maintenance plan for CO and PM₁₀.

Sunrise Landfill served as the primary municipal solid waste landfill (MSWL) for Clark County from 1951 until October 8, 1993. In 1993 the landfill stopped accepting waste and was permanently closed. Sunrise Landfill is currently collecting landfill gases (LFG) consisting of methane, non-methane organic compounds (NMOC), hazardous air pollutants (HAPs) and H₂S as a result of anaerobic bacterial decomposition of the organic materials in the solid waste. Sunrise Landfill is a source of Greenhouse Gasses (GHG). The landfill operates a landfill gas collection system and an open combustion flare with a minimum destruction efficiency of 98% for target pollutants.

This Part 70 Operating Permit is issued based on the Title V Renewal application submitted on August 3, 2020 and significant revision application submitted on May 18, 2021.

The following tables summarize the source’s potential to emit for each regulated air pollutant from all emission units addressed by this Part 70 Operating Permit.

Table 1: Source-wide Potential to Emit with Existing Flare (tons/year)

	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAPs	H ₂ S	NMOC ¹	GHG ³
Flare Stack	4.18	4.18	10.03	62.67	249.20	0.26 ²	2.11	0.40	0.67	58,353.29
Fugitives	0	0	0	0	0	8.67 ²	4.58	44.33	22.23	0
Total	4.18	4.18	10.03	62.67	249.20	8.93	6.69	44.73	22.90	58,353.29

¹ NMOC are non-methane organic compounds, expressed as hexane.

² VOC emissions comprise 39% of the NMOC in landfills (Reference: AP-42, Table 2.4-2; revised 11/98).

³ GHG is expressed as CO₂e.

Table 2: Source-wide Potential to Emit with New Flare (tons/year)

	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAPs	H ₂ S	NMOC ¹	GHG ³
Flare Stack	2.23	2.23	8.13	37.07	249.20	0.12 ²	1.08	0.40	0.31	30,583.48
Fugitives	0	0	0	0	0	8.15 ²	7.62	44.33	20.90	0
Total	2.23	2.23	8.13	37.07	249.20	8.27	8.70	44.73	21.21	30,583.48

¹ NMOC are non-methane organic compounds, expressed as hexane.

² VOC emissions comprise 39% of the NMOC in landfills (Reference: AP-42, Table 2.4-2; revised 11/98).

³ GHG is expressed as CO₂e.

DAQ will continue to require the permittee to estimate their GHG potential to emit in terms of each individual pollutant (CO₂, CH₄, N₂O, SF₆ etc.), during subsequent permitting actions, and the corresponding TSD will include these PTEs for informational purposes.

This landfill operation is subject to 40 CFR Part 62, Subpart OOO and 40 CFR Part 63, Subpart AAAA. The design capacity of this landfill is greater than or equal to 2.5 million megagrams and 2.5 million cubic meters; therefore, it is subject to Part 70 permitting requirements.

Pursuant to AQR 12.5, all terms and conditions and the attachments in this permit are federally enforceable unless explicitly denoted otherwise.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
TABLE OF CONTENTS	3
LIST OF TABLES	4
COMMON ACRONYMS AND ABBREVIATIONS	5
1.0 EQUIPMENT	6
1.1 Emission Units	6
1.2 Nonroad Engines	6
2.0 CONTROLS	7
2.1 Control Devices	7
2.2 Control Requirements	7
3.0 LIMITATIONS AND STANDARDS	10
3.1 Operational Limits	10
3.2 Emission Limits	10
4.0 COMPLIANCE DEMONSTRATION REQUIREMENTS	12
4.1 Monitoring	12
4.2 Testing	16
4.3 Recordkeeping	19
4.4 Reporting and Notifications	21
4.5 Mitigation	25
5.0 OTHER REQUIREMENTS	26
6.0 PERMIT SHIELD	27
7.0 GENERAL CONDITIONS	28
7.1 General Requirements	28
7.2 Modification, Revision, and Renewal Requirements	29
8.0 ATTACHMENTS	31
ATTACHMENT 1—APPLICABLE REGULATIONS	31

LIST OF TABLES

Table 1: Source-wide Potential to Emit with Existing Flare (tons/year)	2
Table 2: Source-wide Potential to Emit with New Flare (tons/year).....	2
Table 1.1-1: List of Emission Units (Existing Flare).....	6
Table 1.1-2: List of Emission Units (New Flare)	6
Table 3.2-1: Emission Unit PTE (tons per year).....	11
Table 3.2-2: Emission Unit Emission Rates (pounds per hour).....	11
Table 3.2-3: Emission Unit PTE (tons per year).....	11
Table 3.2-4: Emission Unit Emission Rates (pounds per hour).....	11
Table 4-1: Required Submission Dates for Various Reports.....	24
Table A-1: Applicable Clark County AQRs	31
Table A-2: Applicable CFRs	32

Common Acronyms and Abbreviations

(These terms may be seen in the permit)

Acronym	Term
AQR	Clark County Air Quality Regulation
ATC	Authority to Construct
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂	carbon dioxide
DAQ	Division of Air Quality
DES	Clark County Department of Environment and Sustainability
DOM	date of manufacture
dscf	dry standard cubic feet
dscm	dry standard cubic meter
EPA	U.S. Environmental Protection Agency
EU	emission unit
g/gr	gram
H ₂ S	hydrogen sulfide
HAP	hazardous air pollutant
hp	horsepower
kW	kilowatts
MSP	Minor Source Permit
MSW	Municipal Solid Waste
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NMOC	Non-methane organic compound
NO _x	nitrogen oxides
NSPS	New Source Performance Standard
OP	Operating Permit
PM _{2.5}	particulate matter less than 2.5 microns in diameter
PM ₁₀	particulate matter less than 10 microns in diameter
PSD	Prevention of Significant Deterioration
PTE	potential to emit
SIC	Standard Industrial Classification
SO ₂	sulfur dioxides
U.S.C.	United States Code
VMT	vehicle miles traveled
VOC	volatile organic compound

1.0 EQUIPMENT

1.1 EMISSION UNITS

The stationary source covered by this Part 70 OP consists of the emission units and associated appurtenances summarized in Table 1.1-1 with the existing flare. *[ATC/OP 15033(09/24/02) and AQR 12.5.2.3]*

Table 1.1-1: List of Emission Units (Existing Flare)

EU	Description	Rating	Manufacturer	Model #	Serial #
A01	Landfill Gas Collection and Combustion Flare, Non-Assisted, and Open	57.24 MMBtu/hr	LFG Specialties, LLC	PCF1230110	1700
A02	Landfill Fugitive Emissions	N/A	N/A	N/A	N/A

The stationary source covered by this Part 70 OP consists of the emission units and associated appurtenances summarized in Table 1.1-2 after the new flare replaces the existing flare. *[OP Significant Revision Application (05/18/21) and AQR 12.5.2.3]*

Table 1.1-2: List of Emission Units (New Flare)

EU	Description	Rating	Manufacturer	Model #	Serial #
A03	Landfill Gas Collection and Combustion Flare, Non-Assisted, Open and Elevated	27.3 MMBtu/hr	John Zink	ZNIX	TBD
A02	Landfill Fugitive Emissions	N/A	N/A	N/A	N/A

1.2 NONROAD ENGINES

Pursuant to Title 40, Part 1068.30 of the Code of Federal Regulations (40 CFR Part 1068.30), nonroad engines shall not remain at a location for more than 12 consecutive months; otherwise, the engine(s) will constitute a stationary reciprocating internal combustion engine (RICE) and be subject to the applicable requirements of 40 CFR Part 63, Subpart ZZZZ; 40 CFR Part 60, Subpart IIII; and/or 40 CFR Part 60, Subpart JJJJ. Stationary RICE shall be permitted as emission units upon commencing operation at this stationary source.

Records of location changes for portable or transportable nonroad engines shall be maintained, and shall be made available to the Control Officer upon request. These records are not required for engines owned and operated by a contractor for maintenance and construction activities as long as records are maintained demonstrating that such work took place at the stationary source for periods of less than 12 consecutive months.

Nonroad engines used on self-propelled equipment do not have this 12-month limitation or the associated recordkeeping requirements.

2.0 CONTROLS

2.1 CONTROL DEVICES

1. The permittee shall install and operate a LFG collection and control system that, at minimum, meets the conditions provided in 40 CFR Parts 62.16716 and 63.1959(b)(2)(iii). *[AQR 12.5.2.6]*

2.2 CONTROL REQUIREMENTS

LFG Emission Controls

1. The combustion flare (EU: A01 or A03) shall be operated and maintained in accordance with the manufacturer's recommendations. The flare shall be operated in a manner such that a minimum of 98% destruction efficiency for the targeted pollutants is achieved. *[ATC/OP 15033(09/24/02) and AQR 12.5.2.6]*
2. The permittee shall operate the LFG collection system such that gas is collected from each area, cell, or group of cells in the MSWL in which solid waste has been in place for two years. *[40 CFR Parts 62.16716(a)2 and 63.1958(a)]*
3. The permittee shall operate the LFG collection system with negative pressure at the wellheads except under the following conditions: *[40 CFR Parts 62.16716(b) and 63.1958(b)]*
 - a. A fire or increased temperature;
 - b. Use of a geomembrane or synthetic cover, in which case the permittee shall develop acceptable limits in the design plan; and
 - c. A decommissioned well. A well may experience a static positive pressure after shutdown to accommodate for declining flows. All design changes shall be approved by the Administrator.
4. The permittee shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C. The permittee may establish a higher operating temperature at a particular well. A higher operating value demonstration must be submitted to the Administrator for approval and must include supporting data demonstrating that the elevated parameter neither causes fires nor significantly inhibits anaerobic decomposition by killing methanogens. The demonstration must satisfy both criteria in order to be approved (*i.e.*, neither causing fires nor killing methanogens is acceptable). *[40 CFR Part 62.16716(c) and Long-Term Operation and Maintenance Plan dated April 2014]*
5. If the current Long-Term Operation and Maintenance Plan approves operation of the wellhead in the collection system with a landfill gas temperature equal to or higher than 55°C; where provided in the provisions in 40 CFRs 63.1958, 63.1960 and 63.1961, records must be kept in accordance with 40 CFR 63.1983(e)(1) through (5). Once the permittee begins compliance with these provisions, the permittee must continue to operate the collection and control device according to these provisions and cannot return to the provisions in 40 CFRs 62.16716, 62.16720, and 62.16722. *[40 CFR Part 62.16716]*

6. The permittee shall operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. *[40 CFR Parts 62.16716(d) and 63.1958(d)(1)]*
7. The permittee shall operate the collection system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR Part 62.16714(c) and 40 CFR Part 63.1955(c). If the collection or control system is inoperable, the permittee shall shut down the gas mover system and close all valves in the collection and control system that contribute to the venting of gas to the atmosphere within one hour. *[40 CFR Part 62.16716(e) and 40 CFR §63.1958(e)(1)]*
8. The permittee shall use the flare only with the net heating value of the gas being combusted at 7.45 MJ/scm (200 Btu/scf) or greater (EU: A01 or A03). *[40 CFR §60.18(c)(3)(ii)]*
9. The permittee shall operate the flare to comply with the provisions of 40 CFR Part 60.18 and monitor the flare (EU: A01 or A03) to ensure that it is operated and maintained in conformance with its designs. *[40 CFR §60.18(d)]*
10. The permittee shall operate the flare at all times LFG is vented to the flare (EU: A01 or A03). *[40 CFR Parts 60.18(e) and 63.11(b)(3)]*
11. The permittee shall operate the combustion flare with the flame present at all times (EU: A01 or A03). *[40 CFR Parts 62.16716(f) and 63.1958(f)]*
12. The permittee shall design and operate the open combustion flare in accordance with 40 CFR Part 60.18 and 40 CFR 63.11, except that the net heating value of the combusted LFG shall be calculated from the concentration of methane in the gas as measured by Method 3C. (A minimum of three 30-minute Method 3C samples are determined.) *[40 CFR Parts 62.16714(c)(1) and 63.1959(e)]*
13. The permittee shall operate the combustion flare with a programmable logic control system or equivalent control system capable of automatic gas shut-off, automatic flame ignition, and automatic blower controls. *[AQR 12.5.2.6(a)]*
14. At all times, including periods of startup, shutdown and malfunction, the permittee shall, under all conditions, maintain and operate the source in a manner consistent with good air pollution control practice for minimizing emissions, as required by 40 CFR Part 63.6. Determination of whether acceptable operating and maintenance procedures are being used shall be based on information available to the Control Officer, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. *[40 CFR §63.1960]*
15. The permittee shall cap or remove the collection and control system, provided all of the following conditions are met: *[40 CFR Parts 62.16714(f) and 63.1957(b)]*
 - a. The landfill shall be a closed landfill, as defined in 40 CFR Part 62.16730 and 40 CFR Part 63.1990. A closure report shall be submitted to the Administrator as provided in Part 62.16724(f) and Part 63.1981(f);
 - b. The collection and control system shall have been in operation a minimum of 15 years; and

- c. Following the procedures specified in 40 CFR Part 62.16718(b) and Part 63.1959(c), the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates no less than 90 days apart, and no more than 180 days apart.

Other

16. The permittee shall not cause, suffer, or allow any source to discharge air contaminants (or other materials) in quantities that will cause a nuisance, including excessive odors. *[AQR 40 & AQR 43 (local only requirement)]*
17. The permittee shall comply with the control requirements contained in this section. If there is inconsistency between standards or requirements, the most stringent standard or requirement shall apply. *[AQR 12.5.2.6(a)]*

3.0 LIMITATIONS AND STANDARDS

3.1 OPERATIONAL LIMITS

When Operated with the Existing Flare (EU: A01)

1. The permittee shall limit the maximum production of landfill gas to 1.34×10^9 cubic feet per year (3.79×10^7 cubic meters per year) as calculated by EPA's LandGEM Emission Model for Municipal Solid Waste Landfill (MSWL). Any landfill gas generation in excess of this amount shall require an application for a revision to the Operating Permit unless the permittee receives approval from DAQ for higher production limits by demonstrating that exceeding the production limit does not result in any emission rate greater than those listed in either Tables 3-2.1 or 3-2.2. [ATC/OP 15033 (09/24/02) and AQR 12.5.2.6]
2. The permittee shall limit the actual flow of landfill gas through the collection and control system to no greater than the rated flow of 1,908 standard cubic feet per minute (scfm), unless the permittee receives approval from DAQ for a higher flow rate by demonstrating that exceeding the maximum flow rate does not result in any emissions greater than those listed in either Tables 3-2.1 or 3-2.2. [ATC/OP 15033 (09/24/02) and AQR 12.5.2.6]
3. The permittee shall limit the actual heat rate of the combustion flare to no greater than either 57.24 MMBtu per hour or 501,422 MMBtu per any consecutive 12-month period unless the permittee receives approval from DAQ for a higher heat rate by demonstrating that exceeding the maximum heat rate does not result in emissions greater than those listed in Tables 3-2.1 or 3-2.2. [ATC/OP 15033 (09/24/02) and AQR 12.5.2.6]
4. The permittee shall operate the flare at a minimum combustion temperature of 1,400°F. [AQR 12.5.2.6]

When Operated with the New Flare (EU: A03)

5. The permittee shall limit the flow of LFG through the collection and control system so as to not exceed the manufacturers' rated flow of 1,000 scfm. [OP Significant Revision Application (05/18/21) and AQR 12.5.2.6]
6. The permittee shall limit the heat rate of the combustion flare to no greater than either 27.3 MMBtu per hour or 239,138 MMBtu per any consecutive 12-month period. [OP Significant Revision Application (05/18/21) and AQR 12.5.2.6]

3.2 EMISSION LIMITS

When Operated with the Existing Flare (EU: A01)

1. The permittee shall limit actual emissions from the individual emission units (EUs: A01 and A02) to the calculated PTE listed in Table 3.2-1 per any consecutive 12-month period while operating the existing flare. [ATC/OP 15033 (09/24/02) and AQR 12.5.2.6(a) & (b)]

Table 3.2-1: Emission Unit PTE (tons per year)

EU	Description	PM ₁₀ /PM _{2.5}	NO _x	CO	SO ₂	VOCs	HAPs	NMOC ¹	H ₂ S
A01	Flare Stack	4.18	10.03	62.67	249.20	0.262	2.11	0.67	0.40
A02	Fugitives	0	0	0	0	8.672	4.58	22.23	44.33

¹ NMOC are non-methane organic compounds, expressed as hexane.

² VOC emissions comprise 39% of the NMOC in landfills (Reference: AP-42, Table 2.4-2; revised 11/98).

- The permittee shall limit the actual emissions from each emission unit (EUs: A01 and A02) to the emission rates listed in Table 3.2-2 while operating the existing flare. *[ATC/OP 15033 (09/24/02) and AQR 12.5.2.3(c)]*

Table 3.2-2: Emission Unit Emission Rates (pounds per hour)

EU	Description	PM ₁₀ /PM _{2.5}	NO _x	CO	SO ₂	VOC	HAPs	NMOC ¹	H ₂ S
A01	Flare Stack	0.95	2.29	14.31	56.89	0.06 ²	0.48	0.15	0.09
A02	Fugitives	0	0	0	0	1.98 ²	1.05	5.08	10.12

¹ NMOC are non-methane organic compounds, expressed as hexane.

² VOC emissions comprise 39% of the NMOC in landfills (Reference: AP-42, Table 2.4-2; revised 11/98).

When Operated with the New Flare (EU: A03)

- The permittee shall limit actual emissions from the individual emission units (EUs: A02 and A03) to the calculated PTE listed in Table 3.2-3 per any consecutive 12-month period while operating the new flare. *[OP Significant Revision Application (05/18/21) and AQR 12.5.2.6(a) & (b)]*

Table 3.2-3: Emission Unit PTE (tons per year)

EU	Description	PM ₁₀ /PM _{2.5}	NO _x	CO	SO ₂	VOC	HAPs	NMOC ¹	H ₂ S
A03	Flare Stack	2.23	8.13	37.07	249.20	0.122	1.08	0.31	0.40
A02	Fugitives	0	0	0	0	8.152	7.62	20.90	44.33

¹ NMOC are non-methane organic compounds, expressed as hexane.

² VOC emissions comprise 39% of the NMOC in landfills (Reference: AP-42, Table 2.4-2; revised 11/98).

- The permittee shall limit the actual emissions from each emission unit (EUs: A02 and A03) to the emission rates listed in Table 3.2-4 while operating the new flare. *[OP Significant Revision Application (05/18/21) and AQR 12.5.2.3(c)]*

Table 3.2-4: Emission Unit Emission Rates (pounds per hour)

EU	Description	PM ₁₀ /PM _{2.5}	NO _x	CO	SO ₂	VOC	HAPs	NMOC ¹	H ₂ S
A03	Flare Stack	0.51	1.86	8.46	56.90	0.03 ²	0.34	0.07	0.09
A02	Fugitives	0	0	0	0	1.86 ²	2.44	4.77	10.12

¹ NMOC are non-methane organic compounds, expressed as hexane.

² VOC emissions comprise 39% of the NMOC in landfills (Reference: AP-42, Table 2.4-2; revised 11/98).

Other

- The permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20% opacity for a period of more than six consecutive minutes. *[AQR 26.1]*
- Flares (EUs: A01 and A03) shall be designed for and operated with no visible emissions, as determined by the methods specified in 40 CFR Part 60.18(f), except for periods not to exceed a total of five minutes during any two consecutive hours. *[40 CFR 60.18(c)(1)]*

4.0 COMPLIANCE DEMONSTRATION REQUIREMENTS

4.1 MONITORING

Surface Methane Monitoring

1. The permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at no more than 30-meter intervals (or a site-specific established spacing) for each collection area quarterly using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40 CFR §62.16720(d). *[40 CFR §62.16720(c)(1), 40 CFR §63.1960(c)(1) and Long-Term Operation and Maintenance Plan dated April 2014]*
2. If the Long-Term Operation and Maintenance Plan dated April 2014 is revised and approved to change the surface monitoring frequency, the permittee shall operate in accordance with the revised Long-Term Operation and Maintenance Plan and 40 CFRs 62.16722(f) and 63.1961(f). *[40 CFR §62.16722(f), 40 CFR §63.1961(f)]*
3. If, the Long-Term Operation and Maintenance Plan dated April 2014 is modified, the permittee is required to submit a copy of the modified plan to the Control Officer within 30 days after the modification. *[AQR 12.5.2.6]*
4. The permittee shall determine the background concentration by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells. *[40 CFR Parts 62.16720(c)(2) and 63.1960(c)(2)]*
5. The permittee shall perform quarterly surface methane emission monitoring in accordance with 40 CFR Part 60, Appendix A7, Method 21, Section 8.3.1, except that the probe inlet shall be placed within 5–10 cm of the ground. Monitoring must be performed during typical meteorological conditions. *[40 CFR Parts 62.16720(c)(3) and 63.1960(c)(3)]*
6. The permittee shall record any reading of 500 ppm or more of methane above background at any location as a monitored exceedance and shall take the following actions. As long as the following actions are taken, the exceedance is not a violation of the operation requirements of 40 CFR Part 62.16716(d). *[40 CFR Parts 62.16720(c)(4) and 63.1960(c)(4)]*
 - a. The permittee shall mark and record the location of each monitored exceedance. For location, determine the latitude and longitude coordinates using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.
 - b. The permittee shall perform cover maintenance or make adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance, and shall re-monitor the location within 10 calendar days of detecting the exceedance.
 - c. If the re-monitoring of the location shows a second exceedance, the permittee shall take additional corrective action, and shall monitor the location again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the permittee shall take the action specified in Condition 4.1-5(e), and no further monitoring of that location shall be required until the action specified in Condition 4.1-5(e) has been taken.

- d. Any location that initially showed an exceedance but has a methane concentration less than 500 ppm of methane above background at the 10-day re-monitoring specified in Condition 4.1-(5)(b) or (c) of this section must be re-monitored one month from the initial exceedance. If the one-month re-monitoring shows a concentration less than 500 ppm above background, no further monitoring of that location is required until the next quarterly monitoring period. If the one-month re-monitoring shows an exceedance, the actions specified in Condition 4.1-(5)(c) or (e) of this section must be taken.
 - e. For any location where the monitored methane concentration equals or exceeds 500 ppm above background three times within a quarterly period, a new well or other collection device must be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes, or control device, and a corresponding timeline for installation may be submitted to the Administrator or Control Officer for approval.
7. The permittee shall implement a program to monitor for cover integrity monthly and implement cover repairs as necessary. *[40 CFR Parts 62.16720(c)(5) and 63.1960(c)(5), and Long-Term Operation and Maintenance Plan dated April 2014]*
 8. The permittee shall comply with the provisions in 40 CFR Part 62.16720(d) or 40 CFR 63.1960(d) regarding the following instrumentation specifications and procedures for surface emission monitoring devices: *[40 CFR Parts 62.16720(d) and 63.1960(d)]*
 - a. The portable analyzer must meet the instrument specifications provided in 40 CFR Part 60, Appendix A-7, Method 21, Section 6, except that “methane” replaces all references to “VOC.”
 - b. The calibration gas must be methane, diluted to a nominal concentration of 500 ppm in air.
 - c. The instrument evaluation procedures in 40 CFR Part 60, Appendix A-7, Method 21, Section 8.1 must be used to meet the performance evaluation requirements in Section 8.1 of Method 21.
 - d. The calibration procedures provided in 40 CFR Part 60, Appendix A-7, Method 21, Sections 8 and 10 must be followed immediately before commencing a surface monitoring survey.

LFG Capture System Monitoring

9. The permittee shall install a sampling port and a thermometer, other temperature measuring device, or an access port for LFG temperature measurements at each wellhead of the active gas collection system to: *[40 CFR Parts 62.16722(a)(1)–(3) and 63.1961(a)(1)–(3)]*
 - a. Measure the gauge pressure in the gas collection header monthly, as provided in 40 CFR Parts 62.16720(a)(3) and 63.1960(a)(3);
 - b. Monitor the nitrogen or oxygen concentration in the LFG monthly as follows:
 - i. The nitrogen level must be determined using 40 CFR Part 60, Appendix A-2, Method 3C unless an alternative test method is established, as allowed by 40 CFR Parts 62.16724(d)(2) and 63.1981(d)(2).

- ii. Unless an alternative test method is established as allowed by 40 CFR Parts 62.16724(d)(2) and 63.1981(d)(2), determine the oxygen level by an oxygen meter using Method 3A or 3C of 40 CFR Part 60, Appendix A-7, or ASTM D6522-11 (if sample location is prior to combustion) under the following conditions:
 - (1) The span must be set between 10–12% oxygen;
 - (2) A data recorder is not required;
 - (3) Only two calibration gases are required, a zero and span;
 - (4) A calibration error check is not required;
 - (5) The allowable sample bias, zero drift, and calibration drift must be $\pm 10\%$.
 - iii. A portable gas composition analyzer may be used to monitor the oxygen levels provided:
 - (1) The analyzer is calibrated; and
 - (2) The analyzer meets all quality assurance and quality control requirements for EPA Method 3A or ASTM D6522-11.
 - c. Monitor the temperature of the LFG monthly as provided in 40 CFR Parts 62.16720(a)(4) and 63.1960(a)(4). The temperature measuring device must be calibrated annually using 40 CFR Part 60, Appendix A-1, Method 2, Section 10.3.
10. If a positive pressure exists at the LFG collection system wellheads, the permittee shall initiate action to correct the exceedance within 5 calendar days, except for the three conditions allowed under § 62.16716(b). Any attempted corrective measure must not cause exceedances of other operational or performance standards: *[40 CFR Parts 62.16720(a)(3) and 63.1960(a)(3)]*
- a. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement of positive pressure, the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but not later than 60 days after positive pressure was first measured. The owner or operator must keep records according to 40 CFR Parts 62.16726(e)(3) and 63.1983(e)(3);
 - b. If corrective actions cannot be fully implemented within 60 days following the positive pressure or elevated temperature measurement for which the root cause analysis was required, the owner or operator must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the measurement of landfill gas temperature greater than 55°C (131°F) or positive pressure. The owner or operator must submit the items listed in Part 62.16724(h)(7) and 40 CFR Part 63.1981(h)(7) as part of the next annual report. The owner or operator must keep records according to 40 CFR Part 62.16726(e)(4) and 40 CFR 63.1983(e)(4); and

- c. If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to 40 CFR Parts 62.16724(h)(7) & (k) and 63.1981(j). The owner or operator must keep records according to 40 CFR Parts 62.16726(e)(5) and 63.1983(e)(5).

LFG Flare Monitoring

11. The permittee shall install, calibrate, maintain, and operate the following equipment on the non-enclosed flare according to the manufacturer's specifications: [40 CFR Parts 62.16722(c) and 63.1961(c)(1-2)]
- A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame; and [40 CFR §60.18(f)(2) and 63.11(b)(5)]
 - A device that records flow (in sfc) to the flare and bypass of the flare (if applicable). The permittee shall:
 - Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the control device at least every 15 minutes; and
 - Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.
12. The permittee shall monitor quarterly the visible emissions from the combustion flare using Method 22. [40 CFR §60.18(f)(1)]
13. The permittee shall monitor the net heating value of the gas being combusted in a flare shall be calculated using the following equation: [40 CFR §60.18(f)(3) and 63.11(b)(6)(ii)]

$$H_T = K \sum_{i=1}^n C_i H_i$$

where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$$K = \text{Constant, } 1.740 \times 10^{-7} \left(\frac{1}{\text{ppm}} \right) \left(\frac{\text{g mole}}{\text{scm}} \right) \left(\frac{\text{MJ}}{\text{kcal}} \right)$$

where the standard temperature for $\left(\frac{\text{g mole}}{\text{scm}} \right)$ is 20°C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by reference as specified in § 60.17); and H_i = Net heat of combustion of sample component i , kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in § 60.17) if published values are not available or cannot be calculated.

14. The permittee shall determine the actual exit velocity of the flare by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by EPA Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [40 CFR §60.18(f)(4)]
15. The permittee shall determine the maximum permitted velocity, V^{\max} , with following equation: [40 CFR §60.18(f)(5)]

$$\text{Log}^{10}(V^{\max}) = (H^{\text{T}} + 28.8)/31.7$$

V^{\max} = Maximum permitted velocity, M/sec

28.8 = Constant

31.7 = Constant

H^{T} = The net heating value as determined in paragraph (f)(3).

Other

16. The permittee shall calculate fugitive NMOC emissions annually using chemical analysis of LFG and AP-42 default emission factors in accordance with the provisions of EPA-approved test methods (or equivalent); with 40 CFR Part 60, Appendix A—General Provisions; or using a DAQ-approved performance test method. Fugitive emissions from the landfill shall be calculated based on the assumption that 25% of the LFG generated is not captured. [AQR 12.5.2.6]
17. The permittee shall calculate fugitive H₂S emissions from landfill on a consecutive 12-month basis using monthly H₂S ppm that was analyzed per ASTM D5504, e.g., using a gas chromatograph equipped with a sulfur chemiluminescence detector (SCD) or an equivalent method approved by EPA. The monthly gas flow rate shall be reported in scfm. Fugitive emissions from the landfill shall be calculated based on the assumption that 25% of the LFG generated is not captured. [AQR 12.5.2.6]
18. The permittee may petition DAQ to revise the monthly landfill H₂S monitoring requirement after 12 consecutive months of stable H₂S concentrations in the landfill gas and compliance with the emissions standards and limitations in this permit. Such requests shall be submitted to DAQ with supporting documentation, including test results, data analyses and emissions calculations. [AQR 12.5.2.6]

4.2 TESTING

1. At the Control Officer's request, the permittee shall test (or have tests performed) to determine emissions of air contaminants from any source whenever the Control Officer has reason to believe that an emission in excess of those allowed by the AQRs is occurring. The Control Officer may specify testing methods to be used in accordance with good professional practice. The Control Officer may observe the testing. All tests shall be conducted by reputable, qualified personnel. [AQR 4.2]

2. At the Control Officer's request, the permittee shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices, as may be necessary for proper determination of the emission of air contaminants. [AQR 4.2]
3. The permittee shall submit to the Control Officer for approval a performance testing protocol that contains testing, reporting, and notification schedules, test protocols, and anticipated test dates no less than 45 days, but no more than 90 days, before the anticipated date of the performance test unless otherwise specified in this permit. [AQR 12.5.2.8]
4. The permittee shall submit to EPA for approval any alternative test methods EPA has not already approved to demonstrate compliance with a requirement under 40 CFR Part 60. [40 CFR Part 60.8(b)]
5. The permittee shall submit a report describing the results of each performance test to the Control Officer within 60 days of the end of the test. [AQR 12.5.2.8]
6. All performance testing is subject to 40 CFR Part 60.8 and DAQ's *Guidelines for Source Testing (9/19/2019)*. Performance testing shall be the instrument for determining initial and subsequent compliance with the emission limitations set forth in this permit and the testing requirements established by the applicable sections of 40 CFR Part 62.16718, "Test methods and procedures," as well as 40 CFR Part 63.1959(b)(2)(iii)(A) & (B). [AQR 12.5.2.8(a)]
7. The permittee shall conduct an initial performance test (Method 22 – Visual determination of smoke emissions from flares) to be completed no later than 180 days after the initial startup of the approved control system (EU: A03), in accordance with Condition 4.2.11 of this permit. [40 CFR Parts 62.16714(c)(2) and 63.1959(b)(2)(iii)(B)]
8. The permittee for an affected source having a design capacity equal to or greater than 2.5 million Mg and 2.5 million m³ must either comply with an NMOC emission rate equal to or greater than 50 Mg/year or calculate an NMOC emission rate for the landfill using the procedures specified in the applicable regulations. The NMOC emission rate must be recalculated annually, except as provided in 40 CFR Parts 62.16724(c)(3) and 63.1981(c)(1)(ii)(A). [40 CFR Parts 62.16714(e) and 63.1959(b)]
9. After installation and startup of a collection and control system in compliance with the applicable regulations, the permittee must calculate the NMOC emission rate to determine when the system can be capped, removed, or decommissioned, as provided in 40 CFR Parts 62.16714(f) and 63.1957(b)(3), using Equation 3: [40 CFR Parts 62.16718(b) and 63.1959(c)]

$$M_{\text{NMOC}} = 1.89 \times 10^{-3} Q_{\text{LFG}} C_{\text{NMOC}} \text{ (Eq. 3).}$$

where:

- M_{NMOC} = Mass emission rate of NMOC (in megagrams per year);
- Q_{LFG} = Flow rate of LFG (in cubic meters per minute); and
- C_{NMOC} = Average NMOC concentration (in ppmv as hexane).

10. The permittee shall determine QLFG by measuring the total LFG flow rate at the common header pipe that leads to the control system using a gas flow measuring device calibrated according to the provisions of 40 CFR Part 60, Appendix A-1, Method 2E, Section 10. [40 CFR Parts 62.16718(b)(1) and 63.1959(c)(1)]

11. The permittee shall determine C_{NMOC} by collecting and analyzing LFG sampled from the common header pipe using the procedures in 40 CFR Part 60, Appendix A-7, Method 25 or Method 25C. The sample location on the common header pipe must come before any condensate removal or other gas-moving or -refining units. The permittee must divide the average NMOC concentration (from Method 25 or 25C) by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane. *[40 CFR Parts 62.16718(b)(2) and 63.1959(c)(2)]*
12. The permittee may use another method to determine LFG flow rate and NMOC concentration if approved by the Administrator. *[40 CFR Parts 62.16718(b)(3) and 63.1959(c)(3)]*
13. Within 60 days after the date of calculating the NMOC emission rate to determine when the system can be capped or removed, the permittee must submit the results according to 40 CFR Parts 62.16724(j)(2) and 63.1981(l)(1). *[40 CFR Parts 62.16718(b)(3)(i) and 63.1959(c)(3)(i)]*
14. For the performance test required in 40 CFR Parts 62.16714(c)(1) and 63.1959(b)(2)(iii)(A), the net heating value of the combusted LFG as determined in 40 CFR Part 60.18(f)(3) is calculated quarterly from the concentration of methane in the LFG as measured by EPA Method 3C. A minimum of three 30-minute Method 3C samples shall be determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the LFG molecular weight for calculating the flare gas exit velocity under 40 CFR Parts 60.18(f)(4) and 63.11(b)(7), in Subpart A. *[40 CFR Parts 62.16718(d) and 63.1959(e)]*
15. For the performance test required in 40 CFR Part 62.16714(c)(2), EPA Method 25 or 25C (25C may be used at the inlet only) must be used to determine compliance with the 98 weight percent efficiency or the 20 ppmv outlet NMOC concentration level unless the Administrator or Control Officer has approved another method to demonstrate compliance, as provided by 40 CFR Parts 62.16724(d)(2) and 63.1981(d)(2). Method 3, 3A, or 3C (in Appendix A-2) shall be used to determine oxygen for correcting the NMOC concentration as hexane to 3%. Where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A (Appendix A-7) should be used in place of Method 25. Method 18 (Appendix A-6) may be used in conjunction with Method 25A on a limited basis (compound-specific, e.g., for methane), or Method 3C may be used alone to determine methane. The methane as carbon should be subtracted from the Method 25A total hydrocarbon value as carbon to give the NMOC concentration as carbon. The permittee shall divide the NMOC concentration as carbon by six to convert C_{NMOC} as carbon to C_{NMOC} as hexane. Equation 4 shall be used to calculate efficiency: *[40 CFR Parts 62.16718(e) and 63.1959(d)]*

$$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}}) / (\text{NMOC}_{\text{in}}) \quad (\text{Eq. 4})$$

Where:

NMOC_{in} = Mass of NMOC entering control device.

NMOC_{out} = Mass of NMOC exiting control device.

16. The permittee shall conduct quarterly visible emissions checks from the combustion flare by employing 40 CFR Part 60, Appendix A-7, Method 22. The observation period is two hours, which shall be used according to Method 22. *[40 CFR Part 60.18(f)(1)]*
17. The Control Officer will consider approving the permittee's request for alternative performance test methods if proposed in writing in the performance test protocols. *[AQR 12.5.2.8(a)]*

18. The permittee shall submit to EPA for approval any alternative test methods EPA has not already approved to demonstrate compliance with a requirement under 40 CFR Part 60. *[40 CFR Part 60.8(b)]*
19. The permittee shall submit a report describing the results of the performance test to the Control Officer within 60 days of the end of the performance test. *[40 CFR Part 62.16718(d)(1) and AQR 12.5.2.8]*
20. The permittee shall submit results of the performance test to EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's CDX. *[40 CFR Part 63, Subpart AAAA]*
21. The permittee of any stationary source that fails to demonstrate compliance with emissions standards or limitations during any performance test shall submit a compliance plan to the Control Officer within 90 days of the end of the performance test. *[AQR 12.5.2.8(a) & AQR 10.1]*
22. The Control Officer may require additional performance testing when operating conditions appear to be inadequate to demonstrate compliance with the emissions and/or limitations in this permit. *[AQR 12.5.2.8(a) & AQR 4.2]*

4.3 RECORDKEEPING

1. The permittee shall keep records of all inspections, maintenance, and repairs, as required by this permit. *[AQR 12.5.2.6(d) and AQR 12.5.2.8]*
2. The permittee shall comply with all applicable recordkeeping requirements of 40 CFR Part 62, Subpart OOO and 40 CFR Part 63, Subpart AAAA *[AQR 12.5.2.6(d)]*
3. All records, logs, etc., or copies thereof, shall be kept on-site for a minimum of five years from the date the measurement or data was entered. *[AQR 12.5.2.6(d) & AQR 12.5.2.8]*
4. Records and data required by this permit to be maintained by the permittee may be audited at any time by a third party selected by the Control Officer. *[AQR 4.1 and AQR 12.5.2.8]*
5. At a minimum, the permittee shall create and maintain the records identified in Section 4.3.1, all of which must be producible on-site to the Control Officer's authorized representative upon request and without prior notice during the permittee's hours of operation. *[AQR 12.5.2.6(d) and AQR 12.5.2.8]*
6. The permittee shall maintain the following records on-site: *[AQR 12.5.2.6(d); AQR 12.5.8; 40 CFR Part 62, Subpart OOO; and 40 CFR Part 63, Subpart AAAA]*
 - a. Quarterly surface concentration monitoring for methane;
 - b. Quarterly background concentration monitoring for methane;
 - c. Monthly measurements of the gauge pressure in the gas collection header;
 - d. Monthly concentrations of nitrogen and oxygen in the LFG;
 - e. Monthly temperature of the landfill gas;

- f. Corrective actions taken if any deviations were observed during the monthly wellhead inspections;
 - g. Monthly landfill cover integrity and repairs implemented;
 - h. Corrective actions taken and re-monitoring of any surface monitoring exceedance; and
 - i. All performance test results.
7. The permittee shall maintain the following records on-site for reporting: [*AQR 12.5.2.6(d) & AQR 12.5.2.8*]
- a. Annual estimation of NMOC fugitive emissions using chemical analysis of LFG and AP-42 default emission factors (reported annually);
 - b. Monthly LFG H₂S concentration in ppm (reported semiannually),
 - c. Monthly, consecutive 12-month total of estimated H₂S fugitive emissions using ASTM D 5504-12, using a gas chromatograph equipped with a sulfur chemiluminescence detector (SCD) or an equivalent method approved by EPA (reported semiannually);
 - d. Annual NMOC results, (reported as required in Section 4.2 of this OP);
 - e. Results of the quarterly surface concentration monitoring for methane (reported semiannually);
 - f. Results of the quarterly background concentration monitoring for methane (reported semiannually);
 - g. Quarterly summary of the hours of operation of the combustion flare (reported semiannually);
 - h. Readings and locations of each surface monitoring exceedances during surface concentration monitoring for methane (reported semiannually);
 - i. Continuous monitoring records of the flare combustion temperature (EU: A01) (reported semiannually);
 - j. Results of the quarterly Method 22 performance test results of the combustion flare (reported as required in Section 4.2 of this OP);
 - k. Quarterly calculated average of the hourly and each monthly consecutive 12-month total LFG flow (in cubic feet or cubic meters) through the gas collection and control system (reported semiannually);
 - l. Quarterly landfill gas heating value in MMBtu/dscf based on EPA-approved methods (reported annually);
 - m. Calculated quarterly average of the heat input to the combustion flare in MMBtu/hr and each monthly consecutive 12-month total heat input (reported semiannually);
 - n. Monthly consecutive 12-month-total of estimated combustion flare emissions (reported semiannually);

- o. Magnitude and duration of malfunctions, excess emissions, monitoring system downtimes, corrective actions taken, etc. during the flare operation, as required by 40 CFR 60.7 (reported as required by this OP);
 - p. Records required in accordance with 40 CFR Part 63.1983 (reported as required by the regulation);
 - q. Deviations from permit requirements that result in excess emissions (reported as required in Section 4.4 of this OP); and
 - r. Deviations from permit requirements that do not result in excess emissions (reported semiannually).
8. The permittee shall include in each record above, where applicable, the date and time the monitoring or measurement was taken, the person performing the monitoring or measurement, and the emission unit or location where the monitoring or measurement was performed. Each record must also contain the action taken to correct any deficiencies, when applicable. *[AQR 12.5.2.6]*
9. The permittee shall include deviations specified in 40 CFR Part 63.1965 in its semiannual and annual reports. Specified deviations include periods when: *[40 CFR Part 63.1965]*
- a. The control device operating parameter boundaries described in 40 CFR Part 62.16726 or 40 CFR Part 62, Subpart OOO are exceeded; and
 - b. One hour or more during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.
10. The Control Officer reserves the right to require additional record keeping for this source. *[AQR 12.5.2.6]*

4.4 REPORTING AND NOTIFICATIONS

- 1. The permittee shall certify compliance with the terms and conditions contained in this Part 70 OP, including emission limitations, standards, work practices, and the means for monitoring such compliance. *[AQR 12.5.2.8(e)]*
- 2. The permittee shall submit compliance certifications annually in writing to the Control Officer (4701 W. Russell Road, Suite 200, Las Vegas, NV 89118) and the Region 9 Administrator (Director, Air and Radiation Divisions, 75 Hawthorne St., San Francisco, CA 94105). A compliance certification for each calendar year will be due on January 30 of the following year, and shall include the following: *[AQR 12.5.2.8(e)]*
 - a. The identification of each term or condition of the permit that is the basis of the certification;
 - b. The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period. These methods and means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements described in 40 CFR Part 70.6(a)(3). If

- necessary, the permittee shall also identify any other material information that must be included in the certification to comply with Section 113(c)(2) of the Clean Air Act, which prohibits knowingly making a false certification or omitting material information; and
- c. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the methods or means designated in (b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify, as possible exceptions to compliance, any periods during which compliance was required and in which an excursion or exceedance, as defined under 40 CFR Part 64, occurred.
3. The permittee shall report to the Control Officer any startup, shutdown, malfunction, emergency, or deviation that causes emissions of regulated air pollutants in excess of any limits set by regulations or this permit. The report shall be in two parts, as specified below: *[AQR 12.5.2.6(d)(4)(B); AQR 25.6.1]*
 - a. Within 24 hours of the time the permittee learns of the excess emissions, the permittee shall notify DAQ by phone at (702) 455-5942, by fax at (702) 383-9994, or by email at airquality@clarkcountynv.gov.
 - b. Within 72 hours of the notification required by paragraph (a) above, the permittee shall submit a detailed written report to DAQ containing the information required by AQR 25.6.3.
 4. With the semiannual monitoring report, the permittee shall report to the Control Officer all deviations from permit conditions that do not result in excess emissions, including those attributable to malfunction, startup, or shutdown. Reports shall identify the probable cause of each deviation and any corrective actions or preventative measures taken. *[AQR 12.5.2.6(d)(4)(B)]*
 5. The owner or operator of any source required to obtain a permit under AQR 12 shall report to the Control Officer emissions in excess of an applicable requirement or emission limit that pose a potential imminent and substantial danger to public health and safety or the environment as soon as possible, but no later than 12 hours after the deviation is discovered, and submit a written report within two days of the occurrence. *[AQR 25.6.2]*
 6. The permittee shall submit all compliance certifications to the U.S. Environmental Protection Agency (EPA) and to the Control Officer. *[AQR 12.5.2.8(e)(4)]*
 7. Any application form, report, or compliance certification submitted to the Control Officer pursuant to the permit or the AQRs, shall contain a certification by a Responsible Official, with an original signature, of truth, accuracy, and completeness. This certification, and any other required under AQR 12.5, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *[AQR 12.5.2.6(l)]*
 8. The permittee shall furnish to the Control Officer, in writing and within a reasonable time, any information that the Control Officer may request to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Control Officer copies of

records that the permit requires keeping. The permittee may furnish records deemed confidential directly to the Administrator, along with a claim of confidentiality. *[AQR 12.5.2.6(g)(5)]*

9. At the Control Officer's request, the permittee shall provide any information or analyses that will disclose the nature, extent, quantity, or degree of air contaminants that are or may be discharged by the source, and the type or nature of control equipment in use. The Control Officer may require such disclosures be certified by a professional engineer registered in the state. In addition to this report, the Control Officer may designate an authorized agent to make an independent study and report on the nature, extent, quantity, or degree of any air contaminants that are or may be discharged from the source. An agent so designated may examine any article, machine, equipment, or other contrivance necessary to make the inspection and report. *[AQR 4.1]*
10. The permittee shall submit annual emissions inventory reports based on the following: *[AQR 18.6.1 and AQR 12.5.2.4]*
 - a. The annual emissions inventory must be submitted to DAQ by March 31 of each calendar year (if March 31 falls on a Saturday or Sunday, or on a Nevada or federal holiday, the submittal shall be due on the next regularly scheduled business day);
 - b. The calculated actual annual emissions from each emission unit shall be reported even if there was no activity, along with the total calculated actual annual emissions for the source based on the emissions calculation methodology used to establish the potential to emit (PTE) in the permit or an equivalent method approved by the Control Officer prior to submittal; and
 - c. As the first page of text, a signed certification containing the sentence: "I certify that, based on information and belief formed after reasonable inquiry, the statements contained in this document are true, accurate, and complete." This statement shall be signed and dated by a Responsible Official of the company (a sample form is available from DAQ).
11. Stationary sources that emit 25 tons or more of nitrogen oxide (NO_x) and/or emit 25 tons or more of volatile organic compounds (VOC) from their emission units, insignificant activities, and exempt activities during a calendar year shall submit an annual emissions statement for both pollutants. Emissions statements must include actual annual NO_x and VOC emissions from all activities, including emission units, insignificant activities and exempt activities. Emissions statements are separate from, and additional to, the calculated annual emissions reported each year for all regulated air pollutants (aka Emissions Inventory). *[AQR 12.9.1]*
12. The permittee shall comply with all applicable notification and reporting requirements of 40 CFR Part 60.7, 40 CFR Part 62, Subpart OOO, CFR Part 63.9 and 40 CFR Part 63, Subpart AAAA *[AQR 12.5.2.6(d)]*
13. The permittee shall submit semiannual monitoring reports to DAQ. *[AQR 12.5.2.6(d) and AQR 12.5.2.8]*
14. The following requirements apply to semiannual reports: *[AQR 12.5.2.6(d) and AQR 12.5.2.8]*
 - a. The report shall include item listed in Section 4.3.

- b. The report shall include summaries of any permit deviations, their probable cause, and corrective or preventative actions taken.
 - c. The report shall be based on a calendar semiannual period, which includes partial reporting periods.
 - d. The report shall be received by DAQ within 30 calendar days after the semiannual period.
15. The permittee shall report the NMOC on an annual basis using the formula and procedures provided in 40 CFR Part 62.16718(a) or (b), as applicable. *[40 CFR Parts 62.16724(c)(1) and 62.16724(h)]*
16. The permittee shall submit semiannual reports to the Control Officer in accordance with 40 CFR Part 63.1980(a).
17. The permittee shall report the start-up of the new flare to DAQ/Permitting 15 days after initial startup. *[AQR 12.5.2.8]*
18. All report submissions shall be addressed to the attention of the Control Officer. *[AQR 14.1(b), AQR 12.5.2.6(d), and AQR 12.5.2.8]*
19. All reports shall contain the following: *[AQR 12.5.2.6(d) and AQR 12.5.2.8]*
- a. A certification statement on the first page, e.g., “I certify that, based on information and belief formed after reasonable inquiry, the statements contained in this document are true, accurate and complete.” (A sample form is available from DAQ.)
 - b. A certification signature from a responsible official of the company and the date of certification.
20. Regardless of the date of issuance of this OP, the source shall comply with the schedule for report submissions outlined in Table 4-1. *[AQR 12.5.2.6(d)]*

Table 4-1: Required Submission Dates for Various Reports

Required Report	Applicable Period	Due Date
Semiannual report for 1 st six-month period	January, February, March, April, May, June	July 30 each year ¹
Semiannual report for 2 nd six-month period; any additional annual records required	July, August, September, October, November, December	January 30 each year ¹
Annual Compliance Certification	Calendar year	January 30 each year ¹
Annual Emissions Inventory Report	Calendar year	March 31 each year ¹
Annual Emissions Statement ²	Calendar year	March 31 each year ¹
Notification of Malfunctions, Startup, Shutdowns, or Deviations with Excess Emission	As required	Within 24 hours of the permittee learns of the event
Report of Malfunctions, Startup, Shutdowns, or Deviations with Excess Emission	As required	Within 72 hours of the notification

Required Report	Applicable Period	Due Date
Deviation Report without Excess Emissions	As required	Along with semiannual reports ¹
Excess Emissions that Pose a Potential Imminent and Substantial Danger	As required	Within 12 hours of the permittee learns of the event
Performance Testing Protocol	As required	No less than 45 days, but no more than 90 days, before the anticipated test date ¹
Performance Testing	As required	Within 60 days of end of test ¹

¹If the due date falls on a Saturday, Sunday, or federal or Nevada holiday, the submittal is due on the next regularly scheduled business day.

²Required only for stationary sources that emit 25 tons or more of nitrogen oxide (NO_x) and/or emit 25 tons or more of volatile organic compounds (VOC) during a calendar year.

21. The Control Officer reserves the right to require additional reports and reporting to verify compliance with permit emission limits, applicable permit requirements, and requirements of applicable federal regulations. *[AQR 4.1]*

4.5 MITIGATION

The source has no federal offset requirements. *[AQR 12.7]*

5.0 OTHER REQUIREMENTS

1. Any person who violates any provision of the AQRs, including, but not limited to, any application requirement; any permit condition; any fee or filing requirement; any duty to allow or carry out inspection, entry, or monitoring activities; or any requirements from DAQ is guilty of a civil offense and shall pay a civil penalty levied by the Air Pollution Control Hearing Board and/or the Hearing Officer of not more than \$10,000. Each day of violation constitutes a separate offense. *[AQR 9.1; NRS 445B.640]*
2. Any person aggrieved by an order issued pursuant to AQR 9.1 is entitled to review, as provided in Chapter 233B of the NRS. *[AQR 9.12]*
3. The permittee shall comply with the requirements of Title 40, Part 61 of the Code of Federal Regulations (40 CFR Part 61), Subpart M—the National Emission Standard for Asbestos—for all demolition and renovation projects. *[AQR 13.1(b)(8)]*
4. The permittee shall not use, sell, or offer for sale any fluid as a substitute material for any motor vehicle, residential, commercial, or industrial air conditioning system, refrigerator freezer unit, or other cooling or heating device designated to use a Class I or Class II ozone-depleting substance or any nonexempt substitute refrigerant as a working fluid, unless such fluid has been approved for sale in such use by the EPA Administrator. The permittee shall keep records of all paperwork relevant to the applicable requirements of 40 CFR Part 82 on-site. *[40 CFR Part 82]*
5. A risk management plan is required for the storing, handling and use of an applicable “Highly Hazardous Chemical” pursuant to 40 CFR Part 68. The permittee shall submit revisions of the risk management plan to the appropriate authority and a copy to DAQ. *[40 CFR Part 68.150(b)(3)]*

6.0 PERMIT SHIELD

The source has not requested a permit shield. *[AQR 12.5.2.9]*

The conditions in this OP are based on various requirements of 40 CFR Part 62, Subpart OOO; 40 CFR Part 60.18; 40 CFR Part 63, Subpart AAAA; 40 CFR Part 63.11; and applicable AQRs.

7.0 GENERAL CONDITIONS

7.1 GENERAL REQUIREMENTS

1. The permittee shall comply with all conditions of the Part 70 Operating Permit (OP). Any permit noncompliance may constitute a violation of the Clark County Air Quality Regulations (AQRs), Nevada law, and the Clean Air Act (Act), and is grounds for enforcement action; permit termination, revocation and reissuance, or revision; or denial of a permit renewal application. *[AQR 12.5.2.6(g)(1)]*
2. If any term or condition of this permit becomes invalid as a result of a challenge to a portion of this permit, the other terms and conditions of this permit shall not be affected and shall remain valid. *[AQR 12.5.2.6(f)]*
3. The permittee shall pay all permit fees pursuant to AQR 18. *[AQR 12.5.2.6(h)]*
4. This permit does not convey any property rights of any sort, or any exclusive privilege. *[AQR 12.5.2.6(g)(4)]*
5. The permittee agrees to allow inspection of the premises to which this permit relates by the Control Officer at any time during the permittee's hours of operation without prior notice. The permittee shall not obstruct, hamper, or interfere with any such inspection. *[AQR 4.1; AQR 5.1.1; & AQR 12.5.2.8(b)]*
6. The permittee shall allow the Control Officer, upon presentation of credentials, to: *[AQR 4.1 & AQR 12.5.2.8(b)]*
 - a. Access and copy any records that must be kept under the conditions of the permit;
 - b. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
 - c. Sample or monitor substances or parameters for the purpose of assuring compliance with the permit or applicable requirements; and
 - d. Document alleged violations using such devices as cameras or video equipment.
7. Any permittee who fails to submit any relevant facts, or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit the needed supplementary facts or corrected information. In addition, the permittee shall provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit. A responsible official shall certify the additional information, consistent with the requirements of AQR 12.5.2.4. *[AQR 12.5.2.2]*
8. Anyone issued a permit under AQR 12.5 shall post it in a location that is clearly visible and accessible to facility employees and DAQ representatives. *[AQR 12.5.2.6(m)]*
9. The permittee shall not use as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[AQR 12.5.2.6(g)(2)]*

7.2 MODIFICATION, REVISION, AND RENEWAL REQUIREMENTS

1. No person shall begin actual construction of a New Part 70 source, or modify or reconstruct an existing Part 70 source that falls within the preconstruction review applicability criteria, without first obtaining an ATC Permit from the Control Officer. *[AQR 12.4.1.1(a)]*
2. The permit may be revised, revoked, reopened and reissued, or terminated for cause by the Control Officer. The filing of a request by the permittee for a permit revision, revocation, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance, does not stay any permit condition. *[AQR 12.5.2.6(g)(3)]*
3. The permit shall be reopened under any of the following circumstances and when all applicable requirements pursuant to AQR 12.5.2.15 are met: *[AQR 12.5.2.15(a)]*
 - a. New applicable requirements become applicable to a stationary source considered “major” (per the definition in AQR 12.2, AQR 12.3, or 40 CFR Part 70.3(a)(1)) with a remaining permit term of three or more years;
 - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under the Acid Rain Program;
 - c. The Control Officer or EPA determines that the permit contains a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
 - d. The EPA Administrator or the Control Officer determines that the permit must be revised or revoked to assure compliance with applicable requirements
4. A permit, permit revision, or renewal may be approved only if all of the following conditions have been met: *[AQR 12.5.2.10(a)]*
 - a. The permittee has submitted to the Control Officer a complete application for a permit, permit revision, or permit renewal, except that a complete application need not be received before a Part 70 general permit is issued pursuant to AQR 12.5.2.20; and
 - b. The conditions of the permit provide for compliance with all applicable requirements and the requirements of AQR 12.5.
5. The permittee shall not build, erect, install, or use any article, machine, equipment, or other contrivance, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission that would otherwise constitute a violation of an applicable requirement. *[AQR 80.1 & 40 CFR Part 60.12]*
6. No permit revisions shall be required under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit. *[AQR 12.5.2.6(i)]*
7. Permit expiration terminates the permittee’s right to operate unless a timely and complete renewal application has been submitted. *[AQR 12.5.2.11(b)]*

8. For purposes of permit renewal, a timely application is a complete application that is submitted at least six months, but not more than eighteen months, prior to the date of permit expiration. If a source submits a timely application under this provision, it may continue operating under its current Part 70 Operating Permit (OP) until final action is taken on its application for a renewed Part 70 OP. *[AQR 12.5.2.1(a)(2)]*

8.0 ATTACHMENTS

ATTACHMENT 1—APPLICABLE REGULATIONS

Requirements Specifically Identified as Applicable

1. NRS, Chapter 445B.
2. Applicable AQRs, as listed in Table A-1.

Table A-1: Applicable Clark County AQRs

Citation	Title
AQR 0	"Definitions"
AQR 4	"Control Officer"
AQR 5	"Interference with Control Officer"
AQR 8	"Persons Liable for Penalties – Punishment: Defense"
AQR 9	"Civil Penalties"
AQR 12.0	"Applicability and General Requirements"
AQR 12.4	"Authority to Construct Application and Permit Requirements for Part 70 Sources"
AQR 12.5	"Part 70 Operating Permit Requirements"
AQR 12.9	"Annual Emissions Inventory Requirement"
AQR Section 13.2.b.59	"MACT - National Emission Standard for Hazardous Air Pollutants for Municipal Solid Waste Landfills"
AQR 14.1(b)(1)	"Subpart A – General Provisions"
AQR 18	"Permit and Technical Service Fees"
AQR 25	"Affirmative Defense for Excess Emissions due to Malfunctions, Startup, and Shutdown"
AQR 26	"Emission of Visible Air Contaminants"
AQR 28	"Fuel Burning Equipment"
AQR 40	"Prohibitions of Nuisance Conditions"
AQR 41	"Fugitive Dust"
AQR 42	"Open Burning"
AQR 43	"Odors in the Ambient Air"
AQR 70	"Emergency Procedures"
AQR 80	"Circumvention"
AQR 92	"Fugitive Dust"
AQR 94	"Permitting and Dust Control for Construction Activities"

3. Clean Air Act Amendments (authority: 42 U.S.C. § 7401, et seq.)
4. Applicable 40 CFR sections, as listed in Table A-2.

Table A-2: Applicable CFRs

Citation	Title
40 CFR Part 52.21	"Prevention of significant deterioration of air quality"
40 CFR Part 52.1470	"Approval and Promulgation of Implementation Plans, Subpart DD—Nevada"
40 CFR Part 60, Subpart A	"General Provisions"
40 CFR Part 60, Appendix A	"Test Methods 2E"
40 CFR Part 60, Appendix A	"Test Methods 3C"
40 CFR Part 60, Appendix A	"Test Methods 18"
40 CFR Part 60, Appendix A	"Test Methods 21"
40 CFR Part 60, Appendix A-7	"Test Methods 25C"
40 CFR Part 62, Subpart OOO	Federal Plan for Municipal Solid Waste Landfills
40 CFR Part 63, Subpart AAAA	National Emission Standard for Hazardous Air Pollutants for Municipal Solid Waste Landfills
40 CFR Part 70	"State Operating Permit Programs"
40 CFR Part 82	"Protection of Stratospheric Ozone"