

State Registration Number

P1025

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number

MI-ROP-P1025-
2021

Trinseo LLC (hereinafter “Trinseo”)

State Registration Number (SRN): P1025

Located at

1604 Building, Barth Street, Midland, Midland County, Michigan 48667

Permit Number: MI-ROP-P1025-2021

Staff Report Date: July 19, 2021

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) of the administrative rules promulgated under Act 451, requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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Purpose

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act; and Michigan’s Administrative Rules for Air Pollution Control promulgated under Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source’s applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

General Information

Stationary Source Mailing Address:	Trinseo LLC 1604 Barth Street Midland, Michigan 48667
Source Registration Number (SRN):	P1025
North American Industry Classification System (NAICS) Code:	325211
Number of Stationary Source Sections:	1
Application Type:	Significant Modification
Application Number:	201900089
Responsible Official:	Robin Zhang, Site Leader 989-495-4829 Fred McNett, Responsible Care Leader 989-495-4768
AQD Contact:	Kathy Brewer Senior Environmental Quality Analyst 989-439-2100
Date Application Received:	March 6, 2019
Date Application Was Administratively Complete:	March 6, 2019
Is Application Shield in Effect?	NA
Date Public Comment Begins:	July 19, 2021
Deadline for Public Comment:	August 18, 2021

Source Description

The Trinseo LLC Midland site includes the ABS copolymer, SAN copolymer, and the Latex manufacturing facilities that utilize reactors, separators, dryers, storage tanks/silos, natural gas fired process heaters, and material transfer, packaging, and recovery equipment.

Trinseo LLC is located at a single stationary source with The Dow Chemical Company (SRN: A4033), Dow Silicones (SRN: A4043), Corteva Agriscience LLC (SRN: P1028), DDP Specialty Electronic Materials US (SRN P1027) and SK Saran Americas LLC (SRN: P1026).

In 2016, Dow Silicones Corporation (Dow Silicones) became a wholly owned subsidiary of The Dow Chemical Company (Dow). On April 1, 2019, Dow underwent a restructuring and split off its assets to form an industrial park with Trinseo LLC (Trinseo), Corteva Agriscience LLC (Corteva), SK Saran Americas LLC (SK Saran), and DDP Specialty Electronic Materials US, Inc. (DDP). Dow is considered the landlord of the industrial park or stationary source whereas the other facilities are considered tenants that will own and operate their assets. They are one stationary source pursuant to the Clean Air Act. Dow owns the land and has lease agreements, product supply agreements, licensing agreements, business service agreements, technical service agreements, site service agreements, and other agreements with the facilities that give Dow common control.

Dow requested that each facility acquire its own Part 70, Title V, renewable operating permit (ROP). Since Dow's existing ROP does not expire until 2022, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), had the facilities submit individual ROP Significant Modification applications to enable each facility to acquire its own ROP. In the Source-Wide Requirements section of each facility's ROP, language has been added to indicate that all the facilities are one stationary source, and specific federal requirements or standards that apply to the entire stationary source have also been included.

Currently some emissions units owned by one company can vent process exhaust to a control device owned by another company. Language has been included in the ROP that requires the generator of the emissions to acquire, and the owner of the control device to provide adequate monitoring and records to demonstrate compliance with conditions in the ROP.

Control Device	Current owner	EU	Current owner
FG954THROX	Corteva (SRN P1028)	EU01, EU07+, EU11, EU13	Corteva (SRN P1028)
		EU06*, EU08+, EUB2, EUB5	DDP (SRN P1027)
		EU91	Trinseo (SRN P1025)
FG963THROX	DDP (SRN P1027)	EU88, EUANION_XCHG, EUB2	DDP (SRN P1027)
		EU03, EU11, EU12b	Corteva (SRN P1028)
		EUB1	Trinseo (SRN P1025)
		EU82	Dow (SRN A4033)
FGSARANTTU	SK Saran (SRN P1026)	EU035	SK Saran (SRN P1026)
		EU02	Corteva (SRN P1028)
FGHCLSCRUBBER	DDP (SRN P1027)	EU06*	DDP (SRN P1027)
		EU05*	Corteva (SRN P1028)

*Former EU85 (PTI No.78-03)

+ Former EU93 (PTI No. 284-07)

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2018**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	14
Lead (Pb)	0
Nitrogen Oxides (NO _x)	172
Particulate Matter (PM)	41
Sulfur Dioxide (SO ₂)	8.4
Volatile Organic Compounds (VOCs)	250

See Parts C and D in the ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

Regulatory Analysis

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is in Midland County, which is currently designated by the United States Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants. The stationary source is a chemical process plant and a major stationary source because its potential to emit of NO_x, PM, and VOCs are greater than 100 tons per year. The 32 hazardous waste incinerator at Dow is considered a “synthetic minor” source with regard to PSD as Dow accepted legally enforceable permit conditions limiting the potential to emit from the incinerator for SO₂, PM, PM₁₀ (PM less than 10 microns in diameter), PM_{2.5} (PM less than 2.5 microns in diameter), CO, fluorides, and sulfuric acid. The 32 incinerator was able to “net out” of PSD for NO_x.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70 because the potential to emit each of the following criteria pollutants exceeds 100 tons per year: NO_x, PM, and volatile organic compounds (VOCs). The stationary source is considered a major source of Hazardous Air Pollutant (HAP) emissions because the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, is equal to or more than 10 tons per year and/or the potential to emit of all HAPs combined is equal to or more than 25 tons per year.

The stationary source is an existing Major Stationary Source for federal Prevention of Significant Deterioration (PSD) (40 CFR 52.21) regulations.

As stated above under the “Source Description”, Trinseo, Dow, Dow Silicones, Corteva, and SK Saran are one stationary source for New Source Review, PSD, and Title V Major Source applicability and determinations.

The stationary source is subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Asbestos promulgated in 40 CFR Part 61, Subparts A and M.

The stationary source is subject to the NESHAP General Provisions promulgated in 40 CFR Part 63, Subpart A.

The stationary source is subject to the NESHAP for Site Remediation promulgated in 40 CFR Part 63, Subpart GGGGG.

EU31, EU33, and EUB1, Trinseo facility benzene waste operations are less than 10 Mg/year. Benzene waste operations at the Trinseo facility are included in the site wide Benzene NESHAP reports submitted by Dow (SRN A4033) for activities at the stationary source subject to the NESHAP for Benzene Operations in 40 CFR Part 61, Subpart FF.

EU31, EU33, EUB1, EU86, and EU91 Transfer racks at the Trinseo facility are subject to the NESHAP for Organic Liquid Distribution (OLD) (non-gasoline) operations promulgated in 40 CFR Part 63, Subpart EEEE.

EU31, EU33, EUB1, EU86, and EU91 at the Trinseo facility are subject to the leak provisions of the NESHAP for Equipment Leaks promulgated in 40 CFR Part 63, Subpart H.

EUB1 at the Trinseo facility is subject to the NESHAP for Industrial Process Cooling Towers promulgated in 40 CFR Part 63, Subpart Q.

EUB1, EU91, and FGRULE290 at the Trinseo facility are subject to the NESHAP for Group 1 Polymers and Resins promulgated in 40 CFR Part 63, Subpart U.

EU31, EU33, and EU86, at the Trinseo facility are subject to the NESHAP for Group IV Polymers and Resins promulgated in 40 CFR Part 63, Subpart JJJ.

EU31, EU33, and FGRULE290 at the Trinseo facility are subject to the NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63, Subpart DDDDD.

The FGEMERGCIRICE contains requirements for the Trinseo site emergency generators subject to the NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE) promulgated in 40 CFR Part 63, Subpart ZZZZ for existing compression (CI) emergency RICE with a maximum site rate of less than 500 brake horsepower (HP) and greater than 500 brake HP.

The AQD's Rules 287 and 290 were revised on December 20, 2016. There are no emission units using a Rule 287(2)(c) exemption at the Trinseo site. A FGRULE290 flexible group table created for emission units subject to Rule 290. Emission units installed before December 20, 2016, can comply with the requirements of Rule 290 in effect at the time of installation or modification as identified in the tables. However, emission units installed or modified on or after December 20, 2016, must comply with the requirements of the current rules outlined in the table.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

The Trinseo facility has no Emission Units/Flexible Groups that are subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM).

Please refer to Parts B, C, and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

Source-Wide Permit to Install (PTI)

Rule 214a requires the issuance of a Source-Wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs for assets currently owned by Trinseo. PTIs issued for Trinseo assets after the effective date of ROP No. MI-ROP-A4033-2017b for the Stationary Source are identified in Appendix 6 of the ROP.

PTI Number		
417-73C	49-07A (EUB1)	188-89A (EU91)
72-08A (EU33)	350-88C (EU86)	349-90
349-90A	349-90B	3-04A
72-08A		

Streamlined/Subsumed Requirements

This ROP does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

Non-applicable Requirements

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the ROP pursuant to Rule 213(6)(a)(ii).

Processes in Application Not Identified in Draft ROP

The following table lists processes that were included in the ROP Application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EU-R284(2)(i)LATEX	Latex Storage Containers	Rule 284(i)	Rule 212(4)(d)
EU-R284(2)(i)ABS Ethylbenzene	Ethylbenzene Storage tank (SVEG31007)	Rule 284(2)(i)	Rule 212(4)(d)
EU-Railpowerwash	Portable Rail power wash units run by diesel engine	Rule 285(2)(g)	Rule 212(4)(d)

Draft ROP Terms/Conditions Not Agreed to by Applicant

This draft ROP does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

Action taken by EGLE, AQD

The AQD proposes to approve this ROP. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD’s proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft ROP and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Chris Hare, Bay City District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP Application, a judgment that the stationary

source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

State Registration Number
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RENEWABLE OPERATING PERMIT
August 25, 2021 - STAFF REPORT ADDENDUM

ROP Number
MI-ROP-P1025-2021

Purpose

A Staff Report dated July 19, 2021, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

Responsible Official:	Robin Zhang, Site Leader 989-495-4829 Fred McNett, Responsible Care Leader 989-495-4768
AQD Contact:	Kathy Brewer, Senior Environmental Quality Analyst 989-439-2100

Summary of Pertinent Comments

No pertinent comments were received during the 30-day public comment period.

Changes to the July 19, 2021 Draft ROP

No changes were made to the draft ROP.