**NORTH CAROLINA DIVISION OF AIR QUALITY**

# Application Review

**Issue Date:** xxxx, xx, 2024

**Region:** Wilmington Regional Office
**County:** New Hanover
**NC Facility ID:** 6500343
**Inspector's Name:** Linda Willis
**Date of Last Inspection:** 11/08/2022
**Compliance Code:** 3 / Compliance - inspection

## Facility Data

**Applicant (Facility's Name):** New Hanover County Secure Landfill

**Facility Address:**
New Hanover County Secure Landfill
5210 U.S. Highway 421 North
Wilmington, NC 28401

**SIC:** 4953 / Refuse Systems
**NAICS:** 562212 / Solid Waste Landfill

**Facility Classification: Before:** Title V **After:** Title V
**Fee Classification: Before:** Title V **After:** Title V

## Permit Applicability (this application only)

**SIP:** 15A NCAC 02D .0516, .0521, .0524, .1100, .1111, .1806, 02Q .0711
**NSPS:** Subparts XXX, JJJJ
**NESHAP/MACT:** Subpart ZZZZ
**PSD:** N/A
**PSD Avoidance:** N/A
**NC Toxics:** Acrylonitrile, Benzene, Hydrogen Sulfide, Vinyl Chloride
**112(r):** N/A
**Other:** N/A

## Contact Data

| Facility Contact | Authorized Contact | Technical Contact |
|---|---|---|
| Joe (Yousef) Suleyman<br>Director - Dept. of Env. Management<br>3002 US Highway 421 North<br>Wilmington, NC 28401<br>(910) 798-4453<br><br>jsuleyman@nhcgov.com | Joe (Yousef) Suleyman<br>Director - Dept. of Env. Management<br>3002 US Highway 421 North<br>Wilmington, NC 28401<br>(910) 798-4453<br><br>jsuleyman@nhcgov.com | Andrew Mulvey<br>Environmental Specialist<br>3002 US Highway 421 North<br>Wilmington, NC 28401<br><br>(910) 798-4453<br><br>amulvey@nhcgov.com |

## Application Data

**Application Number:** 6500343.23A
**Date Received:** 04/24/2023
**Application Type:** Renewal
**Application Schedule:** TV-Renewal

**Existing Permit Data**
**Existing Permit Number:** 09805T08
**Existing Permit Issue Date:** 10/21/2022
**Existing Permit Expiration Date:** 11/30/2023

**Total Actual emissions in TONS/YEAR:**

| CY | SO2 | NOX | VOC | CO | PM10 | Total HAP | Largest HAP |
|---|---|---|---|---|---|---|---|
| 2022 | 93.09 | 11.02 | 4.25 | 49.83 | 2.81 | 3.28 | 1.21 [Hydrogen chloride (hydrochlori] |
| 2021 | 175.38 | 12.45 | 2.79 | 56.33 | 3.15 | 2.71 | 1.37 [Hydrogen chloride (hydrochlori] |
| 2020 | 1.05 | 6.22 | 6.76 | 27.95 | 1.63 | 3.67 | 1.06 [Toluene] |
| 2019 | 0.6600 | 3.69 | 20.18 | 16.48 | 1.08 | 3.14 | 0.9740 [Toluene] |
| 2018 | 0.5200 | 1.66 | 11.47 | 6.74 | 0.2000 | 5.62 | 1.87 [Toluene] |

**Review Engineer:** Booker Pullen/Massoud Eslambolchi

**Review Engineer's Signature:** **Date:**

**Comments / Recommendations:**
**Issue:** 09805T09
**Permit Issue Date:** xxxx, xx, 2024
**Permit Expiration Date:** xxxxxxxxxx

**1. Facility Description**

The New Hanover County Secure Landfill is an active Municipal Solid Waste Landfill which is owned and operated by New Hanover County. The landfill began operating in 1981 and has a permitted design capacity exceeding 2.5 million megagrams and 2.5 million cubic meters. Gases generated during the decomposition of the waste are currently collected via an installed landfill gas collection system and routed to a 2,500 scfm utility flare for incineration. The permit-to-construct from the Division of Waste Management authorized the construction of Cells 7-13 and construction was commenced on May 5, 2018, triggering applicability of NSPS Subpart XXX. A collection and control system is required by regulation since the NMOC emission rate is greater than the XXX threshold of 34 Mg/yr.

The landfill no longer accepts asbestos-containing waste. Asbestos containing waste received in the past was placed in Cell 5. The landfill operates a wastewater treatment plant that includes an aerated lagoon for storage, a small package plant providing treatment for chemical and biological oxygen demand as well as settling solids, followed by a reverse osmosis (RO) system to further treat the discharge from the package plant prior to discharge to the Northeast Cape Fear River. Reject-wastewater from the RO system is injected into the landfill subsurface.

**2. Purpose of Application**

Application No. 6500343.23A was submitted for the renewal of the existing Title V permit and was received by the Wilmington Regional Office on April 24, 2023. The application was considered complete on that date. The application was forwarded to the Raleigh Central Office on May 11, 2023 for processing. The renewal application was submitted at least six months prior to the expiration date as required by General Condition K in the current permit. Therefore, the permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall not expire until the renewal permit has been issued or denied. This application is required to go through both a 30-day public comment period and a 45-day EPA review period prior to issuance.

**3. Permitting History**

| Revision No. | Issue Date | Description |
|---|---|---|
| 09805T05 | 12/18/2018 | Renewal/Modification to renew the permit and to add NSPS XXX regulations to the permit. |
| 09805T06 | 03/07/2019 | Significant modification to add one utility flare and add the gas collection and control system to the permit. |
| Gas collection and control system | 10/23/2019 | Gas collection and control system (GCCS) design plan approved. |
| 09805T07 | 04/20/2020 | Significant modification, Part II, to send the Title V permit through the 30-day public notice and the 45-day EPA review for the addition of the one utility flare and the gas collection and control system. |
| Applicability Determination | 08/20/2021 | Approved usage of one “illegal drug” incinerator at the facility. |
| Notice of Violation | 06/10/2022 | Hydrogen Sulfide (H2S) emissions exceeded the permitted limit. A modification was required to re-model the $H_2S$ emissions emitted by the facility. |
| 09805T08 | 10/21/2022 | A State-enforceable only modification was processed that included revised modeling for $H_2S$. The facility modeled in compliance with State Air Toxic emissions. |

## 4. Application Chronology

| | |
|---|---|
| April 24, 2022 | Application 6500343.23A was received in the Wilmington Regional Office and considered complete. |
| May 11, 2023 | Application 6500343.23A was received in the Raleigh Central Office for processing. |
| May 12, 2023 | The Raleigh Central Office sent an acknowledge letter to the facility stating that the application submittal contained all the required elements as indicated and was accepted for processing. |
| January 29, 2024 | DAQ/RCO sent the draft permit and engineering review to the Stationary Source Compliance Branch. No comments. |
| January 29, 2024 | DAQ/RCO sent the draft permit and engineering review to the Wilmington Regional Office for comment. No comments. |
| July 19, 2024 | DAQ/RCO sent the draft permit to the applicant for comment. The applicant had no comments. |
| XXXXX, 2024 | Date of 30 day Public Notice and EPA 45 day review. See Section 13 below concerning any comments received. |

## 5. Table of Changes to the Existing Permit No. 09805T08

The following changes were made to existing Title V air permit No. 09805T08*

| Page No. | Section | Description |
|---|---|---|
| Cover Page | Cover Page | Updated letterhead.<br>Updated Permit revision numbers and dates throughout.<br>Updated PSD increment tracking statement. |
| Cover Page | Cover Page | Revised the Summary Of "Changes To The Permits" table. |
| Page 1 of Permit | Body of Permit | Changed Permit number.<br>Changed "Replaces Permit" number.<br>Revised effective date of Permit.<br>Revised application number.<br>Revised complete application date. |

* This list is not intended to be a detailed record of every change made to the permit but a summary of those changes.

## 6. Table Permitted Sources

The facility's currently permitted emission sources are as follows:

| Emission Source ID No. | Emission Source Description | Control Device ID No. | Control Device Description |
|---|---|---|---|
| ES-1<br>**NSPS XXX** | One municipal solid waste landfill | CD-GCCS<br><br>CD-1 | One landfill gas collection system<br><br>One landfill gas-fired utility flare (2,500 standard cubic feet per minute maximum flow rate, 75.9 million Btu per hour heat input at 506 Btu per cubic foot heat value of landfill gas) |

Insignificant Activities in accordance with 15A NCAC 02Q .0503(8) in the current permit

| Emission Source ID No. | Emission Source Description |
|---|---|
| IES-Leachate Pond | Leachate holding pond |
| IES-Aeration Tank | Aeration tank |
| IES-Diesel Tank | Diesel storage tank |
| IES-Waste Oil | Waste oil tank |
| IES-Ash Silo | Mobile ash silo for alternative daily cover |
| IES-EG1<br>**GACT ZZZZ, NSPS JJJJ** | Propane-fired, spark ignition emergency generator (20 kW, 27 HP) |

**7. Regulations Listed in the Current Permit:**

The facility is subject to the following air quality regulations in addition to the General Conditions:

- 15A NCAC 02D .0516 "Sulfur Dioxide Emissions From Combustion Sources"
- 15A NCAC 02D .0521 "Control of Visible Emissions"
- 15A NCAC 02D .0524 "New Source Performance Standards", Subpart XXX and JJJJ
- 15A NCAC 02D .1100 "Control of Toxic Air Pollutants"
- 15A NCAC 02D .1111 "Maximum Achievable Control Technology"
- 15A NCAC 02D .1806 "Control and Prohibition of Odorous Emissions"
- 15A NCAC 02Q .0503(8) "Definitions, Insignificant Activities due to size"
- 15A NCAC 02Q .0711 "Emission Rates Requiring a Permit"

**8. Regulatory Review**

**15A NCAC 02D .0516 "Sulfur Dioxide Emissions From Combustion Sources"**

Emissions of sulfur dioxide from this source **(ID No. CD-1)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. Landfill gas combustion in the utility flare (ID No. CD-1) emits 4.79 lb $SO_2$/hr at the maximum heat input rate of 75.9 mmBtu/hr. This equals 0.063 lb $SO_2$/mmBtu which is less than the allowable sulfur dioxide emission rate. No monitoring, recordkeeping or reporting is required for Landfill gas combustion. Compliance is expected.

**15A NCAC 02D .0521: Control of Visible Emissions**

Visible emissions from this source **(ID No. CD-1)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. Visible emissions from a properly maintained and operated flare are commonly not a concern. No monitoring, recordkeeping or reporting is required for LFG combustion. Compliance is expected.

**15A NCAC 02D. 0524: New Source Performance Standards**

See Section 9. Below for NSPS XXX and JJJJ.

**15A NCAC 02D .1100: Control Of Toxic Air Pollutants**

The toxics air pollutants (Acrylonitrile, Benzene, Hydrogen Sulfide, Vinyl Chloride) were previously modeled in August 2022. The remodeling effort was submitted in response to a Notice of Violation issued to the facility on June 10, 2022 for the exceedance of the toxic air pollutant hydrogen sulfide permitted emission limit (1.906 lbs/day) the Title V permit (Section 2.1 A.5). New Hanover County Secure Landfill submitted an application dated June 9, 2022 containing revised toxic modeling that used conservatively estimated values that were scaled up to 95% of the AAL to indicate compliance at the higher values for the landfill.

Example calculation for Hydrogen Sulfide modeled emissions:

ES1 (Landfill): 69.5 lb/day
Flare: 2.81 lb/day

Total modeled emissions = 72.31 lb/day

ES1 % of total modeled emissions rate $= \frac{69.5\ lb/day}{72.31\ lb/day} = 96.1\%$

Flare % of total modeled emissions rate $= \frac{2.81\ lb/day}{72.31\ lb/day} = 3.9\%$

Scaling total emissions rate up to 95 % of AAL:

The modeled results for inputs listed above results = 53.4% of AAL

Scaled up to 95% of the AA: $\frac{95\%}{53.4\%}\ x\ 72.31\ lb/day = 128.64\ lb/day$

Calculate individual source emissions rates from total emissions rates scaled 95% to AAL:

ES1 - 128.64 lb/day * 96.1% = 123.64 lb/day (number listed in Table 1 below)

Flare - 128.64 lb/day * 3.9% = 5.0 lb/day (number listed in Table 1 below)

In accordance with 15A NCAC 02D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the following modeled permit limits shall not be exceeded. The modeling analysis was reviewed (Mark Yoder) and approved by the AQAB on August 11, 2022. Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo.

**Table 1:** AQAB Modeled Emissions Rates

| Pollutant | Averaging Period | Modeled Impact % of AAL | Emissions Rate @ 95% of the AAL Landfill | Emissions Rate @ 95% of the AAL Flare | The rates that were scaled up to 95% of the AAL will be the values listed in the Title V Air Permit |
|---|---|---|---|---|---|
| Acrylonitrile | 1-hr | Scaled up to 95 | 4.75 lbs/hr | 0.18 lbs/hr | |
| | 24-hour | Scaled up to 95 | 30.94 lbs/24-hours | 0.125 lbs/24-hours | |
| Benzene | Annual | Scaled up to 95 | 277.4 lbs/yr | 11.86 lbs/yr | |
| Hydrogen Chloride | 1-hour | Scaled up to 95 | No change | No change | |
| Hydrogen Sulfide | 24-hour | Scaled up to 95 | 123.64 lbs/24-hours | 5.0 lbs/24-hours | |
| Vinyl Chloride | Annual | Scaled up to 95 | 879.56 lbs/yr | 237.48 lbs/yr | |

**15A NCAC 02D .1111: Maximum Achievable Control Technology**

The New Hanover County Secure Landfill (ID No. ES-1) is not subject to 40 CFR 63, Subpart AAAA "Municipal Solid Waste Landfills." The NMOC emissions are not greater than the MACT AAAA thresholds (50 Mg per year), the landfill itself is not a major source, and this facility is not co-located at a major source of HAPs as defined in 40 CFR 63.2.

The MSW Landfill (ID No. ES-1) is not subject to 40 CFR 61, Subpart M "National Emission Standard for Asbestos," since it no longer receives asbestos-containing waste for disposal.

The Propane-fired, spark ignition emergency generator (20 kW, 27 HP) (IES-EG1) is subject to 40 CFR 63, Subpart ZZZZ "Reciprocating Internal Combustion Engines," and is considered a new (commenced construction of the stationary RICE on or after June 12, 2006) engine under this regulation. The facility complies with this regulation by complying with the requirements of NSPS Subpart JJJJ.

**15A NCAC 02D .1806: Control and Prohibition of Odorous Emissions**

The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

**15A NCAC 02Q .0503(8): Definitions, Insignificant Activities due to size**

The following sources are insignificant in accordance with 02Q 0503(8): "Insignificant activities because of size or production rate" means any activity whose emissions would not violate any applicable emissions standard and whose potential emission of particulate, sulfur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide before air pollution control devices, are each no more than five tons per year and whose potential emissions of hazardous air pollutants before air pollution control devices, are each below 1000 pounds per year.

| Emission Source ID No. | Emission Source Description[1,2] |
|---|---|
| IES-Leachate Pond | Leachate holding pond |
| IES-Aeration Tank | Aeration tank |
| IES-Diesel Tank | Diesel storage tank |
| IES-Waste Oil | Waste oil tank |
| IES-Ash Silo | Mobile ash silo for alternative daily cover |
| IES-EG1<br>**GACT ZZZZ, NSPS JJJJ** | Propane-fired, spark ignition emergency generator (20 kW, 27 HP) |

[1] Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement (Federal or State) or that the Permittee is exempted from demonstrating compliance with any applicable requirement.

[2] When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit."

**15A NCAC 02Q .0711: Emission Rates Requiring a Permit**

The facility shall be operated and maintained in such a manner that any new, existing or increased actual emissions of any Toxic Air Pollutant (TAP) listed in 15A NCAC 02Q .0711 or in this permit from all sources at the facility (excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions"), including fugitive emissions and emission sources not otherwise required to have a permit, will not exceed its respective TAP permitting emission rates (TPER) listed in 15A NCAC 02Q .0711 without first obtaining an air permit to construct or operate.

PRIOR to exceeding any of the TPERs listed in 15A NCAC 02Q .0711, the Permittee shall be responsible for obtaining an air permit to emit TAPs and for demonstrating compliance with the requirements found in 15A NCAC 02D .1100 "Control of Toxic Air Pollutants."

The Permittee shall maintain at the facility records of operational information sufficient for demonstrating to the Division of Air Quality staff that actual TAPs are less than the rate listed in 15A NCAC 02Q .0711.

The TPER table listed below is provided to assist the Permittee in determining when an air permit is required pursuant to 15A NCAC 02Q .0711 and may not represent all TAPs being emitted from the facility. This table will be updated at such time as the permit is either modified or renewed.

| Pollutant | CAS No. | Carcinogens (lbs/yr) | Chronic toxicant (lbs/day) | Acute Systemic Toxicants (lbs/hr) | Acute Irritants (lbs/hr) |
|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | ----- | 3.9 | ----- | ----- |
| Carbon tetrachloride | 56-23-5 | 460 | ----- | ----- | ----- |
| Chlorobenzene | 108-90-7 | ----- | 46 | ----- | ----- |
| Chloroform | 67-66-3 | 290 | ----- | ----- | ----- |
| Dichlorobenzene (p) 1,4 | 106-46-7 | ----- | ----- | ----- | 16.8 |
| Ethyl mercaptan (Ethanethiol) | 75-08-1 | ----- | ----- | 0.025 | ----- |
| Ethylene dibromide (dibromoethane) | 106-93-4 | 27 | ----- | ----- | ----- |
| Ethylene dichloride (1,2 dichloroethane) | 107-06-2 | 260 | ----- | ----- | ----- |
| n-hexane | 110-54-3 | ----- | 23 | ----- | ----- |
| Mercury, aryl and inorganic compounds (Component of HGC, MERCARYL) | ---------- | ----- | 0.013 | ----- | ----- |
| Mercury vapor | 7439-97-6 | ----- | 0.013 | ----- | ----- |
| Methyl chloroform | 71-55-6 | ----- | 250 | ----- | 64 |
| Methyl ethyl ketone (2-butanone) | 78-93-3 | ----- | 78 | ----- | 22.4 |
| Methyl isobutyl ketone | 108-10-1 | ----- | 52 | ----- | 7.6 |
| Methyl mercaptan | 74-93-1 | ----- | ----- | 0.013 | ----- |
| Methylene chloride | 75-09-2 | 1600 | ----- | 0.39 | ----- |
| Perchloroethylene (Tetrachloroethene) | 127-18-4 | 13000 | ----- | ----- | ----- |
| TCE (trichloroethylene) | 79-01-6 | 4000 | ----- | ----- | ----- |
| Tetrachloroethane, 1,1,2,2 | 79-34-5 | 430 | ----- | ----- | ----- |
| Toluene | 108-88-3 | ----- | 98 | ----- | 14.4 |
| Vinylidene chloride | 75-35-4 | ----- | 2.5 | ----- | ----- |
| Xylenes | 1330-20-7 | ----- | 57 | ----- | 16.4 |

**9. NSPS, NESHAP/MACT, PSD, 112(r), CAM & Attainment Status**

**NSPS**

- **40 CFR 60, Subpart XXX**
  The MSW landfill (ID No. ES-1) is subject to 40 CFR 60, Subpart XXX "Municipal Solid Waste Landfills that Commenced Construction, Reconstruction, or Modification After July 17, 2014," since the landfill commenced construction on a modification on May 1, 2018.

- **40 CFR 60, Subpart JJJJ**
  The emergency generator (ID No. IES-EG1) is subject to 40 CFR 60, Subpart JJJJ, "Stationary Spark Ignition Internal Combustion Engines," since the engine is a spark ignition emergency engine, manufactured after January 1, 2009.

**NESHAP/MACT**

- **40 CFR Subpart AAAA**
  The New Hanover Secure Landfill is not subject to 40 CFR Subpart AAAA "Municipal Solid Waste Landfill MACT" because:
  - The landfill is not a major source as defined in 40 CFR 63.2 of Subpart A.
  - The landfill is not collocated with a major source as defined in 40 CFR 63.2 of Subpart A.
  - The landfill does not have an NMOC emissions rate equal to or greater than 50 megagrams per year (Mg/yr) NMOC as calculated according to 40 CFR 63.1959.

- **40 CFR Subpart ZZZZ**
  The Landfill does operate one insignificant propane-fired, spark ignition engine (20 kW, 27 horse power, ID No. IES-EG1). This engine is subject to 40 CFR Subpart ZZZZ for an area source (GACT).

**PSD**

This facility is not subject to PSD because the potential emissions of each criteria pollutant is below the 250 ton per year threshold. This landfill is considered a minor source under the PSD program as indicated on the cover page of the proposed Title V permit.

New Hanover County has triggered increment tracking under PSD for $PM_{10}$, $SO_2$, and NOx. However, this permit renewal does not consume or expand increments for any pollutants.

**112(r)**

The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the 112(r) thresholds. No change with respect to 112(r) is anticipated under this permit renewal.

**CAM**

The CAM rule (15A NCAC 02D .0614) applies to each pollutant specific emissions unit (PSEU) at Title V facilities that meets all three following criteria:

- the unit is subject to any (non-exempt: e.g. pre November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- the unit uses any control device to achieve compliance with any such emission limitation or standard.
- The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source (i.e., 100 tons per year for criteria pollutants or 10/25 tons per year for HAPs).

  CAM does not apply because the facility does not meet the requirements listed above.

**10. Other Regulatory Requirements**

- A Zoning Consistency Determination is not required for the renewal of this Title V permit.
- The application was signed by the Responsible Official (Yousef Suleyman).
- No fee is required for the renewal of this Title V air permit.

- **PFAS:**

  The NC DEQ has determined that per- and polyfluoroalkyl substances, also known as PFAS, have been and are being deposited in landfills. PFAS has become a significant concern since 2017. PFAS compounds are commonly used in industrial processes and found in waste streams where they can be emitted into the air, deposited into surface water or soil, and eventually reach groundwater. PFAS are also found in many commercial products that eventually find their way to landfills. In response to the growing concern about PFAS, NC DAQ has developed a list of screening questions that are sent to identified industries to help to identify potential air emission sources of emerging contaminants. These questions will be sent to all landfills operating a gas collection and control system and burning LFG onsite in a flare or other combustion device, and to facilities that receive LFG for renewable natural gas facilities.

DAQ requested completion of a screening questionnaire from those landfills with potential PFAS release to the environment. A copy of the facility's responses can be found in the attachment of this review.

**"Disclosure of Information Relating to Emissions of Fluorinated Chemicals:**
The Permittee shall have an ongoing duty to disclose the known presence of materials containing fluorinated chemicals at the Facility that have the potential to result in the emission of fluorinated chemicals to the environment. Such disclosures shall be in writing and submitted to the Regional Office Supervisor within thirty days of the Permittee becoming aware of such information, unless such information has already been disclosed to DAQ by the Permittee."

When this facility's draft permit for renewal is noticed for public comments, the above permit term on PFAS disclosure will be included in the permit.

- **1-bromopropane**
  On February 4, 2022, 1-bromopropane was added to EPA's list of hazardous air pollutants (HAPs). This facility does not use or emit 1-bromopropane.

**11. Facility Emissions Review**
The facility-wide potential emissions do not change under this TV permit renewal. Actual emissions for criteria pollutants and HAPs for the years 2018 through 2022 are provided in the header of this permit review.

**12. Compliance Status**
DAQ has reviewed the compliance status of the New Hanover County Secure Landfill facility. During the most recent inspection, conducted on November 8, 2022 by Linda Willis of the Wilmington Regional Office, she stated that the facility was accepted as compliant with their Title V permit.

**13. Public Notice/EPA and Affected State(s) Review**
A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 02Q .0521 above. No affected states or local agencies are within 50 miles of this facility.

The 30-day public notice period was from ____ 2024 through _____2024.
_____comments were received during the 30-day public notice period.

The EPA 45-day review period was from _____2024 through _____ 2024.
_____comments were received during the 45-day EPA review period.

**14. Comments and Recommendations**
This permit modification for the New Hanover County Secure Landfill located at 5210 U.S. Highway 421 North, Wilmington, NC 28401, New Hanover, County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. The DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. The DAQ recommends the issuance of Air Permit No. 09805T09.

# Attachment to TV Application – New Hanover County Secure Landfill

## Facility ID: 6500343

**Questionnaire for facilities with potential PFAS releases from Landfills**

**a. In response to the growing concern about PFAS, NC DAQ has developed a list of screening questions for Permittees to help us identify potential air emission sources of emerging contaminants which are listed below.**

**DAQ Question 1:**

**Will your facility use any material or products in your operations that contain fluorinated chemicals? If so, please identify such materials or products and the fluorinated chemicals they contain.**

No.

**DAQ Question 2:**

**Will your facility formulate/create products or byproducts (directly or indirectly) that contain fluorinated chemicals (across multiple media)? If so, please identify such products or byproducts and the fluorinated chemicals they contain.**

No, the facility will not formulate or create byproducts that contain fluorinated compounds. While the facility commonly receives solid waste for disposal containing fluorinated compounds, landfills are passive receivers and not users or generators of such compounds.

**DAQ Question 3:**

**Will your facility generate solid, liquid, or gaseous related emissions, discharges, or wastes/products containing fluorinated chemicals? If so, please identify such waste streams or materials and the fluorinated chemicals they contain.**

As mentioned above, landfills are passive receivers of solid waste containing fluorinated compounds, not generators. Our facility operates a Reverse Osmosis treatment plant for the treatment of landfill leachate. This technology is very effective at removing fluorinated compounds.

The New Hanover County Landfill generates leachate which in turn is treated onsite and discharged to surface waters per an NPDES permit (Effluent Discharge). It's possible the discharge of treated landfill leachate may contain fluorinated chemicals. Limited testing has been performed on a voluntary basis. The list of fluorinated chemicals tested for, and analytical results are included on this email as an attachment. Results indicated non-detect ("ND") for all compounds in the Effluent Discharge.

Regarding fluorinated compounds in landfill gas, our facility has not conducted any sampling that would indicate the presence, or lack thereof, of fluorinated compounds in emissions. Sampling is not currently required by State or Federal law. However, our facility operates an active landfill gas collection system which eliminates the potential of all passive emissions. Additionally, the current landfill gas flare system will give way to an RNG Gas-to-Energy plant within the next year or so resulting in a significant reduction in emissions from our flare.

**DAQ Question 4:**

**Do your facility's processes or operations use equipment, material, or components that contain fluorinated chemicals (e.g., surface coating, clean room applications, solvents, lubricants, fittings, tubing, processing tools, packaging, facility infrastructure, air pollution control units)? Could these processes or operations directly or indirectly (e.g., through leaching, chemical process, heat treatment, pressurization, etc.) result in the release of fluorinated chemicals into the environment?**

The New Hanover County maintains a fleet of heavy equipment including bulldozers, compactors, etc. that use oils and other lubricants that may contain fluorinated compounds. However, New Hanover County staff is not directly aware of the use of any fluorinated compounds in the lubricants and fluids used onsite.

**DAQ Question 5:**

**List the fluorinated chemicals identified (i.e., through testing or desktop review) above in your response under the appropriate methods/approaches? If one is not, are they on any other known US or International target lists? OTM-45 (air emissions) Methods 533 & 537.1 (drinking water) SW-846: Method 8327 (water) Draft Method 1633 (water, solids, tissue) Total PFAS" Draft Method 1621 for Adsorbable Organic Fluorine (wastewater) Non targeted analytical methods Qualitative approach through suspect screening**.

The method used for analytical testing of the landfill leachate "Effluent Discharge" was EPA 537 PFCs by LC-MS/MS. No fluorinated chemicals were detected.

**DAQ Question 6:**

**Are there other facilities or operations in the U.S. or internationally engaged in the same or similar activities involving fluorinated chemicals addressed in your response to the above questions? If so, please provide facility identification information? In addition, are there any ISO (International Organization for Standardization) certification requirements?**

Yes, most or all solid waste disposal sites generate landfill leachate that may contain fluorinated compounds found in products commonly disposed of at such sites.

**DAQ Question 7:**

**Do you plan to store AFFF on site, use it in fire training at the site, use it for fighting fires at the facility, or include it in a fire fighting system at the site?**

No.

**DAQ Question 8:**

**Are other emerging contaminants (e.g., 1,4-dioxane, brome, perchlorate, 1,2,3-Trichloropropane) used in some capacity within your facility or operations?**

No.

**DAQ Question 9:**

**Do you need technical assistance to answer the questions above.**

No.

**b. The following State-enforceable only condition will be placed in the Title V permit for this facility along with <u>possibly a one-time testing requirement</u> to test for per- and polyfluoroalkyl substances (PFAS).**

- **Disclosure of Information Relating to Emissions of Fluorinated Chemicals:**
  **The Permittee shall have an ongoing duty to disclose the known presence of materials containing fluorinated chemicals at the Facility that have the potential to result in the emission of fluorinated chemicals to the environment. Such disclosures shall be in writing and submitted to the Regional Office Supervisor within thirty days of the Permittee becoming aware of such information unless such information has already been disclosed to DAQ by the Permittee.**