

NARRATIVE

TO: Cynthia Dorrough

FROM: Jada Levers

DATE: December 8, 2022

Facility Name: **SA Recycling – Garden City**
AIRS No.: 04-13-051-00270
Location: Garden City, GA (Chatham County)
Application #: 28586
Date of Application: September 14, 2022

Background Information

SA Recycling is a scrap metal recycling facility located in Garden City, Georgia within the limits of Chatham County. Chatham county is considered an attainment area for all criteria pollutants. The facility operates an automobile shredder which has the potential to emit particulate matter (PM), Volatile Organic Compounds (VOCs), and a few hazardous air pollutants (HAPs). Potential HAP emissions from the facility are below the 10 tpy threshold for any individual HAP, 25 tpy threshold for any combinations of HAPs, and potential PM emissions are below the 100 tpy threshold. Potential VOC emissions from the facility are above the 100 tpy major source threshold set forth in Part 70 of the Clean Air Act. The facility will be considered a synthetic minor source with respect to Title V regulations.

SA Recycling drains automobiles of all fluid before placing them in the shredder. Materials exit the shredder on a conveyer belt and are separated into piles based on size, weight, and material content. The piles are then processed further and accordingly at the facility. Prior to this permit, the facility had been operating under NPR (No Permit Required from Application No. 27164) under the exemption of Georgia Air Quality Control Rule 391-3-1-.03(6)(i)1. In light of new source testing performed June 16-18, 2021, which yielded higher VOC emission limits than previously known, the facility was obliged to submit Application No. 28586.

Purpose of Application

Application No. 28586 was dated September 14, 2022, and received by the Division on September 19, 2022, requesting a new operating limit for the shredder. The facility is proposing to limit annual shredding output of the automobile shredder to 608,750 tons per year to limit VOC emissions to less than 100 tons per year (tpy). Public Advisory expired on November 11, 2022.

Updated Equipment List

Source Code	Description	Installation Date	Construction Date
SS	Savannah automobile shredder	2019	2019

Emissions Summary

Emission data below derives from Application No. 28586 and supplemental revised emission calculations received from the facility on February 16, 2023. Testing was performed in triplicate by Montrose Air Quality Service, LLC per the request of the EPA. The facility developed and applied a new VOC emission factor of 0.13 pounds per long ton (lb/ton) shredder output and 0.12 pounds per short ton (lb/ton) shredder output. For PM emissions from the shredder exhaust, an emission factor of 0.0015 lb/ton was used.

Facility-Wide Emissions
(in tons per year)

Pollutant	Potential Emissions	Actual Emissions
PM	6.51	1.26
NO _x	0	0
SO ₂	0	0
CO	0	0
VOC	127	36.3
Max. Individual HAP	3.15	0.90
Total HAP	9.64	2.88

Regulatory Applicability**Georgia Rule 391-3-1-.02(2)(b)**

Rule (b) limits the opacity of visible emissions to not exceed 40 percent from any air contaminant source that is subject to some other emission limitation under 391-3-1-.02(2) unless the source is subject to another opacity standard in 391-3-1-.02. The facility will be subject to this rule.

Georgia Rule 391-3-1-.02(2)(e)

The facility will be subject to rule (e) for new manufacturing process equipment which states that the Permittee shall not cause, let, permit, suffer, or allow the rate of emission from any source involved in the manufacturing process, particulate matter in total quantities equal to or exceeding the following rates:

$$E = 4.1 P^{0.67}; \text{ for process input weight rate up to and including 30 tons per hour.}$$

$$E = 55 P^{0.11} - 40; \text{ for process input weight rate above 30 tons per hour.}$$

Where:

E = emission rate in pounds per hour

P = process input weight rate in tons per hour

Georgia Rule 391-3-1-.02(2)(n)

Rule (n) states that all persons responsible for any operation, process, handling, transportation or storage facility which may result in fugitive dust shall take all reasonable precautions to prevent such dust from becoming airborne. The percent opacity from any fugitive dust source shall not exceed 20%. The facility will be subject to this rule.

Permit Conditions

Permit Condition 2.1 establishes the opacity standards for process emission units at the facility per rule (b).

Permit Condition 2.2 establishes particulate matter standards for the process emission units at the facility per rule (e).

Permit Condition 2.3 limits the annual shredding output of the automobile shredder to 608,750 tpy to avoid the Title V major threshold for VOC.

Permit Condition 3.1 establishes standards to minimize fugitive dust for the entire facility per rule (n).

Permit Condition 6.1 contains standard requirements for performance testing.

Permit Condition 7.1 requires the Permittee to maintain daily shredding output logs for the automobile shredder for inspection purposes.

Permit Condition 7.2 requires the Permittee to maintain monthly shredding output records using the daily logs required by Permit Condition 7.1 for the automobile shredder for inspection purposes.

Permit Condition 7.3 requires the Permittee to use the monthly shredding output records for the automobile shredder required by Permit Condition 7.2 to calculate the 12-consecutive month shredding output of the shredder. In the event the monthly operation of the shredder exceeds 1/12th of its rolling annual limit during any calendar month, the Permittee is required to notify the Division in writing.

Permit Condition 7.4 requires the Permittee to report any exceedances in Permit Conditions 2.3 within 15 days of occurrence.

Permit Condition 8.1 establishes the Division's authority to determine additional control of emissions.

Permit Condition 8.2 requires the facility to pay permit fees.

Toxic Impact Assessment

A TIA was not required to be performed.

Summary & Recommendations

Based on the above considerations, I recommend issuing Permit No. 5093-051-0270-S-01-0 to SA Recycling facility in Garden City, Georgia. Public Advisory expired on November 11, 2022, and there were no comments received. Public Notice expired on XXXXXXXX, and there were no comments received. The facility is a synthetic minor source with this application, and it is located inside the Coastal District (Brunswick) for the purposes of compliance responsibility and report submittals.