

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Application Review**

**Issue Date:**

**Region:** Winston-Salem Regional Office  
**County:** Alamance  
**NC Facility ID:** 0100010  
**Inspector's Name:** Davis Murphy  
**Date of Last Inspection:** 06/15/2022  
**Compliance Code:** B / Violation - emissions

<p style="text-align: center;"><b>Facility Data</b></p> <p><b>Applicant (Facility's Name):</b> Stericycle, Inc.</p> <p><b>Facility Address:</b>                  Stericycle, Inc.                  1168 Porter Avenue                  Haw River, NC 27258</p> <p><b>SIC:</b> 4953 / Refuse Systems  <b>NAICS:</b> 562213 / Solid Waste Combustors and Incinerators</p> <p><b>Facility Classification: Before:</b> Title V <b>After:</b> Title V  <b>Fee Classification: Before:</b> Title V <b>After:</b> Title V</p>	<p style="text-align: center;"><b>Permit Applicability (this application only)</b></p> <p><b>SIP:</b> 02D .1206, 02Q .0512 (permit shield), 02Q .0308(a)(PFAS), 02Q .0309(b)(PFAS)  <b>NSPS:</b> NA  <b>NESHAP:</b> NA  <b>PSD:</b> NA  <b>PSD Avoidance:</b> NA  <b>NC Toxics:</b> NA  <b>112(r):</b> NA  <b>Other:</b> General Duty Clause</p>
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Contact Data			Application Data
<p style="text-align: center;"><b>Facility Contact</b></p> <p>Don Nuss                  Regional Compliance Manager                  (513) 543-7073                  3614 Hoskins Court                  Hamilton, OH 45011</p>	<p style="text-align: center;"><b>Authorized Contact</b></p> <p>Kirk Yarbrough                  Facility Manager                  (336) 578-8901                  1168 Porter Ave                  Haw River, NC 27258</p>	<p style="text-align: center;"><b>Technical Contact</b></p> <p>Don Nuss                  Regional Compliance Manager                  (513) 543-7073                  3614 Hoskins Court                  Hamilton, OH 45011</p>	<p><b>Application Number:</b> 0100010.21A  <b>Date Received:</b> 01/27/2021  <b>Application Type:</b> Renewal  <b>Application Schedule:</b> TV-Renewal  <b>Existing Permit Data</b>  <b>Existing Permit Number:</b> 05896/T25  <b>Existing Permit Issue Date:</b> 12/19/2016  <b>Existing Permit Expiration Date:</b> 11/30/2021</p>

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

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2020	0.2300	22.03	0.8700	0.7000	0.8200	0.0345	0.0144 [Hexane, n-]
2019	0.2200	20.72	0.8200	0.8900	0.7800	0.0369	0.0186 [Hexane, n-]
2018	0.2300	19.91	0.8000	0.6900	0.7500	0.0307	0.0133 [Hexane, n-]
2017	0.2300	21.35	0.8500	0.5000	0.8000	0.0478	0.0280 [Hydrogen chloride (hydrochlori)]
2016	0.2300	21.67	0.8700	0.5000	0.8200	0.0486	0.0285 [Hydrogen chloride (hydrochlori)]

<p><b>Review Engineer:</b> Ed Martin</p> <p><b>Review Engineer's Signature:</b> _____ <b>Date:</b> _____</p> <p><b>DRAFT</b></p>	<p style="text-align: center;"><b>Comments / Recommendations:</b></p> <p>Issue 05896/T26  <b>Permit Issue Date:</b> _____  <b>Permit Expiration Date:</b> _____</p>
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## Chronology

January 27, 2021	Application 0100010.21A was received and complete for processing.
July 22, 2022	The draft permit and review were sent for supervisor's review.
February 15, 2023	The updated draft permit and review sent for supervisor's review.
February 22, 2023	A letter was sent to Kirk Yarbrough requesting additional information on per- and polyfluoroalkyl substances (PFAS) with a list of questions DAQ may typically ask facilities to answer and to document in the technical review (see Section IX).
March 29, 2023	In a letter emailed to Ed Martin on April 5, 2023, from Kirk Yarbrough, Stericycle provided answers to the questions in the February 22, 2023 request and stated that the responses (including any attachments) contain "trade secrets," as defined under N.C.G.S. § 66-152(3) and are subject to confidential treatment (see Section IX).
April 21, 2023	In an email to Kirk Yarbrough, Mark Cuilla notified Stericycle that DAQ had determined that Stericycle's request for confidential treatment above was incomplete and that for DAQ to process Stericycle's Confidential Business Information (CBI) request, Stericycle must provide additional information within 30 days (see Section IX).
May 22, 2023	In a letter to Mark Cuilla, Kirk Yarbrough submitted the additional information as requested in the above April 21, 2023 email (see Section IX).
June 16, 2023	The draft permit and review were sent to the Permittee, Davis Murphy at the Winston-Salem Regional Office, and Samir Parekh with the Stationary Source Compliance Branch (SSCB) for comment.
July 7, 2023	Stericycle's comments on the draft permit were received.
July 20, 2023	Sent the draft permit to 30-day public notice.
August 22, 2023	The public hearing was held.
August 25, 2023	Public notice period ended.

### **I. Purpose of Application**

Stericycle is requesting a renewal of their Title V permit. The current operating permit 05896 T25 was issued on December 19, 2016, and expired on November 30, 2021. The complete application was received on January 27, 2021, at least nine months prior to date of permit expiration (as was the requirement for the renewal application to be submitted in their permit at the time). Therefore, since a complete and timely application was submitted, the current permit will not expire until the renewal permit has been issued or denied in accordance with General Condition K. This renewal permit is being issued for another 5-year term and will expire 5 years from the date of issuance.

Stericycle requested the following changes to the permit:

1. Remove the diesel-fuel fired 568 kW emergency generator EG1 from the permit and add as an insignificant activity (see Section V.B).
2. Add several nonapplicable requirements as permit shields in Section 2.3 (see Section V.C).
3. A request was received to remove reference to the previously deleted 02D .1206(g) (see Section V.D).

4. In a letter dated August 29, 2022, Mr. Kirk Yarbrough proposed the addition of a Maxon Tube-O-Therm tub washer with two natural gas-fired burners to the facility as an insignificant source. (see Section V.E)

This renewal permit does not contravene or conflict with a condition in the existing permit pursuant to rule 15A NCAC 02Q .0501(b)(1) and is required to go through a 30-day public notice and a 45-day EPA review period prior to issuance.

## II. Facility Description

Stericycle owns and operates a hospital, medical, and infectious waste incinerator (HMIWI) facility located in Haw River, North Carolina. This is a Title V facility as a result of being subject to 40 CFR Part 60, Subpart Ce, rather than as a result of exceeding any Title V emission thresholds. Section 60.32e(i) of Subpart Ce requires designated facilities subject to this subpart to operate pursuant to a permit issued under the EPA-approved Part 70 operating program, as required by 15A NCAC 02D .1206.

The facility has two dual-chamber HMIWI incinerators (ES01 and ES02) firing natural gas at 4.6 million Btu per hour in the primary chamber and 6.0 million Btu per hour in the secondary chamber. Control devices (typical of each incinerator (ES01/ES02) are shown in Diagram 1 below). Exhaust gases from the secondary chamber of the incinerator is routed to selective non-catalytic reduction (SNCR) system with ammonia or urea injection (CD07/CD08). After the SNCR, the exhaust is quenched in two stages of cooling. Then the saturated flue gas enters the condensing absorber or packed bed scrubber (CD01/CD02) where it is cooled with recirculated scrubber liquor. Then the gases enter the venturi scrubber (CD03/CD04) which removes the condensed water vapor as a result of contact with cooled recirculated scrubber liquor and also removes acid gases and sulfur dioxide. The gases then enter a mist eliminator and sulfur impregnated carbon bed (CD05/06) before discharged into the atmosphere.

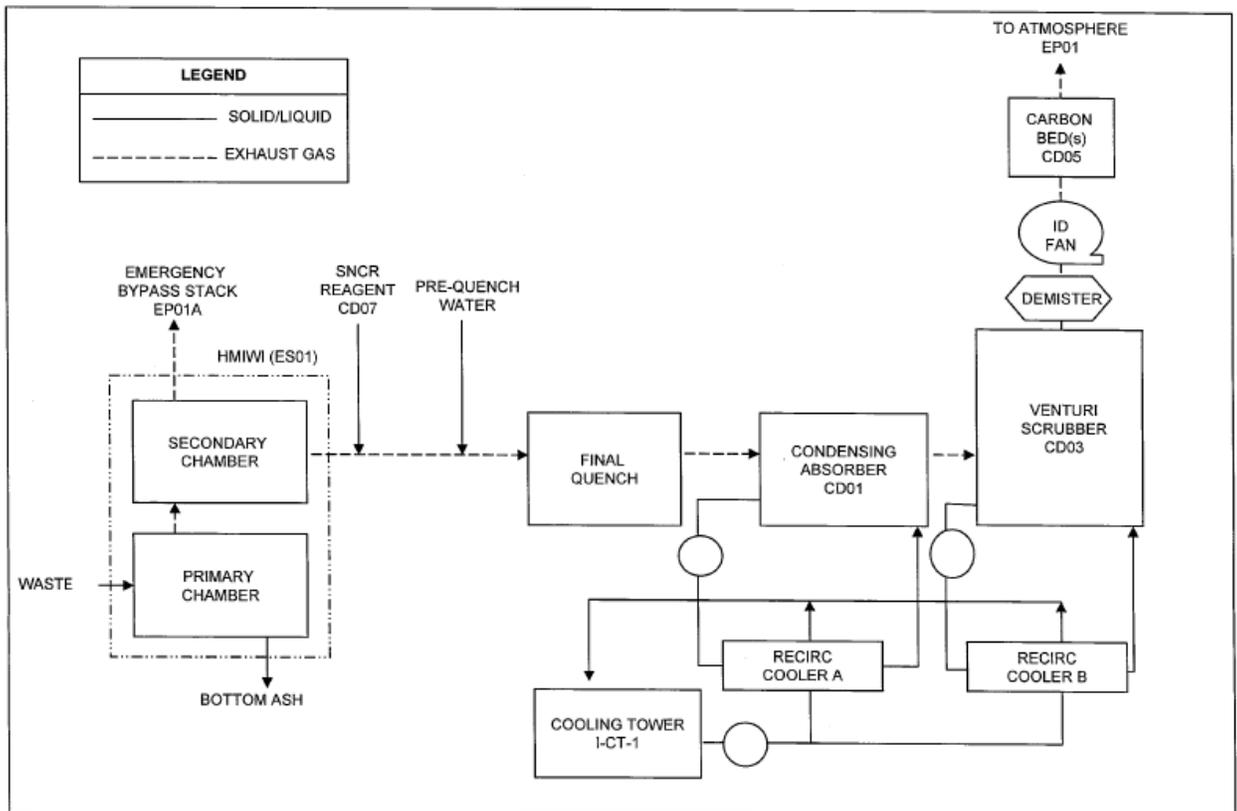


Diagram 1 – HMIWI Control Devices

### III. Permit Changes

The following changes were made to Air Permit No. 05896T25:\*

Page No.	Section	Description of Changes
Cover	--	Updated dates and permit numbers.  Added new cover letter with new format.  Added page: "Notice Regarding the Right to Contest A Division of Air Quality Permit Decision."  Reformatted permit in accordance with the updated formatting for TV permits.
--	Table of Changes to the Permit	Revised the table for the changes in this renewal permit.
3	List of Acronyms,	Relocated this list to the front of the permit.
4	1, table of permitted emission sources	Moved EG1 from this table to the insignificant activities list in Section 3.
7	2.1 A.2.a.ii	Changed regulatory citation to: 02D .1206(c)(5).
7	2.1 A.2.a.iii	Changed regulatory citation to 02D .1206(c)(6). Removed old regulatory citation 02D .1206(c)(8), which is no longer in the rule.
7	2.1 A.2.d	Changed regulatory citation to: 02D .1206(d)(4) and (8).
8	2.1 A.2.j	Added regulatory citation 02D .1206(c)(6).
8	2.1 A.2.l	Changed regulatory citation to: 02D .1206(c)(6). Removed old regulatory citation 02D .1206(c)(8), which is no longer in the rule.
8	2.1 A.2.l.ii	Replaced the language defining international garbage (USDA/APHIS) with regulated garbage as defined by 7 CFR 330.400 -330.403 and 9 CFR 94.5.
8	2.1 A.2.l.iv	Removed "...captured by law enforcement agencies" from controlled substances.
8	2.1 A.2.l.v and vi	Revised wording.
9	2.1 A.2.m	Changed regulatory citation to: 02D .1206(c)(6). Removed old regulatory citation 02D .1206(c)(8), which is no longer in the rule.
9	2.1 A.2.n table	Corrected "Minimum packed bed scrubber liquor flow rate" to "Minimum venturi scrubber liquor flow rate."
9	2.1 A.2.o	Changed regulatory citation to: 02D .1206(d)(4) and (8).
10	2.1 A.2.p table	Corrected "Minimum [packed bed] scrubber liquor flow rate" to "Minimum venturi scrubber liquor flow rate."
10	2.1 A.2.t	Changed regulatory citation to: 02D .1206(d)(4) and (f)(2).
11	2.1 A.2.cc	Removed regulatory citation 02D .1206(g), which is no longer in the rule.
12	2.1 A.2.ee	Changed regulatory citation to: 02D .1206(g).
13	2.1 A.4	Added a State-enforceable Only condition for disclosure of information relating to emissions of fluorinated chemicals.
15 (old page)	2.1 B (old permit)	Removed this section. EG1 moved from this section to Section 3 (Insignificant Activities List).
15	2.3	Added several new permit shields.
16	3	Created this new section for insignificant activities.  Moved EG1 from the permit to this section as an insignificant activity (I-EG-1).  Added tub washer I-TW-1.

17-25	4	Created this new section and moved General Conditions to this section. Updated General Conditions to version 6.0, dated 01/07/2022.
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\* This list is not intended to be a detailed record of every change made to the permit but a summary of those changes.

**IV. Permit History Since Last Renewal**

December 19, 2016 Permit No. 05896 T25 (Application 0100010.15A) was issued to renew the permit for five years.

TBD Permit No. 05896 T26 (Application 0100010.21A) was issued to renew the permit for five years.

**V. Regulatory Evaluation**

A. Two natural gas-fired dual-chamber hospital, medical, and infectious waste incinerators [HMIWI] (ID Nos. ES01 and ES02), each controlled with one selective non-catalytic reduction (SNCR) system (ID Nos. CD07 and CD08), in series with one packed bed scrubber (ID Nos. CD01 and CD02), in series with one venturi scrubber (ID Nos. CD03 and CD04), in series with one sulfur impregnated carbon bed (ID Nos. CD05 and CD06)

The following regulations apply to these incinerators:

State-enforceable Only

1. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

Stericycle has performed toxic dispersion modeling in order to demonstrate compliance with the acceptable ambient limits (AALs) listed in 15A NCAC 02D .1104. The modeling demonstrated that Stericycle would not violate any AAL provided emissions remained under the modeled emission rates. These emission rates are listed below.

Regular TAP testing was originally added in 1998 and was previously required for these toxics. However, during the last permit renewal in 2016, because of the large margin of compliance of approximately 95% below the limits for most pollutants, testing is now only required for mercury, and cadmium (along with lead, a non-toxic pollutant). This testing is required every three years as previously proposed by Stericycle.

Emission Limits

In accordance with the approved application for a facility-wide air toxic compliance demonstration, the following permit limits shall not be exceeded:

EMISSION SOURCES	TOXIC AIR POLLUTANTS	EMISSION LIMITS
Incinerators (ID Nos. ES01 and ES02, combined)	Chromium VI	0.964 pounds per year
	Arsenic	2.673 pounds per year
	Cadmium	63.91 pounds per year
	Hydrogen Chloride	2.2 pounds per hour
	Hexachlorodibenzo-P-dioxin	0.8831 pounds per year
	Tetrachlorodibenzo-P-dioxin	0.0349 pounds per year
	Mercury	3.82 pounds per day
	Chlorine	24.00 pounds per day; 1.00 pounds per hour
	Beryllium	47.64 pounds per year

EMISSION SOURCES	TOXIC AIR POLLUTANTS	EMISSION LIMITS
	Nickel	12.00 pounds per day
	Manganese	8.22 pounds per hour
	Hydrogen Fluoride	24.00 pounds per day; 1.00 pounds per hour

Operating Standards

To ensure compliance with the above limits, the following restrictions apply:

- i. The charge rate into ID No. ES01 shall not exceed 1,870.0 pounds per hour,
- ii. The charge rate into ID No. ES02 shall not exceed 1,870.0 pounds per hour,
- iii. Each incinerator's stack height shall be a minimum of 82.4 feet above ground level, and
- iv. The maximum carbon bed inlet temperature shall not exceed the limits set in Section 2.1 A.2.n of the permit.

In order to minimize bypass event duration and emissions, the Permittee shall:

- i. Install an uninterruptible power supply (UPS) for the control system to eliminate any "reboot" time associated with the programmable logic controllers (PLCs). The UPS shall be equipped with a readiness indicator.
- ii. Install a power outage indicator as an input to the PLCs.
- iii. Revise the PLC logic to require automatic re-closure of the bypass stack within 5 minutes after a power failure.
- iv. Install a low fuel indicator on the emergency generator diesel tank.
- v. Install a water supply pressure indicator to alert operators to a loss of water supply.
- vi. Operate devices to assure continuous removal of the ash from the primary chamber.
- vii. Reduce combustion air to the primary chamber by alternately shutting the fan off and on in 1-minute cycles to achieve a net reduction in airflow of 50% during the bypass event.

The Permittee shall not incinerate dental waste as shown in Section 2.1 A.2.m of the permit and as addressed in the waste management plan required by Section 2.1 A.2.bb of the permit.

State-enforceable Only

2. 15A NCAC 02D .1206: HOSPITAL, MEDICAL, AND INFECTIOUS WASTE INCINERATORS

This is the overall primary regulation for the applicable HMIWI requirements. The draft permit has been updated for several changes to the 02D .1206 citations as a result of the readopted rule that became effective July 1, 2018.

The rule requires compliance with:

- The emission standards in Table 1B of 40 CFR Part 60, Subpart Ce, "Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators," in accordance with 02D .1206(c)(2).
- The parameter monitoring requirements in 40 CFR 60.57c to install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 3 to Subpart Ec, "Standards of Performance for New Stationary Sources: Hospital/Medical/Infectious Waste Incinerators." in accordance with 02D .1206(f)(6).
- The reporting and recordkeeping requirements in 40 CFR 60.58c(b) through (g), excluding 40 CFR 60.58c(b)(2)(ii) and (b)(7), of Part 60 Subpart Ec in accordance with 02D .1206(f)(3).
- The compliance and performance testing in 40 CFR 60.56c of Part 60, Subpart Ec for any HMIWI subject to the requirements listed in Table 1B of Subpart Ce of 40 CFR Part 60 in accordance with the operational standards in 02D .1206(d)(4).

Stericycle is not subject to the above NSPS Subpart Ce other than the sections referenced in 02D .1206 because, even though the HMIWIs commenced construction on or before June 20, 1996, in accordance with 40 CFR 60.32e, Subpart Ce is not part of North Carolina's State Implementation Plan (SIP) as indicated in 02D .0524(b)(7). The incorporation of Subpart Ce into the 02D .1206 rule was never approved by EPA; therefore, 02D .1206 is a state-only rule. Because the HMIWIs are not covered by an approved State SIP, the Stericycle incinerators are subject to the federal-enforceable only 40 CFR Part 62, Subpart HHH (see Section V.A.3 below).

Stericycle is not subject to the above Subpart Ec rules other than the sections referenced in 02D .1206 because the incinerators were constructed before the applicability date of June 20, 1996, in Subpart Ec, §60.50c(a).

The requirements for small remote incinerators in 02D .1206 do not apply to the Stericycle incinerators.

Stericycle is required to demonstrate compliance with the emission limits for PM, and HCl by a performance test performed at least every three years or more frequent as shown in permit condition 2.1 A.2.i in accordance with 02D .1206(d)(4); and to demonstrate compliance with the emission limits for mercury, cadmium, and lead every three years in accordance with 02D .1206(c)(6) and 02D .1206(e)(2) as shown in permit condition 2.1 A.2.j. Emissions for the above pollutants are covered under Table 1B of 40 CFR Part 60, Subpart Ce. In addition, 02D .1206(c)(6) requires Stericycle to comply with the toxic emission limits listed in Section 2.1 A.1.a of the permit for arsenic, beryllium, cadmium, and chromium (VI).

Stericycle must install a carbon monoxide continuous emissions monitoring system (CO CEMS) on the exhaust stack of each incinerator to determine compliance with the CO emission limit in accordance with 02D .1206(f)(2) in Section 2.1 A.2. of the permit. The CO CEMS was added in Permit T18, issued February 7, 2011. In addition, a continuous monitor for both oxygen and CO is required in order to determine proper operation of each HMIWI in accordance with 02D .1206(f)(2) in Section 2.1 A.2.p of the permit.

The HMIWI discharge gases are limited to 6% opacity or less, based on a six-minute block

average as shown in Section 2.1 A.2.a,ii of the permit, with an annual performance test required in Section 2.1 A.2.h of the permit.

Federal-enforceable Only

3. 40 CFR Part 62, Subpart HHH "Federal Plan Requirements for Hospital/Medical/Infectious Waste Incinerators Constructed On Or Before December 1, 2008"

The Stericycle incinerators are subject to this rule because the HMIWIs are not covered by an EPA approved and effective State or Tribal plan and construction of the HMIWIs commenced on or before June 20, 1996, in accordance with 40 CFR 62.14400(a).

Stericycle must comply with all applicable requirements of 40 CFR Part 62, Subpart HHH.

State-enforceable Only

4. Disclosure of Information Relating to Emissions of Fluorinated Chemicals [15A NCAC 02Q .0308(a); 15A NCAC 02Q .0309(b)]

The Permittee shall have an ongoing duty to disclose the 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. The disclosure shall describe the identity, quantity, and use of such material to the extent known. DAQ may require the permittee to conduct analysis or testing of fluorinated chemical emissions as necessary to properly evaluate emissions sources at the facility. As used in this condition, the term "fluorinated chemicals" includes but is not limited to per- and polyfluoroalkyl substances (PFAS).

B. Diesel fuel-fired emergency generator (ID No. I-EG1)

Stericycle requested that this diesel-fuel fired 568 kW emergency generator I-EG1 be removed from the permit and added as an insignificant activity. The requirements do not change because the engine is categorized as an insignificant activity. Regulation 02Q .0503(8) states that "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. The engine meets this requirement as shown below.

Potential emissions are based on 500 hours per year operation as required for emergency engines and are determined using DAQ's Large Diesel and All Dual-Fuel Engines Emissions Calculator LGD 2012 Rev J, 6/22/2015 as follows except for SO<sub>2</sub> as noted.

<b>Pollutant</b>	<b>Potential Emissions</b>
PM	0.13 tpy
PM <sub>10</sub>	0.13 tpy
PM <sub>2.5</sub>	0.13 tpy
SO <sub>2</sub>	0.36 tpy*
NO <sub>x</sub> (uncontrolled)	4.57 tpy
VOC	0.13 tpy
CO	1.05 tpy
Total HAP	4.68 lb/yr

\* SO<sub>2</sub> based on AP-42 Table 3.3-1 emission factor of 0.29 lb/MMBtu, 36.6 gal/hr fuel flow at 100% load, and diesel fuel heat content of 137,000 Btu/gal as shown in the application.

This engine is subject to all applicable requirements including the following standards:

1. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR Part 60, Subpart IIII)

This rule applies to all stationary, compression ignition, internal combustion engines constructed after 2008. I-EG1 is an emergency generator subject to 40 CFR §60.4200(a)(2)(i) for stationary CI ICE that commenced construction after July 11, 2005, and manufactured after April 1, 2006, and are not fire pump engines.

Emission Standards

In accordance with §60.4205(b), owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants.

Monitoring and Compliance

- The diesel fuel must have a sulfur content of no more than 15 ppm.
- The engine must be equipped with a non-resettable hour meter prior to startup.
- The engine must be operated and maintained according to the manufacturer's emission related written instructions.
- The engine must be purchased certified to the emission standards in the rule for the same model year and maximum engine power.
- The engine shall be installed and configured according to the manufacturer's emission-related specifications.
- Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year is prohibited. There is no time limit on the use of emergency stationary ICE in emergency situations.

2. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR Part 63, Subpart ZZZZ)

Pursuant to 40 CFR 63.6590(c)(1), as stationary RICE subject to regulations under 40 CFR Part 60, this engine must meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply for this engine under 40 CFR 63 Subpart ZZZZ and Subpart A. Since Stericycle is an area source of HAPS, the emergency generator I-EG1 is a GACT (Generally Available Control Technology) source under Subpart ZZZZ.

C. Request to add several nonapplicable requirements as permit shields in Section 2.3.

In the application, Stericycle requested several nonapplicable requirements be added as permit shields in Section 2.3. As allowed by 02Q .0512 PERMIT SHIELD AND APPLICATION SHIELD, Stericycle is shielded from the following nonapplicable requirements as of the date of issuance of this permit.

1. 40 CFR Part 68 (Risk Management Program) does not apply to this facility, except for the General Duty provisions, because the facility does not operate any processes that contain or process chemicals that meet the minimum threshold quantities that would subject the facility to the rule.
2. 40 CFR Part 64 (Compliance Assurance Monitoring) does not apply to this facility because the facility does not have any specific emissions units using a control device to achieve compliance with a non-exempt regulated air pollutant emission limit that has potential pre-control emissions equal to or greater than the major source thresholds (100 tons per year) of the applicable regulated air pollutant.
3. 40 CFR Part 82 (Protection of Stratospheric Ozone), except Subparts B and F, does not apply to this facility because the facility does not make, distribute, or process CFCs covered by this regulation.

4. 40 CFR Part 60, Subpart Kb, (Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984) does not apply to this facility because the facility does not maintain any storage tanks containing VOCs that meet both the size requirement and the installation date requirement that would subject them to 40 CFR Part 60, Subpart Kb.
  5. 40 CFR Part 60, Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines) does not apply to emergency generator I-EG1 because the engine is a compression ignition internal combustion engine.
  6. 15A NCAC 02D .0900 (Volatile Organic Compounds) does not apply to the facility because the facility is not a type of facility regulated by this rule.
- D. Request to remove reference to the previously deleted 02D .1206(g) in permit condition 2.1 A.2.cc  
The DAQ received a permit application for an administrative amendment correction on June 2, 2020, from Stericycle to remove references to a regulatory requirement in Section 2.1 A.2.cc that no longer exists in the applicable regulations.

The State-enforceable Only 02D .1206 rule was amended in 2018, at which time former paragraph (g) addressing the startup, shutdown, and malfunction (SSM) provisions in 15A NCAC 02D .0535, was removed from the rule. The regulatory basis for Section 2.1 A.2.cc in the permit was cited as 15A NCAC 02D .0535 and .1206(g). Since paragraph (g) was removed from 02D .1206<sup>1</sup> with the 2018 rule revisions, Stericycle requested, as part of the administrative amendment, that specific reference to the deleted paragraph be removed from the permit along with the statement, “*Emissions from bypass conditions shall not be exempted by 15A NCAC 02D .0535(c) or (g).*”

DAQ evaluated the submitted administrative amendment application for the removal of the highlighted language with respect to the current set of regulations. As Stericycle is a Title V facility, 02Q .0514, Administrative Amendments, was reviewed to determine if the changes could be made as requested pursuant to that rule. Paragraph (a) of that rule contains a list of changes that qualify as administrative. However, paragraph (f) explicitly states that this rule (02Q .0514) does not apply to the “State-enforceable Only part of a Title V permit” and goes on to say that “For the State-enforceable Only part of a Title V permit, 15A NCAC 02Q .0316 shall govern administrative permit amendments.” A letter was sent on July 7, 2020, as an applicability determination to Mr. Kirk Yarbrough explaining that evaluating the request under that rule (02Q .0316) indicates that this request does not qualify as an administrative amendment and therefore, DAQ has concluded that the processing of the request cannot be undertaken as an administrative amendment. Stericycle was informed that, in lieu of an administrative amendment, Stericycle could submit a request for a TV-State only modification. This would require the submittal of an application with appropriate application fee. DAQ would then have 90 days from receipt of a complete application to process that application using the procedures under 15A NCAC 02Q .0300. Also, Stericycle was made aware of the potential that such an application could be subject to the public participation (i.e., notification and/or hearing) procedures as outlined in 02Q .0306(a)(1) and 02Q .0307 as a process or “source that may be designated by the Director based on public interest relevant to air quality”. As an alternative to pursuing the requested change as a permit modification request, Stericycle was informed that DAQ would plan to remove the outdated reference to former paragraph (g) of 15A NCAC 02D .1206 at the next permit renewal.

In addition, Stericycle was informed that to modify the language as suggested, it should be noted that DAQ would likely only remove the direct reference to former paragraph (g) in 15A NCAC 02D .1206 from the rule citation in Section 2.1 A.2.cc of the permit. DAQ is inclined to leave the statement, “*Emissions from bypass conditions shall not be exempted by 15A NCAC 02D .0535(c) or (g)*” in the permit with reference 02D .1206 generally. That is, DAQ continues to interpret the relevant regulations to not allow the Facility to claim the SSM defense for bypass events. Further, the

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<sup>1</sup> The previous 02D .0612(g) rule prior to changes in 2018 read: “Excess Emissions and Start-up and Shut-down. All HMIWIs subject to this Rule shall comply with Rule .0535, Excess Emissions Reporting and Malfunctions, of this Subchapter. Emissions from bypass conditions shall not be exempted as provided under Paragraphs (c) and (g) of Rule 0.535 [sic] of this Subchapter.”

settlement agreement between Stericycle and DAQ dated September 14, 2022, included a clause stating that "In any challenge to any future civil penalty assessment levied by DAQ based on the use of the bypass stack, Stericycle agrees that it will not raise 15A NCAC 02D .0535 as a defense in such a challenge ..."

Therefore, Section 2.1 A.2.cc has been revised to only remove the reference to 02D .1206(g).

**E. Addition of a Tub Washer I-TW-1 Insignificant Activity**

In a letter dated August 29, 2022, Mr. Kirk Yarbrough proposed the addition of a Maxon Tube-O-Therm tub washer with two natural gas-fired burners to the facility as an insignificant source. The purpose of the washer is to clean waste from reusable containers prior to reuse. One burner is a four-inch firing tube with maximum capacity of 0.9 mmBtu/hr and the other burner is a six-inch firing tube with a maximum capacity of 2.0 mmBtu/hr. Regulation 02Q .0503(8) states that "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. The tub washer meets this requirement as shown below. Potential emissions are based on emission factors from AP-42 Chapter 1, Section 1.4, Tables 1.4-1 through 1.4-3, 8760 hours per year operation, and a natural gas conversion factor of 1020 mmBtu/mmscf.

<b>Pollutant</b>	<b>Potential Emissions</b>
PM	0.09 tpy
SO <sub>2</sub>	7.47E-03 tpy
NO <sub>x</sub>	1.25 tpy
VOC	0.07 tpy
CO	1.05 tpy
Total HAP	45.58 lb/yr

**VI. Maximum Achievable Control Technology (MACT)**

To be classified as a major source under Section 112, 40 CFR Part 63, the facility's potential to emit (PTE) considering controls must be less than 10 tons per year for any single hazardous air pollutant (HAP) and less than 25 tons per year for any combination of HAPs. The Stericycle facility does not qualify as a major source and is therefore classified as an area source of HAP.

**VII. Compliance Assured Monitoring (CAM)**

This facility is subject to a CAM analysis as required for renewal of a Title V permit. The CAM rule applies to each pollutant specific emission unit (PSEU) at a Title V facility if the individual emissions unit uses a control device to achieve compliance with any non-exempt regulated air pollutant emission limit or standard (as defined by 02D .0614(b)(1)), and if the potential pre-control emissions from that specific source are equal to or greater than the major source thresholds (100 tons per year) of the applicable regulated air pollutant.

Stericycle does not have potential pre-control emissions greater than the major source thresholds for any unit. Therefore, CAM does not apply.

**VIII. Public Notice and Public Hearing**

Pursuant to 15A NCAC 02Q .0521, a notice of the draft Title V Operating Permit will be published in the local newspaper and on the DAQ website to provide for a 30-day comment period and information on the public hearing. Copies of the draft (proposed) permit, review and public notice will be sent to EPA for

their 45-day review, to persons on the Title V mailing list, to the Winston-Salem Regional Office, and to the Permittee.

## **IX. Other Requirements**

State-enforceable only

### Disclosure of Information Relating to Emissions of Fluorinated Chemicals

The Director has determined that the following statement be added to the permit (see Section 2.1 A.4) as required on a case-by-case basis where per- and polyfluoroalkyl substances (PFAS) may exist at the facility and potentially be emitted.

*The Permittee shall have an ongoing duty to disclose the 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. The disclosure shall describe the identity, quantity, and use of such material to the extent known. DAQ may require the permittee to conduct analysis or testing of fluorinated chemical emissions as necessary to properly evaluate emissions sources at the facility. As used in this condition, the term "fluorinated chemicals" includes but is not limited to per- and polyfluoroalkyl substances (PFAS).*

In a letter dated February 22, 2023, to Kirk Yarbrough, Mark Cuilla notified Stericycle that additional information was needed regarding the use (or lack thereof) of fluorinated chemicals at the facility before the renewed Title V permit can be issued. In response to the growing concern about fluorinated chemicals, the Department of Environmental Quality (DEQ) has developed a list of screening questions for Permittees to help us identify potential air emission sources of emerging contaminants, which was attached to this letter. Stericycle was requested to review and respond to the questions so that the responses can be documented in this technical review.

In a letter dated March 29, 2023, emailed to Ed Martin, from Kirk Yarbrough, Stericycle provided answers to the questions in the February 22, 2023 request and stated that the responses (including any attachments) contain "trade secrets," as defined under N.C.G.S. § 66-152(3). Further, the letter states that the trade secrets are the property of Stericycle, which is a "person" as defined under N.C.G.S. § 66-152(2) and are disclosed to the North Carolina Department of Environmental Quality (DEQ) in compliance with applicable law. As such, the responses are subject to confidential treatment under N.C.G.S. § 132-1.2(1). Therefore, the DEQ is legally obligated to prohibit the disclosure of the Facility's responses in their entirety and to the maximum extent allowed under the law.

In an email dated April 21, 2023, to Kirk Yarbrough, Mark Cuilla notified Stericycle that DAQ has determined that Stericycle's request for confidential treatment is incomplete. Pursuant to 15A NCAC 2Q .0107(b), for information to be entitled to confidential treatment, Stericycle must, among other things, provide sufficient information to demonstrate that the information meets the criteria set forth in G.S. 143-215.3C. While Stericycle asserts that the information provided in its letter contains trade secrets, Stericycle has failed to provide information upon which DAQ could make that determination. For DAQ to process Stericycle's Confidential Business Information (CBI) request, Stericycle must provide the following within 30 days:

1. Submit two versions of the document, including: (a) A confidential version, which includes all the information for which confidentiality has been requested. Only the page(s) containing confidential information should be marked as "confidential." (b) A publicly viewable version, which includes the confidential information either redacted or removed from the document. If removed, an insert should be included to reference that information was removed for confidentiality purposes.
2. Submit a written justification detailing the rationale for requesting the confidentiality claim. As the written justification is also publicly viewable, the confidential information shall not be included in this

document. This written justification, at a minimum, must explain the following: (a) How the information is protected by the requester and how its disclosure would affect the requester, (b) Why the information meets the definition of "trade secret," and (c) Why the information does not meet the definition of "emission data" as defined in G.S. 143-215.3C.

3. Submit the package including the confidential version, publicly viewable version, and written justification. It is the DAQ's preference that CBI requests are not submitted via e-mail. Until this information is received and DAQ can decide of its ability to remain confidential, we will hold it as such.

In a letter dated May 22, 2023, to Mark Cuilla, Kirk Yarbrough submitted the following answers to the original questions in the format requested by DAQ:

Except as otherwise stated in its responses below, the Facility interprets your RFI to inquire about the Facility's known or intentional use, as part of its industrial operations and processes, of any materials or products containing fluorinated chemicals. As used in the below responses, the terms "known," "intentional use," and their variations (e.g., "knowledge," "knowingly," "intentionally used," etc.) signify the Facility's actual and specific knowledge regarding the existence or presence of fluorinated chemicals in such materials or products through an examination of documents in the Facility's possession, custody or control. The terms do not apply to general inferences or suspicions unsupported by documentary evidence or to information that the Facility may obtain by, for example, performing an independent inquiry, analysis or chemical evaluation of each such material or product.

- 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.

To its knowledge, the Facility does not use any material or products in its operations that contain fluorinated chemicals. The Facility already has provided the DEQ with information on all of its emission sources in connection with its application to renew Air Quality Permit No. 05896T25. Of the chemicals that are used in the operation of these emissions sources, the Facility knows none to contain fluorinated chemicals.

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

No.

The Facility does not formulate/create any products or byproducts.

- 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.**

No.

The Facility does not have any knowledge that any of the waste that it receives contains fluorinated chemicals. The Facility does not knowingly or intentionally use fluorinated chemicals in its operations. As such, the Facility has no specific knowledge that it generates any solid, liquid, or gaseous related emissions, discharges or wastes/products containing fluorinating chemicals.

- 4a. 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)?**

No.

The Facility interprets this question to pertain to equipment, material or components that are either (a) part of the improvements at the Facility or (b) knowingly or intentionally used by the Facility in connection with the processing of the waste that the Facility receives. The Facility does not have knowledge of any such equipment, material or component containing fluorinated chemicals.

**4b. 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?**

No.

The Facility interprets the question to pertain to direct or indirect discharges to soil, groundwater, surface water or sediment via a “release,” as that term generally applies to those media, rather than via an “emission” to the ambient air.

The Facility has no knowledge that its equipment, materials or components contain fluorinated chemicals. As such, the Facility has no knowledge that would suggest that its processes or operations could directly or indirectly result in a fluorinated chemicals “release” to the environment.

**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?**

N/A

**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?**

The Facility respectfully declines to answer this question, as it pertains to facilities, operations and topics that are outside the jurisdiction of the DEQ, Division of Air Quality.

**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.

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

No.

The Facility does not knowingly or intentionally use other emerging contaminants in its operations.

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

No.

### 112(r)

This facility is not subject to a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act since it does not use or store any of the regulated chemicals in quantities above the threshold levels in the rule. Aqueous ammonia is a 112(r) listed material, but only in concentrations of 20% or greater. Since this facility uses 19% aqueous ammonia, they are not subject to the RMP. The facility is subject to the General Duty Clause.

### PE Seal

A PE seal is not required since there are no air pollution capture or control systems being added in accordance with 02Q .0112.

### Zoning

There is no expansion of the facility, therefore zoning consistency is not needed.

### Fee Classification

The facility fee classification before and after this modification will remain as "Title V".

## **X. Comments on Draft Permit**

The draft permit and review were sent to Don Nuss at Stericycle, Davis Murphy at WSRO, and Samir Parekh with SSCB on June 16, 2023, for comment.

### Stericycle Comments

Stericycle's requested revisions (shown in tracked changes) to the draft Title V permit were received in a letter dated July 7, 2023, sent via email.

1. In section 2.1 A.2.1.ii of the permit, Stericycle replaced the language defining international garbage (USDA/APHIS) with regulated garbage as defined by 7 CFR 330.400 -330.403 and 9 CFR 94.5.

#### *Response*

The description in the permit was changed in Permit T15, issued on December 30, 2003, from "international garbage (USDA/APHIS)" to the current language. It is not known exactly where the current language came from; however, it is stated in the review for Permit T15, that the language was defined in the USDA Airport and Maritime Operations Manual Glossary. Regardless, regulated garbage is defined, as Stericycle requested, by 7 CFR 330.400 -330.403 [[USDA APHIS | Regulated Garbage](#)] and 9 CFR 94.5 [[eCFR :: 9 CFR 94.5 -- Regulation of certain garbage.](#)] as specified by the U.S. Department of Agriculture "Animal and Plant Health Inspection Service" (USDA/APHIS). "Regulated Garbage" under USDA/APHIS is not allowed to be imported, except from Canada. as appears was the basis for this particular waste prior to Permit T15. Therefore, DAQ concurs with this change.

2. In section 2.1 A.2.1.iv of the permit, Stericycle removed "...captured by law enforcement agencies" from controlled substances.

#### *Response*

In the review for Permit T15, issued on December 30, 2003, it is stated that the term "contraband" is deleted and replaced with more accurate language which identifies the waste material as controlled substances being disposed of for law enforcement agencies. Regardless, since it is not known where the term contraband originated from as a waste allowed to be incinerated, there does not appear to be any reason why controlled substances could only be restricted to law enforcement agencies. Therefore, DAQ concurs with this change.

3. In sections 2.1 A.2.1.v and vi of the permit, Stericycle changed:

- v. non-hazardous trace chemotherapeutic waste materials
- vi. non-hazardous pharmaceuticals

To:

- v. trace chemotherapy waste as defined in 15A NCAC 13B .1201
- vi. non-hazardous waste pharmaceuticals

*Response*

“Trace chemotherapy waste” is defined in 15A NCAC 13B .1201 (Medical Waste Management, definitions) as medical waste containing no more than three percent by weight of a medical drug used for chemotherapy, but is not a radioactive waste. Trace chemotherapy waste includes gowns, gloves, wipes, and other handling, preparation, administration, cleaning, and decontamination items used in association with chemotherapy. DAQ concurs with these changes.

- 4. Stericycle re-worded the Disclosure of Information Relating to Emissions of Fluorinated Chemicals statement in section 2.1 A.4 of the permit and in section V.A.4 of the review, and removed the documented responses to the Department’s screening questions in section IX of the review.

*Response*

In an email to Don Nuss at Stericycle on July 14, 2023, from Mark Cuilla, with respect to the PFAS disclosure statement re-write and the removal of Stericycle’s documented responses to the Department’s screening questions, we are unlikely to make those changes to the draft permit and review as requested. Doing so would make your permit inconsistent with other permits containing the same information. Also, it is our practice to document facility responses to those screening questions as part of our technical reviews. DAQ does not agree to make these changes.

WSRO Comments

In an email dated June 20, 2023, Davis Murphy provided tracked changes in the documents with the following comments:

- 1. Davis asked whether the “Minimum [packed bed] scrubber liquor flow rate” in the permit Section 2.1 A.2.p table should be for the venturi scrubber and not the packed bed scrubber.

*Response*

Yes, it appears that it should be the venturi scrubber and not the packed bed scrubber. Similar to a previous change to the 2.1 A.2.n table to correct this, the 2.1 A.2.p table will also be changed to read as below:

Operating parameters to be monitored	Minimum frequency	
	Data measurement	Data recording
Maximum operating parameters:		
Maximum charge rate	Continuous	1 × hour
Maximum flue gas temperature	Continuous	1 × minute
Minimum operating parameters:		
Minimum secondary chamber temperature	Continuous	1 × minute
Minimum pressure drop across the [venturi] scrubber	Continuous	1 × minute
Minimum <b>venturi</b> scrubber liquor flow rate	Continuous	1 × minute
Minimum packed bed scrubber liquor pH	Continuous	1 × minute

- 2. With reference to the request to remove reference to the previously deleted 02D .1206(g) along with the statement, “Emissions from bypass conditions shall not be exempted by 15A NCAC 02D .0535(c) or (g).”in permit condition 2.1 A.2.cc as discussed in Section V.D above, Davis suggested it could be noted that DAQ’s settlement agreement with Stericycle included a clause that said "In any challenge to any future civil penalty assessment levied by DAQ based on the use of the bypass stack, Stericycle agrees that it will not raise 15A NCAC 02D .0535 as a defense in such a challenge."

*Response*

This was incorporated into this review.

SSCB Comments

In an email dated June 20, 2023, Samir Parekh stated he had no comments.

**XI. Recommendations**

TBD