

Facility DEC ID: 8463000010

PERMIT
Under the Environmental Conservation Law (ECL)

IDENTIFICATION INFORMATION

Permit Type: Air State Facility
Permit ID: 8-4630-00010/00011
Mod 0 Effective Date: 04/02/2015 Expiration Date: 04/01/2025
Mod 1 Effective Date: 12/19/2019 Expiration Date: 04/01/2025
Mod 2 Effective Date: 06/11/2021 Expiration Date: 04/01/2025

Permit Issued To: HAKES C & D DISPOSAL INC
4376 MANNING RIDGE RD
PAINTED POST, NY 14870

Contact: LARRY G SHILLING
HYLAND LANDFILL
6653 HERDMAN RD
ANGELICA, NY 14709
(589) 466-7271

Facility: HAKES C & D LANDFILL
4376 MANNING RIDGE RD
PAINTED POST, NY 14870

Description:
Hakes C&D Disposal, Inc. (Hakes) operates an existing C&D landfill called the Hakes C&D landfill, located at 4376 Manning Ridge Road, Campbell, NY. The landfill's currently approved design capacity is 1,494 tons per day. Landfill gas is presently collected and controlled by a hydrogen sulfide (H₂S) treatment system and flare to combust H₂S and methane (CH₄).

The facility does not currently require capping for H₂S emissions.

The previous permit modification required sampling and monitoring of the gas and calculations to verify Sulphur Dioxide SO₂ emissions, generated by combustion of H₂S and other sulfur containing compounds, are below major source thresholds and air quality standards.

This current modification requires refinement in the measurement and frequency of H₂S sampling and implementation of a correction factor to be used to determine SO₂ emissions, as required by the permit.

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By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified and any Special Conditions included as part of this permit.

Permit Administrator: KIMBERLY A MERCHANT
 6274 E AVON LIMA RD
 AVON, NY 14414-9519

Authorized Signature: _____ Date: ___ / ___ / _____

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Notification of Other State Permittee Obligations

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the compliance permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in any compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

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DEC GENERAL CONDITIONS
****** General Provisions ******
GENERAL CONDITIONS - Apply to ALL Authorized Permits.

Condition 1: Facility Inspection by the Department
Applicable State Requirement: ECL 19-0305

Item 1.1:
 The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

Item 1.2:
 The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

Item 1.3:
 A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

Condition 1-1: Facility Inspection by the Department
Applicable State Requirement: ECL 19-0305

Item 1-1.1:
 The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

Item 1-1.2:
 The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

Item 1-1.3:
 A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

Condition 2: Relationship of this Permit to Other Department Orders and Determinations
Applicable State Requirement: ECL 3-0301 (2) (m)

Item 2.1:
 Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of

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the terms, conditions or requirements contained in such order or determination.

Condition 1-2: Relationship of this Permit to Other Department Orders and Determinations

Applicable State Requirement: ECL 3-0301 (2) (m)

Item 1-2.1:

Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

Condition 1-3: Applications for permit renewals, modifications and transfers

Applicable State Requirement: 6 NYCRR 621.11

Item 1-3.1:

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

Item 1-3.2:

The permittee must submit a renewal application at least 180 days before the expiration of permits for Title V and State Facility Permits.

Item 1-3.3

Permits are transferrable with the approval of the department unless specifically prohibited by the statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

Condition 3: Applications for permit renewals, modifications and transfers

Applicable State Requirement: 6 NYCRR 621.11

Item 3.1:

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

Item 3.2:

The permittee must submit a renewal application at least 180 days before expiration of permits for Title V Facility Permits, or at least 30 days before expiration of permits for State Facility Permits.

Item 3.3:

Permits are transferrable with the approval of the department unless specifically prohibited by the statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

Condition 1-4: Permit modifications, suspensions or revocations by the Department

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Applicable State Requirement: 6 NYCRR 621.13

Item 1-4.1:

The Department reserves the right to exercise all available authority to modify, suspend, or revoke this permit in accordance with 6NYCRR Part 621. The grounds for modification, suspension or revocation include:

- a) materially false or inaccurate statements in the permit application or supporting papers;
- b) failure by the permittee to comply with any terms or conditions of the permit;
- c) exceeding the scope of the project as described in the permit application;
- d) newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;
- e) noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

Condition 4: Permit modifications, suspensions or revocations by the Department

Applicable State Requirement: 6 NYCRR 621.13

Item 4.1:

The Department reserves the right to exercise all available authority to modify, suspend, or revoke this permit in accordance with 6NYCRR Part 621. The grounds for modification, suspension or revocation include:

- a) materially false or inaccurate statements in the permit application or supporting papers;
- b) failure by the permittee to comply with any terms or conditions of the permit;
- c) exceeding the scope of the project as described in the permit application;
- d) newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;
- e) noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

****** Facility Level ******

Condition 5: No regulated activity without Dept approval

Applicable State Requirement: ECL 3-0301 (2) (m)

Item 5.1:

No regulated activity, including any construction activities or other physical alteration of the site as authorized by this permit, can commence prior to the permittee's receipt of written notice from the Department stating that the outstanding violations of the Environmental Conservation Law (ECL) at this site have been resolved to the Department's satisfaction.

Condition 6: Submission of application for permit modification or renewal-REGION 8 HEADQUARTERS

Applicable State Requirement: 6 NYCRR 621.6 (a)

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Item 6.1:

Submission of applications for permit modification or renewal are to be submitted to:

NYSDEC Regional Permit Administrator
Region 8 Headquarters
Division of Environmental Permits
6274 Avon-Lima Road
Avon, NY 14414-9519
(585) 226-2466

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DEC SPECIAL CONDITIONS

Condition 8: Resolve Site Closure

Applicable State Requirement: ECL 3-0301 (2) (m)

Item 8.1:

No regulated activity, including any construction activities or other physical alteration of the site as authorized by this permit, can commence prior to the permittee's receipt of a closure approval letter from the Department stating that the site has been properly closed pursuant to Part 360 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) to the Department's satisfaction.

Condition 7: Resolve Site Closure

Applicable State Requirement: ECL 3-0301 (2) (m)

Item 7.1:

No regulated activity, including any construction activities or other physical alteration of the site as authorized by this permit, can commence prior to the resolution of each term, provision, and condition of the Order on Consent NO. R2-20001222-250 executed on March 12, 2004 and, the permittee's receipt of a closure approval letter from the Department stating that the site has been properly closed pursuant to Part 360 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) to the Department's satisfaction.

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ARTICLE 19: AIR POLLUTION CONTROL - AIR STATE FACILITY PERMIT

IDENTIFICATION INFORMATION

Permit Issued To: HAKES C & D DISPOSAL INC
4376 MANNING RIDGE RD
PAINTED POST, NY 14870

Facility: HAKES C & D LANDFILL
4376 MANNING RIDGE RD
PAINTED POST, NY 14870

Authorized Activity By Standard Industrial Classification Code:
4953 - REFUSE SYSTEMS

Mod 0 Permit Effective Date: 04/02/2015

Permit Expiration Date: 04/01/2025

Mod 1 Permit Effective Date: 12/19/2019

Permit Expiration Date: 04/01/2025

Mod 2 Permit Effective Date: 06/11/2021

Permit Expiration Date: 04/01/2025

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EU=U-LFGAS,EP=FLA01,Proc=001,ES=FLA01

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FEDERALLY ENFORCEABLE CONDITIONS

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**** Facility Level ****

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

This section contains terms and conditions which are federally enforceable. Permittees may also have other obligations under regulations of general applicability

Item A: Sealing - 6 NYCRR 200.5

The Commissioner may seal an air contamination source to prevent its operation if compliance with 6 NYCRR Chapter III is not met within the time provided by an order of the Commissioner issued in the case of the violation.

Sealing means labeling or tagging a source to notify any person that operation of the source is prohibited, and also includes physical means of preventing the operation of an air contamination source without resulting in destruction of any equipment associated with such source, and includes, but is not limited to, bolting, chaining or wiring shut control panels, apertures or conduits associated with such source.

No person shall operate any air contamination source sealed by the Commissioner in accordance with this section unless a modification has been made which enables such source to comply with all requirements applicable to such modification.

Unless authorized by the Commissioner, no person shall remove or alter any seal affixed to any contamination source in accordance with this section.

Item B: Acceptable Ambient Air Quality - 6 NYCRR 200.6

Notwithstanding the provisions of 6 NYCRR Chapter III, Subchapter A, no person shall allow or permit any air contamination source to emit air contaminants in quantities which alone or in combination with emissions from other air contamination sources would contravene any applicable ambient air quality standard and/or cause air pollution. In such cases where contravention occurs or may occur, the Commissioner shall specify the degree and/or method of emission control required.

Item C: Maintenance of Equipment - 6 NYCRR 200.7

Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and

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procedures, inclusive of manufacturer's specifications, required to operate such device effectively.

Item D: Unpermitted Emission Sources - 6 NYCRR 201-1.2

(a) Except as otherwise provided by this Part, construction or operation of a new, modified or existing air contamination source without a registration or permit issued pursuant to this Part is prohibited.

(b) If an existing facility or emission source was subject to the permitting requirements of this Part at the time of construction or modification, and the owner or operator failed to apply for a permit or registration as described in this Part, the owner or operator must apply for a permit or registration in accordance with the provisions of this Part. The facility or emission source is subject to all regulations that were applicable to it at the time of construction or modification and any subsequent requirements applicable to existing emission sources.

Item E: Recycling and Salvage - 6 NYCRR 201-1.7

Where practical, any person who owns or operates an air contamination source shall recycle or salvage air contaminants collected in an air cleaning device according to the requirements of 6 NYCRR.

Item F: Prohibition of Reintroduction of Collected Contaminants to the Air - 6 NYCRR 201-1.8

No person shall unnecessarily remove, handle, or cause to be handled, collected air contaminants from an air cleaning device for recycling, salvage or disposal in a manner that would reintroduce them to the outdoor atmosphere.

Item G: Proof of Eligibility for Sources Defined as Exempt Activities - 6 NYCRR 201-3.2 (a)

The owner and/or operator of an emission source or unit that is eligible to be exempt, may be required to certify that it operates within the specific criteria described in 6 NYCRR Subpart 201-3. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request.

Department representatives must be granted access to any facility which contains emission sources or units subject to 6 NYCRR Subpart 201-3, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

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- Item H: Proof of Eligibility for Sources Defined as Trivial Activities - 6 NYCRR 201-3.3 (a)**
The owner and/or operator of an emission source or unit that is listed as being trivial in 6 NYCRR Part 201 may be required to certify that it operates within the specific criteria described in 6 NYCRR Subpart 201-3. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility which contains emission sources or units subject to 6 NYCRR Subpart 201-3, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.
- Item I: Required Emission Tests - 6 NYCRR 202-1.1**
An acceptable report of measured emissions shall be submitted, as may be required by the Commissioner, to ascertain compliance or noncompliance with any air pollution code, rule, or regulation. Failure to submit a report acceptable to the Commissioner within the time stated shall be sufficient reason for the Commissioner to suspend or deny an operating permit. Notification and acceptable procedures are specified in 6 NYCRR Subpart 202-1.
- Item J: Open Fires Prohibitions - 6 NYCRR 215.2**
Except as allowed by section 215.3 of 6 NYCRR Part 215, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.
- Item K: Permit Exclusion - ECL 19-0305**
The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York (NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the

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Clean Air Act brought by the United States or any person.

Item L: Federally Enforceable Requirements - 40 CFR 70.6 (b)
 All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

FEDERAL APPLICABLE REQUIREMENTS
The following conditions are federally enforceable.

Condition 1-1: Acceptable Ambient Air Quality
Effective between the dates of 12/19/2019 and 04/01/2025

Applicable Federal Requirement:6 NYCRR 200.6

Item 1-1.1:
 Notwithstanding the provisions of 6 NYCRR Chapter III, Subchapter A, no person shall allow or permit any air contamination source to emit air contaminants in quantities which alone or in combination with emissions from other air contamination sources would contravene any applicable ambient air quality standard and/or cause air pollution. In such cases where contravention occurs or may occur, the Commissioner shall specify the degree and/or method of emission control required.

Condition 2-1: Maintenance of Equipment
Effective between the dates of 06/11/2021 and 04/01/2025

Applicable Federal Requirement:6 NYCRR 200.7

Item 2-1.1:
 Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and procedures, inclusive of manufacturer's specifications, required to operate such device effectively.

Condition 1-2: Maintenance of Equipment
Effective between the dates of 12/19/2019 and 04/01/2025

Applicable Federal Requirement:6 NYCRR 200.7

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Item 1-2.1:

Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and procedures, inclusive of manufacturer's specifications, required to operate such device effectively.

Condition 2-2: Compliance Demonstration
Effective between the dates of 06/11/2021 and 04/01/2025

Applicable Federal Requirement: 6 NYCRR 200.6

Item 2-2.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 2-2.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The facility owner or operator shall not allow emissions of sulfur dioxide to violate the National Ambient Air Quality Standard (NAAQS) for sulfur dioxide.

The applicant has demonstrated that the sulfur dioxide emissions for the facility are in compliance with the 1-hr NAAQS for sulfur dioxide at an emission rate of 12.2 lb/hr at a flow rate of 400 cfm of landfill gas (LFG) and a concentration of 3000 ppm Total Reduced Sulfur Inlet Concentration, as well as at the maximum projected flow rate of 750 cfm of landfill gas and a concentration of 1604 ppm Total Reduced Sulfur Inlet Concentration.

The facility must install and operate a landfill gas treatment system no later than 90-days from the date the facility determines the sulfur dioxide emission rate has exceeded 11.5 lb/hr or prior to reaching the sulfur dioxide emission rate of 12.2 lb/hr, whichever comes first.

1) Hakes C&D Landfill must operate and maintain a landfill gas treatment system to remove hydrogen sulfide from the collected gas to reduce sulfur dioxide emissions created in the flare due to the presence of sulfur-containing compounds, including hydrogen sulfide. The landfill gas treatment system must be operated, as necessary, to maintain the sulfur dioxide emission rate at 12.2 lb/hr or less. The landfill gas flare shall be operated at all times that the gas collection system is operating. The collected landfill gas should not be diverted or bypass the landfill gas flare or the landfill gas treatment

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system (when landfill gas treatment is necessary). If such a situation should happen, the Department must be notified immediately.

2) The landfill gas treatment system must be operated according to manufacturer's specifications and shall reduce the concentration of hydrogen sulfide in the inlet gas to the flare, such that the calculated sulfur dioxide emission rate remains below 12.2 lb/hr.

3) The LFG treatment system must be installed upstream of the existing LFG flare. The LFG treatment system will be a static media bed system that will consist of one or more vessels that contain a non-hazardous media that removes hydrogen sulfide. LFG flow through the treatment system will be adjusted using a mixing valve, to optimize treatment media usage and extend media bed life, while maintaining hourly sulfur dioxide (SO₂) emissions below 12.2 lb/hr.

4) The media for the LFG treatment system must be replaced on a routine basis in order to maintain SO₂ emissions below the permitted limit of 12.2 lb/hr. Hakes will monitor the LFG flow and the hydrogen sulfide concentration in the LFG delivered to the flare on a weekly basis and any time adjustments are made to the H₂S system using direct reading colorimetric tubes. All hydrogen sulfide concentration readings will be used with average hourly LFG flow rates to confirm that actual SO₂ emission rates remain below 12.2 lb/hr.

5) After the LFG treatment system is installed, and subsequently, on a calendar quarterly basis (every three months), the facility shall collect a LFG sample from the inlet to the flare for submission to a National ELAP accredited laboratory (or NYSDOH ELAP accredited laboratory or other DEC approved laboratory) to analyze the concentration of total reduced sulfur compounds and hydrogen sulfide in accordance with EPA Method 3C for fixed gases and ASTM D5504 (or a DEC approved equivalent method) for reduced sulfide gases. Field testing of hydrogen sulfide concentrations using colorimetric gas detection tubes shall be taken concurrently with the collection of quarterly analytical samples. Analytical results must be submitted to the Department within one (1) week of receipt of the results. Based on the results of the quarterly total reduced sulfur (TRS) analytical results, calculate a correction factor (CF) based on the ratio between the analytical testing results for total reduced sulfur compounds (TRS AS) including hydrogen sulfide and the field colorimetric tube reading (H₂S FS)

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collected at the time of the analytical sample collection, where $CF = \text{TRS AS}/\text{H2S FS}$ (if the calculated CF is less than 1.00 then $CF = 1.00$). The calculated CF shall be used to adjust the results of all colorimetric field results used for calculating the SO₂ emission rate per event until the next quarterly sampling event. After one year of treatment system operation, the analytical sample frequency will be reevaluated by the Department and the frequency will be reduced if found to be acceptable based on the data received. The request for a reduction of sampling may be submitted by the facility for Department approval.

6) The facility shall submit an SOP (Standard Operating Procedures) Plan to the Department for approval once the treatment system design is finalized. The treatment system design (including specification of media to be used, the conditions whereupon media must be replaced, parameters used to monitor the treatment system, etc.) must be submitted to the Department for approval. Subsequent alternatives to the media may be made upon notification and approval by the Department. The facility shall schedule delivery of fresh media to accomplish media replacements with minimal downtime. Flare system downtime will be recorded by the facility during media replacements.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2022.

Subsequent reports are due every 12 calendar month(s).

Condition 2-3: Compliance Demonstration

Effective between the dates of 06/11/2021 and 04/01/2025

Applicable Federal Requirement: 6 NYCRR 200.6

Item 2-3.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 2-3.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The facility owner or operator shall not allow emissions of sulfur dioxide to violate the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide.

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The applicant has demonstrated that sulfur dioxide emissions for this facility are in compliance with the 1-hour NAAQS standard.

The facility owner or operator shall verify the parameters used to demonstrate compliance with the 1-hour NAAQS for sulfur dioxide on a weekly basis. These parameters include, but are not limited to, landfill gas (LFG) flow rate and field testing of LFG hydrogen sulfide concentration using colorimetric gas detection tubes. Any significant change to these parameters or any method of operation which could increase the emissions, increase the emission rate potential, decrease the air cleaning control efficiency, or provide cause to alter the environmental rating of any contaminant may require a modification to the permit and will require facility and DEC reevaluation to ensure continued compliance with the NAAQS for sulfur dioxide.

Additionally, the facility owner or operator must investigate, in a timely manner, any instance where there is reason to believe that there is, or has been, an emission increase above those listed on the application, or that the 1-hour NAAQS for sulfur dioxide may have been or continues to be exceeded. In such cases, the facility owner or operator shall investigate the cause, make any corrections, and verify that the potential excess emissions problem has been corrected.

Prior to the LFG treatment system being installed, in order to verify emissions and demonstrate continued compliance with the 1-hour NAAQS for sulfur dioxide, the owner or operator shall analyze a weekly sample of the gas generated by the landfill from the inlet of the flare at the main header using colorimetric gas detection tubes for hydrogen sulfide.

On a calendar quarterly basis, every three (3) months, the facility shall collect a sample of LFG from the inlet of the flare at the main header for submission to a National ELAP accredited laboratory (or NYSDOH ELAP accredited laboratory or other DEC approved laboratory) to analyze the concentration of total reduced sulfur compounds and hydrogen sulfide in accordance with EPA Method 3C for fixed gases and ASTM D5504 for reduced sulfide gases (or a DEC approved equivalent method). Field testing of hydrogen sulfide concentrations using colorimetric gas detection tubes shall be taken concurrently with the collection of quarterly analytical samples. Analytical results must be submitted to the Department within one week of receipt of the results. The most recent quarterly

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LFG sample analysis result will be used to confirm the accuracy of the colorimetric gas detection tube readings and the calculated weekly SO₂ emission rates.

Prior to the treatment system being installed, if the results of weekly or quarterly sampling indicate that the sulfur dioxide emission rate has exceeded 11.5 lb/hr or 12.2 lb/hr, utilizing the prescribed calculation methodology as noted in Condition 2-4.2, the facility shall notify the Department immediately and implement treatment system requirements as prescribed in Condition 2-2.2.

Prior to the LFG treatment system being installed, if the hydrogen sulfide results from quarterly analytical testing have increased 20% from the previous quarterly sample (on a methane equivalent basis), or if the weekly sample of gas generated by the landfill from the inlet on the flare at the main header using colorimetric gas detection tubes for hydrogen sulfide has increased 20% from the previous quarterly sampling event (where a concurrent sample using the gas detection tubes was performed), the facility shall notify the Department immediately and a new sample of landfill gas must be collected and analyzed as noted above. The results shall be submitted to the Department within a week of receipt from the approved laboratory.

Within one week following permit issuance, the facility shall collect the initial quarterly LFG sample from the inlet of the flare at the main header for submission to an approved laboratory for analysis as noted in Condition 2-2 and Condition 2-3. Concurrently, the colorimetric gas detection tube samples will be taken for comparison for the hydrogen sulfide results.

Analytical results shall be submitted to the Department in the annual report and upon request.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2022.

Subsequent reports are due every 12 calendar month(s).

Condition 2-4: Compliance Demonstration
Effective between the dates of 06/11/2021 and 04/01/2025

Applicable Federal Requirement: 6 NYCRR 200.6

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Item 2-4.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 007446-09-5 SULFUR DIOXIDE

Item 2-4.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL
DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

The facility owner or operator shall not allow emissions of sulfur dioxide to violate the National Ambient Air Quality Standard (NAAQS) for sulfur dioxide.

The applicant has demonstrated that the sulfur dioxide emissions for the facility are in compliance with the 1-hr NAAQS for sulfur dioxide at an emission rate 12.2 lb/hr at the current flow rate of 400 cfm of landfill gas (LFG) as well as at the maximum projected flow rate of 750 cfm of LFG.

- 1) Flare sulfur dioxide emissions shall not exceed an operating limit of 12.2 lb/hr.
- 2) On a weekly basis, the facility shall collect data from the flare recorder and calculate the average hourly LFG flow rate (in standard cubic feet per hour) delivered to the flare.
- 3) The facility shall calculate the estimated hourly SO₂ emission rate from the flare, on a weekly basis, using the weekly average of all colorimetric field readings multiplied by the Correction Factor (CF) {calculated using the equation $CF = \frac{TRS\ AS}{H_2S\ AS}$ as determined in accordance with Condition 2-2, Item 2-2.2, paragraph 5}, as follows:

$$\text{Hourly SO}_2 \text{ Emission Rate} = 1.69 \cdot 10^{-7} \times \text{LFG flow [scf/hr]} \\ \times \text{Weekly Average H}_2\text{S Concentration [ppmv]} \times \text{TRS Correction Factor (CF)}$$

- 4) When the facility calculations indicate that the flare hourly SO₂ emissions exceed 11.5 lb/hr, the facility shall notify the Department and a LFG treatment system shall be installed and operated no later than 90-days from the date the facility indicates that emissions exceeds the 11.5 lb/hr of sulfur dioxide or prior to reaching the operating limit of 12.2 lb/hr of sulfur dioxide, whichever comes

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first.

5) On a weekly basis, the facility shall record the weekly average hourly LFG flow rates delivered to the flare and the estimated hourly SO2 emission rate from the flare. This log shall be kept at the facility and be provided to the Department upon request.

Parameter Monitored: SULFUR DIOXIDE
 Upper Permit Limit: 12.2 pounds per hour
 Reference Test Method: EPA Method 3C and ASTM D5504 (or equal)
 Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
 Averaging Method: 1 HOUR MAXIMUM - NOT TO BE EXCEEDED AT ANY TIME
 Reporting Requirements: ANNUALLY (CALENDAR)
 Reports due 30 days after the reporting period.
 The initial report is due 1/30/2022.
 Subsequent reports are due every 12 calendar month(s).

Condition 13: Visible Emissions Limited
Effective between the dates of 04/02/2015 and 04/01/2025

Applicable Federal Requirement:6 NYCRR 211.2

Item 13.1:
 Except as permitted by a specific part of this Subchapter and for open fires for which a restricted burning permit has been issued, no person shall cause or allow any air contamination source to emit any material having an opacity equal to or greater than 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

****** Emission Unit Level ******

Condition 1-9: Compliance Demonstration
Effective between the dates of 12/19/2019 and 04/01/2025

Applicable Federal Requirement:6 NYCRR 200.7

Item 1-9.1:
 The Compliance Demonstration activity will be performed for:

Emission Unit: U-LFGAS
 Process: 001 Emission Source: FLA01

Item 1-9.2:
 Compliance Demonstration shall include the following monitoring:

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Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

In order to ensure proper operation of the open flare in the destruction of hydrogen sulfide and to remain in compliance with the ambient air quality standard for hydrogen sulfide established in 6NYCRR Part 257-10, as well as the one-hour National Ambient Air Quality Standard for sulfur dioxide, the facility shall operate the flare in accordance with the following:

1) For the 750 scfm open flare, the temperature shall be recorded at least once each business day, during flare operation, on a data recorder(circle chart paper recorder, data logger or equivalent device) that is installed, calibrated, maintained and operated according to manufacturer's specifications.

2) If the 750 scfm flare is not operating properly, the facility shall notify the Department and corrective action shall be taken. In the event that the flare needs maintenance and is unable to be repaired within 5 days, the facility shall notify the Department and replace the flare with a temporary flare in order to ensure proper destruction of hydrogen sulfide and to limit odors from the landfill.

3) Records of start-up, shut-down, and malfunctions of the flare as well as corrective action taken shall be maintained on site. A summary of these events shall be included in the annual report to the Department.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2020.

Subsequent reports are due every 12 calendar month(s).

Condition 1-10: Compliance Demonstration
Effective between the dates of 12/19/2019 and 04/01/2025

Applicable Federal Requirement:6 NYCRR 200.7

Item 1-10.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: U-LFGAS

Process: 001

Emission Source: FLA01

Item 1-10.2:

Compliance Demonstration shall include the following monitoring:

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Facility DEC ID: 8463000010

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

All required flares shall meet, at a minimum, the following conditions:

1) be designed and operated with no visible emissions as determined by Method 22, except for periods not to exceed 5 minutes during any 2 consecutive hours;

2) be operated with a flame present at all times that landfill gas is being sent to the flares, as determined by Method 22;

3) be used only with a net heating value of the gas being combusted at 300 Btu/scf or greater if the flare is steam or air assisted, or 200 Btu/scf or greater if the flare is nonassisted.

The net heating value of the gas being combusted shall be estimated from the methane content of the gas using a portable LFG analyzer via EPA method 3A, analytical method EPA 3C or ASTM Method 1945 (or equivalent). The heating value for methane shall be the higher heating value (HHV) of 1012 BTUs per scf; and

4) be designed to operate under the exit velocity parameters specified by the Administrator.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2020.

Subsequent reports are due every 12 calendar month(s).

Condition 1-11: Compliance Demonstration

Effective between the dates of 12/19/2019 and 04/01/2025

Applicable Federal Requirement: 6 NYCRR 212-1.6 (a)

Item 1-11.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: U-LFGAS

Emission Point: FLA01

Process: 001

Emission Source: FLA01

Item 1-11.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Permit ID: 8-4630-00010/00011

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Monitoring Description:

No person shall cause or allow emissions having an average opacity during any six consecutive minutes of 20 percent or greater from any process emission source, except only the emission of uncombined water. The Department reserves the right to perform or require the performance of a Method 9 opacity evaluation at any time during facility operation.

The permittee will conduct daily observations of visible emissions from the emission unit, process, etc. to which this condition applies during business days while the process is in operation. The permittee will immediately investigate any instance where there is cause to believe that visible emissions above those that are normal and in compliance are occurring or have occurred from a process source.

If visible emissions above those that are normal (this may be zero percent opacity for many or all emission sources) and in compliance with section 212-1.6(a) are detected, the permittee shall determine the cause, make the necessary correction, and verify that the excess visible emissions problem has been corrected.

If visible emissions above those that are normal and in compliance continue to be present after corrections are made, the permittee will immediately notify The Department and conduct a Method 9 assessment within 24 hours to determine the degree of opacity.

Records of these observations, investigations and corrective actions will be kept on-site in a format acceptable to the Department.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2020.

Subsequent reports are due every 12 calendar month(s).

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STATE ONLY ENFORCEABLE CONDITIONS

**** Facility Level ****

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

This section contains terms and conditions which are not federally enforceable. Permittees may also have other obligations under regulations of general applicability

Item A: Emergency Defense - 6 NYCRR 201-1.5

An emergency, as defined in 6 NYCRR subpart 201-2, constitutes an affirmative defense to penalties sought in an enforcement action brought by the department for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) an emergency occurred and that the facility owner or operator can identify the cause(s) of the emergency;
- (2) the equipment at the facility was being properly operated and maintained;
- (3) during the period of the emergency the facility owner or operator took all reasonable steps to minimize the levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- (4) the facility owner or operator notified the department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.

(b) In any enforcement proceeding, the facility owner or operator seeking to establish the occurrence of an emergency has the burden of proof.

(c) This provision is in addition to any emergency or malfunction provision contained in any applicable requirement.

Item B: Public Access to Recordkeeping for Facilities With State Facility Permits - 6 NYCRR 201-1.10 (a)

Where facility owners and/or operators keep records pursuant to compliance with the requirements of 6 NYCRR Subpart 201-5.4, and/or the emission capping requirements of 6 NYCRR Subpart 201-7, the Department will make such

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records available to the public upon request in accordance with 6 NYCRR Part 616 - Public Access to Records. Facility owners and/or operators must submit the records required to comply with the request within sixty working days of written notification by the Department.

Item C: General Provisions for State Enforceable Permit Terms and Condition - 6 NYCRR Part 201-5

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

STATE ONLY APPLICABLE REQUIREMENTS

The following conditions are state only enforceable.

Condition 7: Contaminant List
Effective between the dates of 04/02/2015 and 04/01/2025

Applicable State Requirement:ECL 19-0301

Item 7.1:

Emissions of the following contaminants are subject to contaminant specific requirements in this permit(emission limits, control requirements or compliance monitoring conditions).

CAS No: 007446-09-5
Name: SULFUR DIOXIDE

CAS No: 007783-06-4
Name: HYDROGEN SULFIDE

Condition 8: Malfunctions and start-up/shutdown activities

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Effective between the dates of 04/02/2015 and 04/01/2025

Applicable State Requirement:6 NYCRR 201-1.4**Item 8.1:**

(a) The facility owner or operator shall take all necessary and appropriate actions to prevent the emission of air pollutants that result in contravention of any applicable emission standard during periods of start-up, shutdown, or malfunction.

(b) The facility owner or operator shall compile and maintain records of all equipment malfunctions, maintenance, or start-up/shutdown activities when they can be expected to result in an exceedance of any applicable emission standard, and shall submit a report of such activities to the department when requested to do so, or when so required by a condition of a permit issued for the corresponding air contamination source. Such reports shall state whether any violations occurred and, if so, whether they were unavoidable, include the time, frequency and duration of the maintenance and/or start-up/shutdown activities, and an estimate of the emission rates of any air contaminants released. Such records shall be maintained for a period of at least five years and made available for review to department representatives upon request. Facility owners or operators subject to continuous stack monitoring and quarterly reporting requirements need not submit additional reports for equipment maintenance or start-up/shutdown activities for the facility to the department.

(c) In the event that emissions of air contaminants in excess of any emission standard in this Subchapter occur due to a malfunction, the facility owner or operator shall compile and maintain records of the malfunction and notify the department as soon as possible during normal working hours, but not later than two working days after becoming aware that the malfunction occurred. When requested by the department, the facility owner or operator shall submit a written report to the department describing the malfunction, the corrective action taken, identification of air contaminants, and an estimate of the emission rates.

(d) The department may also require the owner or operator to include, in reports described under Subdivisions (b) and (c) of this Section, an estimate of the maximum ground level concentration of each air contaminant emitted and the effect of such emissions.

(e) A violation of any applicable emission standard resulting from start-up, shutdown, or malfunction conditions at a permitted or registered facility may not be subject to an enforcement action by the department and/or penalty if the department determines, in its sole discretion, that such a violation was unavoidable. The actions and recordkeeping and reporting requirements listed above must be adhered to in such circumstances.

Condition 2-5: Malfunctions and Start-up/Shutdown Activities

Effective between the dates of 06/11/2021 and 04/01/2025

Applicable State Requirement:6 NYCRR 201-1.4**Item 2-5.1:**

(a) The facility owner or operator shall take all necessary and appropriate actions to prevent the emission of air pollutants that result in contravention of any applicable emission standard

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during periods of start-up, shutdown, or malfunction.

- (b) The facility owner or operator shall compile and maintain records of all equipment maintenance and start-up/shutdown activities when they are expected to result in an exceedance of any applicable emission standard, and shall submit a report of such activities to the department when required by a permit condition or upon request by the department. Such reports shall state whether an exceedance occurred and if it was unavoidable, include the time, frequency and duration of the exceedance, and an estimate of the emission rates of any air contaminants released. Such records shall be maintained for a period of at least five years and made available for review to department representatives upon request. Facility owners or operators subject to continuous monitoring and quarterly reporting requirements need not submit additional reports of exceedances to the department.
- (c) In the event that air contaminant emissions exceed any applicable emission standard due to a malfunction, the facility owner or operator shall notify the department as soon as possible during normal working hours, but not later than two working days after becoming aware that the malfunction occurred. In addition, the facility owner or operator shall compile and maintain a record of all malfunctions. Such records shall be maintained at the facility for a period of at least five years and must be made available to the department upon request. When requested by the department, the facility owner or operator shall submit a written report to the department describing the malfunction, the corrective action taken, the air contaminants emitted, and the resulting emission rates and/or opacity.
- (d) The department may also require the facility owner or operator to include, in reports described under Subdivisions (b) and (c) of this Section, an estimate of the maximum ground level concentration of each air contaminant emitted and the effect of such emissions.
- (e) A violation of any applicable emission standard resulting from start-up, shutdown, or malfunction conditions at a permitted or registered facility may not be subject to an enforcement action by the department and/or penalty if the department determines, in its sole discretion, that such a violation was unavoidable. The actions and recordkeeping and reporting requirements listed above must be adhered to in such circumstances.

Condition 9: Unavoidable noncompliance and violations
Effective between the dates of 04/02/2015 and 04/01/2025

Applicable State Requirement: 6 NYCRR 201-1.4

Item 9.1:

At the discretion of the commissioner a violation of any applicable emission standard for necessary scheduled equipment maintenance, start-up/shutdown conditions and malfunctions or upsets may be excused if such violations are unavoidable. The following actions and recordkeeping and reporting requirements must be adhered to in such circumstances.

- (a) The facility owner and/or operator shall compile and maintain records of all equipment maintenance or start-up/shutdown activities when they can be expected to result in an exceedance of any applicable emission standard, and shall submit a report of such activities to the commissioner's representative when requested to do so in writing or when so required by a condition of a permit issued for the corresponding air contamination source except where

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conditions elsewhere in this permit which contain more stringent reporting and notification provisions for an applicable requirement, in which case they supercede those stated here. Such reports shall describe why the violation was unavoidable and shall include the time, frequency and duration of the maintenance and/or start-up/shutdown activities and the identification of air contaminants, and the estimated emission rates. If a facility owner and/or operator is subject to continuous stack monitoring and quarterly reporting requirements, he need not submit reports for equipment maintenance or start-up/shutdown for the facility to the commissioner's representative.

(b) In the event that emissions of air contaminants in excess of any emission standard in 6 NYCRR Chapter III Subchapter A occur due to a malfunction, the facility owner and/or operator shall report such malfunction by telephone to the commissioner's representative as soon as possible during normal working hours, but in any event not later than two working days after becoming aware that the malfunction occurred. Within 30 days thereafter, when requested in writing by the commissioner's representative, the facility owner and/or operator shall submit a written report to the commissioner's representative describing the malfunction, the corrective action taken, identification of air contaminants, and an estimate of the emission rates. These reporting requirements are superceded by conditions elsewhere in this permit which contain reporting and notification provisions for applicable requirements more stringent than those above.

(c) The Department may also require the owner and/or operator to include in reports described under (a) and (b) above an estimate of the maximum ground level concentration of each air contaminant emitted and the effect of such emissions depending on the deviation of the malfunction and the air contaminants emitted.

(d) In the event of maintenance, start-up/shutdown or malfunction conditions which result in emissions exceeding any applicable emission standard, the facility owner and/or operator shall take appropriate action to prevent emissions which will result in contravention of any applicable ambient air quality standard. Reasonably available control technology, as determined by the commissioner, shall be applied during any maintenance, start-up/shutdown or malfunction condition subject to this paragraph.

(e) In order to have a violation of a federal regulation (such as a new source performance standard or national emissions standard for hazardous air pollutants) excused, the specific federal regulation must provide for an affirmative defense during start-up, shutdowns, malfunctions or upsets.

Condition 10: Emission Unit Definition
Effective between the dates of 04/02/2015 and 04/01/2025

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 10.1(From Mod 1):

The facility is authorized to perform regulated processes under this permit for:

Emission Unit: U-LFGAS

Emission Unit Description:

This emission unit is the Hakes Landfill, consisting of approximately 58 acres of existing, closed and active landfill cells, and a proposed landfill expansion of approximately 22 acres, to the north of the existing

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cells. Within this emission unit there are two emission controls and one emission point. The two emission controls are FLA01 (750 scfm open flare) and SUL01 (landfill gas treatment system). The emission point is the exhaust of FLA01.

Condition 11: Renewal deadlines for state facility permits
Effective between the dates of 04/02/2015 and 04/01/2025

Applicable State Requirement:6 NYCRR 201-5.2 (c)

Item 11.1:

The owner or operator of a facility having an issued state facility permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

Condition 2-6: CLCPA Applicability
Effective between the dates of 06/11/2021 and 04/01/2025

Applicable State Requirement:6 NYCRR 201-5.3 (c)

Item 2-6.1:

Pursuant to The New York State Climate Leadership and Community Protection Act (CLCPA) and Article 75 of the Environmental Conservation Law, emission sources shall comply with regulations to be promulgated by the Department to ensure that by 2030 statewide greenhouse gas emissions are reduced by 40% of 1990 levels, and by 2050 statewide greenhouse gas emissions are reduced by 85% of 1990 levels.

Condition 12: Compliance Demonstration
Effective between the dates of 04/02/2015 and 04/01/2025

Applicable State Requirement:6 NYCRR 201-5.3 (c)

Item 12.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 12.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Any reports or submissions required by this permit shall be submitted to the Regional Air Pollution Control Engineer (RAPCE) at the following address:

Division of Air Resources
 NYS Dept. of Environmental Conservation
 Region 8
 6274 East Avon-Lima Rd.

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Avon, NY 14414

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2016.

Subsequent reports are due every 12 calendar month(s).

Condition 1: Air pollution prohibited
Effective between the dates of 04/02/2015 and 04/01/2025

Applicable State Requirement:6 NYCRR 211.1

Item 1.1:

No person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.

Condition 1-12: Compliance Demonstration
Effective between the dates of 12/19/2019 and 04/01/2025

Applicable State Requirement:6 NYCRR 212-2.1

Item 1-12.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 1-12.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

ACTIVE LANDFILL GAS COLLECTION AND CONTROL SYSTEM

Hakes C&D Landfill has an active landfill gas collection and control system. This system shall continue into the expansion area throughout construction, operation and post-closure period. The active landfill gas collection and control system shall be designed to handle the maximum expected flow rate from the entire landfill. The maximum landfill gas generation is calculated to be 750 scfm.

The facility shall continue to collect gas from each area, cell, or group of cells in the landfill. The gas collection and control system shall begin operation once

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the minimum thickness of waste has been reached and sufficient gas is being generated.

In the event that the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed as expeditiously as practicable. The facility must keep records of these shut down periods and note corrective actions taken.

In order to confirm the ambient air modeling results for all HTACs and non-HTACs, the facility must keep daily records of the actual gas flow rate using a continuous flow meter on the main header to the flare. Each week, the facility must calculate the weekly average. If the weekly average gas flow rate exceeds 750 scfm, then the facility must notify the Department to determine if the emission estimates and/or operation and design of the landfill gas collection system need to be re-evaluated.

Work Practice Type: PARAMETER OF PROCESS MATERIAL

Process Material: LANDFILL GAS

Parameter Monitored: FLOW RATE

Upper Permit Limit: 750 cubic feet per minute (standard conditions)

Monitoring Frequency: DAILY

Averaging Method: AVERAGING METHOD - SEE MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 1-13: Compliance Demonstration
Effective between the dates of 12/19/2019 and 04/01/2025

Applicable State Requirement:6 NYCRR 212-2.1

Item 1-13.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 1-13.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

In order to ensure that the gas collection system operates effectively and limits fugitive emissions, the facility owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

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A log shall be maintained on site of the monthly monitoring including the date the cover was inspected, instances where corrective action has taken place, a photograph of the area prior to corrective action taken and post corrective action, and the date completed. If after 30 days the initial area where corrective action is needed has not been repaired, the facility must notify the Department in writing and request an extension.

This log shall be made available to the Department upon request.

Monitoring Frequency: MONTHLY
Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2020.
Subsequent reports are due every 12 calendar month(s).

Condition 1-14: Compliance Demonstration
Effective between the dates of 12/19/2019 and 04/01/2025

Applicable State Requirement:6 NYCRR 212-2.1

Item 1-14.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 1-14.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

In order to demonstrate that the landfill gas collection system is operating properly, landfill personnel shall monitor pressure at each horizontal and vertical collector on a monthly basis. If positive pressure exists, corrective action shall be taken within 5 days (exceptions for pressure include: i. fire or increased well temperature; ii. use of a geomembrane or synthetic cover; or iii. a decommissioned well).

If negative pressure cannot be achieved within 30 days of the initial exceedance, a proposed corrective action plan and schedule shall be submitted to the Department within 45 days of the initial exceedance (a monthly reading that indicates positive pressure). Providing the specified corrective measures are taken, an exceedance is not a violation of this condition.

The facility shall maintain records of the monthly monitoring and corrective actions on site.

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Monitoring Frequency: MONTHLY
Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2020.
Subsequent reports are due every 12 calendar month(s).

Condition 1-15: Compliance Demonstration
Effective between the dates of 12/19/2019 and 04/01/2025

Applicable State Requirement: 6 NYCRR 212-2.3 (b)

Item 1-15.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 1-15.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The facility owner or operator shall not allow emissions of an air contaminant to violate the requirements specified in Table 3 – Degree of Air Cleaning Required for Criteria Air Contaminants, or Table 4 – Degree of Air Cleaning Required for Non-Criteria Air Contaminants under 6 NYCRR Part 212-2.3, as applicable, for the environmental rating assigned to the contaminant by the department.

The facility owner or operator shall verify twice per permit term that the parameters used to demonstrate compliance with these tables have not significantly changed. These parameters include, but are not limited to engineering emission estimates, mass balances, process flows, production records, control equipment parameters, etc.

Additionally, the facility owner or operator will investigate, in a timely manner, any instance where there is cause to believe that Part 212 emissions standards may have been or continue to be exceeded. In such cases, the facility owner or operator shall investigate the cause, make any necessary corrections, and verify that the potential excess emissions problem has been corrected.

At all times, the facility owner or operator must operate and maintain all process emission sources, including the associated air pollution control and monitoring equipment, in a manner consistent with safety, good air pollution control practices, good engineering practices and

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manufacturers' recommendations for minimizing emissions.

Additionally, within one week of issuance of this permit, the facility shall collect a landfill gas sample from the inlet to the flare and send it to a National ELAP accredited laboratory (or a NYSDOH ELAP accredited laboratory) for an analysis of compounds listed in AP-42 Chapter 2.4, Tables 2.4-1 and 2.4-2, default concentrations for LFG constituents, excluding mercury and hydrogen chloride. Another sample will be collected and analyzed as above five years later, and then 2 months prior to expiration of this permit. The results shall be submitted to the Department within one week of receipt from the approved laboratory.

Records of observations, investigations and corrective actions will be kept on-site. A summary of these records will be included in the annual compliance monitoring report.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2020.

Subsequent reports are due every 12 calendar month(s).

Condition 1-6: Compliance Demonstration
Effective between the dates of 12/19/2019 and 04/01/2025

Applicable State Requirement:6 NYCRR Subpart 257-10

Item 1-6.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 1-6.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

ACTIVE LANDFILL GAS COLLECTION AND CONTROL SYSTEM

Hakes C&D Landfill has an active landfill gas collection and control system. This system shall continue into the expansion area throughout construction, operation and post-closure period. The active landfill gas collection and control system shall be designed to handle the maximum expected flow rate from the entire landfill. The maximum

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landfill gas generation is calculated to be 750 scfm.

The facility shall continue to collect gas from each area, cell, or group of cells in the landfill. The gas collection and control system shall begin operation once the minimum thickness of waste has been reached and sufficient gas is being generated.

In the event that the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed as expeditiously as practicable. The facility must keep records on-site of these shut down periods and shall note corrective actions taken.

In order to confirm the ambient air modeling results for hydrogen sulfide, the facility must keep daily records of the actual gas flow rate using an instantaneous flow meter. Each week, the facility must calculate the average gas flow rate. If the weekly average gas flow rate exceeds 750 scfm, then the facility must notify the Department to determine if the emission estimates and/or operation and design of the landfill gas collection system need to be re-evaluated.

Work Practice Type: PARAMETER OF PROCESS MATERIAL

Process Material: LANDFILL GAS

Parameter Monitored: FLOW RATE

Upper Permit Limit: 750 cubic feet per minute (standard conditions)

Monitoring Frequency: WEEKLY

Averaging Method: AVERAGING METHOD - SEE MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 1-7: Compliance Demonstration
Effective between the dates of 12/19/2019 and 04/01/2025

Applicable State Requirement: 6 NYCRR Subpart 257-10

Item 1-7.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 007783-06-4 HYDROGEN SULFIDE

Item 1-7.2:

Compliance Demonstration shall include the following monitoring:

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Monitoring Type: AMBIENT AIR MONITORING

Monitoring Description:

QUARTERLY HYDROGEN SULFIDE SURFACE SCANS:

(1) The effectiveness of the landfill gas collection and control system at limiting hydrogen sulfide (H₂S) emissions from the surface of the landfill to less than 10 ppmv will be demonstrated by completing quarterly H₂S monitoring using a portable H₂S analyzer capable of measuring 10 ppmv H₂S with a resolution of 1 ppmv (the portable Jerome J605 Gold Film Hydrogen Sulfide Analyzer or Department approved equivalent). The owner/operator shall monitor surface concentrations of H₂S along the entire perimeter of the landfill area and along a pattern that traverses the landfill at no more than 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. Prior to surface scans, manufacturer's documentation on the selected H₂S detection instrument shall be submitted to the Department for approval to use the selected instrument.

(2) Areas with steep slopes or other dangerous areas may be excluded from the quarterly surface testing. For safety purposes, if a section of the landfill is covered with snow and/or ice or excessive precipitation (wet conditions) for an entire quarter, that section of the landfill does not need to be included in the surface scan required for that quarter. The facility must return to quarterly monitoring in the event that conditions improve (i.e., if the snow and ice melt and the ground surface is dry enough to be accessible by personnel and suitable for the monitoring instrument) during the quarterly monitoring period.

(3) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the waste boundary of the landfill at a distance of at least 30 meters from the perimeter wells. Surface emissions monitoring shall be performed so that the probe inlet is placed no more than 5 centimeters above the landfill surface. Monitoring shall be performed to ensure minimal wind interference. A wind barrier, similar to a funnel surrounding the probe, should be used when average wind speed exceeds 5 miles per hour or wind gusts exceed 10 miles per hour. Monitoring shall be performed during typical meteorological conditions.

(4) Any reading of 10 ppmv H₂S or more at any location

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shall be recorded and the actions specified below shall be taken:

- (a) The location of any reading of 10 ppmv H₂S or more shall be marked and the location recorded.
- (b) Implement corrective actions including but not necessarily limited to: application of additional cover soils; use of alternative cover materials; increase vacuum on the active collection and control system; adjust individual wellheads to improve overall collection system performance; perform maintenance on wellheads or leachate cleanouts; or perform maintenance on the landfill cover system.
- (c) The location shall be re-monitored within 10 calendar days of detecting the reading of 10 ppmv H₂S or more.
- (d) If the re-monitoring of the location shows a second reading of 10 ppmv H₂S or more, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second reading of 10 ppmv H₂S or more.
- (e) In the event that a third reading of 10 ppmv H₂S or more for the same location occurs within the same quarterly period, more substantial alternative actions must be proposed and implemented. Alternative actions such as installing a new collector, upgrading the blower, header pipes or control device, will be submitted to the NYSDEC for approval, including a corresponding timeline for installation.

If three (3) consecutive quarterly monitoring events show no readings of 10 ppmv H₂S or more in a closed area or an open area of the landfill that is not currently being filled, the facility may reduce the surface emissions monitoring to once a calendar year for that closed section or open area of the landfill that is not currently being filled. The annual scan in this case must be done in the second or third quarter of that year. The facility must submit a notification to the Department for approval. In the case that there is any reading of 10 ppmv H₂S or more in subsequent annual monitoring events for that closed section and/or for the open area that is not currently being filled, this will return that section to quarterly monitoring of surface emissions. An open area that begins taking waste again (i.e., becomes an active area of the landfill) will return that area to quarterly monitoring.

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The final report, including all information such as calibrations performed, all readings taken, drawing of landfill and pattern traversed, areas that were not sampled, documented readings of 10 ppm H₂S or more, and corrective action taken, and other pertinent information must be submitted in a format acceptable to the Department.

Upper Permit Limit: 10 parts per million (by volume)

Reference Test Method: 40CFR60.764(a)(6), general procedure reference only

Monitoring Frequency: QUARTERLY

Averaging Method: AVERAGING METHOD - SEE MONITORING DESCRIPTION

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2020.

Subsequent reports are due every 3 calendar month(s).

Condition 1-8: Compliance Demonstration

Effective between the dates of 12/19/2019 and 04/01/2025

Applicable State Requirement: 6 NYCRR Subpart 257-10

Item 1-8.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 1-8.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The facility owner or operator shall not allow emissions of hydrogen sulfide to violate the ambient air quality standard for hydrogen sulfide established in 6NYCRR Part 257-10.

The applicant has demonstrated that hydrogen sulfide emissions for this facility are in compliance with the ambient air quality standard (including fugitive emissions).

The facility owner or operator shall verify the parameters used to demonstrate compliance with 6NYCRR Part 257-10 annually. These parameters include, but are not limited to, engineering estimates, mass balances, process flows, production records, control equipment parameters, manufacturer's or published emission factors, etc. Any significant change to these parameters or any method of operation which could increase the emissions, increase the emission rate potential, decrease the air cleaning

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control efficiency, or provide cause to alter the environmental rating of any contaminant may require a modification to the permit and will require facility and DEC reevaluation to ensure continued compliance with Part 257-10.

Additionally, the facility owner or operator must investigate, in a timely manner, any instance where there is reason to believe that there is, or has been, an emission increase above those listed on the application, or that the Part 257-10 ambient air quality standard for hydrogen sulfide may have been or continues to be exceeded. In such cases, the facility owner or operator shall investigate the cause, make any corrections, and verify that the potential excess emissions problem has been corrected.

Annually, in order to verify emissions and show continued compliance with Part 257-10, the owner or operator shall sample the gas generated by the landfill at the main header, prior to the flare and landfill gas treatment (if installed). The facility shall collect a sample of LFG from the inlet of the flare at the main header for submission to an approved National ELAP accredited laboratory (or other DEC approved laboratory) to analyze the concentration of total reduced sulfur compounds and hydrogen sulfide in accordance with EPA Method 3C for fixed gases and ASTM D5504 (or a DEC approved equivalent method) for hydrogen sulfide.

If the parameters used within the original permit application Ambient Air Dispersion model for fugitive hydrogen sulfide emission (2.6 pounds per hour, based on measured H₂S concentration of 3,000 ppmv and estimated fugitive LFG flow rate of 160 scfm) indicate a combined increase of 10% or more, the facility shall notify the Department and implement testing on a quarterly basis. At the Department's request, performance of another screen analysis for H₂S emissions or submission of a new Ambient Air Dispersion Modeling Protocol for H₂S emissions may be required.

All analytical results must be submitted to the Department.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2020.

Subsequent reports are due every 12 calendar month(s).

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****** Emission Unit Level ******

Condition 14: Emission Point Definition By Emission Unit
Effective between the dates of 04/02/2015 and 04/01/2025

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 14.1(From Mod 1):

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: U-LFGAS

Emission Point: FLA01

Height (ft.): 22

Diameter (in.): 6

NYTMN (km.): 4675.446 NYTME (km.): 325.942

Condition 15: Process Definition By Emission Unit
Effective between the dates of 04/02/2015 and 04/01/2025

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 15.1(From Mod 1):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: U-LFGAS

Process: 001

Source Classification Code: 5-02-006-01

Process Description:

Landfill gas collected from the landfill via a landfill gas collection system and routed to the landfill gas treatment system and flare.

Emission Source/Control: FLA01 - Control

Control Type: FLARING

Emission Source/Control: SUL01 - Control

Control Type: GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: LNDFL - Process

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