

## Emission Summary

**Permit Number:** 979280

**Source Status:** New ☐ Modification ☒ Expansion ☐ Relocation ☐ **Permit Status:** New ☒ Renewal ☐

PSD ☐ NSPS ☒ NESHAPs ☒ **Previous Permit Number:** Construction 974644 Operating N/A

PES B-221-3, Glycol Plants (82-0003-245)										
Pollutant	Pounds/Hour			Tons/Year				Date of Data	*	Applicable Standard TAPCR 1200-03-
	Actual	Potential	Allowable	Actual	Potential	Allowable	Net Change			
CO						0.24	0	8/13/2021		07-.07(2)
VOC			30.12			76.35	7.01	8/13/2021	3, 6	07-.07(2)

\* Source of data

**Notes:**

- VOC totals include organic HAP emissions.
- VOC emissions were calculated using AP-42 emission factors (storage tanks), Eastman and SOCMI emission factors (fugitive equipment leaks), and ASPEN/VLE modeling (process vents).
- Hourly VOC emission limit (30.12 lb/hr) applies to Vents E, F, and J.

PERMITTING PROGRAM: TJB DATE: August 19, 2021

**TABLE OF EMISSION ESTIMATION METHOD CODES**

NOT APPLICABLE EMISSIONS ARE KNOWN TO BE ZERO	0
EMISSIONS BASED ON SOURCE TESTING	1
EMISSIONS BASED ON MATERIAL BALANCE USING ENGINEERING EXPERTISE AND KNOWLEDGE OF PROCESS	2
EMISSIONS CALCULATED USING EMISSION FACTORS FROM EPA PUBLICATION NO. AP-42	3
COMPILATION OF AIR POLLUTANT EMISSIONS FACTORS	
JUDGEMENT	4
EMISSIONS CALCULATED USING A SPECIAL EMISSION FACTOR DIFFERING FROM THAT IN AP-42	5
OTHER (SPECIFY IN COMMENTS)	6

# CONSTRUCTION PERMIT SUMMARY REPORT

Company Name: Eastman Chemical Company File Number: 82-0003 EPS Initials: TJB  
Permit Number(s): 979280 Source Point Number(s): 245  
Application Received (date): August 13, 2021 Application Complete (date): August 13, 2021  
Air Quality Analysis Performed? Yes ☒ No ☐

Briefly describe the project: (new source, modifications) (what the process is) (type controls proposed) (emissions expected, qualitative) (replacing what sources) (background information)

Construction permit 979280 allows for the installation of a new feed pump in the Glycol MCPU. This modification will trigger NSPS RRR applicability due to an increase in actual emissions from the reactors to which this pump will supply material. This permit also incorporates the changes submitted as minor modification #1 to permit 576162. Minor modification #1 added Tank WH-51 (Vent J2), updated NSPS NNN applicability for DC-29 Degreaser and DC-30 Degreaser, designated MON Storage Tanks TB-50, TL-50, and TZ-50 (Vent J1) as part of a different MCPU (Tritan MCPU), and updated fugitive equipment leaks based on updated equipment counts and addition of nontraditional fugitive emissions. Specific changes are described below.

Condition or Section	Description of Change
G14, Appendix 8	Added NSPS RRR requirements for the equipment associated with the WE-23 condenser (TRE index value between 1 and 8 and using a recovery condenser). Updated NSPS NNN requirements to state that a recovery device is not used. Updated MACT FFFF requirements to identify general requirements for parametric monitoring and performance testing and to move Tanks TB-50, TL-50, TZ-50 from the Glycol MCPU to the Tritan MCPU.
E3-2	Increased estimated VOC emissions from fugitive equipment leaks from 7.72 tons/year to 11.23 tons/year based on updated equipment counts and addition of nontraditional fugitive emissions. Updated periodic monitoring to reference Item 10 of the Table Notes for equipment not subject to a Federal standard for equipment leaks.
E3-3	Increased estimated VOC emissions from fugitive equipment leaks from 3.37 tons/year to 3.83 tons/year based on updated equipment counts and addition of nontraditional fugitive emissions. Updated periodic monitoring to reference Item 10 of the Table Notes for equipment not subject to a Federal standard for equipment leaks.
E3-4	Increased estimated VOC emissions from fugitive equipment leaks from 3.55 tons/year to 6.02 tons/year based on updated equipment counts and addition of nontraditional fugitive emissions. Changed monitoring frequency from annual to quarterly and updated periodic monitoring to reference Item 10 of the Table Notes for equipment not subject to a Federal standard for equipment leaks.
E3-5	Increased allowable VOC emissions (entire source excluding fugitive equipment leaks) from 54.70 tons/year to 55.27 tons/year. Added new ester storage tank (Vent J2) and compliance method (annual certification).
E3-6	Decreased allowable VOC emissions (Vents E, F, and J) from 43.07 lb/hr to 30.12 lb/hr.

**TAPCR 1200-03-09-.01(1)(f):** Rule 1200-03-09-.01(1)(f) states that in the issuance of construction permits for new sources or modifications, source impact analysis shall demonstrate that allowable emission increases would not cause or contribute to a violation of an air quality standard (NAAQS or state standard) or PSD increment. As required, all estimates of ambient concentrations must be based on applicable models and appropriate databases.

**Emissions increases:** This permit allows emissions increases of 7.01 tons/year VOC (increase of 0.57 tons/year from stacks and increase of 6.44 tons/year fugitive equipment leaks).

**Review of stack parameters:** Since there are no net emissions increases for PM, SO<sub>2</sub>, CO, or NO<sub>x</sub>, stack parameters were not reviewed to assess whether the stacks provide adequate dispersion of emissions.

**Ambient Data:** Ambient data are shown below.

Pollutant	Standard	Current Data
Ozone	70 ppb (annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years)	61 ppb (2018-2020 design value at 3301 Bloomingdale Rd. Kingsport).

**Ambient Air Quality in Neighboring States:** The proposed project is located a short distance (less than 10 miles) from Scott County, Virginia. Other nearby counties include Washington County, Russell County, and the City of Bristol<sup>1</sup>. EPA's website (<https://www3.epa.gov/airquality/greenbook/anc1.html>) indicates that these counties are currently attaining all NAAQS. The Division has determined that the proposed source would not interfere with attainment or maintenance of a national ambient air quality standard in a neighboring state, based on the emissions from the proposed project (below PSD significance) and the attainment status of the nearby counties.

**Summary and Conclusion:** Because the net emissions increases are less than the PSD significance threshold for VOC, and because the ambient monitoring data indicate attainment of the NAAQS, the information indicates that allowable emissions increases will not cause or contribute to a violation of an air quality standard or PSD increment. Modeling of the source is not required.

NSPS/MACT Standards: This source is subject to the following NSPS and MACT standards:

Source	MACT	NSPS
245	40 CFR 63 Subparts A and FFFF	40 CFR 60 Subparts A, VVa, NNN, and RRR

### Rules Analysis

Title V ☒ Cond. Major ☐ Minor ☐ Source category listed in 1200-03-09-.01(4)(b)1.(i)? Yes ☒ No ☐

Reason for PSD: New source above \_\_\_\_ TPY ☐ Sig. increase in \_\_\_\_ emissions ☐ N/A ☒  
 Applicable NSPS: 40 CFR Part 60, Subpart \_\_\_\_ See above ☒ State Rule 1200-03-16- \_\_\_\_ ☐ N/A ☒

Applicable NESHAP: 40 CFR Part 61, Subpart \_\_\_\_ ☐ State Rule 1200-03-11- \_\_\_\_ ☐ N/A ☒

Applicable NESHAP: 40 CFR Part 63, Subpart \_\_\_\_ See above ☒ State Rule 1200-03-31- \_\_\_\_ ☐ N/A ☒

### Other Applicable State Rules

PM Emissions:	1200-03-____ - ____	<input type="checkbox"/> N/A <input checked="" type="checkbox"/>	NO <sub>x</sub> Emissions:	1200-03-____ - ____	<input type="checkbox"/> N/A <input checked="" type="checkbox"/>
SO <sub>2</sub> Emissions:	1200-03-____ - ____	<input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Lead Emissions:	1200-03-____ - ____	<input type="checkbox"/> N/A <input checked="" type="checkbox"/>
CO Emissions:	1200-03-07 - 07(2)	<input checked="" type="checkbox"/> N/A <input type="checkbox"/>	HAP Emissions:	1200-03-07 - 07(2)	<input checked="" type="checkbox"/> N/A <input type="checkbox"/>
VOC Emissions:	1200-03-07 - 07(2)	<input checked="" type="checkbox"/> N/A <input type="checkbox"/>	____ Emissions:	1200-03-____ - ____	<input type="checkbox"/> N/A <input type="checkbox"/>

Visible Emissions from Source not to exceed 20 % opacity per Method 9 (Rule 1200-03-05 -.01(1) ) 03(6)

<sup>1</sup> The source is also located within 50 miles of Kentucky and North Carolina, but Virginia would see higher impacts due to proximity and prevailing winds.