

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Application Review**

**Issue Date:**

**Region:** Mooresville Regional Office  
**County:** Iredell  
**NC Facility ID:** 4900262  
**Inspector's Name:** Karyn Kurek  
**Date of Last Inspection:** 07/08/2021  
**Compliance Code:** 3 / Compliance - inspection

<p style="text-align: center;"><b>Facility Data</b></p> <p><b>Applicant (Facility's Name):</b> Iredell Transmission, LLC</p> <p><b>Facility Address:</b>          Iredell Transmission, LLC          365 Twin Oaks Road          Statesville, NC 28625</p> <p><b>SIC:</b> 4931 / Elec &amp; Other Services Combined  <b>NAICS:</b> 22121 / Natural Gas Distribution</p> <p><b>Facility Classification: Before:</b> Title V After: Title V  <b>Fee Classification: Before:</b> Title V After: Title V</p>	<p style="text-align: center;"><b>Permit Applicability (this application only)</b></p> <p><b>SIP:</b> 15A NCAC 02D .0516, 02D .0521, 02D .0524, 02D .1111, 02D .1806, and 15A NCAC 02Q .0317 of 02D .0530  <b>NSPS:</b> JJJJ  <b>NESHAP:</b> MACT ZZZZ  <b>PSD:</b> N/A  <b>PSD Avoidance:</b> Carbon Monoxide  <b>NC Toxics:</b> N/A  <b>112(r):</b> N/A  <b>Other:</b> G.S. 62.133.8(g) "Renewable Energy and Energy Efficiency Portfolio Standard (REPS)"</p>
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<b>Contact Data</b>			<b>Application Data</b>
<p style="text-align: center;"><b>Facility Contact</b></p> <p>Willard Handy          Facility Manager          (704) 818-7282          356 Twin Oaks Road          Statesville, NC 28625</p>	<p style="text-align: center;"><b>Authorized Contact</b></p> <p>Kevin Dobson          Director          (734) 358-1408          One Energy Plaza          400 WCB          Detroit, MI 48226</p>	<p style="text-align: center;"><b>Technical Contact</b></p> <p>Jonny Neal          Associate Environmental Engineer          (734) 546-4079          One Energy Plaza          400 WCB          Detroit, MI 48226</p>	<p><b>Application Number:</b> 4900262.21A  <b>Date Received:</b> 12/01/2021  <b>Application Type:</b> Renewal  <b>Application Schedule:</b> TV-Renewal</p> <p style="text-align: center;"><b>Existing Permit Data</b></p> <p><b>Existing Permit Number:</b> 08634/T08  <b>Existing Permit Issue Date:</b> 09/05/2017  <b>Existing Permit Expiration Date:</b> 08/31/2022</p>

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

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2020	1.20	33.50	4.00	144.80	6.40	21.02	16.86 [Formaldehyde]
2019	1.40	35.30	4.20	151.30	6.40	22.16	17.74 [Formaldehyde]
2018	1.20	34.10	4.20	146.90	5.90	21.41	17.36 [Formaldehyde]
2017	1.50	34.40	4.10	149.00	6.60	21.49	16.69 [Formaldehyde]
2016	1.50	19.20	4.30	135.00	7.00	22.36	17.67 [Formaldehyde]

<p><b>Review Engineer:</b> Alice M. Wessner</p> <p><b>Review Engineer's Signature:</b> <i>Alice M. Wessner</i> <b>Date:</b></p>	<p style="text-align: center;"><b>Comments / Recommendations:</b></p> <p><b>Issue:</b> 08634/T09  <b>Permit Issue Date:</b>  <b>Permit Expiration Date:</b></p>
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**1. Purpose of Application:**

Iredell Transmission, LLC (Iredell) currently holds Title V Permit No. 08634T08 with an expiration date of August 31, 2022, for a landfill gas to energy facility in Statesville, Iredell County, North Carolina. This permit application is for a permit renewal without modification. The renewal application was received on November 30, 2021, or at least six months prior to the expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

**2. Facility Description:**

Iredell Transmission, LLC (Iredell) is owned and operated by DTE Biomass Energy (DTE). The facility utilizes landfill gas that is generated by the Iredell County Landfill and creates electrical energy that is supplied to the local utility power grid. Normal operation for this facility is to burn the landfill gas in the two gas-fired engines (Caterpillar model 3520C, 2,233 hp each)/generator (1,600 kW each) units. A candle stick flare (1,714 cfm) is used as a backup system to combust the landfill gas that is not burned by the engine/generator units or when the engine/generator units are not operating. Iredell County Landfill is permitted under a separate permit, Air Quality Permit No. 09959T03 with an expiration date of October 31, 2025. The landfill owns and operates the landfill gas collection and control system, but the gas treatment system and the flare are owned by Iredell Transmission, LLC.

**3. History/Background/Application Chronology:**

History/Background

September 5, 2017 Air Quality Permit No. 08634T08 was issued as a renewal with modification with the expiration date of August 31, 2022. A modification of permit T07 was needed because DAQ had changed the SB3 emission limits for landfill gas fired engines to match the NSPS Subpart JJJJ limits.

Application Chronology

November 30, 2021	Received an application 49000262.21A for a renewal of Permit No. 08634T08 without modification in the Raleigh Central Office. The application was stamped received on 12/01/2021.
December 1, 2021	Acknowledgement letter was sent to the facility.
May 5, 2022	Draft permit and permit review sent to Booker Pullen, DAQ Engineering Supervisor
May 6, 2022	Booker Pullen reviewed the draft permit and sent his comments.
May 9, 2022	Draft permit and permit review sent to Karen Kurek of the Mooresville Regional Office (MRO) and Samir Parekh, DAQ Compliance Branch for review.
May 13, 2022	Samir Parekh, DAQ Compliance Branch reviewed draft and had no comments.
May 20, 2022	Karen Kurek of MRO reviewed the draft permit and had no comments.
June 8, 2022	Jonathan Neal, Associate Environmental Engineer of DTE BioMass Energy, Inc. reviewed the draft permit, mentioned one addition to the address line (400 WCB) which was incorporated. An email was sent to the regional staff requesting to update the address in IBEAM.
XXXX XX, 2022	Public Notice of Intent to Issue an Air Quality Permit was issued. A copy of the draft permit was sent to the EPA.
XXXX XX, 2022	Public comment period ended with XX comments.

XXXX XX, 2022 EPA comment period ended with XX comments.

XXXX XX, 2022 Permit 08634T09 issued.

**4. Summary of Changes to Permit**

**Summary of Changes to Permit**

The following changes were made to Air Permit No. 08634T08.\*

<b>Page No.</b>	<b>Section</b>	<b>Description of Changes</b>
Pages 1-3	Cover letter	Updated letterhead, added new responsible official, application date, and permit numbers, updated cover letter to current shell language
Page 4	Cover Letter	Added the “NOTICE REGARDING THE RIGHT TO CONTEST A DIVISION OF AIR QUALITY PERMIT DECISION”
Page 5	Cover letter	Revised the changes to the Permit Table
-----	Attachment 1 Insignificant Activities List	Moved Attachment I Insignificant Activities to Section 3 of permit
Page 1	Permit Cover	Revised Permit number, changed replaced permit number, revised effective date, expiration date, added note concerning renewal, revised application number and application complete date
Page 2	Table of Contents	Added Insignificant Activities as Section 3 Added General Conditions as Section 4
Page 3	List of Acronyms	Added list to the front of the Permit
-----	All	Updated Permit Revision number in header Made minor corrections in capitalization and wording throughout the permit Updated language throughout the permit to be consistent with Permit Shell
Page 4	2.1 A.1.b	Removed rule reference to outdated 15A NCAC 02D .0501(c)(4) and added rule 15A NCAC 02Q .0508(f) to be consistent with condition permitting language
Page 4	2.1.A.2.b	Removed rule reference to outdated 15A NCAC 02D .0501(c)(8) and added rule 15A NCAC 02Q .0508(f) to be consistent with condition permitting language
Page 5	2.1 B.1.b	Removed rule reference to outdated 15A NCAC 02D .0501(c)(4) and added rule 15A NCAC 02Q .0508(f) to be consistent with condition permitting language
Page 5	2.1 B.2.b	Removed rule reference to outdated 15A NCAC 02D .0501(c)(8) and added rule 15A NCAC 02Q .0508(f) to be consistent with condition permitting language
Page 7	2.1 B.3.d	Updated to current language in condition
Page 7	2.1 B.3.d.i	Added reference to 40 CFR 63.4233(e), Table 1 to 40 CFR 63 Subpart JJJ
Page 9	2.1 B.3.f and g	Added recordkeeping and reporting conditions
Page 12	3	Relocated Insignificant activities this Section of the permit
Pages 13-21	4	Updated General Conditions to most recent version 6.0 dated 01/07/2022 an moved from Section 3 to Section 4

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

TVEE was updated to reflect the most recent equipment listed on this permit.

## 5. Regulatory Review

Iredell's equipment and operations have not changed since the last permit renewal in 2017. The engines, treatment system, and flare are subject to the following:

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 for Stationary Non-Emergency Spark Ignition Engines" 40 CFR Part 60, Subpart JJJJ

15A NCAC 02D .1111 – 40 CFR 63, Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"

Best Available Control Technology: GS, Session Law 2007-397, Senate Bill 3 (SB3)

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

15A NCAC 02Q .0317 "Avoidance Conditions" for 15A NCAC 02D .0530 "Prevention of Significant Deterioration" for Carbon Monoxide

A regulatory review for all the requirements listed above are included in this document. Iredell has shown a history of complying with these existing regulations. The permit was updated to reflect the most current stipulations for all applicable regulations, where necessary.

### *15A NCAC 02D .0516, Sulfur Dioxide Emissions from Combustion Sources*

Emissions of sulfur dioxide from the candlestick flare (1714 cfm, 36 million Btu per hour nominal heat input based on LHV of landfill gas @350 Btu/ft<sup>3</sup>) (ID No. CD-1) shall not exceed 2.3 pounds per million Btu heat input. Similar to natural gas, sulfur dioxide emissions from burning landfill gas are minimal. Using sulfur dioxide (SO<sub>2</sub>) emissions factor from burning natural gas from AP-42 Table 1.4-2 *Emission Factors for Criteria Pollutants and GHG from Natural Gas Combustion*, the emissions from the flare are expected as follows:

$$\frac{0.6 \text{ lb}}{10^6 \text{ cf}} \times \frac{1714 \text{ cf}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{\text{hr}}{36 \text{ mmBtu}} = 0.0017 \text{ lb/mmBtu}$$

Therefore, compliance is expected. No monitoring, recordkeeping or reporting are required for sulfur dioxide emissions from firing landfill gas in the candlestick flare.

Emissions of sulfur dioxide from the two-landfill gas-fired lean burn internal combustion engines (2,233 bhp each)/electricity generator (1,600 kW each) units (ID Nos. ES-02 and ES-03) shall not exceed 2.3 pounds per million Btu heat input.

As indicated above, sulfur dioxide emissions from the engines are expected to be similar to the emissions from natural gas combustion. Therefore, compliance is expected. No monitoring, recordkeeping or reporting are required for sulfur dioxide emissions from firing landfill gas in any engine/generator unit.

The current testing condition references 15A NCAC 02D .0501(c)(4) are no longer valid. All references to 15A NCAC 02D .0501(c)(4) in the testing condition have been removed and replaced with reference to 15A NCAC 02Q .0508(f) and General Condition JJ, in accordance with the latest permit shell language.

### *15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS*

The candlestick flare (ID No. CD-01) and the engine/generator units (ID Nos. ES-02 and ES-03) were manufactured and operating after July 1, 1971 and must not have visible emissions of more than 20 percent opacity each when averaged over a six-minute period, except as specified in 15A NCAC 02D .0521(d). There is no monitoring, record keeping, and reporting requirements required for these emission sources; however, if the results of emission testing are above the limits mentioned above the Permittee shall be deemed out of compliance with 15A NCAC 02D .0521.

The current testing condition references 15A NCAC 02D .0501(c)(8), which is no longer valid. All references to 15A NCAC 02D .0501(c)(8) in the testing condition have been removed and replaced with reference to 15A NCAC 02Q .0508(f) and General Condition JJ, in accordance with the latest permit shell language.

*15A NCAC 02D .0524 “New Source Performance Standards for Stationary Non-Emergency Spark Ignition Engines” 40 CFR Part 60, Subpart JJJJ*

See Section 6 below for further discussion.

*15A NCAC 02D .1111 – 40 CFR 63, Subpart ZZZZ “National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines”*

See Section 6 below for further discussion.

*Best Available Control Technology: GS, Session Law 2007-397, Senate Bill 3 (SB3)*

See Section 6 below for further discussion.

*15A NCAC 02D .1806 “Control and Prohibition of Odorous Emissions” (State-enforceable only)*

This regulation is State-enforceable only and applies facility-wide to sources. It states that the Permittee shall not operate the facility without implementing management practices or installing or operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility’s boundaries. According to present and past inspection reports, there have been no reports of objectionable odors beyond the facility’s boundaries linked to Iredell. Continued compliance is anticipated.

## **6. NSPS, NESHAPS/MACT, BACT, NSR/PSD, 112(r), CAM**

### *NSPS*

The landfill gas-fired internal combustion engines, (ID Nos. ES-02 and ES-03) are both Caterpillar model 3520C engines, rated at 2233 horsepower (hp), powering 1600-kilowatt (kW) output electricity generators. They are subject to “Standards of Performance for Stationary Spark Ignition Internal Combustion Engines,” 40 CFR Part 60 Subpart JJJJ, (NSPS Subpart JJJJ). This regulation applies to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) manufactured on or after July 1, 2007 but before July 1, 2020. The engines (ID Nos. ES-02 and ES-03) are subject to NSPS Subpart JJJJ as non-certified, non-emergency stationary SI internal combustion engines greater than 500 HP. The manufacturing dates of ES-02 and ES-3 are September 10, 2007, and October 29, 2007, respectively as verified in the previous permit review dated September 5, 2017 by Yukiko Puram. Owners and operators of stationary spark ignition internal combustion engines shall achieve the following required emission standards over the entire life of the engine.

- Carbon Monoxide (CO): 5.0 g/HP-hr or 610 ppmvd at 15% O<sub>2</sub>
- Nitrogen oxides (NO<sub>x</sub>): 3.0 g/HP-hr or 220 ppmvd at 15% O<sub>2</sub>
- Volatile organic compounds (VOCs): 1.0 g/HP-hr or 80 ppmvd at 15% O<sub>2</sub>

The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, recordkeeping and monitoring contained in 15A NCAC 2D .0524 “New Source Performance Standards (NSPS).” The Permittee shall conduct a performance test on these sources (ID Nos. ES-02 and ES-03) every 8,760 hours of operation or 3 years from the date of the most recent test, whichever comes first, to demonstrate compliance. According to the most recent inspection report by Karen Kurek of the Mooresville Regional Office dated July 8, 2021, the facility tests one engine per year as a representative and alternates between engines as approved by the Stationary Source Compliance Branch (SSCB) on November 23, 2021. The most recent test was conducted on Unit 1 (ID No. ES-02) on December 10, 2020. The test results are provided in the table below and compliance is indicated.

Actual Power Output	Pollutant	Test Results	Emission Limit	Standard	Compliance
1,611 kW (2,160 HP) (~100% of Maximum kW)	NO <sub>x</sub>	0.48 g/HP-hr 31.1 ppmvd@15% O <sub>2</sub>	3.0 g/HP-hr	State BACT	Indicated
			3.0 g/HP-hr (or 220 ppmvd@15% O <sub>2</sub> )	60 Subpart JJJJ	Indicated
	CO	3.9 g/HP-hr 413.2 ppmvd@15% O <sub>2</sub>	5.0 g/HP-hr	State BACT	Indicated
			5.0 g/HP-hr (or 610 ppmvd@15% O <sub>2</sub> )	60 Subpart JJJJ	Indicated
	VOC*	0.15 g/HP-hr 10.1 ppmvd@15% O <sub>2</sub>	1.0 g/HP-hr	60 Subpart JJJJ	Indicated
			(or 80 ppmvd@15% O <sub>2</sub> )		

Notes:  
The test results were approved by Gregg O’Neal of the SSCB in a memorandum dated June 29, 2021.  
Horsepower (HP) @ ~100% generator efficiency.  
\* VOC as non-methane organic compounds as propane (NMOC as C<sub>3</sub>H<sub>8</sub>).

Owners and operators of stationary spark ignition internal combustion engines who conduct performance tests must follow the procedures in 40 CFR 60.4244. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 4 of the permit. If the results of this test are above the limit provided in Section 2.1 B.3.b, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. Continued compliance with this rule is expected.

The landfill (ID No. ES-01), the gas collection and control system (ID No. CD-GCCS1), the flare (ID No. CD-1) and the treatment system (ID No. CD-Treatment) are subject to “Standards of Performance for Municipal Solid Waste Landfills”, 40 CFR Part 60 Subpart WWWW (NSPS Subpart WWW). which regulates municipal solid waste landfills constructed on or after May 30, 1991, but before July 18, 2014; however, the requirements for this subpart are in Iredell County Landfill’s permit since they own and operate the emission source (ID No. ES-01) and are not included in this permit.

*15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT)*

Iredell is a major source of Hazardous Air Pollutants (HAPs) due to the formaldehyde emissions from the engines (ID Nos. ES-02 and ES-03). As such, the engines are subject to “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines,” 40 CFR Part 63 Subpart ZZZZ (MACT Subpart ZZZZ). These engines are considered to be new sources under MACT Subpart ZZZZ because they are reciprocal internal combustion engines (RICE) with a site rating of more than 500 brake HP located at a major source of HAP and were constructed on or after December 19, 2002. (See construction dates above). Pursuant to 40 CFR 63.6590(b)(2), such engines that combust landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis do not have to meet the emission limitations and operating limitations of MACT Subpart ZZZZ. For each affected source, Iredell must submit an initial notification, keep records of the daily fuel usage monitors, and submit annual reports.

The initial notification requirement was met and was removed in the 2017 renewal. The most recent maintenance for Unit 1 (ES-02) was May 12, 2021, and for Unit 2 (ES-03) on May 21, 2021. The annual report to DAQ was received January 29, 2021. Continued compliance for this rule is anticipated.

*BEST AVAILABLE CONTROL TECHNOLOGY (BACT)*

General Assembly of North Carolina, Session Law 2007-397, Senate Bill 3 (SB3) – Under the provisions of a Renewable Energy and Energy Efficiency Portfolio Standard (REPS), Iredell is categorized as a new renewable energy facility that delivers electric power to an electric power supplier. Due to DAQ’s change in the SB3 policy and to the applicant’s request under a previous permit application, the CO and NO<sub>x</sub> emission limits were increased to 5.0 g/hp-hr and 3.0 g/hp-hr (the NO<sub>x</sub> limit for engines that are manufactured prior to July 1, 2010, in accordance with NSPS Subpart JJJJ, Table 1), respectively. SB3, 62-133.8(g) requires biomass combustion processes at a new renewable energy facility to meet BACT. To comply with the BACT determinations pursuant to GS 62.133.8(g) for each pollutant, the following shall apply:

- CO emissions shall not exceed 5.0 grams per horsepower-hour (g/hp-hr),

- NOx emissions shall not exceed 3.0 g/hp-hr,
- Emissions of PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub>, VOCs, lead, and mercury shall be controlled from each engine using good combustion practices and the burning of landfill gas in the engine.
- Test results (g/hp-hr) from 40 CFR 60.4244, NSPS Subpart JJJJ shall be used to demonstrate compliance with the State BACT limits listed above in this Section.
- The Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the Permittee shall perform an annual inspection (for each 12-month period following the initial inspection) to ensure the engine is operating properly.

The results of the inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The Permittee shall maintain a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping listed above and shall submit the results within 30 days of a written request by the DAQ.

As noted above, test results for NSPS Subpart JJJJ can be used to demonstrate compliance with SB3 BACT. The most recent test was conducted on Unit 1 (ID No. ES-02) on December 10, 2020 and compliance with SB3 BACT emission limits was indicated. See NSPS discussion above.

### PSD

In the previous permits, the Permittee used the SB3 BACT limits to calculate the potential emissions to avoid the PSD applicability for CO. The Permittee requested in the last renewal with modification (T08) to increase the SB3 limits to match the NSPS standards, and the PSD calculation equation in the permit was updated to reflect these changes. The emission factor for CO in the emission equation was increased at that time to 5.0 g/bhp-hr from 3.3 g/bph-hr. Calculations of CO emissions per month shall be determined by using the following equation:

$$\left( \frac{0.37 \text{ lbs CO}}{10^6 \text{ Btu}} \times \frac{500 \text{ Btu}}{\text{ft}^3 \text{ LFG}} \times \frac{(A) \text{ft}^3 \text{ LFG}}{\text{hour}} \times \frac{(B) \text{ hours}}{\text{month}} \right) + \sum_{ES-03}^{ES-02} \left( \frac{5.0 \text{ grams CO}}{\text{bhp} - \text{hour}} \times \frac{0.0022 \text{ lbs CO}}{1 \text{ gram CO}} \times \frac{2233 \text{ bhp}}{1} \times \frac{(C) \text{ hours}}{\text{month}} \right)$$

A = flow rate of landfill gas into the flare (ft<sup>3</sup>/hour)

B = Number of hours per month of flare operation

C = Number of hours per month of generator operation

### **Emission factors**

0.37 lbs CO/million Btu = Vendor supplied data for flare

500 Btu/ft<sup>3</sup> = Higher heat value of landfill gas

5.0 grams CO/bhp-hr = BACT/NSPS limit

To avoid applicability of this regulation, the landfill gas-fired engines (ID Nos. ES-02 and ES-03) and the candle stick flare (ID No. CD-1) shall discharge into the atmosphere less than 250 tons of CO per consecutive 12-month period. Calculations and the total amount of CO emissions are required to be recorded monthly in a log book (written or electronic format). The Permittee shall submit a semi-annual summary report with the monthly CO emissions for the previous 17 months.

### 112(r)

40 CFR Part 68 establishes requirements for stationary sources that hold more than threshold quantities of regulated substances to develop a risk management plan (RMP), in accordance with Section 112(r) of the Clean Air Act. The RMP identifies the potential effects of a chemical accident, steps the facility is taking to prevent an accident, and emergency response procedures if an accident occurs.

Iredell does not handle, store, or use any 112(r) pollutants in sufficient quantity to be subject to this regulation. This permit renewal does not affect this status. Continued compliance is expected.

CAM

The CAM rule (40 CFR 64; 15A NCAC 02D .0614) applies to each pollutant specific emissions unit (PSEU) at major TV 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).

The following emission source has a control device:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-01	Municipal Solid Waste landfill*	CD-GCCS1*	Landfill gas collection and control system*
		CD-1 **	One candlestick flare (1714 cfm, 36 mmBtu per hour heat input @ 350 Btu/ft <sup>3</sup> landfill gas)**
		CD-Treatment **	Landfill gas treatment system

\*The Municipal Solid Waste landfill and the landfill gas collection and control system are owned by Iredell County Landfill.

\*\*The candlestick flare and the treatment system are owned by Iredell Transmission, LLC.

The engines are subject to emissions standards under NSPS Subpart JJJJ and MACT Subpart ZZZZ but these rules were proposed after November 15, 1990 and are exempt for CAM purposes under 40 CFR 64.2(b)(i). No landfill gas engine or the candlestick flare has the potential to emit any of the pollutants greater than the major source thresholds for any special pollutant. Furthermore, the engines and the candlestick flare are not equipped with add-on controls to reduce emissions. Therefore, CAM is not applicable to these engines.

## 7. Facility Wide Air Toxics

Iredell conducted a dispersion modeling analysis to demonstrate compliance with the Acceptable Ambient Limit (AAL) for formaldehyde. According to the review dated December 9, 2015, by Alex Zarnowski of DAQ’s Air Quality Analysis Branch, the maximum impacts of formaldehyde emissions was 19% of AAL, which demonstrated that there was no unacceptable human health risk. The potential formaldehyde emissions were modeled based on the manufacturer’s emission rate at the last permit modification (T07).

Pollutant	Average Period	2014 (µg/m <sup>3</sup> )	AAL (µg/m <sup>3</sup> )	% of AAL
Formaldehyde	1-hour	29	150	19%

Per NCGS§ 143-215.107 and 15A NCAC 02Q .0702(a)(27)(B), the sources (ID Nos. ES-02 and ES-03) are exempt from the air toxic pollutant regulations and the toxic emission requirement was removed in the last permit (T08). This renewal application does not change this action.

## 8. 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 2016 through 2020 are provided in the header of this permit review.



## **9. Compliance Status**

From the inspection report issued on July 8, 2021, Karyn Kurek concluded that based on her observations during the inspection, this facility appeared to be in compliance with the applicable air quality regulations. However, a Notice of Deviation (NOD) was issued to Iredell for failure to comply with Condition 2.1 B.4.d of Permit No. 08634T08 which requires an annual compliance report to be postmarked by January 30, 2022, as well as Condition 2.2 B.4 which requires semi-annual reporting of monthly CO emissions. The compliance report was received by DAQ on February 25, 2022. The compliance issue has been resolved.

## **10. 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.

## **11. Other Regulatory Considerations**

- A P.E. seal is NOT required for this application.
- A zoning consistency determination is NOT required for this application.
- No permit fee was required for the application for this renewal application.

## **12. Recommendations**

The renewal application with associated modification for Iredell Transmission, LLC located in Statesville, Iredell County, NC has been reviewed by DAQ to determine compliance with all procedures and requirements. 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. 08634T09.