GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

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NARRATIVE

TO: Jeng-Hon Su

FROM: Eddie Gomez

DATE: February 16, 2022

Facility Name:	Sun Chemical Corporation
AIRS No.:	12100779
Location:	Atlanta, GA (Fulton County)
Application #:	28272
Date of Application:	January 20, 2022

Background Information

Sun Chemical Corporation (hereinafter "facility") is an existing synthetic minor facility located at 1357 Seaboard Industrial Blvd. N.W. Atlanta, Georgia 30318 (Fulton County). The facility makes printing ink and related ink intermediates. Due to the reclassification/redesignation of the Metro Atlanta Non-Attainment Area to being in attainment for the 2008 8-hour ozone standard, which changed the major source limits for both Volatile Organic Compounds (VOC) and Nitrogen Oxides (NO_x) to 100 tpy, the facility was able to obtain their current synthetic minor permit.

Purpose of Application

On February 1, 2022 the facility submitted Application No. 28272 for the construction and operation of three (3) additional paste ink mixers. The Public Advisory expired on March 4, 2022; no comments were received.

Updated Equipment List

Emission Units				Associated Control Devices	
Source Code	**Description**	**Applicable Requirements/ Standards**	**Installation Date**	**Source Code**	**Description**
ES01	Mixing Tanks with Mixer Motors Rated at 1 hp or Less	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ccc)	1996	--	--
ES02	Solvent Bulk Chemical Storage Tank	391-3-1-.02(2)(vv)	1996	TI01	Thermal Oxidizer
ES03	Solvent Bulk Chemical Storage Tank	391-3-1-.02(2)(vv)	1996	--	--
ES04	Solvent Bulk Chemical Storage Tank	391-3-1-.02(2)(vv)	1996	--	--
ES05	Solvent Bulk Chemical Storage Tank	391-3-1-.02(2)(vv)	1996	TI01	Thermal Oxidizer
ES06	Solvent Bulk Chemical Storage Tank	391-3-1-.02(2)(vv)	1996	TI01	Thermal Oxidizer

Emission Units				Associated Control Devices	
Source Code	**Description**	**Applicable Requirements/ Standards**	**Installation Date**	**Source Code**	**Description**
ES07	Mixing Tanks with Mixer Motors Rated at Less Than or Equal to 10 hp and Greater Than 1 hp	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ccc)	1996	--	--
ES08	Mixing Tanks with Mixer Motors Rated at Less Than or Equal to 20 hp and Greater Than 10 hp	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ccc)	1996	--	--
ES09	Mixing Tanks with Mixer Motors Rated at Less Than or Equal to 30 hp and Greater Than 20 hp	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ccc)	1996	--	--
ES10	Mixing Tanks	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ccc)	1996	CD01	Torrit Filter Device.
ES13	Seven Waterborne Ink Mixers	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ccc)	2006	--	--
M034	**2 HP Paste Ink Mixer**	**391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ccc)**	**2022***	--	--
M035	**3 HP Paste Ink Mixer**	**391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ccc)**	**2022***	--	--
M036	**TBD HP Paste Ink Mixer**	**391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ccc)**	**2022***	--	--

*proposed within current application

Emissions Summary

Facility-Wide Emissions
(in tons per year)

Pollutant	Potential Emissions			Actual Emissions		
	Before Mod.	**After Mod.**	**Emissions Change**	**Before Mod.**	**After Mod.**	**Emissions Change**
$PM/PM_{10}/PM_{2.5}$	0.4	0.4	0.0	<0.4	<0.4	0.0
NOx	-	-	0	-	-	0
SO_2	-	-	0	-	-	0
CO	-	-	0	-	-	0
VOC	<50	<50	0.0	~20	~20	0.0
Max. Individual HAP	<10	<10	0.0	<10	<10	0.0
Total HAP	<25	<25	0.0	<20	<20	0.0
Total GHG (if applicable)	-	-	0	-	-	0

Regulatory Applicability

40 CFR 60 Subpart Kb – Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.

NSPS Subpart Kb applies to volatile organic liquid (VOL) storage vessels which were constructed, reconstructed, or modified after July 1984 and meet the following criteria:

- The storage vessel has a maximum storage capacity greater than or equal to 151 cubic meters (m^3) (39,890 gallons) and which stores a VOL with a maximum true vapor pressure exceeding 3.5 kilo Pascals (kPa) or 0.51 pounds per square inch atmosphere (psia); or

- The storage vessel has a maximum storage capacity greater than or equal to 75 m^3 (19,813 gallons) but less than 151 m^3 and which stores a VOL with a maximum true vapor pressure exceeding 15.0 kPa (2.2 psia).

The storage tanks on site have a capacity of 38 m^3 (10,000 gallons), which is below the 75 m^3 threshold. Therefore, NSPS Subpart Kb does not apply.

40 CFR 60 Subpart RRR – VOC emissions from Synthetic Organic Manufacturing Industry (SOCMI) Reactor Processes

NSPS Subpart RRR applies to a source which produces, either as an intermediary or direct product, a chemical listed in 40 CFR 60.707. The storage tanks at the facility mix raw materials which do not produce the chemicals on the list. Therefore, NSPS Subpart RRR does not apply.

40 CFR 60 Subpart VVa – Equipment Leaks of VOC in the Synthetic Organic Manufacturing Industry

NSPS Subpart VVa applies to affected SOCMI facilities. Under NSPS Subpart VVa, a SOCMI is defined as an industry that produces, as intermediates or final products, one or more of the chemicals listed in 40 CFR 60.489. The facility mixes raw ingredients to make ink products and does not produce any of the chemicals listed in 40 CFR 60.489. Therefore, NSPS Subpart VVa does not apply.

40 CFR 63 Subpart EEEE – Organic Liquids Distribution (Non-Gasoline)

NESHAP Subpart EEEE is applicable to organic liquids distribution operations, including organic liquid storage tanks, located at major sources of hazardous air pollutant (HAP) emissions. Because the facility is an area source of HAP emissions, this regulation does not apply.

40 CFR 63 Subpart F – Synthetic Hazardous Organics, SOCMI Standards

NESHAP Subpart F applies to a source which manufactures either Tetrahydrobenzaldehyde, Crotonaldehyde, or a chemical listed in Table 1 of the subpart. The storage tanks at the facility mix raw materials which do not produce the chemicals on this list. Therefore, NESHAP Subpart F does not apply.

40 CFR 63 Subpart G – SOCMI Process Vents, Storage Vessels, Transfer Operations, Wastewater

NESHAP Subpart G applies to equipment within a source regulated by NESHAP Subpart F. Because Subpart F does not apply, Subpart G does not apply either.

40 CFR 63 Subpart HHHHH – Miscellaneous Coating Manufacturing

NESHAP Subpart HHHHH is applicable to equipment that is used to manufacture coatings as defined in 40 CFR 63.8105 and located at a major source of emissions. Because the facility is an area source of HAP emissions, this regulation does not apply.

40 CFR 63 Subpart VVVVVV – Chemical Manufacturing Area Sources

NESHAP Subpart VVVVVV, also referred to as CMAS, applies to new and existing chemical manufacturing process units (CMPU) that use or produce at least one of the HAP listed in Table 1 of the rule in concentrations exceeding the thresholds listed in 40 CFR 63.11494(a)(2) and that are located at an area source of HAP. 40 CFR 63.11494(c)(1)(i) exempts operations that are included within the Manufacture of Paint and Allied Products category. The operations at the facility fall under North American Industry Classification System (NAICS) code 325910 for "Printing Ink Manufacturing" and fall within this exempt category. Additionally, the facility does not fall into the nine chemical manufacturing sectors regulated by Subpart VVVVVV. Therefore, this regulation does not apply.

40 CFR 63 Subpart BBBBBBB – Chemical Preparations Industry

NESHAP Subpart BBBBBBB is applicable to chemical preparations facilities at an area source of HAP emissions. "Chemical preparation" is defined as a target HAP-containing product, or intermediate used in the manufacture of other products, manufactured in a process operation described by the NAICS code 325998 if the operation manufactures target HAP-containing products or intermediates other than indelible ink, India ink, writing ink, and stamp pad ink. Indelible ink, India ink, writing ink, and stamp pad ink manufacturing operations are subject to the paints and allied products area source rule: 40 CFR Part 63, Subpart CCCCCCC. The facility's operations fall under NAICS code 325910 for "Printing Ink Manufacturing." Therefore, Subpart BBBBBB does not apply.

40 CFR 63 Subpart CCCCCCC – Paints and Allied Products Manufacturing

NESHAP Subpart CCCCCCC is applicable to facilities that perform paint and allied products manufacturing, including those mentioned in the description, at an area source of HAP emissions and process, use, or generate materials containing HAP, defined in 40 CFR Part 63.11607 as containing at least 0.1% by weight of benzene, methylene chloride, cadmium, chromium, lead, and/or nickel. The facility provided the Division a certification in 2010 which confirmed that none of these materials are used on site. Thus, Subpart CCCCCCC does not apply.

<u>Georgia Rules for Air Quality Control (GRAQC) 391-3-1-.02(2)(b) – Visible Emissions</u>

Unless a source has another opacity limitation elsewhere in GRAQC, rule (b) limits opacity emissions from air pollution sources to 40%. This rule applies to the three new mixing tanks The nature of operation of the mixing tanks are unlikely to generate any significant amount of particulate matter (PM) emissions; therefore, compliance with the GA Rule (b) visible emission limit is expected.

GRAQC 391-3-1-.02(2)(e) – Particulate Emission from Manufacturing Processes

Rule (e), also known as the process weight rule (PWR), limits emissions from the manufacturing processes based on their process input weight rates. The facility is not allowed to emit particulate matter (PM) from any of the equipment in quantities equal to or greater than:

i. $E = 4.1\ P^{0.67}$, for process input weight rate up to and including 30 tons per hour.
ii. $E = 55\ P^{0.11} - 40$, for process input weight rate in excess of 30 tons per hour.

Where E is the emission rate in pounds per hour and P is the process weight rate in tons per hour. The three new mixing tanks are subject to GA Rule (e). The nature of operation of the mixing tanks are unlikely to generate any significant amount of particulate matter (PM) emissions; therefore, compliance with the GA Rule (e) PM emission limit is expected.

GRAQC 391-3-1-.02(2)(tt) – VOC Emissions from Major Sources

Rule (tt) requires a review of Reasonably Available Control Technology (RACT) from sources in the Atlanta Ozone Non-Attainment Area which emit more than 25 tpy of VOC and are not subject to another VOC specific rule. Because most of the facility's emission units are subject to GRAQC 391-3-1-.02(2)(vv) and (ccc), and VOC emissions from the rest of the facility are below 25 tpy, GA Rule (tt) does not apply.

GRAQC 391-3-1-.02(2)(ccc) – VOC Emissions from Bulk Mixing Tanks

GA Rule (ccc) provides standards for mixing tanks from sources in the Atlanta Ozone Non-Attainment Area which have potential VOC emissions of 25 tpy or greater. The definition of "mixing tank" includes any vessel in which resin, coating, other materials, or any combination thereof are added to produce product blend. Because they emit more than 25 tpy of VOC, each of the proposed mixing tanks are subject to this rule. By using covers on mixing tanks, free fall loading of VOC containing material into product containers through drop tubes, fill pipes or low clearance equipment design on filling equipment when practical, the use of non-VOC containing cleaners, and the storage of waste solvent in closed containers or vessels, the facility intends to comply with this rule.

GRAQC 391-3-1-.02(2)(a)3.(ii) – Toxic Air Pollutants

The Division's *Guideline for Ambient Impact Assessment of Toxic Air Pollutant Emissions* ("Guideline") provides requirements for assessing the impacts of toxic air pollutant (TAP) emissions from a proposed project. The Guideline defines a TAP as any substance which may have an adverse effect on public health, excluding any specific substance that is covered by a state or federal ambient air quality standard. If a source's emissions of a specific TAP are less than the minimum emission rate (MER), no further analysis is required for that pollutant. Otherwise, an air dispersion modeling analysis is required to demonstrate that the either the source's TAP will not exceed the acceptable ambient concentration (AAC), or to determine what corrective measures are required.

The facility submitted a Toxic Impact Analysis (TIA) to the Division in 2006 in accordance with this rule and the Guideline. Since the application does not result in altering the existing single/combined HAP emission caps in existing Condition 2.2, no additional HAP emissions would be expected. Therefore, no TIA is needed for the modification.

Permit Conditions

The proposed permit amendment does not include any new or modified conditions. The three new mixing tanks will be subject to the requirements of existing Conditions 2.1, 2.2, 2.5, 2.6, 4.1, 5.2. 7.4 through 7.9, and 7.12.

Summary & Recommendations

I recommend that Permit Amendment No. 2893-121-0779-S-05-1 be issued to the facility. A public advisory was issued on February 9, 2022 and comments were due on March 4, 2022. No comments were received. The Stationary Source Compliance Program (SSCP) remains responsible for inspections and complaints/investigations.