

Facility DEC ID: 8463000010

PERMIT
Under the Environmental Conservation Law (ECL)

IDENTIFICATION INFORMATION

Permit Type: Air State Facility
Permit ID: 8-4630-00010/00011
Effective Date:

Expiration Date:

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

Contact: LARRY G SHILLING
HAKES C&D LANDFILL
4376 MANNING RIDGE RD
PAINTED POST, NY 14870
(589) 466-7271

Facility: HAKES C&D LANDFILL
4376 MANNING RIDGE RD
CAMPBELL, 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.

This renewal includes a 43.3 acre western expansion, and the construction and installation of a 900 cfm enclosed flare. The existing open flare will be kept onsite as backup. The renewal requires quarterly methane surface scans for 1 year, at minimum, with an action level of 200 ppm.

The previous modification required refinement in the measurement and frequency of H₂S sampling and implementation of a correction factor to be used to determine SO₂ emissions.

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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: ASHLEY N KASPEROWICZ
 NYS DEC - REGION 8
 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

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Facility Level

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

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 the expiration of permits for Title V and 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.

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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: Submission of application for permit modification or renewal-REGION 8 HEADQUARTERS
Applicable State Requirement: 6 NYCRR 621.6 (a)

Item 5.1:

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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Permit Under the Environmental Conservation Law (ECL)

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
CAMPBELL, NY 14870

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

Permit Effective Date:

Permit Expiration Date:

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EU=U-LFGAS,EP=FLA03,Proc=001,ES=FLA03

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FEDERALLY ENFORCEABLE CONDITIONS

Renewal 2/DRAFT

**** 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 procedures, inclusive of manufacturer's specifications,

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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.

Item H: Proof of Eligibility for Sources Defined as Trivial

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

Item L: Federally Enforceable Requirements - 40 CFR 70.6 (b)

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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: Acceptable Ambient Air Quality
Effective for entire length of Permit****Applicable Federal Requirement: 6 NYCRR 200.6****Item 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: Compliance Demonstration
Effective for entire length of Permit****Applicable Federal Requirement: 6 NYCRR 200.6****Item 2.1:**

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 007446-09-5 SULFUR DIOXIDE

Item 2.2:

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 (SO₂) to violate the National Ambient Air Quality Standard (NAAQS) for SO₂.

The applicant has demonstrated that the SO₂ emissions for the facility are in compliance with the 1-hr NAAQS for SO₂

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at an emission rate of 12.2 lb/hr at the maximum flow rate of 750 cfm of landfill gas (LFG) at the open flare (FLA01). After startup of the enclosed flare (FLA03), FLA01 will only operate as backup control device, during downtime of FLA03.

1) FLA01 SO₂ emissions shall not exceed an operating limit of 12.2 lb.hr.

2) On a weekly basis or once during operation as backup to FLA03, the facility shall collect data from the FLA01 recorder and calculate the average hourly LFG flow rate (in standard cubic feet per hour) delivered to FLA01.

3) When operational, the facility shall calculate the estimated hourly SO₂ emission rate from FLA01, on a weekly basis, using the average of all colorimetric field readings multiplied by the Correction Factor (CF); calculated using the equation $CF = \frac{TRS \text{ AS}}{H_2S \text{ FS}}$ as determined in accordance with Condition 4, Item 4.2, paragraph 5, as follows:

Hourly SO₂ 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) On a weekly basis or during operation as backup to FLA03, the facility shall record the weekly average hourly LFG flow rates delivered to FLA01 and the estimated hourly SO₂ emission rate from FLA01. 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, ASTM D5504, SCAQMD 307.91 (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.

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

Condition 3: Compliance Demonstration
Effective for entire length of Permit

Applicable Federal Requirement: 6 NYCRR 200.6

Item 3.1:

The Compliance Demonstration activity will be performed for the Facility.

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Regulated Contaminant(s):

CAS No: 007446-09-5 SULFUR DIOXIDE

Item 3.2:

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 (SO₂) to violate the National Ambient Air Quality Standard (NAAQS) for SO₂.

The applicant has demonstrated that the SO₂ emissions for the facility are in compliance with the 1-hr NAAQS for SO₂ at an emission rate of 22.5 lb/hr at the maximum flow rate of 900 cfm of landfill gas (LFG) from the enclosed flare (FLA03) as the primary control device.

1) FLA03 SO₂ emissions shall not exceed an operating limit of 22.5 lb/hr on a 12-month rolling average (99 tons per year).

2) On a weekly basis, the facility shall collect data from FLA03 recorder and calculate the average hourly LFG flow rate (in standard cubic feet per hour) delivered to FLA03.

3) The facility shall calculate the estimated hourly SO₂ emission rate from FLA03, on a weekly basis, using the weekly average of all colorimetric field readings multiplied by the Correction Factor (CF); calculated using the equation $CF = \frac{TRS \text{ AS}}{H_2S \text{ FS}}$ as determined in accordance with Condition 4, Item 4.2, paragraph 5, as follows:

Hourly SO₂ Emission Rate = $1.69 \cdot 10^{-7} \times \text{LFG flow [scf/hr]} \times \text{Weekly Average } H_2S \text{ Concentration [ppmv]} \times \text{TRS Correction Factor (CF)}$.

4) Where there are short-term periods of downtime or malfunctions of the treatment system, a short-term emission rate up to 124 lb/hr will be allowed as long as the 12-month rolling average remains below 22.5 lb/hr and the annual emissions remain below 99 tons per year. The facility must clearly note these periods of downtime or malfunctions in their log. A short-term emission rate of 124 lb/hr results in a modeled air concentration of approximately 173 ug/m³ which is under the standard of 196 ug/m³. Any instances of exceeding the standard are required to be reported to the Department

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immediately.

5) On a weekly basis, the facility shall record the weekly average hourly LFG flow rates delivered to FLA03 and the estimated hourly SO₂ emission rate from FLA03. This log shall be kept at the facility and be provided to the Department upon request.

Parameter Monitored: SULFUR DIOXIDE

Upper Permit Limit: 22.5 pounds per hour

Reference Test Method: EPA Method 3C, ASTM D5504, SCAQMD 307.91 (or equal)

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING

DESCRIPTION

Averaging Method: 12 MONTH AVERAGE - ROLLED MONTHLY

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 4: Compliance Demonstration
Effective for entire length of Permit

Applicable Federal Requirement: 6 NYCRR 200.6

Item 4.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 4.2:

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 (SO₂).

The applicant has demonstrated that the SO₂ emissions for the facility are in compliance with the 1-hr NAAQS for SO₂ at an emission rate of 22.5 lb/hr from the enclosed flare (FLA03) at a flow rate of 900 cfm of landfill gas (LFG) and a concentration of 2465 ppm as Hydrogen Sulfide (H₂S).

1) Hakes C&D Landfill must operate and maintain a landfill gas treatment system to remove H₂S from the collected gas to reduce SO₂ emissions created in FLA03 due to the presence of sulfur-containing compounds, including H₂S. The landfill gas treatment system must be operated, as necessary, to maintain the SO₂ emission rate at 22.5 lb/hr or less over a 12-month rolling average. FLA03 shall be operated at all times that the gas collection system is operating. The collected landfill gas should not be diverted or bypass FLA03 or the landfill gas treatment system (when landfill gas treatment is necessary). If

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such a situation should happen, the Department must be notified immediately.

2) The LFG treatment system must be operated according to manufacturer's specifications and shall reduce the concentration of H₂S in the inlet gas to FLA03, such that the calculated SO₂ emission rate remains below 22.5 lb/hr over a 12-month rolling average.

3) The LFG treatment system must be installed upstream of the LFG flares. 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 H₂S. 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 22.5 lb/hr over a 12-month rolling average at FLA03.

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 22.5 lb/hr over a 12-month rolling average at FLA03. Hakes will monitor the LFG flow and the H₂S concentration in the LFG delivered to FLA03 on a weekly basis and any time adjustments are made to the H₂S system using direct reading colorimetric tubes. All H₂S concentration readings will be used with average hourly LFG flow rates to confirm that actual SO₂ emission rates remain below 22.5 lb/hr over a 12-month rolling average at FLA03.

5) On a calendar quarterly basis (every three months), the facility shall collect a LFG sample from the inlet to FLA03 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 H₂S in accordance with EPA Method 3C for fixed gases and ASTM D5504 (or a DEC approved equivalent method such as SCAQMD 307.91) for reduced sulfide gases. Field testing of H₂S 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 H₂S and the field colorimetric tube reading (H₂S FS) collected at the time of the analytical sample collection, where $CF = TRS\ AS / H_2S\ FS$ (if the calculated CF is less than 1.00 then CF = 1.00). The calculated CF shall

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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 maintain the approved SOP (Standard Operating Procedures) Plan onsite. Any changes to 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.

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

Condition 5: Compliance Demonstration
Effective for entire length of Permit

Applicable Federal Requirement: 6 NYCRR 200.6

Item 5.1:

The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: U-LFGAS

Emission Point: FLA03

Process: 001

Emission Source: FLA03

Regulated Contaminant(s):

CAS No: 007446-09-5

SULFUR DIOXIDE

Item 5.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

INTERMITTENT EMISSIONS TESTING

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The facility owner or operator shall not allow emissions of sulfur dioxide (SO₂) to violate the National Ambient Air Quality Standard (NAAQS) for SO₂.

The applicant has demonstrated that the SO₂ emissions for the facility are in compliance with the 1-hour NAAQS for SO₂ at an emission rate of 22.5 lb/hr at the maximum flow rate of 900 cfm of landfill gas (LFG).

In order to comply with the 1-hour NAAQS for SO₂, the facility must demonstrate that the flare FLA03 is meeting the short-term emission rate of 124 lb/hr of SO₂ at the maximum flow rate of 900 cfm. The Department may require a stack test to demonstrate compliance with the 1-hr NAAQS for SO₂ upon request.

Parameter Monitored: SULFUR DIOXIDE

Upper Permit Limit: 124 pounds per hour

Reference Test Method: EPA Method 6A-6C, other DEC accepted method

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING
DESCRIPTION

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 6: Compliance Demonstration
Effective for entire length of Permit

Applicable Federal Requirement: 6 NYCRR 200.6

Item 6.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 6.2:

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.

The applicant has demonstrated that sulfur dioxide (SO₂) 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 SO₂ on a weekly basis. These parameters include, but are not limited to, landfill gas (LFG) flow rate and field testing of LFG hydrogen sulfide (H₂S) concentration using

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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 SO₂.

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 SO₂ 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.

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 H₂S in accordance with EPA Method 3C for fixed gases and ASTM D5504 for reduced sulfide gases (or a DEC approved equivalent method, such as SCAQMD 307.91). Field testing of H₂S 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 10 days of receipt of the results. The most recent quarterly 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.

Within 30 calendar days 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. Concurrently, the colorimetric gas detection tube samples will be taken for comparison for the H₂S results.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 7: Compliance Demonstration
Effective for entire length of Permit

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Applicable Federal Requirement: 6 NYCRR 200.7**Item 7.1:**

The Compliance Demonstration activity will be performed for the Facility.

Item 7.2:

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 900 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 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 flares (FLA01 and FLA03). Each week, the facility must calculate the weekly average. If the weekly average gas flow rate exceeds 900 scfm to FLA03 or 750 cfm to FLA01, 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

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Upper Permit Limit: 900 cubic feet per minute (standard conditions)

Monitoring Frequency: DAILY

Averaging Method: AVERAGING METHOD - SEE MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 8: Compliance Demonstration
Effective for entire length of Permit

Applicable Federal Requirement: 6 NYCRR 200.7

Item 8.1:

The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: U-LFGAS

Process: 001

Emission Source: FLA01

Emission Unit: U-LFGAS

Process: 001

Emission Source: FLA03

Item 8.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

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

- 1) Applicable to FLA01 and FLA03: 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) Applicable to FLA01 and FLA03: be operated with a flame present at all times that landfill gas is being sent to the flares, as determined by thermocouple or any other equivalent device to detect the presence of flame;
- 3) Applicable to FLA01: 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

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4) Applicable to FLA01: 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.

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

Condition 9: Visible Emissions Limited
Effective for entire length of Permit

Applicable Federal Requirement:6 NYCRR 211.2

Item 9.1:

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.

Condition 10: Compliance Demonstration
Effective for entire length of Permit

Applicable Federal Requirement:6 NYCRR 211.2

Item 10.1:

The Compliance Demonstration activity will be performed for the facility:

The Compliance Demonstration applies to:

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

Emission Unit: U-LFGAS	Emission Point: FLA03
Process: 001	Emission Source: FLA03

Item 10.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

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 weekly observations of visible emissions from the emission unit, process, etc. to which

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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.

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

Condition 11: Compliance Demonstration
Effective for entire length of Permit

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

Item 11.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 11.2:

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.

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The facility owner or operator shall verify, in conjunction with the landfill gas sampling described below, 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 manufacturers' recommendations for minimizing emissions.

Additionally, within 30 days of issuance of this permit, the facility shall collect a landfill gas sample from the inlet to the operational 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. Subsequent samples will be taken every 5 years from the date of the last sample until the next permit renewal. 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.

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

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**** Emission Unit Level ****

Condition 12: Compliance Demonstration
Effective for entire length of Permit

Applicable Federal Requirement: 6 NYCRR 200.7

Item 12.1:

The Compliance Demonstration activity will be performed for:

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

Item 12.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

In order to ensure proper operation of the 750 scfm open flare (FLA01) in the destruction of hydrogen sulfide and to remain in compliance with the ambient air quality standard for sulfur dioxide established in 6NYCRR Part 257-2, 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 FLA01, 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 FLA01 is not operating properly, the facility shall notify the Department and corrective action shall be taken. In the event that FLA01 needs maintenance and is unable to be repaired within 5 days while FLA01 is the primary control device, the facility shall notify the Department and replace FLA01 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 FLA01 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.

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

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Condition 13: Compliance Demonstration
Effective for entire length of Permit

Applicable Federal Requirement: 6 NYCRR 200.7

Item 13.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: U-LFGAS	Emission Point: FLA03
Process: 001	Emission Source: FLA03

Item 13.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:

In order to ensure proper operation of the 900 scfm enclosed flare (FLA03) in the destruction of hydrogen sulfide and to remain in compliance with the ambient air quality standard for sulfur dioxide established in 6NYCRR Part 257-2, as well as the one-hour National Ambient Air Quality Standard for sulfur dioxide, the facility shall operate FLA03 in accordance with the following:

- 1) For FLA03, 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 FLA03 is not operating properly, the facility shall notify the Department and corrective action shall be taken. In the event that FLA03 needs maintenance, the open flare (FLA01) will be operated 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.

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 records available to the public upon request in accordance

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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 14: Contaminant List
Effective for entire length of Permit

Applicable State Requirement:ECL 19-0301

Item 14.1:

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

CAS No: 000074-82-8
Name: METHANE

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

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

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Condition 15: Malfunctions and Start-up/Shutdown Activities
Effective for entire length of Permit

Applicable State Requirement: 6 NYCRR 201-1.4

Item 15.1:

(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 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 16: Emission Unit Definition
Effective for entire length of Permit

Applicable State Requirement: 6 NYCRR Subpart 201-5

Item 16.1:

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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 80 acres of existing, closed and active landfill cells. There are two emission sources, three emission controls and two emission points. The two emission sources are the Existing Landfill (LNDFL) and the Western Expansion Landfill (WEXP). The three emission controls are FLA01 (750 scfm open flare), FLA03 (900 scfm enclosed flare) and SUL01 (LFG treatment system). The emission points are the exhausts of FLA01 and FLA03. FLA03 will be installed and commence operation within 24 months of waste placement in the first cell of the Western Expansion and will be the primary control device. FLA01 will be the primary control device until FLA03 is installed and commissioned. Thereafter, FLA01 will be maintained as a backup control device and will only be operated during downtime of FLA03.

Condition 17: Renewal deadlines for state facility permits
Effective for entire length of Permit

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

Item 17.1:

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 18: Compliance Demonstration
Effective for entire length of Permit

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

Item 18.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 000074-82-8 METHANE

Item 18.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: AMBIENT AIR MONITORING

Monitoring Description:

The owner or operator must monitor the surface concentrations of methane according to the procedures found in 40 CFR 60.765(c)(1-4) and the instrument specifications in 40 CFR 60.765(d), except that the action level will be 200 ppm. Any closed landfill that has no

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monitored exceedances of the operational standard of 200 ppm in three consecutive quarterly monitoring periods may reduce the monitoring frequency to annually. Any methane reading of 200 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

The quarterly surface emission monitoring scans will include monitoring of all penetrations through areas of intermediate and final cover, including penetrations around wellheads. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

For safety purposes, if a section of the landfill is covered with snow and/or ice for an entire calendar 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 surface monitoring in the event that conditions improve (i.e., if the snow and/or ice melt and the ground surface is accessible to the monitoring instruments) during the quarterly monitoring period.

If three (3) consecutive quarterly monitoring events show no readings of 200 ppmv methane 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 200 ppmv methane 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.

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 200 ppm methane or more, and corrective action taken, and other pertinent information must be submitted in a format acceptable to the Department.

The Department reserves the right to require the facility to perform a drone scan (or equivalent method) to

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determine if gas emissions are coming from areas that are unable to be scanned if conditions warrant these areas to be scanned. The Department will notify the facility if this becomes applicable.

The facility shall maintain records of the quarterly monitoring and corrective actions on site for a period of at least 5 years from the date of the record.

Upper Permit Limit: 200 parts per million (by volume)
 Reference Test Method: As Required: See permit description
 Monitoring Frequency: QUARTERLY
 Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -
 SEE MONITORING DESCRIPTION
 Reporting Requirements: QUARTERLY (CALENDAR)
 Reports due 30 days after the reporting period.
 Subsequent reports are due every 3 calendar month(s).

Condition 19: Compliance Demonstration
Effective for entire length of Permit

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

Item 19.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 19.2:

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.
 Avon, NY 14414

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)
 Reports due 30 days after the reporting period.
 Subsequent reports are due every 12 calendar month(s).

Condition 20: Air pollution prohibited
Effective for entire length of Permit

Applicable State Requirement: 6 NYCRR 211.1

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Item 20.1:

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 21: Compliance Demonstration
Effective for entire length of Permit****Applicable State Requirement: 6 NYCRR 212-2.1****Item 21.1:**

The Compliance Demonstration activity will be performed for the Facility.

Item 21.2:

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.

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: UPON REQUEST BY REGULATORY AGENCY

**Condition 22: Compliance Demonstration
Effective for entire length of Permit****Applicable State Requirement: 6 NYCRR 212-2.1****Item 22.1:**

The Compliance Demonstration activity will be performed for the Facility.

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Item 22.2:

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 twice per month with 10 days between readings. 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 twice-per-month 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 monitoring and corrective actions on site.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

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

Condition 23: Compliance Demonstration
Effective for entire length of Permit

Applicable State Requirement:6 NYCRR Subpart 257-5

Item 23.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 23.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

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

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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 900 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 900 scfm for the enclosed flare (FLA03), or 750 cfm for the open flare (FLA01), 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.

Monitoring Frequency: WEEKLY

Averaging Method: AVERAGING METHOD - SEE MONITORING
DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 24: Compliance Demonstration
Effective for entire length of Permit

Applicable State Requirement: 6 NYCRR Subpart 257-5

Item 24.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 24.2:

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

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standard for hydrogen sulfide established in 6NYCRR Part 257-5.

The applicant has demonstrated that hydrogen sulfide (H₂S) 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 257-5 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 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 257-5.

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 257-5 ambient air quality standard for H₂S 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 257-5, the owner or operator shall sample the gas generated by the landfill at the main header, prior to the landfill gas treatment. The facility must submit this sample to an approved National ELAP accredited laboratory (or other DEC approved laboratory) to analyze the concentration of total reduced sulfur compounds and H₂S in accordance with EPA Method 3C for fixed gases and ASTM D5504 (or a DEC approved equivalent method, such as SCAQMD 307.91) for H₂S.

If the parameters used within the original permit application Ambient Air Dispersion model for fugitive H₂S emission (0.73 pounds per hour, based on H₂S concentration of 10,000 ppmv and estimated fugitive LFG flow rate of 13 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,

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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.

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

Condition 25: Compliance Demonstration
Effective for entire length of Permit

Applicable State Requirement: 6 NYCRR Subpart 257-5

Item 25.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 007783-06-4 HYDROGEN SULFIDE

Item 25.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: AMBIENT AIR MONITORING

Monitoring Description:

HYDROGEN SULFIDE SURFACE SCANS UPON REQUEST:

(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 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 surface testing. For safety purposes, if a section of the landfill is covered with snow and/or

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ice or excessive precipitation (wet conditions), that section of the landfill does not need to be included in the surface scan.

(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 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.

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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: UPON REQUEST OF REGULATORY AGENCY

Averaging Method: AVERAGING METHOD - SEE MONITORING
DESCRIPTION

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

****** Emission Unit Level ********Condition 26: Emission Point Definition By Emission Unit
Effective for entire length of Permit****Applicable State Requirement: 6 NYCRR Subpart 201-5****Item 26.1:**

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.): 4674.4

NYTME (km.): 325.6

Emission Point: FLA03

Height (ft.): 40

Diameter (in.): 60

NYTMN (km.): 4675.476

NYTME (km.): 326.032

**Condition 27: Process Definition By Emission Unit
Effective for entire length of Permit****Applicable State Requirement: 6 NYCRR Subpart 201-5****Item 27.1:**

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 LFG collection system and routed to the LFG treatment system and flares.

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Emission Source/Control: FLA01 - Control
Control Type: FLARING

Emission Source/Control: FLA03 - Control
Control Type: FLARING

Emission Source/Control: SUL01 - Control
Control Type: GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: LNDFL - Process

Emission Source/Control: WEXPA - Process

Item 27.2:

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

Emission Unit: U-LFGAS
Process: FUG Source Classification Code: 5-02-006-02
Process Description:
Fugitive landfill gas from the the Existing Landfill and the Western Expansion Landfill (Emission Sources LNDFL and WEXP) as well as fugitive emissions from the leachate storage tanks.

Emission Source/Control: LNDFL - Process

Emission Source/Control: TANK1 - Process
Design Capacity: 161 1000 gallons

Emission Source/Control: TANK2 - Process
Design Capacity: 161 1000 gallons

Emission Source/Control: TANK3 - Process
Design Capacity: 330 1000 gallons

Emission Source/Control: WEXPA - Process

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