

PUBLIC NOTICE

Eastman Chemical Company has applied to the Tennessee Department of Environment and Conservation, Division of Air Pollution Control for renewal of their existing major source (Title V) operating permit subject to the provisions of Tennessee Air Pollution Control Regulations 1200-03-09-.02(11) (Title V Regulations). A major source operating permit is required by both the Federal Clean Air Act and Tennessee's air pollution control regulations. However, it should be noted that this facility has a current major source operating permit.

The Title V operating renewal permit is identified as follows: Division identification number 82-0003/581499. The applicant is **Eastman Chemical Company** (Facility ID 82-0003; Division renewal permit no. 581499) with a site address of 200 South Wilcox Drive, Kingsport TN. They have applied for renewal of their existing major source (Title V) operating permit for their Chemical Manufacturing Production (MSOP-03).

EPA has agreed to treat this draft permit as a proposed Part 70 significant permit modification and to perform its 45-day review provided by the law concurrently with the public notice period. If any substantive comments are received, EPA's 45-day review period will cease to be performed concurrently with the public notice period. In this case, EPA's 45-day review period will start once the public notice period has been completed and EPA receives notification from the Tennessee Air Pollution Control Division that comments have been received and resolved. The status regarding EPA's 45-day review of these permits and the deadline for submitting a citizen's petition can be found at the following website address:

<https://www.epa.gov/caa-permitting/tennessee-proposed-title-v-permits>

Copies of the application materials and draft/proposed permit are available for public inspection during normal business hours at the following locations:

Tennessee Department of Environment and Conservation
Johnson City Environmental Field Office
Division of Air Pollution Control
2305 Silverdale Drive
Johnson City, TN 37601-2162

and

Tennessee Department of Environment and Conservation
Division of Air Pollution Control
Davy Crockett Tower, 7th Floor
500 James Robertson Parkway
Nashville, TN 37243

Also, if you require a copy of the draft/proposed permit it is available electronically by accessing the TDEC Air Pollution Control Public Participation Opportunity (APC PPO) page:

<http://www.tn.gov/environment/ppo-public-participation/ppo-public-participation/ppo-air.html>

Questions concerning the source may be addressed to Elizabeth Terranova at (865) 323-3891 or by e-mail at Elizabeth.Terranova@tn.gov.

Interested parties are invited to review these materials and comment. In addition, a public hearing may be requested at which written or oral presentations may be made. To be considered, written comments or requests for a public hearing must be received no later than 4:30 PM on **April 29, 2026**. To assure that written comments are received and addressed in a timely manner, written comments must be submitted using one of the following methods:

1. **Mail, private carrier, or hand delivery:** Address written comments to Ms. Michelle W. Owenby, Director, Division of Air Pollution Control, Davy Crockett Tower, 500 James Robertson Parkway, Nashville, Tennessee 37243.
2. **E-mail:** Submit electronic comments to air.pollution.control@tn.gov.

A final determination will be made after weighing all relevant comments.

Individuals with disabilities who wish to review information maintained at the above-mentioned depositories should contact the Tennessee Department of Environment and Conservation to discuss any auxiliary aids or services needed to facilitate such review. Such contact may be in person, by writing, telephone, or other means, and should be made no less than ten days prior to the end of the public comment period to allow time to provide such aid or services. Contact the Tennessee Department of Environment and Conservation ADA Coordinator, Davy Crockett Tower, 6th Floor, 500 James Robertson Parkway, Nashville, TN 37243, (615) 532-0211. Hearing impaired callers may use the Tennessee Relay Service, 1-(800)-848-0298.

**STATE OF TENNESSEE
 AIR POLLUTION CONTROL BOARD
 DEPARTMENT OF ENVIRONMENT AND CONSERVATION
 NASHVILLE, TENNESSEE 37243**



OPERATING PERMIT (TITLE V) Issued Pursuant to Tennessee Air Quality Act

This permit fulfills the requirements of Title V of the Federal Clean Air Act (42 U.S.C. 7661a-7661e) and the federal regulations promulgated thereunder at 40 CFR Part 70. (FR Vol. 57, No. 140, Tuesday, July 21, 1992 p.32295-32312). This permit is issued in accordance with the provisions of Tennessee Air Pollution Control Regulations (TAPCR) 1200-03-09-.02(11). The permittee has been granted permission to operate an air contaminant source in accordance with emissions limitations and monitoring requirements set forth herein.

Issue Date: ****DRAFT****

Permit Number: **581499**

Expiration Date: ****DRAFT****

Issued To:

**Eastman Chemical Company
 Tennessee Operations
 P.O. Box 511
 Kingsport, TN 37662**

**Installation Address:
 200 South Wilcox Drive
 Kingsport**

Installation Description: MSOP-03 Chemical Manufacturing

ESRN	PES	Description
82-0003-72	B-352-1	Organic Acid and Anhydride Production
82-0003-139	B-335-1	Alcohol Production
82-0003-140	B-354-1	Production of Methyl Acetate
82-0003-141	B-336-1	Ester Production
82-0003-142	B-356-2	Cooling Tower Water System

ESRN	PES	Description
82-0003-143	B-337-3	Organic Acid and Anhydride Production
82-0003-144	B-338-3	Recovery of Carbonylation Reactor Catalyst
82-0003-145	B-351-8	Cooling Tower Water System
82-0003-146	B-472-1	Cyclohexane Dicarboxylic Acid Production
82-0003-147	B-486-1	Production of Methanol or Dimethyl Ether

Facility ID: 82-0003 MSOP-03

Renewal Application Due Date: ****DRAFT****

Primary SIC: 28

Information Relied Upon: **Title V renewal application dated June 19, 2023.**

(continued on the next page)

 TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

POST AT INSTALLATION ADDRESS

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END OF PERMIT NUMBER 581499

ATTACHMENT 1	Opacity Matrix Decision Tree for Visible Emission Evaluation Method 9 Dated September 11, 2013.
ATTACHMENT 2	Applicability Determinations for 40 CFR 60 (NSPS) and 40 CFR 63 (MACT) to MSOP-03
ATTACHMENT 3	Compliance Assurance Monitoring (CAM) Plans for MSOP-03
ATTACHMENT 4	Title V Fee Selection Form APC 36 (CN-1583)

SECTION A

GENERAL PERMIT CONDITIONS

A permit issued under the provisions of Tennessee Air Pollution Control Regulations (TAPCR) Paragraph 1200-03-09-.02(11) is a permit issued pursuant to the requirements of Title V of the Federal Act and its implementing Federal regulations promulgated at 40 CFR, Part 70.

- A1. Definitions.** Terms not otherwise defined in the permit shall have the meaning assigned to such terms in the referenced regulations.

TAPCR 1200-03 and 0400-30

- A2. Compliance requirement.** All terms and conditions in a permit issued pursuant to TAPCR paragraph 1200-03-09-.02(11), including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Federal Act. The permittee shall comply with all conditions of its permit. Except for requirements specifically designated herein as not being federally enforceable (State Only), non-compliance with the permit requirements is a violation of the Federal Act and the Tennessee Air Quality Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Non-compliance with permit conditions specifically designated herein as not being federally enforceable (State Only) is a violation of the Tennessee Air Quality Act and may be grounds for these actions.

TAPCR 1200-03-09-.02(11)(e)2(i) and 1200-03-09-.02(11)(e)1(vi)(I)

- A3. Need to halt or reduce activity.** The need to halt or reduce activity is not a defense for noncompliance. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this item shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations.

TAPCR 1200-03-09-.02(11)(e)1(vi)(II)

- A4. The permit.** The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

TAPCR 1200-03-09-.02(11)(e)1(vi)(III)

- A5. Property rights.** The permit does not convey any property rights of any sort, or any exclusive privilege.

TAPCR 1200-03-09-.02(11)(e)1(vi)(IV)

- A6. Submittal of requested information.** The permittee shall furnish to the Technical Secretary, within a reasonable time, any information that the Technical Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or termination of the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Technical Secretary copies of records required to be kept by the permit. If the permittee claims that such information is confidential, the Technical Secretary may review that claim and hold the information in protected status until such time that the Board can hear any contested proceedings regarding confidentiality disputes. If the information is desired by EPA, the permittee may mail the information directly to EPA. Any claims of confidentiality for federal purposes will be determined by EPA.

TAPCR 1200-03-09-.02(11)(e)1(vi)(V)

- A7. Severability clause.** The requirements of this permit are severable. A dispute regarding one or more requirements of this permit does not invalidate or otherwise excuse the permittee from their duty to comply with the remaining portion of the permit.

TAPCR 1200-03-09.02(11)(e)1(v)

A8. Fee payment.

- (a) The permittee shall pay an annual Title V fee in accordance with TAPCR 1200-03-26-.02(9) based upon the applicable base fee; the applicable permit modification fee(s); the responsible official's choice of actual emissions, allowable emissions, or a combination of actual and allowable emissions; and on the responsible official's choice of annual accounting period. An emission cap of 4,000 tons per year per regulated pollutant per major source SIC Code shall apply to actual or allowable based emission fees. A Title V annual emission fee will not be charged for emissions in excess of the cap. Title V annual emission fees will not be charged for carbon monoxide or for greenhouse gas pollutants solely because they are greenhouse gases.
- (b) Title V sources shall pay allowable based emission fees until the beginning of the next annual accounting period following receipt of their initial Title V operating permit. At that time, the permittee shall begin paying their Title V fee based upon the applicable base fee; the applicable permit modification fee(s); and their choice of actual or allowable based fees, or mixed actual and allowable based fees. Once permitted, the Responsible Official may revise their existing fee choice by submitting a written request to the Division no later than December 31 of the annual accounting period for which the fee is due.
- (c) When paying annual Title V emission fees, the permittee shall comply with all provisions of TAPCR Rule 1200-03-26-.02 and paragraph 1200-03-09-.02(11) applicable to such fees.
- (d) Where more than one allowable emission limit is applicable to a regulated pollutant, the allowable emissions for the regulated pollutants shall not be double counted. Major sources subject to the provisions of TAPCR paragraph 1200-03-26-.02(9) shall apportion their emissions as follows to ensure that their fees are not double counted.
1. Emissions of hazardous air pollutants (HAP) that are included in the particulate matter (including PM₁₀) category or the volatile organic compound category shall be included in those categories.
 2. HAP that are not included in either the particulate matter category or volatile organic compound category shall be included in the category of Hazardous Air Pollutants Not Included Above.
 3. Each individual HAP is subject to the 4,000 ton cap provisions of TAPCR subparagraph 1200-03-26-.02(2)(i).
 4. Major sources that wish to pay annual emission fees for PM₁₀ on an allowable emission basis may do so if they have a specific PM₁₀ allowable emission standard. If a major source has a total particulate emission standard, but wishes to pay annual emission fees on an actual PM₁₀ emission basis, it may do so if the PM₁₀ actual emission levels are proven to the satisfaction of the Technical Secretary. The method to demonstrate the actual PM₁₀ emission levels must be made as part of the source's major source operating permit in advance in order to exercise this option. The PM₁₀ emissions reported under these options shall not be subject to fees under the family of particulate emissions. The 4,000 ton cap provisions of TAPCR subparagraph 1200-03-26-.02(2)(i) shall also apply to PM₁₀ emissions.
- (e) Emissions of pollutants that do not fall in one of the listed categories shall be included in the category of Miscellaneous Pollutants Not Listed Above. Each miscellaneous pollutant is subject to the 4,000-ton cap provisions.

TAPCR 1200-03-26-.02 and 1200-03-09-.02(11)(e)1(vii)

- A9. Permit revision not required.** A permit revision will not be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or process for changes that are provided for in the permit.

TAPCR 1200-03-09-.02(11)(e)1(viii)

A10. Inspection and entry. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Technical Secretary or an authorized representative to perform the following for the purposes of determining compliance with the permit applicable requirements:

- (a) Enter upon, at reasonable times, the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of the permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- (d) As authorized by the Clean Air Act and Chapter 1200-03-10 of the TAPCR, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
- (e) "Reasonable times" shall be considered to be customary business hours unless reasonable cause exists to suspect noncompliance with the Act, TAPCR Division 1200-03 or any permit issued pursuant thereto and the Technical Secretary specifically authorizes an inspector to inspect a facility at any other time.

TAPCR 1200-03-09-.02(11)(e)3(ii)

A11. Permit shield.

- (a) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date of permit issuance, provided that:
 - 1. Such applicable requirements are included and are specifically identified in the permit; or
 - 2. The Technical Secretary, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
- (b) Nothing in this permit shall alter or affect the following:
 - 1. The provisions of section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section. Similarly, the provisions of T.C.A. §68 201-109 (emergency orders) including the authority of the Governor under the section;
 - 2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - 3. The applicable requirements of the acid rain program, consistent with section 408(a) of the Federal Act; or
 - 4. The ability of EPA to obtain information from a source pursuant to section 114 of the Federal Act.
- (c) Permit shield is granted to the permittee.
- (d) The permit shield does not apply to permit changes made under the minor permit modification procedures of TAPCR subpart 1200-03-09-.02(11)(f)5(ii) nor the administrative permit amendment procedures of TAPCR part 1200-03-09-.02(11)(f)4, except that the permit shield may be extended for administrative permit amendments that meet the relevant requirements of TAPCR subparagraph 1200-03-09-.02(11)(e), subparagraph 1200-03-09-.02(11)(f) and subparagraph 1200-03-09-.02(11)(g) for significant permit modifications.
- (e) The permit shield does not apply to off-permit changes made under the operational flexibility provisions of TAPCR part 1200-03-09-.02(11)(a)4.

TAPCR 1200-03-09-.02(11)(e)6 and 1200-03-09-.02(11)(f)4(iv)

A12. Permit renewal and expiration.

- (a) An application for permit renewal must be submitted at least 180 days, but no more than 270 days, prior to the expiration of this permit. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted.
- (b) If the permittee submits a timely and complete application for permit renewal the source will not be considered to be operating without a permit until the Technical Secretary takes final action on the permit application, except as otherwise noted in TAPCR paragraph 1200-03-09-.02(11).
- (c) This permit, its shield provided in Condition A11, and its conditions will be extended and effective after its expiration date provided that the source has submitted a timely, complete renewal application to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)2 and 3, 1200-03-09-.02(11)(d)1(i)(III), and 1200-03-09-.02(11)(a)2

A13. Reopening for cause.

- (a) A permit shall be reopened and revised prior to the expiration of the permit under any of the circumstances listed below:
 1. Additional applicable requirements under the Federal Act become applicable to the sources contained in this permit provided the permit has a remaining term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the permit expiration date of this permit, unless the original has been extended pursuant to TAPCR part 1200-03-09-.02(11)(a)2.
 2. Additional requirements become applicable to an affected source under the acid rain program.
 3. The Technical Secretary or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 4. The Technical Secretary or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (b) Proceedings to reopen and issue a permit shall follow the same proceedings as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists, and not the entire permit. Such reopening shall be made as expeditiously as practicable.
- (c) Reopenings for cause shall not be initiated before a notice of such intent is provided to the permittee by the Technical Secretary at least 30 days in advance of the date that the permit is to be reopened except that the Technical Secretary may provide a shorter time period in the case of an emergency. An emergency shall be established by the criteria of T.C.A. 68 201 109 or other compelling reasons that public welfare is being adversely affected by the operation of a source that is in compliance with its permit requirements.
- (d) If the Administrator finds that cause exists to terminate, modify, or revoke and reissue a permit as identified in A13, he is required under federal rules to notify the Technical Secretary and the permittee of such findings in writing. Upon receipt of such notification, the Technical Secretary shall investigate the matter in order to determine if he agrees or disagrees with the Administrator's findings. If he agrees with the Administrator's findings, the Technical Secretary shall conduct the reopening in the following manner:
 1. The Technical Secretary shall, within 90 days after receipt of such notification, forward to EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate. If the Administrator grants additional time to secure permit applications or additional information from the permittee, the Technical Secretary shall have the additional time period added to the standard 90-day time period.
 2. EPA will evaluate the Technical Secretary's proposed revisions and respond as to their evaluation.

3. If EPA agrees with the proposed revisions, the Technical Secretary shall proceed with the reopening in the same manner prescribed under Condition A13(b) and Condition A13(c).
4. If the Technical Secretary disagrees with either the findings or the Administrator that a permit should be reopened or an objection of the Administrator to a proposed revision to a permit submitted pursuant to Condition A13(d), he shall bring the matter to the Board at its next regularly scheduled meeting for instructions as to how he should proceed. The permittee shall be required to file a written brief expressing their position relative to the Administrator's objection and have a responsible official present at the meeting to answer questions for the Board. If the Board agrees that EPA is wrong in their demand for a permit revision, they shall instruct the Technical Secretary to conform to EPA's demand, but to issue the permit under protest preserving all rights available for litigation against EPA.

TAPCR 1200-03-09-.02(11)(f)6 and 7

A14. Permit transference. An administrative permit amendment allows for a change of ownership or operational control of a source where the Technical Secretary determines that no other change in the permit is necessary, provided that the following requirements are met:

- (a) Transfer of ownership permit application is filed consistent with the provisions of TAPCR paragraph 1200-03-09-.03(6), and
- (b) Written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)4(i)(IV) and 1200-03-09-.03(6)

A15. Air pollution alert. When the Technical Secretary has declared that an air pollution alert, an air pollution warning, or an air pollution emergency exists, the permittee must follow the requirements for that episode level as outlined in TAPCR paragraph 1200-03-09-.03(1) and TAPCR Rule 1200-03-15-.03.

A16. Construction permit required. Except as exempted in TAPCR Rule 1200-03-09-.04, or excluded in TAPCR subparagraph 1200-03-02-.01(1)(aa) or TAPCR subparagraph 1200-03-02-.01(1)(cc), this facility shall not begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit for the construction or modification of such air contaminant source.

TAPCR 1200-03-09-.01(1)(a)

A17. Notification of changes. The permittee shall notify the Technical Secretary 30 days prior to commencement of any of the following changes to an air contaminant source which would not be a modification requiring a construction permit.

- (a) change in air pollution control equipment
- (b) change in stack height or diameter
- (c) change in exit velocity of more than 25 percent or exit temperature of more than 15 percent based on absolute temperature.

TAPCR 1200-03-09-.02(7)

A18. Schedule of compliance. The permittee will comply with any applicable requirement that becomes effective during the permit term on a timely basis and no later than required by the provisions of the new applicable requirement. If the permittee is not in compliance the permittee must submit a schedule for coming into compliance which must include a schedule of remedial measure(s), including an enforceable set of deadlines for specific actions.

TAPCR 1200-03-09-.02(11)(d)3, 1200-03-09-.03(8), 0400-30-38, 0400-30-39, and 40 CFR Part 70.5(c)

A19. Title VI.

- (a) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to Section 82.156.
 2. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to Section 82.158.
 3. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.
- (b) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.
- (c) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR, Part 82, Subpart G, Significant New Alternatives Policy Program.

TAPCR 1200-03-09-.03(8)

- A20. 112 (r).** Sources which are subject to the provisions of Section 112(r) of the federal Clean Air Act or any federal regulations promulgated thereunder, shall annually certify in writing to the Technical Secretary that they are properly following their accidental release plan. The annual certification is due in the office of the Technical Secretary no later than January 31 of each year. Said certification will be for the preceding calendar year.

TAPCR 1200-03-32-.03(3)

SECTION B

GENERAL CONDITIONS for MONITORING, REPORTING, and ENFORCEMENT

B1. Recordkeeping. Monitoring and related record keeping shall be performed in accordance with the requirements specified in the permit conditions for each individual permit unit. In no case shall reports of any required monitoring and record keeping be submitted less frequently than every six months.

(a) Where applicable, records of required monitoring information include the following:

1. The date, place as defined in the permit, and time of sampling or measurements;
2. The date(s) analyses were performed;
3. The company or entity that performed the analysis;
4. The analytical techniques or methods used;
5. The results of such analyses; and
6. The operating conditions as existing at the time of sampling or measurement.

(b) Digital data accumulation which utilizes valid data compression techniques shall be acceptable for compliance determination as long as such compression does not violate an applicable requirement and its use has been approved in advance by the Technical Secretary.

TAPCR 1200-03-09-.02(11)(e)1(iii)

B2. Retention of monitoring data. The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

TAPCR 1200-03-09-.02(11)(e)1(iii)(II)II

B3. Reporting. Reports of any required monitoring and record keeping shall be submitted to the Technical Secretary in accordance with the frequencies specified in the permit conditions for each individual permit unit. Reports shall be submitted within 60 days of the close of the reporting period unless otherwise noted. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. Reports required under "State only requirements" are not required to be certified by a responsible official.

TAPCR 1200-03-09-.02(11)(e)1(iii)

B4. Certification. Except for reports required under "State Only" requirements, any application form, report or compliance certification submitted pursuant to the requirements of this permit shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

TAPCR 1200-03-09-.02(11)(d)4

B5. Annual compliance certification. The permittee shall submit annually compliance certifications with terms and conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

(a) The identification of each term or condition of the permit that is the basis of the certification;

(b) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any

other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;

- (c) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in B5(b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and
- (d) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* “Excursion” shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** “Exceedance” shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667

B6. Submission of compliance certification. The compliance certification shall be submitted to:

Division of Air Pollution Control Davy Crockett Tower, 7th Floor 500 James Robertson Parkway Nashville, TN 37243	and	Air Enforcement and Toxics Branch US EPA Region IV 61 Forsyth Street, SW Atlanta, Georgia 30303
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TAPCR 1200-03-09-.02(11)(e)3(v)(IV)

B7. Emergency provisions. An emergency constitutes an affirmative defense to an enforcement action brought against this source for noncompliance with a technology-based emission limitation due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

- (a) The affirmative defense of the emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 1. An emergency occurred and that the permittee can identify the probable cause(s) of the emergency. "Probable" must be supported by a credible investigation into the incident that seeks to identify the causes and results in an explanation supported by generally accepted engineering or scientific principles.
 2. The permitted source was at the time being properly operated. In determining whether or not a source was being properly operated, the Technical Secretary shall examine the source's written standard operating procedures which were in effect at the time of the noncompliance and any other code as detailed below that would be relevant to preventing the noncompliance. Adherence to the source's standard operating procedures will be the test of adequate preventative maintenance, careless operation, improper operation or operator error to the extent that such adherence would prevent noncompliance. The source's failure to follow recognized standards of practice to the extent that adherence to such a standard would have prevented noncompliance will disqualify the source from any claim of an emergency and an affirmative defense.
 3. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
 4. The permittee submitted notice of the emergency to the Technical Secretary according to the notification criteria for malfunctions in TAPCR Rule 1200 03 20 .03. For the purposes of this condition, "emergency" shall be substituted for

"malfunction(s)" in TAPCR Rule 1200 03 20 .03 to determine the relevant notification threshold. The notice shall include a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

- (b) In any enforcement proceeding the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (c) (The provisions of this condition are in addition to any emergency, malfunction or upset requirement contained in TAPCR Divisions 1200-03 and 0400-30 or other applicable requirement.

TAPCR 1200-03-09-.02(11)(e)7

B8. Excess emissions reporting.

- (a) The permittee shall promptly notify the Technical Secretary when any emission source, air pollution control equipment, or related facility breaks down in such a manner to cause the emission of air contaminants in excess of the applicable emission standards contained in TAPCR Division 1200-03 or any permit issued thereto, or of sufficient duration to cause damage to property or public health. The permittee must provide the Technical Secretary with a statement giving all pertinent facts, including the estimated duration of the breakdown, the probable cause of the deviation, and any corrective actions or preventative measures taken. Violations of the visible emission standard which occur for less than 20 minutes in one day (midnight to midnight) need not be reported. Prompt notification will be within 24 hours of the malfunction and shall be provided by telephone to the Division's Nashville office. The Technical Secretary shall be notified when the condition causing the failure or breakdown has been corrected. In attainment and unclassified areas if emissions other than from sources designated as significantly impacting on a nonattainment area in excess of the standards will not and do not occur over more than a 24-hour period (or will not recur over more than a 24-hour period) and no damage to property and or public health is anticipated, notification is not required.
- (b) Any malfunction that creates an imminent hazard to health must be reported by telephone immediately to the Division's Nashville office at (615) 532-0554 and to the State Civil Defense.
- (c) A log of all malfunctions, startups, and shutdowns resulting in emissions in excess of the standards in TAPCR Division 1200-03 or any permit issued thereto must be kept at the plant. All information shall be entered in the log no later than twenty-four (24) hours after the startup or shutdown is complete, or the malfunction has ceased or has been corrected. Any later discovered corrections can be added in the log as footnotes with the reason given for the change. This log must record at least the following:
 1. Stack or emission point involved
 2. Time malfunction, startup, or shutdown began and/or when first noticed
 3. Type of malfunction and/or reason for shutdown
 4. Time startup or shutdown was complete or time the air contaminant source returned to normal operation
 5. The company employee making entry on the log must sign, date, and indicate the time of each log entry

The information under items 1. and 2. must be entered into the log by the end of the shift during which the malfunction or startup began. For any source utilizing continuous emission(s) monitoring, continuous emission(s) monitoring collection satisfies the above log keeping requirement.

TAPCR 1200-03-20-.03 and .04

- B9. Malfunctions, startups and shutdowns - reasonable measures required.** The permittee must take all reasonable measures to keep emissions to a minimum during startups, shutdowns, and malfunctions. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment and/or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Failures that are caused by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions. This provision does not apply to standards found in 40 CFR, Parts 60(Standards of performance for new stationary sources), 61(National emission standards for hazardous air pollutants) and 63(National emission standards for hazardous air pollutants for source categories).

TAPCR 1200-03-20-.02

B10. Reserved.

B11. Report required upon the issuance of a notice of violation for excess emissions. The permittee must submit, within twenty days after receipt of the notice of violation, the data required below. If this data has been made available to the Technical Secretary prior to the issuance of the notice of violation no further action is required of the violating source. However, if the source desires to submit additional information, then this must be submitted within the same 20-day time period. The minimum data requirements are:

- (a) The identity of the stack and/or other emission point where the excess emission(s) occurred;
- (b) The magnitude of the excess emissions expressed in pounds per hour and the units of the applicable emission limitation(s) and the operating data and calculations used in determining the magnitude of the excess emissions;
- (c) The time and duration of the emissions;
- (d) The nature and cause of such emissions;
- (e) For malfunctions, the steps taken to correct the situation and the action taken or planned to prevent the recurrence of such malfunctions;
- (f) The steps taken to limit the excess emissions during the occurrence reported, and
- (g) If applicable, documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good operating practices for minimizing emissions.

Failure to submit the required report within the 20-day period specified shall preclude the admissibility of the data for determination of potential enforcement action.

TAPCR 1200-03-20-.06(2), (3) and (4)

SECTION C

PERMIT CHANGES

C1. Operational flexibility changes. The source may make operational flexibility changes that are not addressed or prohibited by the permit without a permit revision subject to the following requirements:

- (a) The change cannot be subject to a requirement of Title IV of the Federal Act or TAPCR Chapter 1200-03-30.
- (b) The change cannot be a modification under any provision of Title I of the federal Act or TAPCR Division 1200-03.
- (c) Each change shall meet all applicable requirements and shall not violate any existing permit term or condition.
- (d) The source must provide contemporaneous written notice to the Technical Secretary and EPA of each such change, except for changes that are below the threshold of levels that are specified in TAPCR Rule 1200-03-09-.04.
- (e) Each change shall be described in the notice including the date, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change.
- (f) The change shall not qualify for a permit shield under the provisions of TAPCR part 1200-03-09-.02(11)(e)6.
- (g) The permittee shall keep a record describing the changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes. The records shall be retained until the changes are incorporated into subsequently issued permits.

TAPCR 1200-03-09-.02(11)(a)4(ii)

C2. Section 502(b)(10) changes.

- (a) The permittee can make certain changes without requiring a permit revision, if the changes are not modifications under Title I of the Federal Act or TAPCR Division 1200-03 and the changes do not exceed the emissions allowable under the permit. The permittee must, however, provide the Administrator and Technical Secretary with written notification within a minimum of 7 days in advance of the proposed changes. The Technical Secretary may waive the 7-day advance notice in instances where the source demonstrates in writing that an emergency necessitates the change. Emergency shall be demonstrated by the criteria of TAPCR part 1200-03-09-.02(11)(e)7 and in no way shall it include changes solely to take advantages of an unforeseen business opportunity. The Technical Secretary and EPA shall attach each such notice to their copy of the relevant permit.
- (b) The written notification must be signed by a facility Title V responsible official and include the following:
 - 1. a brief description of the change within the permitted facility;
 - 2. the date on which the change will occur;
 - 3. a declaration and quantification of any change in emissions;
 - 4. a declaration of any permit term or condition that is no longer applicable as a result of the change; and
 - 5. a declaration that the requested change is not a Title I modification and will not exceed allowable emissions under the permit.

(c) The permit shield provisions of TAPCR part 1200-03-09-.02(11)(e)6 shall not apply to Section 502(b)(10) changes.

TAPCR 1200-03-09-.02(11)(a)4(i)

C3. Administrative amendment.

- (a) Administrative permit amendments to this permit shall be in accordance with TAPCR part 1200-03-09-.02(11)(f)4. The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.

- (b) The permit shield shall be extended as part of an administrative permit amendment revision consistent with the provisions of TAPCR part 1200-03-09-.02(11)(e)6 for such revisions made pursuant to item (c) of this condition which meet the relevant requirements of TAPCR subparagraph 1200-03-09-.02(11)(e), TAPCR subparagraph 1200-03-09-.02(11)(f) and TAPCR subparagraph 1200-03-09-.02(11)(g) for significant permit modifications.
- (c) Proceedings to review and grant administrative permit amendments shall be limited to only those parts of the permit for which cause to amend exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)4

C4. Minor permit modifications.

- (a) The permittee may submit an application for a minor permit modification in accordance with TAPCR subpart 1200-03-09-.02(11)(f)5(ii).
- (b) The permittee may make the change proposed in its minor permit modification immediately after an application is filed with the Technical Secretary.
- (c) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.
- (d) Minor permit modifications do not qualify for a permit shield.

TAPCR 1200-03-09-.02(11)(f)5(ii)

C5. Significant permit modifications.

- (a) The permittee may submit an application for a significant modification in accordance with TAPCR subpart 1200-03-09-.02(11)(f)5(iv).
- (b) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)5(iv)

C6. New construction or modifications.

Future construction at this facility that is subject to the provisions of TAPCR Rule 1200-03-09-.01 shall be governed by the following:

- (a) The permittee shall designate in their construction permit application the route that they desire to follow for the purposes of incorporating the newly constructed or modified sources into their existing operating permit. The Technical Secretary shall use that information to prepare the operating permit application submittal deadlines in their construction permit.
- (b) Sources desiring the permit shield shall choose the administrative amendment route of TAPCR part 1200-03-09-.02(11)(f)4 or the significant modification route of TAPCR subpart 1200-03-09-.02(11)(f)5(iv).
- (c) Sources desiring expediency instead of the permit shield shall choose the minor permit modification procedure route of TAPCR subpart 1200-03-09-.02(11)(f)5(ii) or group processing of minor modifications under the provisions of TAPCR subpart 1200-03-09-.02(11)(f)5(iii) as applicable to the magnitude of their construction.

TAPCR 1200-03-09-.02(11)(d)1(i)(V)

SECTION D

GENERAL APPLICABLE REQUIREMENTS

D1. Visible emissions.

- (a) With the exception of air emission sources exempt from the requirements of TAPCR Chapter 1200-03-05 and air emission sources for which a different opacity standard is specifically provided elsewhere in this permit, the permittee shall not cause, suffer, allow or permit discharge of a visible emission from any air contaminant source with an opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1) hour or more than 20 minutes in any twenty-four (24) hour period; provided, however, that for fuel burning installations with fuel burning equipment of input capacity greater than 600 million btu per hour, the permittee shall not cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with an opacity in excess of 20 percent (6-minute average) except for one six minute period per one hour of not more than 40 percent opacity. Sources constructed or modified after July 7, 1992, shall utilize 6-minute averaging.
- (b) Consistent with the requirements of TAPCR Chapter 1200-03-20, due allowance may be made for visible emissions in excess of that permitted under TAPCR Chapter 1200-03-05 which are necessary or unavoidable due to routine startup and shutdown conditions. The facility shall maintain a continuous, current log of all excess visible emissions showing the time at which such conditions began and ended and that such record shall be available to the Technical Secretary or an authorized representative upon request.

TAPCR 1200-03-05-.01(1), TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.02(1)

- D2. General provisions and applicability for non-process gaseous emissions.** Any person constructing or otherwise establishing a non-portable air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.

TAPCR 1200-03-06-.03(2)

- D3. Non-process emission standards.** The permittee shall not cause, suffer, allow, or permit particulate emissions from non-process sources in excess of the standards in TAPCR Chapter 1200-03-06.

- D4. General provisions and applicability for process gaseous emissions.** Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize equipment and technology which is deemed reasonable and proper by the Technical Secretary.

TAPCR 1200-03-07-.07(2)

- D5. Particulate emissions from process emission sources.** The permittee shall not cause, suffer, allow, or permit particulate emissions from process sources in excess of the standards in TAPCR part 1200-03-07.

- D6. Sulfur dioxide emission standards.** The permittee shall not cause, suffer, allow, or permit sulfur dioxide emissions from process and non-process sources in excess of the standards in TAPCR Chapter 1200-03-14. Regardless of the specific emission standard, new process sources shall utilize the best available control technology as deemed appropriate by the Technical Secretary of the Tennessee Air Pollution Control Board.

D7. Fugitive Dust.

- (a) The permittee shall not cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads, or the clearing of land;

2. Application of asphalt, water, or suitable chemicals on dirt roads, material stockpiles, and other surfaces which can create airborne dusts;
3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.

(b) The permittee shall not cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or 20 minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in TAPCR Chapter 1200-03-20.

TAPCR 1200-03-08

D8. Open burning. The permittee shall comply with the TAPCR Chapter 1200-03-04 for all open burning activities at the facility.

TAPCR 1200-03-04

D9. Asbestos. Where applicable, the permittee shall comply with the requirements of 40 CFR Part 61 when conducting any renovation or demolition activities at the facility.

TAPCR 0400-30-38-.01(2) and 40 CFR, Part 61

D10. Annual certification of compliance. The generally applicable requirements set forth in Section D of this permit are intended to apply to activities and sources that are insignificant emission units or activities. By annual certification of compliance with the conditions in this Section the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of TAPCR subpart 1200-03-09-.02(11)(e)1(iii) and part 1200-03-10-.04(2)(b)1 and the compliance requirements of TAPCR subpart 1200-03-09-.02(11)(e)3(i). The permittee shall submit compliance certification for these conditions annually.

D11. Emission Standards for Hazardous Air Pollutants. The permittee shall comply with all applicable requirements of TAPCR Chapter 0400-30-38 for all emission sources subject to a requirement contained therein.

D12. Standards of Performance for New Stationary Sources. The permittee shall comply with all applicable requirements of TAPCR chapters 0400-30-39 and 1200-03-16 for all emission sources subject to a requirement contained therein.

D13. Gasoline Dispensing Facilities. The permittee shall comply with all applicable requirements of TAPCR Rule 1200-03-18-.24 for all emission sources subject to a requirement contained therein.

D14. Internal Combustion Engines.

(a) All stationary reciprocating internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR Rule 0400-30-38-.01.

(b) All stationary compression ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR Chapter 0400-30-39.

(c) All stationary spark ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR Chapter 0400-30-39.

TAPCR 0400-30-38 and 39

D15. Maintenance and Repair of Sources. The permittee shall maintain and repair each emission source, associated air pollution control device(s), and compliance assurance monitoring equipment as required to maintain and assure compliance with the specified emission limits.

TAPCR 1200-03-09-.03(8)

SECTION E

SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, and MONITORING, RECORDKEEPING and REPORTING REQUIREMENTS

82-0003	Facility Description:	Eastman Chemical Company - Tennessee Eastman Division facility in Kingsport manufactures chemicals, fibers, and plastics. The production of alcohol, esters, organic acid, methanol, and cyclohexane dicarboxylic acid in the Chemicals Manufacturing Division is identified as MSOP-03 for Title V permitting purposes.
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Conditions E1 through E2 apply to all sources in Section E of this permit unless otherwise noted.

E1. Fee payment

FEE EMISSIONS SUMMARY TABLE FOR MAJOR SOURCE 82-0003

REGULATED POLLUTANTS	ALLOWABLE EMISSIONS (tons per AAP)	ACTUAL EMISSIONS (tons per AAP)	COMMENTS
PARTICULATE MATTER (PM)	23.16	AEAR	N/A
SO₂	0.44	AEAR	N/A
VOC	150.55	AEAR	HAPs are included in the VOC total.
NO_x	4.40	AEAR	N/A
Facility-Wide Total HAP Limit		AEAR	N/A
Facility-Wide Individual HAP Limit		AEAR	N/A
HAZARDOUS AIR POLLUTANTS (HAPs) NOT INCLUDED ABOVE*			
		N/A	
		N/A	
		N/A	
MISCELLANEOUS POLLUTANTS NOT LISTED ABOVE**			
EACH MISC POLLUTANT NOT LISTED ABOVE	N/A	N/A	N/A
	N/A	N/A	N/A

NOTES

AAP The **Annual Accounting Period (AAP)** is a 12 consecutive month period that **either (a) begins each July 1st and ends June 30th of the following year when fees are paid on a fiscal year basis, or (b) begins January 1st and ends December 31st of the same year when paying on a calendar year basis.** The AAP at the time of permit renewal issuance began **January 1, 2026, and ends December 31, 2026.** The next AAP begins **January 1, 2027,** and ends **December 31, 2027,** unless a request to change the annual accounting period is submitted by the responsible official as required by subparagraph 1200-03-26-.02(9)(b) of the TAPCR and approved by the Technical Secretary. If the permittee wishes to revise their annual accounting period or their annual emission fee basis as allowed by subparagraph 1200-03-26-.02(9)(b) of the TAPCR, the responsible official must submit the request to the Division in writing on or before December 31 of the annual accounting period for which the fee is due. If a change in fee basis from allowable emissions to actual emissions for any pollutant is requested, the request from the responsible official must include the methods that will be used to determine actual emissions. **Changes in fee bases must be made using the Title V Fee Selection form, form number APC 36 (CN-1583), included as an attachment to this permit and available on the Division of Air Pollution Control’s website.**

N/A N/A indicates that no emissions are specified for fee computation.

AEAR If the permittee is paying annual emission fees on an actual emissions basis, **AEAR** indicates that an **Actual Emissions Analysis** is **Required** to determine the actual emissions of:

- (1) **each regulated pollutant** (Particulate matter [PM], SO₂, VOC, NO_x and so forth. See TAPCR 1200-03-26-.02(2)(i) for the definition of a regulated pollutant.),
- (2) the “**HAP Not Included Above**” **Category (non-VOC and non-PM HAP not included in a facility-wide limit)**, and
- (3) the **Miscellaneous Category**

under consideration during the **Annual Accounting Period**.

* **Hazardous Air Pollutants Not Included Above:** This category is made-up of hazardous air pollutants that are not included in the VOC or PM category, such as HCl and HF, and are not included in a facility-wide HAP emission limitation. **For fee computation**, each individual hazardous air pollutant is subject to the 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

** **Miscellaneous Pollutants Not Listed Above:** This category is for pollutants that are not included in one of the other categories but for which an emission limitation has been established in this permit (including NSPS pollutants). **For fee computation**, each pollutant in this category is subject to the 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

END NOTES

- The permittee shall:**
- (1) Pay Title V **annual fees** (including the emissions fee, base fee, significant modification fee, & minor modification fee), on the emissions and year bases requested by the responsible official and approved by the Technical Secretary, for each annual accounting period (AAP) by the payment deadline(s) established in TAPCR 1200-03-26-.02(9)(a). Fees may be paid on an **actual, allowable, or mixed** emissions basis, and on either a **state fiscal year** or a **calendar year**, provided the requirements of TAPCR 1200-03-26-.02(9)(b) are met. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within 15 days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8).
 - (2) Sources paying annual fees on an allowable emissions basis: pay annual fees for each AAP no later than April 1 of each year pursuant to TAPCR 1200-03-26-.02(9)(d). TAPCR 1200-03-26-.02(9)(a)2(i)
 - (3) Sources paying annual fees on a calendar year basis and an actual or mixed emissions basis: pay annual allowable based emission fees for each AAP no later than April 1 of each year pursuant to TAPCR 1200-03-26-.02(9)(d), except as allowed by TAPCR 1200-03-26-.02(9)(g)3. TAPCR 1200-03-26-.02(9)(a)2(ii)
 - (4) Sources paying annual fees on a fiscal year basis and an actual or mixed emissions basis: for each AAP, pay an estimated 65% of the fee due no later than April 1 of the current fiscal year. The remainder of the fee for each annual accounting period is due no later than August 1 of each year pursuant to TAPCR 1200-03-26-.02(9)(d), except as allowed by TAPCR 1200-03-26-.02(9)(g)3. TAPCR 1200-03-26-.02(9)(a)2(iii)
 - (5) Sources paying annual fees on an actual emissions basis: prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to TAPCR 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:
 - (a) the completed **Fee Emissions Summary Table**,
 - (b) each **actual emissions analysis** required, and
 - (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary’s representative. The summary must include sufficient information for the

Technical Secretary to determine the accuracy of the calculations. These calculations must be based on the Fee Year basis approved by the Technical Secretary (a state fiscal year [July 1 through June 30] or a calendar year [January 1 through December 31]). These records shall be used to complete the **actual emissions analyses** required by the above **Fee Emissions Summary Table**.

TAPCR 1200-03-26-.02(9)(g)2

- (6) Sources paying annual fees on a Fee Choice of a mixed emissions basis: for all pollutants and all sources for which the permittee has chosen an actual emissions basis, prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to TAPCR 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:
- (a) the completed **Fee Emissions Summary Table**,
 - (b) each **actual emissions analysis** required, and
 - (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. The summary must include sufficient information for the Technical Secretary to determine the accuracy of the calculations. These calculations must be based on the Fee Year basis approved by the Technical Secretary (a state fiscal year [July 1 through June 30] or a calendar year [January 1 through December 31]). These records shall be used to complete the **actual emissions analysis**.

For all pollutants and all sources for which the permittee has chosen an allowable emissions basis, pay allowable based emission fees pursuant to TAPCR 1200-03-26-.02(9)(d).

TAPCR 1200-03-26-.02(9)(g)2

- (7) When paying on an actual or mixed emissions basis, submit the **actual emissions analyses** at the time the fees are paid in full or earlier.

TAPCR 1200-03-26-.02(9)(g)2

- (8) Include with each required AEAR report the following statement signed by the Responsible Official: *"I have reviewed this document in its entirety, and to the best of my knowledge, based on information and belief formed after reasonable inquiry, the statements and information contained in this document are true, accurate, and complete."*

TAPCR 1200-03-09-.02(11)(d)4

The annual fee due dates are specified in TAPCR 1200-03-26-.02(9)(a) and are dependent on the Responsible Official's choice of fee bases as described above. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within 15 days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8). Emissions for regulated pollutants shall not be double counted as specified in Condition A8(d) of this permit.

Payment of the fee due and the actual emissions analysis (if required) shall be submitted to the Technical Secretary at the following address:

Payment of Fee to:

Tennessee Department of Environment and Conservation
 Division of Fiscal Services
 Consolidated Fee Section – APC
 Davy Crockett Tower, 6th Floor
 500 James Robertson Parkway
 Nashville, Tennessee 37243

Actual Emissions Analyses to:

A "Title V Emissions Summary Form" and the AEAR must be submitted electronically as directed by the Division. Additional information can be found at <https://www.tn.gov/environment/air/inventory.html>

TAPCR 1200-03-26-.02(3), (8), and (9), and TAPCR 1200-03-09-.02(11)(e)1(vii)

E2.

E2-1. Reporting requirements.

- (a) **Semiannual reports.** Semiannual reports shall cover the six-month periods from **January 1** to **June 30** and **July 1** to **December 31** and shall be submitted within 60 days after the end of each six-month period. Subsequent reports shall be submitted within 60 days after the end of each 6-month period following the first report. The first semiannual report following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
573862	January 1, 2026	day before new permit issuance (with year)
581499	Issuance Date of new permit (with year)	June 30, 2026

- (1) Any monitoring and recordkeeping required by Conditions **E3-1, E3-3, E3-4, E4-1, E4-2, E5-3, E5-5, E5-7, E6-1, E6-3, E8-3, E8-4, E8-5, E8-8, E9-1, E9-2, E9-3, and E12-2** this permit. A summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
- (2) The MACT reports required by 40 CFR 63 Subpart A, 40 CFR 63 Subpart G, and 40 CFR 63 Subpart H (Condition **E2-7**).
- (3) The NSPS reports required by 40 CFR 60 Subpart A, 40 CFR 60 Subpart NNN, 40 CFR 60 Subpart RRR, and 40 CFR 60 Subpart VV (Condition **E2-6**).
- (4) Per the opacity matrix dated September 11, 2013 (Attachment 1), no visible emissions evaluation readings are required by Conditions **E3-5, E4-3, E5-4, E6-2, E7-1, E8-6, E9-4, E10-1, E11-3, and E12-1** of this permit.
- (5) Identification of all instances of deviations from **ALL PERMIT REQUIREMENTS**. The record of deviations/excursions shall include, at a minimum, the time the deviation/excursion was discovered, the corrective action taken, and the time that the deviation/excursion was rectified.

These reports must be certified by a responsible official consistent with condition B4 of this permit and shall be submitted to The Technical Secretary at the address in Condition E2-1(b) of this permit.

TAPCR 1200-03-09-.02(11)(e)1.(iii)

- (b) **Annual compliance certification.** The permittee shall submit annually compliance certifications with each term or condition contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

- (1) The identification of each term or condition of the permit that is the basis of the certification;
- (2) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; Such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
- (3) The status of compliance with each term or condition of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in E2(b)2 above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and

(4) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* “Excursion” shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** “Exceedance” shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

Annual compliance certifications shall cover the 12-month period from **July 1** to **June 30** and shall be submitted within 60 days after the end of each 12-month period. The first annual compliance certification following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
573862	July 1, 2025	day before new permit issuance (with year)
581499	Issuance Date of new permit (with year)	June 30, 2026

These certifications shall be submitted to:

TN APCD and **EPA**

Division of Air Pollution Control
Davy Crockett Tower, 7th Floor
500 James Robertson Parkway
Nashville, TN 37243
 or
Air.Pollution.Control@tn.gov

and **Air Enforcement Branch**
US EPA Region IV
61 Forsyth Street, SW
Atlanta, Georgia 30303
 or
Through the EPA CDX
[\(https://cdx.epa.gov/\)](https://cdx.epa.gov/)
 or
[EPA R4 CAA Reports@epa.gov](mailto:EPA_R4_CAA_Reports@epa.gov)

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667
 TAPCR 1200-03-09-.02(11)(e)3.(v)

(c) **Accidental Release Plan.** In accordance with Section 112(r) of the Clean Air Act and Rule 1200-03-32-.03(1) of Tennessee Air Pollution Control Regulations, the permittee has filed a copy of the accidental release plan for this facility. This plan has been filed with both EPA Region IV and the Division of Air Pollution Control. The permittee shall annually certify in writing to the Technical Secretary that they are properly following their accidental release plan. Such certification is due no later than January 31 for the preceding calendar year in accordance with TAPCR 1200-03-32-.03(3).

(d) **Retention of Records** All records required by any condition in Section E of this permit must be retained for a period of not less than five years. Additionally, these records shall be kept available for inspection by the Technical Secretary or a Division representative.

TAPCR 1200-03-09-.02(11)(e)1.(iii)(II)II

E2-2. Conservation Vent Maintenance:

For storage or process vessels subject to emission limitations based upon TAPCR 1200-03-07-.07(2):

Where removal of a pressure relief device such as a conservation vent from a storage or process vessel would otherwise result in excess emissions, the owner or operator is permitted to remove the pressure relief device provided the following applicable conditions are met:

For vessels which under normal operating conditions vent to a downstream piece of process or control equipment, a pressure relief device may be removed for up to a five (5) day period of time for maintenance, replacement, calibration, or inspection, under the following conditions:

- (a) Upward level movement of liquid within the vessel is restricted to ten percent of the vessel height during the period in which the pressure relief device is removed, or
- (b) Emissions of air contaminants due to working losses and inert gas purge losses are restricted to 100 pounds per day as determined by standard engineering estimation methods during the period in which the pressure relief device is removed.

Emissions occurring during the period of time the pressure relief device is removed shall not be considered excess emissions.

E2-3. Recordkeeping: Data Entry Requirements

- (a) For monthly recordkeeping, all data, including results of all calculations, must be entered into the log no later than thirty (30) days from the end of the month for which the data is required.
- (b) For weekly recordkeeping, all data, including results of all calculations, must be entered into the log no later than fourteen (14) days from the end of the week for which the data is required.
- (c) For daily recordkeeping, all data, including results of all calculations, must be entered into the log no later than fourteen (14) days from the end of the day for which the data is required.

TAPCR 1200-03-10-.02(1)(a)

E2-4. Visible Emissions Evaluation: General Requirements

For all emission sources that use opacity matrix decision trees (Attachment 1) to comply with any visible emissions requirement, including emission sources for which visible emissions are not required by the opacity matrix, if the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

TAPCR 1200-03-10-.02(1)(a)

E2-5. Identification of Responsible Official, Technical Contact, and Billing Contact

- (a) The application that was utilized in the preparation of this renewal permit is dated June 19, 2023, and is signed by Robert Bewley, Chemicals & Fibers Division Manufacturing Leader. If the designated Responsible Official terminates employment or is assigned different duties and is no longer a Responsible Official for this facility as defined in part 1200-03-09-.02(11)(b)21 of the Tennessee Air Pollution Control Regulations, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Responsible Official and certification of truth and accuracy. All representations, agreement to terms and conditions, and covenants made by the former Responsible Official that were used in the establishment of the permit terms and conditions will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements, and/or covenants.
- (b) The application that was utilized in the preparation of this renewal permit is dated June 19, 2023, and identifies Sharon Wellman as the Principal Technical Contact for the permitted facility. If the identified Principal Technical Contact terminates employment or is assigned different duties and is no longer the Principal Technical Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Principal Technical Contact and certification of truth and accuracy.
- (c) The application that was utilized in the preparation of this renewal permit is dated June 19, 2023, and identifies Tracy Venett, as the Billing Contact for the permitted facility. If the identified Billing Contact terminates employment or is assigned different duties and is no longer the Billing Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must

be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Billing Contact and certification of truth and accuracy.

E2-6. New Source Performance Standards (40 CFR Part 60): The emission sources included in this permit are subject to and shall comply with the NSPS standards identified in **Table E2-6:**

Table E2-6: New Source Performance Standards (40 CFR Part 60)			
NSPS Subpart	Rule	Applies to:	
		ESRN	PES
A	General Provisions	82-0003-143	B-337-3
		82-0003-144	B-338-3
		82-0003-72	B-352-1
		82-0003-140	B-354-1
		82-0003-147	B-486-1
Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984, and On or Before October 4, 2023	82-0003-140	B-354-1
VV	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006	82-0003-143	B-337-3
		82-0003-144	B-338-3
		82-0003-72	B-352-1
		82-0003-140	B-354-1
NNN	Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations After December 30, 1983, and on or Before April 25, 2023	82-0003-72	B-352-1
		82-0003-147	B-486-1
RRR	Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes After June 29, 1990, and on or Before April 25, 2023	82-0003-147	B-486-1

Compliance Method: A listing of specific applicability determinations for 40 CFR Part 60 in effect as of the issuance date of this permit is found in Attachment 2. Compliance with this condition shall be assured by compliance with the specific requirements listed in Attachment 2. Changes that result in a change of applicability shall follow the applicable procedures in Section C of this permit and shall include an update to Attachment 2. The permittee shall comply with the applicable portions of the NSPS General Provisions as specified in 40 CFR 60 Subpart A.

TAPCR 1200-03-09-.03(8)

E2-7. National Emission Standards for Hazardous Air Pollutants for Source Categories (40 CFR Part 63)

The emission sources included in this permit are subject to and shall comply with the MACT standards identified in **Table E2-7:**

Table E2-7: MACT Standards (40 CFR Part 63)			
MACT Subpart	Rule	Applies to:	
		ESRN	PES
A	General Provisions	82-0003-139	B-335-1
		82-0003-141	B-336-1
		82-0003-143	B-337-3
		82-0003-144	B-338-3

Table E2-7: MACT Standards (40 CFR Part 63)			
MACT Subpart	Rule	Applies to:	
		ESRN	PES
		82-0003-72	B-352-1
		82-0003-140	B-354-1
		82-0003-147	B-486-1
F	National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry	82-0003-139	B-335-1
		82-0003-141	B-336-1
		82-0003-143	B-337-3
		82-0003-144	B-338-3
		82-0003-72	B-352-1
		82-0003-140	B-354-1
		82-0003-147	B-486-1
G	National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry Process Vents, Storage Vessels, Transfer Operations, and Wastewater	82-0003-139	B-335-1
		82-0003-141	B-336-1
		82-0003-143	B-337-3
		82-0003-72	B-352-1
		82-0003-140	B-354-1
H	National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks	82-0003-139	B-335-1
		82-0003-141	B-336-1
		82-0003-143	B-337-3
		82-0003-72	B-352-1
		82-0003-140	B-354-1
		82-0003-147	B-486-1

Compliance Method: A listing of specific applicability determinations for 40 CFR Part 63 in effect as of the issuance date of this permit is found in Attachment 2. Compliance with this condition shall be assured by compliance with the specific requirements listed in Attachment 2. Changes that result in a change of applicability shall follow the applicable procedures in Section C of this permit and shall include an update to Attachment 2. The permittee shall comply with the applicable portions of the MACT General Provisions as specified in 40 CFR 63 Subpart A and/or the referencing Subparts.

TAPCR 1200-03-09-.03(8)

E2-8: Emissions Inventory Requirements (State-Only): The permittee shall submit emissions inventories in accordance with Rule 1200-03-10-.05.

Alcohol Production (82-0003-139)
Emission Source Specific Operating Permit Conditions*
Conditions E3-1 through E3-10 Apply to Source

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION			3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER		
PES B-335-1		Alcohol Production			82-0003-139		MSOP-03		581499		
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)					
FEDERALLY AND STATE ENFORCEABLE CONDITIONS											
E3-1	Entire source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	VOC and other organics	TAPCR 1200-03-07-.07(2)	5.19 tons/year	Engineering Assessment	Vent A – Parametric Monitoring: 24-hr block average scrubber water flow rate, 12-month moving average tank level increases, and 12-month moving average tank temperatures. See Operating Plan in the Title V Application dated June 19, 2023, PES B-335-1, page 7. Vent B – Parametric Monitoring: 24-hr block average scrubber water and acid feed flow rates, 12-month moving average tank level increases, and 12-month moving average tank temperatures. See Operating Plan in the Title V Application dated June 19, 2023, PES B-335-1, page 9.					
E3-2	Vents A and B	VOC and other organics	TAPCR 1200-03-07-.07(2)	Removal efficiency at design rating: Vent A – 98% Vent B – 99%	Engineering Assessment	Monitoring, recordkeeping, and reporting required by ID Limitations E3-1 and E2-7 will ensure compliance with this limit.					
E3-3	Entire source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	CO	TAPCR 1200-03-07-.07(2)	24.40 tons/year	EPA Method 10 and Engineering Assessment	Vent A – Parametric Monitoring: 24-hour block average and 12-month moving total calculated CO emissions. See Operating Plan in the Title V Application dated June 19, 2023, PES B-335-1, page 8. Vent B – Certification					
E3-4	Flow Diagram Point D (Equipment Leaks)	VOC and CO	TAPCR 1200-03-07-.07(2)	Quarterly Leak Inspection and Repair (fugitive emissions from pumps, valves, flanges, etc. are estimated at 18.27 tons/year VOC and other organics and 4.39 tons/year CO)	See Item 10	See Item 10					
E3-5	Entire Source	Visible Emissions	TAPCR 1200-03-05	20% Opacity	EPA Method 9	Visible Emissions Evaluation: Emission units requiring initial VEEs – None, per TAPCD Opacity Matrix dated September 11, 2013.					

* See Table Notes for additional explanation of permit conditions

Alcohol Production (82-0003-139)
Emission Source Specific Operating Permit Conditions*
Conditions E3-1 through E3-10 Apply to Source

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION		3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER	
PES B-335-1		Alcohol Production		82-0003-139		MSOP-03		581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)			
E3-6 through E3-9: See Condition E2-7 for MACT requirements									
E3-10	Vent A	VOC	40 CFR Part 64 – Compliance Assurance Monitoring §64.2(b)(1)(i) – Exempt emission limitations or standards proposed by the Administrator after November 15, 1990 – Vent Subject to Group 1 MACT control device requirements.						

* See Table Notes for additional explanation of permit conditions

**Ester Production (82-0003-141)
Emission Source Specific Operating Permit Conditions*
Conditions E4-1 through E4-8 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION			3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER	5. PERMIT NUMBER
PES B-336-1		Ester Production			82-0003-141		MSOP-03	581499
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)		
FEDERALLY AND STATE ENFORCEABLE CONDITIONS								
E4-1	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	VOC	TAPCR 1200-03-07-.07(2)	0.92 tons/year	EPA Method 18 and Engineering Assessment	Vent A – Parametric Monitoring. 24-hr block average of the following: 1) Flow rate of the water feed to the scrubber 2) Flow rate of the acid feed to the scrubber 3) % Production rate for PES B-336-1 4) % Production rate for PES B 354-1 See Operating Plan in the Title V Application dated June 19, 2023, PES B-336-1, pages 9 and 10. Vent B – Certification		
E4-2	Flow Diagram Point C (Equipment Leaks)	VOC and other organics, sulfuric acid (state only)	TAPCR 1200-03-07-.07(2)	Quarterly Leak Inspection and Repair (fugitive emissions from pumps, valves, flanges, etc. are estimated at 8.21 tons/year VOC and other organics and 0.05 tons/year sulfuric acid)	See Item 10	See Item 10		
E4-3	Entire Source	Visible Emissions	TAPCR 1200-03-05	20% Opacity	EPA Method 9	Visible Emissions Evaluation: Emission units requiring initial VEEs – None, per TAPCD Opacity Matrix dated September 11, 2013.		
E4-5 through E4-8: See Condition E2-7 for MACT requirements								

* See Table Notes for additional explanation of permit conditions

**Ester Production (82-0003-141)
Emission Source Specific Operating Permit Conditions*
Conditions E4-1 through E4-8 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION			3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER	
PES B-336-1		Ester Production			82-0003-141		MSOP-03		581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)				
STATE- ONLY ENFORCEABLE CONDITIONS										
E4-4	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	Other Organics – Methyl Acetate	TAPCR 1200-3-7-.07(2): Process Gaseous emission standard for sources constructed or modified after April 3, 1972 – Reasonable and proper control equipment and technology.	1.91 lb/hr and 8.37 tons/year	EPA Method 18	N/A				

* See Table Notes for additional explanation of permit conditions

Organic Acid and Anhydride Production (82-0003-143)
Emission Source Specific Operating Permit Conditions*
Conditions E5-1 through E5-12 Apply to Source

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION		3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER	
PES B-337-3		Organic Acid and Anhydride Production		82-0003-143		MSOP-03		581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)			
FEDERALLY AND STATE ENFORCEABLE CONDITIONS									
E5-1	Vent B	VOC and other organics	TAPCR 1200-03-07-.07(2)	1.75 tons/year	EPA Method 18	Monitoring, recordkeeping, and reporting required by ID Limitation E5-7 will ensure compliance with this limit.			
E5-2	Vent B	VOC and other organics	TAPCR 1200-03-07-.07(2)	99% Removal efficiency at design rating.	Engineering Assessment	Monitoring, recordkeeping, and reporting required by ID Limitation E5-7 will ensure compliance with this limit.			
E5-3	Flow Diagram Points D and E (Fugitive Equipment Leaks)	VOC and other organics, CO	TAPCR 1200-03-07-.07(2)	Quarterly Inspection and Repair (fugitive emissions from pumps, valves, flanges, etc. are estimated at 38.57 tons/year VOC and other organics and 0.85 tons/year CO)	See Item 10	See Item 10			
E5-4	Entire Source	Visible Emissions	TAPCR 1200-03-05	20% Opacity	EPA Method 9	Visible Emissions Evaluation: Emission units requiring initial VEEs – None, per TAPCD Opacity Matrix dated September 11, 2013.			
E5-5	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	VOC and other organics	TAPCR 1200-03-07-.07(2)	5.75 tons/year	Engineering Assessment	Vent B – Monitoring, recordkeeping, and reporting required by ID Limitation E5-7 will assure compliance with this limit. Vent I – Recordkeeping: maintain log of emissions. Monthly and annual emissions will be calculated using heat and material balance compositions and historical or projected flow from the vent stack. See Operating Plan in the Title V application dated June 19, 2023, PES B-337-3, page 14.			
E5-6	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	CO	TAPCR 1200-03-07-.07(2)	15 tons/year	Engineering Assessment	Vent I – Monitoring, recordkeeping, and reporting required by ID Limitation E5-5 will assure compliance with this limit. Vents B – Certification			

* See Table Notes for additional explanation of permit conditions

**Organic Acid and Anhydride Production (82-0003-143)
Emission Source Specific Operating Permit Conditions*
Conditions E5-1 through E5-12 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION		3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER	
PES B-337-3		Organic Acid and Anhydride Production		82-0003-143		MSOP-03		581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)			
E5-7	Vent B	VOC	40 CFR Part 64 – Compliance Assurance Monitoring See Attachment 3.						
E5-8 through E5-11: See Condition E2-7 for MACT requirements									
E5-12: See Condition E2-6 for NSPS requirements									

* See Table Notes for additional explanation of permit conditions

**Recovery of Carbonylation Reactor Catalyst (82-0003-144)
Emission Source Specific Operating Permit Conditions*
Conditions E6-1 through E6-12 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION			3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER	5. PERMIT NUMBER	
PES B-338-3		Recovery of Carbonylation Reactor Catalyst			82-0003-144		MSOP-03	581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)			
FEDERALLY AND STATE ENFORCEABLE CONDITIONS									
E6-1	Flow Diagram Point D (Equipment Leaks)	VOC and other organics, iodine (State-only)	TAPCR 1200-03-07-.07(2)	Quarterly Leak Detection and Repair (fugitive emissions from pumps, valves, flanges, etc. are estimated at 17.97 tons/year VOC and other organics and 0.84 tons/year iodine)	See Item 10	See Item 10			
E6-2	Entire Source	Visible Emissions	TAPCR 1200-03-05	20% Opacity	EPA Method 9	Visible Emissions Evaluation: Emission units requiring initial VEEs – None, per TAPCD Opacity Matrix dated September 11, 2013.			
E6-3	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	VOC and other organics	TAPCR 1200-03-07-.07(2)	1.5 tons/year	Engineering Assessment	Vent A – Certification Vent E – Recordkeeping. Number of sample requests. See Operating Plan in the Title V Application dated June 19, 2023, PES B-338-3, page 9.			
E6-4	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	CO	TAPCR 1200-03-07-.07(2)	1.08 tons/year	Engineering Assessment	Certification			
E6-5	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc	NO _x	TAPCR 1200-03-07-.07(2)	4.40 tons/year	Engineering Assessment	Certification			

* See Table Notes for additional explanation of permit conditions

**Recovery of Carbonylation Reactor Catalyst (82-0003-144)
Emission Source Specific Operating Permit Conditions*
Conditions E6-1 through E6-12 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION			3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER	
PES B-338-3		Recovery of Carbonylation Reactor Catalyst			82-0003-144		MSOP-03		581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)				
E6-6	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc	SO ₂	TAPCR 1200-03-14-.03(2) TAPCR 1200-03-14-.03(5)	1,000 ppmvd (one-hour average) and 0.44 tons/year	Engineering Assessment	Certification				
E6-7	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	Particulates	TAPCR 1200-03-07-.01(5)	0.90 tons/year	Engineering Assessment	Certification				
E6-9, E6-10: See Condition E2-7 for MACT requirements										
E6-11, E6-12: See Condition E2-6 for NSPS requirements										
STATE-ONLY ENFORCEABLE CONDITIONS										
E6-8	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc	Iodine (I ₂)	TAPCR 1200-03-07-.07(2)	2.38 tons/year	Engineering Assessment	Not Applicable				

* See Table Notes for additional explanation of permit conditions

**Cooling Towers (82-0003-145)
Emission Source Specific Operating Permit Conditions*
Conditions E7-1 and E7-2 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION		3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER	
PES B-351-8		Cooling Towers		82-0003-145		MSOP-03		581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)			
FEDERALLY AND STATE ENFORCEABLE CONDITIONS									
E7-1	Entire Source	Visible Emissions	TAPCR 1200-03-05	20% Opacity	EPA Method 9	Visible Emissions Evaluation: Emission units requiring initial VEEs – None, per TAPCD Opacity Matrix dated September 11, 2013.			
E7-2	Entire Source (Vent A and Vent B)	Particulates	TAPCR 1200-03-07-.01(5)	1.98 lb/hr not to exceed 7.67 tons/year.	Engineering Assessment: Emission rates for Vents A & B calculated using AP-42 factors, Fifth Edition, Volume I, Section 13.4 Wet Cooling Tower, dated January 1995.	Certification			

* See Table Notes for additional explanation of permit conditions

**Organic Acid and Anhydride Production (82-0003-72)
Emission Source Specific Operating Permit Conditions*
Conditions E8-1 through E8-15 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION		3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER		
PES B-352-1		Organic Acid and Anhydride Production		82-0003-72		MSOP-03		581499		
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)				
FEDERALLY AND STATE ENFORCEABLE CONDITIONS										
E8-1	Vents A and E	VOC and other organics	TAPCR 1200-03-07-.07(2)	6.98 tons/year	Engineering Assessment	Vent A: Monitoring, recordkeeping, and reporting required by ID Limitation E8-8 will ensure compliance with this limit. Also see Operating Plan in the Title V Application dated June 19, 2023, PES B-352-1, page 12. Vent E: Parametric monitoring and recordkeeping. See Operating Plan in the Title V Application dated June 19, 2023, PES B-352-1, page 13.				
E8-2	Vent A	VOC and other organics	TAPCR 1200-03-07-.07(2)	99% removal efficiency at design rating	Engineering Assessment	Monitoring, recordkeeping, and reporting required by ID Limitation E8-8 will ensure compliance with this limit.				
E8-3	Flow Diagram Point B (Equipment Leaks)	VOC and Other Organics, CO	TAPCR 1200-03-07-.07(2)	Quarterly Leak Inspection and Repair (fugitive VOC and other organic emissions from pumps, valves, flanges, etc. are estimated at 20.10 tons/year VOC and other organics and 0.14 tons/year CO)	See Item 10	See Item 10				

* See Table Notes for additional explanation of permit conditions

**Organic Acid and Anhydride Production (82-0003-72)
Emission Source Specific Operating Permit Conditions*
Conditions E8-1 through E8-15 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION		3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER	
PES B-352-1		Organic Acid and Anhydride Production		82-0003-72		MSOP-03		581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)			
FEDERALLY AND STATE ENFORCEABLE CONDITIONS									
E8-4	Vent C (Equipment Leaks)	VOC and Other Organics, CO	TAPCR 1200-03-07-.07(2)	Quarterly Leak Inspection and Repair (fugitive VOC and other organic emissions from pumps, valves, flanges, etc. are estimated at 8.55 tons/year VOC and other organics and 1.25 tons/year CO)	See Item 10	See Item 10			
E8-5	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	VOC and other organics	TAPCR 1200-03-07-.07(2)	9.98 tons/year	Engineering Assessment	Vents A and E – Monitoring, recordkeeping, and reporting required by ID Limitation E8-1 will assure compliance with this limit. Vent I – Recordkeeping: Maintain log of emissions. See Operating Plan in the Title V Application dated June 19, 2023, PES B-352-1, page 16.			
E8-6	Entire Source	Visible Emissions	TAPCR 1200-03-05	20% Opacity	EPA Method 9	Visible Emissions Evaluation: Emission units requiring initial VEEs – None, per TAPCD Opacity Matrix dated September 11, 2013.			
E8-7	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	CO	TAPCR 1200-03-07-.07(2)	15.0 tons/year	Engineering Assessment	Vent I – Monitoring, recordkeeping, and reporting required by ID Limitation E8-5 will assure compliance with this limit. Vent A– Certification			
E8-8	Vent A	VOC	40 CFR Part 64 – Compliance Assurance Monitoring See Attachment 3.						
E8-9 through E8-11: See Condition E2-6 for NSPS requirements									
E8-12 through E8-15: See Condition E2-7 for MACT requirements									

* See Table Notes for additional explanation of permit conditions

**Production of Methyl Acetate (82-0003-140)
Emission Source Specific Operating Permit Conditions*
Conditions E9-1 through E9-11 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION		3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER	
PES B-354-1		Production of Methyl Acetate		82-0003-140		MSOP-03		581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)			
FEDERALLY AND STATE ENFORCEABLE CONDITIONS									
E9-1	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	VOC and other organics	TAPCR 1200-03-07-.07(2)	4.03 tons/year	Engineering Assessment	Vent A: Parametric Monitoring. 24-hr block averages: scrubber water feed flow rate, acid feed flow rate, and daily production rate. See Operating Plan in Title V Application dated June 19, 2023, PES B-354-1, page 6.			
E9-2	Flow Diagram Point B (Equipment Leaks)	VOC and other organics	TAPCR 1200-03-07-.07(2)	Annual Leak Inspection and Repair (fugitive VOC and other organics from pumps, valves, flanges, etc. are estimated at 4.48 tons/year)	See Item 10	See Item 10			
E9-3	Flow Diagram Point C (Equipment Leaks)	VOC and other organics	TAPCR 1200-03-07-.07(2)	Annual Leak Inspection and Repair (fugitive VOC and other organics from pumps, valves, flanges, etc. are estimated at 1.67 tons/year)	See Item 10	See Item 10			
E9-4	Entire Source	Visible Emissions	TAPCR 1200-03-05	20% Opacity	EPA Method 9	Visible Emissions Evaluation: Emission units requiring initial VEEs – None, per TAPCD Opacity Matrix dated September 11, 2013.			
E9-5 through E9-8: See Condition E2-7 for MACT requirements									
E9-9 through E9-11: See Condition E2-6 for NSPS requirements									

* See Table Notes for additional explanation of permit conditions

**Cooling Towers (82-0003-142)
Emission Source Specific Operating Permit Conditions*
Conditions E10-1 and E10-2 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION		3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER	
PES B-356-2		Cooling Towers		82-0003-142		MSOP-03		581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)			
FEDERALLY AND STATE ENFORCEABLE CONDITIONS									
E10-1	Entire Source	Visible Emissions	TAPCR 1200-03-05	20% Opacity	EPA Method 9	Visible Emissions Evaluation: Emission units requiring initial VEEs – None, per TAPCD Opacity Matrix dated September 11, 2013.			
E10-2	Entire Source (Vent A and Vent B)	Particulates	TAPCR 1200-03-07-.01(5)	2.58 lb/hr not to exceed 8.46 tons/year.	Engineering Assessment: Emission rates for Vents A & B to be calculated using AP-42 factors, Fifth Edition, Volume I, Section 13.4 Wet Cooling Tower, dated January 1995.	Certification			

* See Table Notes for additional explanation of permit conditions

**Cyclohexane Dicarboxylic Acid (CHDA) Production Facility (82-0003-146)
Emission Source Specific Operating Permit Conditions*
Conditions E11-1 through E11-3 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION		3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER	
PES B-472-1		Cyclohexane Dicarboxylic Acid (CHDA) Production Facility		82-0003-146		MSOP-03		581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)			
FEDERALLY AND STATE ENFORCEABLE CONDITIONS									
E11-1	Vents A, E, F, G, H, J, and K	Particulates	TAPCR 1200-03-07-.01(5)	0.26 lb/hr	EPA Method 5	Certification			
E11-2	Entire Source	Particulates	TAPCR 1200-03-07-.01(5)	6.03 tons/year	Engineering Assessment	Certification			
E11-3	Entire Source	Visible Emissions	TAPCR 1200-03-05	20% Opacity	EPA Method 9	Visible Emissions Evaluation: Emission units requiring initial VEEs – None, per TAPCD Opacity Matrix dated September 11, 2013.			

* See Table Notes for additional explanation of permit conditions

**Production of Methanol and Dimethyl Ether (82-0003-147)
Emission Source Specific Operating Permit Conditions*
Conditions E12-1 through E12-9 Apply to Source**

1. EASTMAN SOURCE NUMBER		2. EMISSION SOURCE DESCRIPTION			3. EMISSION SOURCE REFERENCE NUMBER		4. MSOP NUMBER		5. PERMIT NUMBER	
PES B-486-1		Production of Methanol and Dimethyl Ether			82-0003-147		MSOP-03		581499	
6. ID	7. PORTION OF SOURCE SUBJECT TO REQUIREMENT	8. POLLUTANT	9. UNDERLYING APPLICABLE REQUIREMENT(S)	10. LIMITATION OR STANDARD	11. REFERENCE TEST METHOD	12. PERIODIC MONITORING METHOD(S)				
FEDERALLY AND STATE ENFORCEABLE CONDITIONS										
E12-1	Entire Source	Visible Emissions	TAPCR 1200-03-05	20% Opacity	EPA Method 9	Visible Emissions Evaluation: Emission units requiring initial VEEs – None, per TAPCD Opacity Matrix dated September 11, 2013.				
E12-2	Flow Diagram Point E (Equipment Leaks)	VOC, CO, PM	TAPCR 1200-03-07-.07(2)	Quarterly Leak Inspection and Repair (fugitive emissions from pumps, valves, flanges, etc. are estimated at 5.36 tons/year VOC, 2.78 tons/year CO, and 0.10 tons/year PM)	See Item 10	See Item 10				
E12-3	Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	CO	TAPCR 1200-03-07-.07(2)	0.09 tons/year	Engineering Assessment	Certification				
E12-4 through E12-6: See Condition E2-7 for MACT requirements										
E12-7 through E12-9: See Condition E2-6 for NSPS requirements										

(End of conditions)

* See Table Notes for additional explanation of permit conditions

Table Notes (February 26, 2021 Version)

- Item 1** **EASTMAN SOURCE NUMBER**
Permittee's designation for the emission source.
- Item 2** **EMISSION SOURCE DESCRIPTION**
Permittee's description of the emission source.
- Item 3** **EMISSION SOURCE REFERENCE NUMBER**
TDEC-APC assigned number for the emission source.
- Item 4** **MSOP NUMBER**
Permittee's designation for major source operating permit.
- Item 5** **PERMIT NUMBER**
TDAPC assigned major source operating permit number.
- Item 6** **ID**
Emission limitation or standard identification
- Item 7** **PORTION OF SOURCE SUBJECT TO REQUIREMENT**
Identifies emission units to which the permit term or condition applies.
- Item 8** **POLLUTANT**
Identifies the air contaminant, regulated air pollutant, or other parameter to which the emission limitation or standard applies. Where the term “other organics” is used it means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate.
- Item 9** **UNDERLYING APPLICABLE REQUIREMENTS**
Specifies and references the origin of and authority for each term or condition.
States the compliance dates for effective applicable requirements with future compliance dates.

Glossary

Descriptions of regulatory citations that appear in Item 9 are given below:

NSPS	Standards of Performance for New Stationary Sources (40 CFR Part 60)
40 CFR 60 Subpart A	General Provisions
40 CFR 60 Subpart D	Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After August 17, 1971
40 CFR 60 Subpart Da	Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978
40 CFR 60 Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
40 CFR 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
40 CFR 60 Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
40 CFR 60 Subpart Y	Standards of Performance for Coal Preparation Plants
40 CFR 60 Subpart VV	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry
40 CFR 60 Subpart VVa	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006

40 CFR 60 Subpart DDD	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing industry
40 CFR 60 Subpart III	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes
40 CFR 60 Subpart NNN	Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations
40 CFR 60 Subpart RRR	Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes
40 CFR 60 Subpart YYY	Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Wastewater
40 CFR 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
40 CFR 60 Subpart JJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
40 CFR 61 Subpart E	National Emission Standard for Mercury
40 CFR Part 63	National Emission Standards for Hazardous Air Pollutants for Source Categories
40 CFR 63 Subpart A	General Provisions
40 CFR 63 Subpart F	National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry
40 CFR 63 Subpart G	National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater
40 CFR 63 Subpart H	National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks
40 CFR 63 Subpart DD	National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations
40 CFR 63 Subpart JJ	National Emission Standards for Wood Furniture Manufacturing Operations
40 CFR 63 Subpart JJJ	National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins
40 CFR 63 Subpart FFFF	National Emission Standards for Hazardous Air Pollutants Miscellaneous Organic Chemical Manufacturing
40 CFR 63 Subpart GGGG	National Emission Standards for Hazardous Air Pollutants: Site Remediation
40 CFR 63 Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters
40 CFR Part 68	Chemical Accident Prevention Provisions.

Item 10 LIMITATION OR STANDARD

Gives the regulatory citation or expression of the emission limitation or standard. This expression identifies any difference in form as compared to the applicable requirement upon which the term or condition is based. The following general requirements apply to each allowable emission rate established in Item 10:

- (a) For non-process or process gaseous emissions subject to TAPCR 1200-03-06-.03(2) or 1200-03-07-.07(2), compliance with hourly emission limits shall be based on a 24-hour block average, unless a performance test is required to demonstrate compliance or a different averaging period is specified in the permit condition, application, or other applicable requirement.
- (b) For particulate matter and sulfur dioxide limits established by mutual agreement pursuant to TAPCR 1200-03-06-.01(7), 1200-03-07-.01(5), 1200-03-14-.01(3), compliance with hourly emission limits shall be based on a 24-hour block average, unless a performance test is required to demonstrate compliance or a different averaging period is specified in the permit condition,

application, or agreement. Notwithstanding any mutual agreement, particulate matter and sulfur dioxide emission rates may not exceed the allowable emission rates established by TAPCR 1200-03-06, 1200-03-07, and 1200-03-14.

- (c) If a performance test is required to demonstrate compliance with a limitation or standard, compliance will be based on the averaging period specified in the underlying applicable requirement. If no averaging period is specified in the underlying applicable requirement, compliance will be based on the average of three one-hour test runs unless otherwise approved by the Technical Secretary.
- (d) Compliance with annual emission limits shall be based on a 12-month rolling total, unless a different period is specified in the permit condition, application, or other applicable requirement.

Emission work practice standards notated as “Quarterly Leak Inspection and Repair” or “Annual Leak Inspection and Repair” are detailed below:

Quarterly and Annual Leak Inspection (TAPCR 1200-03-07-.07(2))

- (a) (1) **Quarterly Leak Inspection:** A leak inspection of all equipment in air contaminant service (contains or contacts a process fluid that is at least 10% air contaminant by weight) that is not “in heavy liquid service” or “in vacuum service” shall be performed once per calendar quarter. For this inspection, detection methods incorporating sight (e.g. looking for drips), sound (e.g. hissing sounds indicative of a leak), or smell (e.g. strong odors traceable to piping leaks) shall be used as appropriate. “Equipment” includes piping, pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, and equipment closures including manways, body flanges, and blind flanges. “In heavy liquid service” means when less than 20 weight percent of the process fluid consists of air contaminants having pure component vapor pressures greater than 0.044 psia at 68 degrees F, and the process fluid is not in the gaseous state at operating conditions. “In vacuum service” means equipment that is operating at an internal pressure that is at least 0.7 psia below ambient pressure. Equipment that is covered by insulation or obstructed from sight when standing on existing floors or walkways is exempt from this inspection. Equipment that is subject to a federally required work practice standard (e.g. 40 CFR Part 60, Subpart VV, 40 CFR Part 63, Subpart H, 40 CFR Part 265, Subpart BB) is exempt from this inspection. Equipment that is in air contaminant service less than 300 hours in a calendar quarter is exempt from this inspection for that quarter.
- (2) **Annual Leak Inspection:** A leak inspection of all equipment in air contaminant service (contains or contacts a process fluid that is at least 10% air contaminant by weight) that is not “in heavy liquid service” or “in vacuum service” shall be performed once per calendar year. For this inspection, detection methods incorporating sight (e.g. looking for drips), sound (e.g. hissing sounds indicative of a leak), or smell (e.g. strong odors traceable to piping leaks) shall be used as appropriate. “Equipment” includes piping, pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, and equipment closures including manways, body flanges, and blind flanges. “In heavy liquid service” means when less than 20 weight percent of the process fluid consists of air contaminants having pure component vapor pressures greater than 0.044 psia at 68 degrees F, and the process fluid is not in the gaseous state at operating conditions. “In vacuum service” means equipment that is operating at an internal pressure which is at least 0.7 psia below ambient pressure. Equipment that is covered by insulation or obstructed from sight when standing on existing floors or walkways is exempt from this inspection. Equipment that is subject to a federally required work practice standard (e.g. 40 CFR Part 60, Subpart VV, 40 CFR Part 63, Subpart H, 40 CFR Part 265, Subpart BB) is exempt from this inspection. Equipment that is in air contaminant service less than 720 hours in a calendar year is exempt from this inspection for that year.
- (b) When a leak is detected, an initial attempt at repair shall be made no later than 10 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 30 calendar days after detection of each leak, except as provided in paragraph (c) below.
- (c) (1) Delay of repair of leaking equipment will be allowed if the repair is technically infeasible without a process unit shutdown or if repair personnel would be exposed to an immediate danger if attempting a repair without a process shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.
- (2) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in air contaminant service.

- (3) Delay of repair for valves, connectors, and agitators is also allowed if the owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair.
 - (4) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than six months after the first process unit shutdown.
 - (5) Delay of repair of pumps for up to six months after leak detection is allowed if the pump is replaced with (i) a dual mechanical seal system, (ii) a pump with no externally actuated shaft penetrating the pump housing, or (iii) a new system that the permittee has determined will provide better performance.
- (d) Recordkeeping Requirements
- (1) Records must be maintained that identify piping systems or process areas subject to this plan.
 - (2) Records of all inspections must be kept documenting the inspection was conducted and the date of the inspection. If no leaks are detected during the inspection, the record must indicate this result.
 - (3) When a leak is detected, the following information shall be recorded:
 - (i) Component identifier or description of location and operator name, initials, or identification number.
 - (ii) The date the leak was detected.
 - (iii) The date the initial attempt at repair is made.
 - (iv) The date of successful repair of the leak. "Successful repair" means the leak is no longer detected using the inspection procedure outlined in item 10(a).
 - (v) "Repair delayed" and the reason for the delay if a leak is not repaired within 30 days after discovery of the leak.

Item 11 REFERENCE TEST METHODS (TAPCR 1200-03-10-.01(2))

- (a) Those emissions measuring test method(s) or procedure(s) by which demonstration of compliance with the emission limitation or standard would be determined as prescribed by the applicable requirement or if requested by the Technical Secretary pursuant to 1200-03-10-.01(2). Citations for performance test methods that may appear in item 11 are shown below:

<u>Pollutant or Parameter</u>	<u>Testing Methodology</u>
Gas Volumetric Flow Rate	EPA Methods 2, 2A, 2C, and 2D as published in the current 40 CFR 60, Appendix A
Dry Molecular Weight	EPA Method 3 as published in the current 40 CFR 60, Appendix A
Oxygen and Carbon Dioxide	EPA Method 3A as published in the current 40 CFR 60, Appendix A
Moisture Content	EPA Method 4 as published in the current 40 CFR 60, Appendix A
Particulate Matter	EPA Method 5 as published in the current 40 CFR 60, Appendix A
Sulfur Dioxide	EPA Method 6, 6A, 6B, or 6C as published in the current 40 CFR 60, Appendix A
Nitrogen Oxides	EPA Method 7, 7A, 7B, 7C, 7D, or 7E as published in the current 40 CFR 60, Appendix A
Sulfuric Acid Mist and Sulfur Dioxide	EPA Method 8 as published in the current 40 CFR 60, Appendix A

<u>Pollutant or Parameter</u>	<u>Testing Methodology</u>
Carbon Monoxide	EPA Methods 10, 10A, or 10B as published in the current 40 CFR 60, Appendix A
Total Fluoride Emissions	EPA Method 13A or 13B as published in the current 40 CFR 60, Appendix A
Gaseous Organic Compounds	EPA Method 18 as published in the current 40 CFR 60, Appendix A
Volatile Organic Compounds Leaks	EPA Method 21 as published in the current 40 CFR 60, Appendix A
Total Gaseous Nonmethane Organics	EPA Method 25 as published in the current 40 CFR 60, Appendix A
Total Gaseous Organics	EPA Method 25A as published in the current 40 CFR 60, Appendix A
Hydrogen Chloride & Chlorine	EPA Method 26 or 26A as published in the current 40 CFR 60, Appendix A
Visible Emissions (six-minute average)	EPA Method 9 as published in the current 40 CFR 60, Appendix A
Visible Emissions (Fugitives from Material Sources and Smoke from Flares)	EPA Method 22 as published in the current 40 CFR 60, Appendix A
Visible Emissions (aggregate count)	Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.
Visible Emissions (Roads and Parking Areas)	Tennessee Visible Emission Evaluation Method 1 as adopted by the Tennessee Air Pollution Control Board on April 29, 1982, as amended on September 15, 1982 and as amended on August 24, 1984.
Fugitive Dust Emissions Crossing a Property Line	Tennessee Visible Emission Evaluation Method 4 as adopted by the Tennessee Air Pollution Control Board on April 16, 1986.
Sulfur Content of Fuels	EPA Method 19 as published in the current 40 CFR 60, Appendix A

- (b) In cases where the underlying applicable requirement does not specify performance testing requirements, the following shall apply:
- (1) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures listed in Item 11 unless the Technical Secretary (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method that is determined to be adequate for indicating whether a specific source is in compliance or (4) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors.
 - (2) Performance tests shall be conducted under such conditions as the Technical Secretary shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Technical Secretary such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.
 - (3) The owner or operator of an affected facility shall provide the Technical Secretary at least 30 days prior notice of any performance test to afford the Technical Secretary the opportunity to have an observer present. The Technical Secretary may waive the right to such prior notice.
- (c) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:
- (1) Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
 - (2) Safe sampling platform(s).
 - (3) Safe access to sampling platform(s).

- (4) Utilities for sampling and testing equipment.
- (d) Unless otherwise specified in the applicable requirement, each performance test shall consist of three separate runs using the applicable test method. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Technical Secretary's approval, be determined using the arithmetic mean of the results of the two other runs.
- (e) Where performance testing is technically infeasible or otherwise not specified by the permit, an engineering assessment, consisting of material or energy balances, emission factors, vapor-liquid equilibria, or other appropriate calculations, may be used to calculate emissions from an emission source or vent.

Item 12 PERIODIC MONITORING METHODS (TAPCR 1200-03-09-.02(11)(e)(iii)(I), TAPCR 1200-03-10-.02(1)(a))

- (a) Includes all of the following:
 - (1) All emissions monitoring and analysis procedures or test methods required under the applicable requirements, including any procedures and methods promulgated pursuant to sections 114(a)(3) or 504(b) of the Federal Act.
 - (2) Those monitoring, recordkeeping, and reporting requirements prescribed by the Technical Secretary in accordance with the powers granted at chapter 1200-03-10.
 - (3) Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit. These requirements assure use of such terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirements.
 - (4) Requirements concerning the use, maintenance, and installation of monitoring equipment or methods.
- (b) **Operating Plans:** Operating Plans referred to in this column are found in the permit application with page references given in this column. These Operating Plans are incorporated by reference into this Title V permit as fully enforceable conditions of the permit. Changes to an Operating Plan shall follow the applicable procedures in Section C of this permit. A permit shield does not attach to these changes unless the proposed change is processed through significant modification procedures.
- (c) **Applicability:** No monitoring or recordkeeping is required during periods during which the source is not in operation.
- (d) **Generic Periodic Monitoring Methods:** Additional requirements for periodic monitoring methods notated in item 12 by generic headings are shown below:
 - (1) **Certification:** Any emission unit or activity which is a subset of a process emission source, fuel burning installation, or incinerator, and which has a potential to emit less than five tons per year of a regulated air pollutant, by annual certification of compliance as required in item 1200-03-09-.02(11)(d)1.(ii)(I), shall be considered to meet the monitoring and related recordkeeping and reporting requirements of subpart 1200-03-09-.02(11)(e)1.(iii) and 1200-03-10-.04(2)(b)(1), and the compliance requirements of subpart 1200-03-09-.02(11)(e)3.(i) for that regulated air pollutant except where generally applicable requirements of the state implementation plan specifically impose monitoring and related record keeping and reporting requirements, or except where any applicable procedures and methods are required pursuant to rule 1200-03-10-.04. This provision shall not apply to emissions unit or activity that is subject to monitoring and related record keeping and reporting requirements under Chapters 1200-03-11 and 1200-03-31, and subparagraph 1200-03-02-.01(1)(dd).

For emission units or activities using annual certification of compliance to meet the monitoring, recordkeeping, and reporting requirements of TAPCR 1200-03-09-.02(11), potential emission calculations and other required documentation, including performance test results, material or energy balances, emission factors, vapor-liquid

equilibria, or other appropriate calculations, are included with the application(s) of record and are incorporated by reference into this permit as the basis for certification.

- (2) **Parametric Monitoring:** (only applies to applicable requirements which do not specify monitoring requirements and the permit must specify periodic monitoring or testing pursuant to 1200-03-09-.02(11)(e)1.(iii)(I)II.)
- (i) The permittee must implement a system to monitor the control system parameters or process operating parameters shown in item 12 utilizing the averaging times shown.
 - (ii) The permittee must develop and obtain the approval of the Technical Secretary of an operating plan that includes a description of the parameter(s) to be monitored; an explanation for the selection of the parameter; description and location (if applicable) of monitoring equipment; the range (and the rationale for establishing the range) for each monitored parameter that indicates proper operation and maintenance of the control technology or pollution prevention measure; monitoring frequency; and any necessary data collection/compression procedures.
 - (iii) An excursion means a departure from an indicator range established for monitoring by this Title V permit, consistent with any averaging period specified for averaging the results of the monitoring.
 - (iv) Operation of each air contaminant source shall be in accordance with the provisions and stipulations set forth in the operating permit, all provisions of TAPCR 1200-03 and 0400-30, and all provisions of the Tennessee Air Quality Act. Some excursions, as defined under TAPCR 1200-03-09-.02(11)(b)31 or in the operating permit and which occur during periodic monitoring for compliance assurance, may be excused by the Technical Secretary. This authority is not extended to excursions that demonstrate noncompliance with an applicable emission limitation.
 - (v) For continuous monitoring systems, the following shall apply;
 - (I) The monitoring system shall measure data values at least once every 15 minutes.
 - (II) The owner or operator shall record either:
 - (A) Each measured value; or
 - (B) At least one measured value every 15 minutes; or
 - (C) Block average values for 15-minute or shorter periods calculated from all measured data values during each period or at least one measured data value per minute if measured more frequently than once per minute.
 - (III) Except as noted in Item 12(d)(2)(vi) (data requirements for valid one-hour averages), for a given averaging period, a valid average must include at least 75% percent of the measured values within the averaging period.
 - (vi) Where the permit requires 24-hour block averages of each continuously monitored parameter, the 24-hour block average shall be calculated from midnight of each day to midnight of the following day, unless a different averaging period is specified in the approved operating plan. The 24-hour block average shall be calculated as either the average of all values for a monitored parameter recorded under (d)(2)(vi)(ii) above during the 24-hour period or as the average of all valid one-hour averages for a monitored parameter recorded during the 24-hour period. If one-hour averages are used, they shall be calculated from four or more equally spaced data averages over each one-hour period, except during periods of monitoring system breakdown, monitoring system repairs, and periods of non-operation of the source. During these periods, a valid one-hour average shall consist of at least two 15-minute averages.
 - (vii) Data recorded during periods of monitoring system breakdown, monitoring system repairs, and periods of non-operation of the source shall not be included in the data averages. Records of the times and durations of all such periods and any other periods during process or control device operation when monitors are not

operating shall be retained at the source location and kept available for inspection by the Technical Secretary or authorized representative.

- (viii) It shall also be acceptable to demonstrate that the monitored parameter is within the range stated in the operating plan for an applicable averaging period by retaining records of all valid measured values obtained during the averaging period where each valid measured value is within the range. For example, when a 24-hour block average is required, compliance may be assured by showing that all valid measurements taken at 15-minute intervals during a 24-hour period are within the applicable range as stated in the operating plan for the parameter. In these cases, it is not mandatory that an average be calculated.
- (ix) Pursuant to TAPCR 1200-03-10-.04(2)(a)2, monitoring methods must have at least a 95% operational availability during each semiannual reporting period. Missing data in excess of these levels shall be grounds for enforcement action. Each operational availability of less than 100%, and each missing or invalid averaging period, must be identified in the semiannual report required by **Condition E2-1** of this permit.

- (3) **Tank Monitoring:** The permittee must develop and obtain the approval of the Technical Secretary of an Operating Plan for demonstrating compliance with annual emission limits for a group of storage/process vessels. Table Notes from "Parametric Monitoring" above also apply to Operating Plans that employ continuous parametric monitoring systems (CPMS) for tanks. Tanks that have potential VOC emissions less than five tons per year qualify for meeting the monitoring and related recordkeeping and reporting requirements of subpart 1200-03-09-.02(11)(e)1.(iii) and the compliance requirements of subpart 1200-03-09-.02(11)(e)3.(i) by certification of compliance pursuant to part 1200-03-09-.04(5)(c).

(e) General Requirements for Quarterly, Semiannual, and Annual Periodic Monitoring

Except as specifically indicated otherwise within this permit (or by an applicable requirement referenced within this permit), the following requirements shall apply to periodic monitoring, recordkeeping, or testing.

- (1) Quarterly monitoring shall be completed at least once during each calendar quarter (January 1 through March 31 of each calendar year, April 1 through June 30 of each calendar year, July 1 through September 30 of each calendar year, and October 1 through December 31 of each calendar year).
- (2) Semiannual monitoring shall be completed at least once during each semiannual period corresponding to the semiannual reporting periods specified in Condition E2-1(a) of this permit.
- (3) Annual monitoring shall be completed at least once per each 12-month period corresponding to the annual reporting period specified in Condition E2-1(b) of this permit.
- (4) Periodic monitoring may be delayed for equipment that is out of service for an extended period, as follows:
 - (i) For quarterly periodic monitoring, if equipment is out of service for at least 45 consecutive days during the calendar quarter, periodic monitoring must be completed within 90 operating days of the previous monitoring event.
 - (ii) For semiannual periodic monitoring, if equipment is out of service for at least 90 consecutive days during the calendar semiannual period, periodic monitoring must be completed within 180 operating days of the previous monitoring event.
 - (iii) For annual periodic monitoring, if equipment is out of service for at least 180 consecutive days during the calendar year, periodic monitoring must be completed within 365 operating days of the previous monitoring event.

(f) Recordkeeping: Data Entry Requirements

- (1) For daily recordkeeping, all data, including results of all calculations, must be entered into the log no later than 14 days from the end of the day for which the data is required.

- (2) For weekly recordkeeping, all data, including results of all calculations, must be entered into the log no later than 14 days from the end of the week for which the data is required.
- (3) For all other recordkeeping, all data, including results of all calculations, must be entered into the log no later than 30 days from the date for which the data is required.

END OF PERMIT NUMBER 581499

ATTACHMENT 1

**OPACITY MATRIX DECISION TREE for
VISIBLE EMISSION EVALUATION METHOD 9**

Dated September 11, 2013

Decision Tree PM for Opacity for Sources Utilizing EPA Method 9*

Notes:

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standards set forth in the permit. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PM required.*

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing EPA Method 9. The observer must be properly certified to conduct valid evaluations.

Typical Pollutants
Particulates, VOC, CO, SO₂, NO_x, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

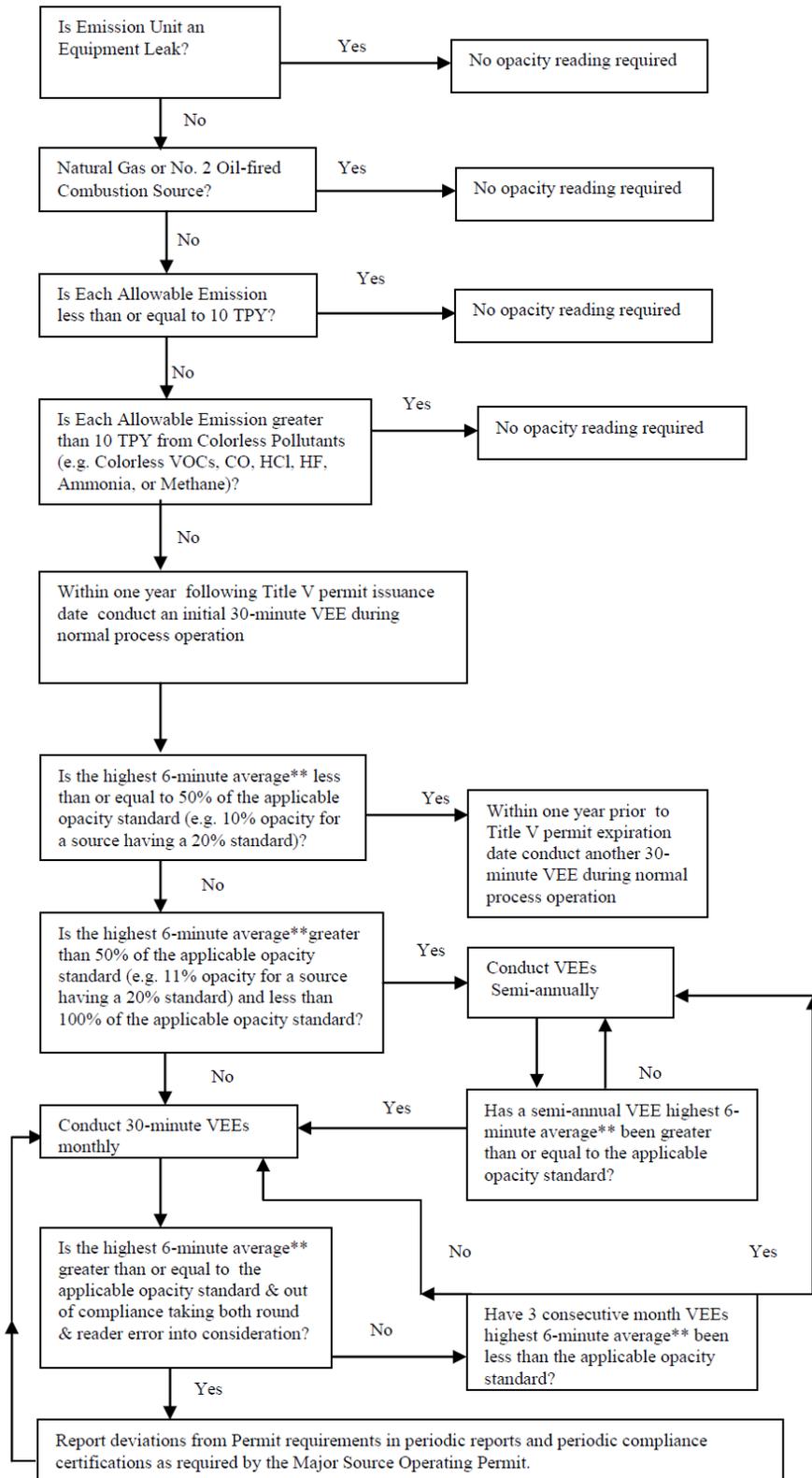
Reader Error
EPA Method 9, Non-NSPS or NESHAPS stipulated opacity standards:
The TAPCD guidance is to declare non-compliance when the highest six-minute average** exceeds the standard plus 6.8% opacity (e.g. 26.8% for a 20% standard).

EPA Method 9, NSPS or NESHAPS stipulate opacity standards:
EPA guidance is to allow only engineering round. No allowance for reader error is given.

*Not applicable to Asbestos manufacturing subject to 40 CFR 61.142

**Or second highest six-minute average, if the source has an exemption period stipulated in either the regulations or in the permit.

Dated June 18, 1996
Amended September 11, 2013



ATTACHMENT 2

**SPECIFIC APPLICABILITY DETERMINATIONS
FOR 40 CFR 60 (NSPS) and 40 CFR 63 (MACT)
TO MSOP-03**

40 CFR Part 63 Subpart F Specific Applicability Determinations for MSOP-03				
PES	HON CMPU	Identification	Category	Rule Citation
Process Units Exempt from Standards				
B-335-1	Alcohol Production	Entire CMPU	Process unit that does not use as a reactant or manufacture as a product or co-product, any organic HAP listed in Table 2 of Subpart F. Process unit is required to comply with the requirements of 63.103(e) and is not subject to Subpart A, G, or H.	Requirements – §63.100(c) Recordkeeping – §63.103(e) Reporting – N/A
B-352-1	Organic Acid and Anhydride	Acetic acid and anhydride refining only		
B-337-3	Acetic Anhydride	When the PES is used to refine acetic acid and acetic anhydride with impurity HAP only		
B-338-3	Acetic Anhydride			
Maintenance Wastewaters				
B-335-1	Alcohol Production	Maintenance wastewaters subject to Subpart F	Maintenance wastewaters that contain organic HAPs listed in Table 9 of Part 63 Subpart G.	Plan Requirements – §63.105(b) through (d) Recordkeeping – §63.105(e) Reporting – N/A
B-336-1	Methyl Acetate			
B-337-3	Acetic Anhydride			
B-352-1	Organic Acid and Anhydride			
B-354-1	Methyl Acetate			
B-486-1	Methanol Plant 29, Methyl Acetate			
Heat Exchange Systems				
B-335-1	Alcohol Production	Heat exchange systems subject to Subpart F	Heat exchange system used to cool process equipment in a CMPU meeting the conditions of 63.100 (b)(1) through (3) (unless conditions in 63.100(a)(1) through (6) are met).	Monitoring Requirements – §63.104(b) and (c) Leak Repair Requirements – §63.104(d) and (e) Recordkeeping – §63.104(f)(1) Reporting – §63.104(f)(2)
B-336-1	Methyl Acetate			
B-337-3	Acetic Anhydride			
B-352-1	Organic Acid and Anhydride			
B-354-1	Methyl Acetate			
B-486-1	Methanol Plant 29, Methyl Acetate			
Gaseous Streams Routed to a Fuel Gas System				
B-335-1	Alcohol Production	Triangle F	Gaseous streams routed to a fuel gas system (see §63.101 for definitions) are not process vents and have no applicable requirements under 40 CFR 63 Subparts F or G.	§63.107(h)(3)
B-337-3	Acetic Anhydride			
B-352-1	Organic Acid and Anhydride			
B-486-1	Methanol Plant 29, Methyl Acetate			
General Reporting and Recordkeeping Provisions				
B-335-1	Alcohol Production	Sources subject to Subpart F, G, or H	General recordkeeping and reporting requirements including performance test notifications, record retention requirements, SSM recordkeeping, NOCs and Periodic Reports.	§63.103
B-336-1	Methyl Acetate			
B-337-3	Acetic Anhydride			
B-352-1	Organic Acid and Anhydride			
B-354-1	Methyl Acetate			
B-486-1	Methanol Plant 29, Methyl Acetate			

40 CFR Part 63 Subpart G Specific Applicability Determinations for MSOP-03				
PES	HON CMPU	Identification	Category	Rule Citation
General Conditions				
B-335-1	All CMPUs	Alcohol Production	Discarded liquid or solid organic materials with a concentration of greater than 10,000 parts per million of Table 9 compounds from a CMPU to water or wastewater require the receiving stream be managed and treated as a Group 1 wastewater stream. This does not apply to: (1) Equipment leaks; (2) Activities included in maintenance or SSM plans; (3) Spills; or (4) (4) Appropriately sized samples.	§63.132(f)
B-337-3		Acetic Anhydride		
B-352-1		Organic Acid and Anhydride Production		
B-354-1		Methyl Acetate		
General Reporting and Continuous Records				
B-335-1	All CMPUs	Sources subject to Subpart G, as applicable	Initial Notification	§63.151
B-336-1			General Reporting and Continuous Records	§63.152
B-337-3			Applicable Portions of Subpart A (General Provisions)	Table 1A to Subpart G
B-352-1				
B-354-1				
Process Vents				
B-336-1	Methyl Acetate	Triangles F, G, H, and I	Group 2 Process Vent with a TRE greater than 4.0	Reference Control Technology: §63.113(a)(3), (e) Group Determination: §63.115(a), (d), (e), (f) Reporting and Recordkeeping: §63.117(b) §63.118(c), (g), (h), (k)
B-354-1	Methyl Acetate	Triangles F and G		

40 CFR Part 63 Subpart G Specific Applicability Determinations for MSOP-03				
PES	HON CMPU	Identification	Category	Rule Citation
Storage Vessels				
B-335-1	Alcohol Production	Tanks 19D-52 and 19D-53 (Vent A) Tank 10D-2 (Vent B)*	Group 1 storage vessel storing a liquid for which the maximum true vapor pressure of organic HAPs is less than 76.6 kPa (11.11 psia) that routes emissions to a closed vent system and control device, other than a flare.	Reference Control Technology: §63.119(a)(1), (g) Procedures to Determine Compliance: §63.120(d)(8)(iv) Reporting and Recordkeeping: §63.122(a) §63.123(a), (h)
B-336-1	Methyl Acetate	Tank 21D-4*		
B-354-1	Methyl Acetate	Tank 31D-2, Tank 29D-20, and Tank 29D-21 (Vent A)**		
B-336-1	Methyl Acetate	Tanks 21D-2 and 21D-3	Group 2 Storage Vessel	§63.119(a)(3)
Process Wastewater				
B-335-1	Alcohol Production	Hexagon G	Group 2 process wastewater stream	General: §63.132(a)(1)(i), (a)(3), (c) Performance Standards: N/A Test Methods and Procedures: §63.144(a)(1), (b), (c) Reporting and Recordkeeping: §63.146(b)(1), (b)(2) §63.147(b)(8), (f)
B-337-3	Acetic Anhydride	Hexagons G and H		
B-352-1	Organic Acid and Anhydride Production	Hexagons G and H		
B-354-1	Methyl Acetate	Hexagon D		
B-336-1	Methyl Acetate	Hexagon E	Existing Group 2 Wastewater Stream	§63.132(a)(3)
Sources Subject to Overlap Provisions				
B-354-1	Methyl Acetate	Tank 31D-2, Tank 29D-20, and Tank 29D-21 (Vent A)**	Group 1 or Group 2 storage vessel that is also subject to 40 CFR part 60 subpart Kb and uses subpart G to demonstrate compliance with subpart Kb.	§63.110(b)(1)
* See the operating plan in the Title V application dated June 19, 2023, (PES-B-335-1 design evaluation and monitoring plans for scrubbers 19C-26 and 101C-2). See the operating plan in the Title V application dated June 19, 2023 (PES B-336-1 design evaluation and monitoring plans for scrubber 21C-30).				
** See the operating plan in the Title V application dated June 19, 2023, PES-B-354-1 (design evaluation and monitoring plans for scrubber 31C-30).				

40 CFR Part 63 Subpart H Specific Applicability Determinations for MSOP-03				
PES	HON CMPU	Identification	Category	Rule Citation
B-335-1	Alcohol Production	Applicable portions of Flow Diagram Point D in OHAP service	Work practice standards for pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, instrumentation systems, and control devices or closed vent systems that are intended to operate in organic hazardous air pollutant service 300 hours or more during the calendar year.	Standards: §63.162 through 169, §63.171 through §63.176 Quality Improvement Programs: §63.175 and §63.176 Test Methods and Procedures: §63.180 Recordkeeping and Reporting: §63.181 and §63.182 Applicable Portions of General Provisions: Table 4
B-336-1	Methyl Acetate	Applicable portions of Flow Diagram Point C in OHAP service		
B-337-3	Acetic Anhydride	Applicable portions of Flow Diagram Points D and E in OHAP service		
B-352-1	Acetic Anhydride	Applicable portions of Flow Diagram Points B and C in OHAP service		
B354-1	Methyl Acetate	Applicable portions of Flow Diagram Points B and C in OHAP service		
B-486-1	Methanol Plant 29 and Methyl Acetate	Applicable portions of Flow Diagram Point E in OHAP service		
B-335-1	Alcohol Production	Surge Control Vessel 19D-51 (Vent A)	Surge control vessel at an existing source that meets the following criteria: <ul style="list-style-type: none"> Meets the conditions specified in table 2 of subpart H; and Emissions are not routed back to the process. 	Standards: §63.170 and 172 Recordkeeping and Reporting: §63.181 and §63.182 Applicable Portions of General Provisions: Table 4
B-337-3	Acetic Anhydride	Applicable portions of Flow Diagram Points D and E in both OHAP and VOC service	Equipment subject to the provisions of 40 CFR part 60 and Subpart H	§63.160(b)(1)
B-352-1	Acetic Anhydride	Applicable portions of Flow Diagram Points B and C in both OHAP and VOC service		
B-354-1	Methyl Acetate	Applicable portions of Flow Diagram Points B and C in both OHAP and VOC service		
B-486-1	Methanol Plant 29 and Methyl Acetate	Applicable portions of Flow Diagram Points E in both OHAP and VOC service		

40 CFR Part 60			
Specific Applicability Determinations for MSOP-03			
PES	Identification	Category	Rule Citation
Subpart Kb – Storage Vessels			
B-354-1	Tank 31D-2 – Vent A Tank 29D-20 – Vent A Tank 29D-21 – Vent A	Each storage vessel with a capacity greater than or equal to 75 m ³ (19,813 gal) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984, and for which compliance is demonstrated through compliance with 40 CFR 63 Subpart G (HON) or 40 CFR 63 Subpart FFFF (MON).	Applicability: §60.110b(a) Requirements: See APC 30 Attachments for MON and/or HON Overlap Provisions
Subpart VV - Equipment Leaks			
B-337-3	Flow Diagram Points D and E	Applicable portions in VOC service and not in HAP service: Each affected facility that commences construction, reconstruction, or modification after January 5, 1981, and on or before November 7, 2006.	Applicability: §60.480(a), (b), and (f) Standards: §60.482-1 through §60.482-10 Alternative Standards for Valves: §60.483-2 Test Methods and Procedures: §60.485 Recordkeeping Requirements: §60.486 Reporting Requirements: §60.487
B-338-3	Flow Diagram Point D		
B-352-1	Flow Diagram Points B and C		
B-486-1	Diagram Point E		
B-354-1	Flow Diagram Points B and C	Sources Subject to Overlap Provisions Each affected facility that commences construction, reconstruction, or modification after January 5, 1981, and on or before November 7, 2006, and for which compliance is demonstrated through compliance with 40 CFR 63 Subpart G (HON) or 40 CFR 63 Subpart FFFF (MON).	Applicability: §60.480(a), (b), and (f) <i>See APC 30 Attachments for MON and/or HON Overlap Provisions</i>
B-337-3	Flow Diagram Points D and E	Applicable portions in acetic acid and/or acetic anhydride service: Alternative monitoring for equipment in in acetic acid and/or acetic anhydride service (letter from Beverly Banister, EPA Region 4 to Barry Stephens, TDAPC, March 30, 2005).**	§60.13(i)
B-338-3	Flow Diagram Point D		
B-352-1	Flow Diagram Points B and C		
B-354-1	Flow Diagram Points B and C		
B-337-3	Flow Diagram Points D and E	Indoor equipment in methyl iodide service: Alternative monitoring for indoor equipment in methyl iodide service (letter from Beverly Banister, EPA Region 4 to Barry Stephens, TDAPC, April 25, 2008).**	§60.13(i)
B-338-3	Flow Diagram Point D		
B-352-1	Flow Diagram Points B and C		

** See the attachments to the Title V application dated June 19, 2023, for NSPS VV alternative monitoring plans.

40 CFR Part 60 Subpart NNN Specific Applicability Determinations for MSOP-03			
PES	Identification	Category	Rule Citation
Subpart NNN – Distillation			
B-486-1	Triangle F	<p><u>TRE<1.0; Boiler/Process Heater > 150 MMBtu/hr</u> Each affected facility that is part of a process unit that produces any of the chemicals listed in §60.667 as a product, co-product, by-product, or intermediate, for which construction, modification, or reconstruction commenced after December 30, 1983, has a TRE index value less than or equal to 1.0, and uses a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hr) or greater to comply with §60.662(a).</p>	<p>Applicability: §60.660(a), (b) Standards: §60.662(a) Monitoring of Emissions & Operations: §§60.663(c), (d) Test Methods & Procedures: §60.664(c) Reporting & Recordkeeping: §60.665(a), (b)(2)(i), (c)(3), (c)(4), (d), (e), (k), (l)</p>
B-352-1			
B-486-1	Triangle F	<p><u>TRE<1.0; Flare</u> Each affected facility that is part of a process unit that produces any of the chemicals listed in §60.667 as a product, co-product, by-product, or intermediate, for which construction, modification, or reconstruction commenced after December 30, 1983, has a TRE index value less than or equal to 1.0, and uses a flare to comply with §60.662(b).</p>	<p>Applicability: §60.660(a), (b) Standards: §60.662(b) Monitoring of Emissions & Operations: §60.663(b) Test Methods & Procedures: §60.664(d), (e) Reporting & Recordkeeping: §60.665(a), (b)(3), (d), (f), (k), (l)</p>
B-352-1			
<p>* The source may comply using either a boiler (§60.662(a)) or a flare (§60.662(b)). A boiler is the primary control alternative.</p>			

40 CFR Part 60 Subpart RRR Specific Applicability Determinations for MSOP-03			
PES	Identification	Category	Rule Citation
Subpart RRR – Reactors			
B-486-1	Triangle F	<p><u>TRE<1.0; Boiler/Process Heater > 150 MMBtu/hr</u> Each affected facility that is part of a process unit that produces any of the chemicals listed in §60.707 as a product, co-product, byproduct, or intermediate, for which construction, modification, or reconstruction commenced after June 29, 1990, has a TRE index value less than or equal to 1.0, and uses a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hr) or greater to comply with §60.702(a).</p>	<p>Applicability: §60.700(a), (b) Standards: §60.702(a) Monitoring of Emissions & Operations: §60.703(c)(1) Test Methods & Procedures: §60.704(b)(5)(i) Reporting & Recordkeeping: §60.705(a), (b)(2)(i), (c)(4), (d), (k), (l), (s)</p>
B-486-1	Triangle F	<p><u>TRE<1.0; Flare</u> Each affected facility that is part of a process unit that produces any of the chemicals listed in §60.707 as a product, co-product, byproduct, or intermediate, for which construction, modification, or reconstruction commenced after June 29, 1990, has a TRE index value less than or equal to 1.0, and uses a flare to comply with §60.702(b).</p>	<p>Applicability: §60.700(a), (b) Standards: §60.702(b) Monitoring of Emissions & Operations: §60.703(b) Test Methods & Procedures: §60.704(c) and (d) Reporting & Recordkeeping: §60.705(a), (b)(3), (d), (e), (k), (l), (s)</p>

HON Overlap with NSPS Regulations Specific Applicability Determinations for MSOP-03					
PES	Identification	HON Category	NSPS Overlap	Compliance Requirement	Rule Citation
B-337-3	Applicable portions of Flow Diagrams Points D and E in both HAP and VOC service	40 CFR 63 Subpart H	40 CFR 60 Subpart VV	Exempt from all provisions of Subpart VV	§63.160(b)(1)
B-352-1	Applicable portions of Flow Diagrams Points B and C in both OHAP and VOC service				
B-354-1	Applicable portions of Flow Diagrams Points B and C in both OHAP and VOC service				
B-486-1	Applicable portions of Flow Diagrams Point E in both HAP and VOC service				
B-354-1	Tank 31D-2 – Vent A Tank 29D-20 – Vent A Tank 29D-21 – Vent A	Group 1 or Group 2 Storage Vessel (40 CFR 63 Subpart G)	40 CFR 60 Kb	Exempt from all provisions of Subpart Kb	§63.160(b)(1)

ATTACHMENT 3

**COMPLIANCE ASSURANCE MONITORING (CAM) PLANS
FOR MSOP-03**

**Compliance Assurance Monitoring General Requirements
MSOP-03**

Identification	Requirement	Rule Citation
Operation of Approved Monitoring		
PES B-337-3, Vent B PES B-352-1, Vent A	Proper maintenance	§64.7(b)
	Continued operation	§64.7(c)
	Response to excursions or exceedances	§64.7(d)
	Documentation of need for improved monitoring	§64.7(e)
Data Availability		
PES B-337-3, Vent B PES B-352-1, Vent A Comply with the data availability requirements specified in Item 12 of the Table Notes, or with specific requirements established in TAPCR 1200-03, 40 CFR, or permit conditions.	Minimum Data Availability	§64.6(c)(4)
Quality Improvement Plan (QIP)		
PES B-337-3, Vent B PES B-352-1, Vent A The permittee shall comply with the provisions of §64.8 upon written notice from the Technical Secretary.	Requirement to submit QIP	§64.8(a)
	QIP elements	§64.8(b)
	Deadline for QIP development	§64.8(c)
	Reasonable changes to QIP	§64.8(d)
	QIP implementation	§64.8(e)
Reporting and Recordkeeping Requirements		
PES B-337-3, Vent B PES B-352-1, Vent A	Reporting requirements	§64.9(a)
	Recordkeeping requirements	§64.9(b)

**Compliance Assurance Monitoring (CAM) Plan
MSOP-03, PES B-337-3**

Stack or Flow Diagram Point	Vent B						
Pollutant	VOC						
Description of Monitoring Protocol (§64.4(a)(1), §64.4(b))	<p>Parametric Monitoring:</p> <ol style="list-style-type: none"> 24-hour block average flow rate of water feed to the scrubber; 12-month moving average of combined volumetric level increases of Tanks 22D-50, 22D-51, 22D-60, 22D-61, 22D-100, and 22D-20. 						
Equipment (§64.4(a)(3))	Flow transmitters to measure scrubber water flow rate, level transmitters to measure tank volumes.						
Installation (§64.4(a)(3))	Flow transmitters in scrubber water feed line; level transmitters in Tanks 22D-50, 22D-51, 22D-60, 22D-61, 22D-100, and 22D-20.						
Parametric Relationship (§64.4(a)(2))	The water flowrate and the combined net volumetric tank level increase have been identified through computer simulation to be the key parameters in assuring proper operation of the scrubber and compliance with the VOC and other organics emissions limits.						
Indicators	<p>To ensure proper operation of the scrubber and compliance with emissions limits, the following parameters must be kept within the specified limits shown below:</p> <table border="1" data-bbox="570 892 1511 1003"> <thead> <tr> <th>Parameter</th> <th>Operating Range</th> </tr> </thead> <tbody> <tr> <td>Inlet Water Feed</td> <td>≥ 0.94 gal/min</td> </tr> <tr> <td>Tank Volumetric Level Increases¹</td> <td>≤ 52,300 gal/hr</td> </tr> </tbody> </table> <p>¹Net gallons per hour vapor displaced out of Tanks 22D-50, 22D-51, 22D-60, 22D-61, 22D-100, and 22D-20</p> <p>An excursion is defined as any 24-hour block in which the average scrubber water flow rate is less than 0.94 gallons per minute or any month in which the 12-month moving average volumetric level increase (sum of increases in Tanks 22D-50, 22D-51, 22D-60, 22D-61, 22D-100, and 22D-20) is greater than 52,300 gallons per hour.</p> <p>Note: Routine maintenance is performed on the scrubber approximately every 3 years, and water flow rate during maintenance will be zero. The process will not be operating, but minimal emissions will occur from breathing and continuous losses from the tanks that normally vent to the scrubber. Such events shall not be considered parameter excursions as defined in the Table Notes to this permit.</p>	Parameter	Operating Range	Inlet Water Feed	≥ 0.94 gal/min	Tank Volumetric Level Increases ¹	≤ 52,300 gal/hr
Parameter	Operating Range						
Inlet Water Feed	≥ 0.94 gal/min						
Tank Volumetric Level Increases ¹	≤ 52,300 gal/hr						
Measurement Frequency (§64.4(a)(3))	Continuous (measurement taken at least once every 15 minutes).						
QA/QC Practices (§64.4(a)(3))	The flow monitor will be calibrated once per calendar year. Level transmitters shall be maintained in a manner that is adequate to ensure continuing validity of the collected data.						
Reference	Operating plan in the Title V application dated June 19, 2023, PES B-337-3, page 11.						

**Compliance Assurance Monitoring (CAM) Plan
MSOP-03, PES B-352-1**

Stack or Flow Diagram Point	Vent A						
Pollutant	VOC						
Description of Monitoring Protocol (§64.4(a)(1), §64.4(b))	<p>Parametric Monitoring:</p> <ol style="list-style-type: none"> 24-hour block average flow rate of water feed to the scrubber. 12-month moving average of combined volumetric level increases of Tanks 32D-50, 32D-51, 32D-60, 32D-61, 32D-100, 32C-120, and 32D-20. 						
Equipment (§64.4(a)(3))	<ol style="list-style-type: none"> Flow transmitters to measure scrubber water flow rate. Level transmitters to measure tank volumes, and temperature transmitters to measure tank temperatures. 						
Installation (§64.4(a)(3))	Flow transmitters in scrubber water feed line; level transmitters in Tanks 32D-50, 32D-51, 32D-60, 32D-61, 32D-100, 32C-120, and 32D-20.						
Parametric Relationship (§64.4(a)(2))	The water flowrate and the combined net volumetric tank level increase have been identified through computer simulation to be the key parameters in assuring proper operation of the scrubber.						
Indicators	<p>To ensure proper operation of the scrubber and compliance with applicable emissions limits, the following parameters must be kept within the specified limits shown below:</p> <table border="1" data-bbox="613 835 1511 940"> <thead> <tr> <th>Parameter</th> <th>Operational Range</th> </tr> </thead> <tbody> <tr> <td>Inlet Water Feed Rate</td> <td>≥ 1.1 gal/min</td> </tr> <tr> <td>Tank Volumetric Level Increases¹</td> <td>≤ 52,300 gal/hr</td> </tr> </tbody> </table> <p>¹Net gallons per hour vapor displaced out of Tanks 32D-50, 32D-51, 32D-60, 32D-61, 32D-100, 32C-120, and 32D-20</p> <p>An excursion is defined as any 24-hour block in which the average scrubber water flow rate is less than 1.1 gallons per minute, or any month in which the average volumetric level increase (sum of increases in Tanks 32D-50, 32D-51, 32D-60, 32D-61, 32D-100, 32C-120, and 32D-20) is greater than 52,300 gallons per hour.</p> <p>Note #1: Routine maintenance is performed on the scrubber approximately every 3-4 years, and water flow rate during maintenance will be zero. The process will not be operating, but minimal emissions will occur from breathing and continuous losses from the tanks that normally vent to the scrubber. Such events shall not be considered parameter excursions as defined in the Table Notes to this permit.</p> <p>Note #2: Acid flush of the scrubber will be performed approximately monthly in order to prevent the buildup of biological growth in the water section of the scrubber. During this monthly maintenance activity, emissions may be higher due to the acid flush.</p>	Parameter	Operational Range	Inlet Water Feed Rate	≥ 1.1 gal/min	Tank Volumetric Level Increases ¹	≤ 52,300 gal/hr
Parameter	Operational Range						
Inlet Water Feed Rate	≥ 1.1 gal/min						
Tank Volumetric Level Increases ¹	≤ 52,300 gal/hr						
Measurement Frequency (§64.4(a)(3))	Continuous (measurement taken at least once every 15 minutes).						
QA/QC Practices (§64.4(a)(3))	The flow monitor will be calibrated once per calendar year. Temperature and level transmitters shall be maintained in a manner that is adequate to ensure continuing validity of the collected data.						
Reference	Operating plan in the Title V application dated June 19, 2023, PES B-352-1, page 12.						

ATTACHMENT 4

TITLE V FEE SELECTION FORM APC 36 (CN-1583)



TITLE V FEE SELECTION

Type or print and submit to the email address above.			
FACILITY INFORMATION			
1. Organization's legal name and SOS control number [as registered with the TN Secretary of State (SOS)]			
2. Site name (if different from legal name)			
3. Site address (St./Rd./Hwy.)			County name
City			Zip code
4. Emission source reference number		5. Title V permit number	
FEE SELECTION			
This fee selection is effective beginning January 1, _____. When approved, this selection will be effective until a new Fee Selection form is submitted. Fee Selection forms must be submitted on or before December 31 of the annual accounting period.			
6. Payment Schedule (choose one):			
Calendar Year Basis (January 1 – December 31) <input type="checkbox"/>		Fiscal Year Basis (July 1 – June 30) <input type="checkbox"/>	
7. Payment Basis (choose one):			
Actual Emissions Basis <input type="checkbox"/> Allowable Emissions Basis <input type="checkbox"/> Combination of Actual and Allowable Emissions Basis <input type="checkbox"/>			
8. If Payment Basis is "Actual Emissions" or "Combination of Actual and Allowable Emissions", complete the following table for each permitted source and each pollutant for which fees are due for that source. See instructions for further details.			
Source ID	Pollutant	Allowable or Actual Emissions	If allowable emissions: Specify condition number and limit. If actual emissions: Describe calculation method and provide example. Provide condition number that specifies method, if applicable.



STATEMENT OF BASIS
Page 1 of 13
TDEC Division of Air Pollution Control

Facility Name: Eastman Chemical Company
Permit Number: 581499
Permit Writer: ETT

Facility ID Number: 82-0003
Date Application Received: June 19, 2023
Date Application Completed: June 19, 2023

FACILITY CATEGORY

This facility is a major source of emissions. The facility-wide PTE of one or more regulated air pollutants (Carbon Monoxide (CO), Volatile Organic Compounds (VOCs), Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Particulate Matter (PM/PM₁₀/PM_{2.5}), a single Hazardous Air Pollutant (HAP), and a combination of Hazardous Air Pollutants (HAPs)) is at or above the Prevention of Significant Deterioration (PSD) and Title V major source thresholds. The PSD applicability threshold for this facility is 100 TPY because it is one of the 28 listed source categories in the PSD regulations.

FACILITY DESCRIPTION

Chemical Manufacturing Facility. MSOP-03 is part of the Chemical Manufacturing Division at the facility.

PROJECT DESCRIPTION

Eastman Chemical Company is requesting a Title V Operating Permit Renewal. MSOP-03 contains a multitude of chemical processes which includes the production of alcohol (Source 139), methyl acetate (Source 140), esters (Source 141), organic acids and anhydrides (Source 143), cyclohexane dicarboxylic acid (Source 72), methanol and dimethyl ether (source 147). MSOP-03 also includes two cooling tower water systems (Source 142 and 145) and a recovery of the carbonylation reactor catalyst (Source 144).

Controls in MSOP-03 include water scrubbers, acid scrubbers, and filters.

COMPLIANCE STATUS

This facility is located in a nonattainment area for the SO₂ NAAQS. Pursuant to TAPCR 1200-03-09-.01(5)(b)2.(ii), minor stationary sources and minor modifications proposing to construct in a nonattainment area must utilize best available control technology (BACT), as defined in 1200-03-09-.01(2)(d), for the nonattainment pollutant as specified by the Technical Secretary at the time of the completed permit application.

The date of the last inspection occurred in October 12, 2023. The facility is in compliance with the applicable requirements of the permit.

COLLOCATION DETERMINATION

Collocation is not applicable to this facility.

PUBLIC NOTICE

This Title V Permit (Renewal) will undergo a 30-day public notice period and a 45-day EPA comment period in accordance with TAPCR 1200-03-09-.02(11). The notice was published on the TDEC website on <date>.

The affected states/counties were notified on <date>.

- Kentucky
- North Carolina
- Virginia

ADDITIONAL PUBLIC PARTICIPATION

There were no public/epa comments for this permit.

There were comments on this permit as follows: (include any comments from the public/EPA)

A public hearing was held for this permit on <date>.



STATEMENT OF BASIS
Page 2 of 13
TDEC Division of Air Pollution Control

Facility Name: Eastman Chemical Company
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Permit Writer: ETT

Facility ID Number: 82-0003
Date Application Received: June 19, 2023
Date Application Completed: June 19, 2023

A public meeting was held for this permit on <date>.

Table 1A: FACILITY EMISSION SOURCES at MSOP-03

<i>Source Number</i>	<i>PES and Source Description</i>	<i>Permitted</i>	<i>Exempt/Insignificant</i>	<i>PBR</i>
139	B-335-1 Alcohol Production	X		
141	B-336-1 Ester Production	X		
143	B-337-3 Organic Acid and Anhydride Production	X		
144	B-338-3 Recovery of Carbonylation Reactor Catalyst	X		
145	B-351-8 Cooling Tower Water System	X		
72	B-352-1 Organic Acid and Anhydride Production	X		
140	B-354-1 Production of Methyl Acetate	X		
142	B-356-2 Cooling Tower Water System	X		
146	B-472-1 Cyclohexane Dicarboxylic Acid Production	X		
147	B-486-1 Production of Methanol or Dimethyl Ether	X		

Table 1B: CHANGES SINCE LAST PERMIT ISSUANCE

<i>Condition or Section</i>	<i>Description</i>	<i>Date</i>
Title V Operating Permit Renewal 581499		TBD
All sections	Remove PES B-572-1: Acetyl Processing Facility from permit	
Sections A-D	Updated conditions to use new standard language and citations.	
Section D	Added a new general condition D15: Maintenance and Repair of Sources	
E1.	Updated Fee Emission Summary Table, removing HAPs with and without Standards.	
E1. Notes	Updated "Annual Accounting Period (AAP)", "N/A", and "Actual Emissions Analysis is Required (AEAR)" definitions. Defined "Hazardous Air Pollutants Not Included Above" and "Miscellaneous Pollutants Not Listed Above".	
E1.	Updated fee informational table. Updated Division of Fiscal Services address and submission for actual emission analyses.	



STATEMENT OF BASIS
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TDEC Division of Air Pollution Control

Facility Name: Eastman Chemical Company
Permit Number: 581499
Permit Writer: ETT

Facility ID Number: 82-0003
Date Application Received: June 19, 2023
Date Application Completed: June 19, 2023

<i>Condition or Section</i>	<i>Description</i>	<i>Date</i>																
Title V Operating Permit Renewal 581499		TBD																
Section E2.	Conditions identifying applicable NSPS and NESHAP standards were added and conditions were renumbered as followed: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Permit 573862</th> <th>Condition</th> <th>Permit 581499</th> <th>Condition</th> </tr> </thead> <tbody> <tr> <td>N/A</td> <td>Emissions Inventory Requirements (State-Only)</td> <td>E2-6.</td> <td>New Source Performance Standards (40 CFR Part 60)</td> </tr> <tr> <td>N/A</td> <td>N/A</td> <td>E2-7.</td> <td>National Emission Standards for Hazardous Air Pollutants for Source Categories (40 CFR Part 63).</td> </tr> <tr> <td>E2-6</td> <td>N/A</td> <td>E2-8.</td> <td>Emissions Inventory Requirements (State-Only)</td> </tr> </tbody> </table>	Permit 573862	Condition	Permit 581499	Condition	N/A	Emissions Inventory Requirements (State-Only)	E2-6.	New Source Performance Standards (40 CFR Part 60)	N/A	N/A	E2-7.	National Emission Standards for Hazardous Air Pollutants for Source Categories (40 CFR Part 63).	E2-6	N/A	E2-8.	Emissions Inventory Requirements (State-Only)	
Permit 573862	Condition	Permit 581499	Condition															
N/A	Emissions Inventory Requirements (State-Only)	E2-6.	New Source Performance Standards (40 CFR Part 60)															
N/A	N/A	E2-7.	National Emission Standards for Hazardous Air Pollutants for Source Categories (40 CFR Part 63).															
E2-6	N/A	E2-8.	Emissions Inventory Requirements (State-Only)															
E2-1 (a)	Updated language for semiannual reports and the reporting period for the old and new permit.																	
E2-1 (b)	Updated language for annual compliance certifications and the reporting period for the old and new permit.																	
B5, E2-1 (b)	Updated address for Central Office. Added a web link to EPA CDX and an email address to Region IV of the EPA.																	
E2-5.	Changed Responsible Official from Tommy Russel to Robert Bewley and Billing Contact from Hanneke Counts to Tracy Venett.																	
Source Specific Conditions	Removed all references to inactive construction permits																	
E3-1	Updated Vent A requirement to reference Condition E3-10.																	
E3-4.	Source 139: CO fugitive estimate changed from 5.67 tons/year to 4.39 tons/year.																	
E3-6 through E3-9	Removed listed MACT requirements and referenced Condition E2-7.																	
Section E4.	Updated condition numbering as follows: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Permit 573862</th> <th>Permit 581499</th> </tr> </thead> <tbody> <tr> <td>E4-1.</td> <td>Deleted in renewal</td> </tr> <tr> <td>E4-2.</td> <td>E4-1. (moved monitoring method for Vent A)</td> </tr> <tr> <td>E4-3.</td> <td>E4-2.</td> </tr> <tr> <td>E4-4.</td> <td>E4-3.</td> </tr> <tr> <td>E4-5. through E4-8.</td> <td>Kept numbering</td> </tr> <tr> <td>E4-9.</td> <td>E4-4.</td> </tr> </tbody> </table>	Permit 573862	Permit 581499	E4-1.	Deleted in renewal	E4-2.	E4-1. (moved monitoring method for Vent A)	E4-3.	E4-2.	E4-4.	E4-3.	E4-5. through E4-8.	Kept numbering	E4-9.	E4-4.			
Permit 573862	Permit 581499																	
E4-1.	Deleted in renewal																	
E4-2.	E4-1. (moved monitoring method for Vent A)																	
E4-3.	E4-2.																	
E4-4.	E4-3.																	
E4-5. through E4-8.	Kept numbering																	
E4-9.	E4-4.																	
E4-5 through E4-8	Removed listed MACT requirements and referenced Condition E2-7.																	
Section E5.	Updated condition numbering as follows: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Permit 573862</th> <th>Permit 581499</th> </tr> </thead> <tbody> <tr> <td>N/A</td> <td>E5-7. (Compliance Assurance Monitoring for Vent B)</td> </tr> <tr> <td>E5-7. through E5-12.</td> <td>E5-8. through E5-13.</td> </tr> </tbody> </table>	Permit 573862	Permit 581499	N/A	E5-7. (Compliance Assurance Monitoring for Vent B)	E5-7. through E5-12.	E5-8. through E5-13.											
Permit 573862	Permit 581499																	
N/A	E5-7. (Compliance Assurance Monitoring for Vent B)																	
E5-7. through E5-12.	E5-8. through E5-13.																	



STATEMENT OF BASIS
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TDEC Division of Air Pollution Control

Facility Name: Eastman Chemical Company
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Permit Writer: ETT

Facility ID Number: 82-0003
Date Application Received: June 19, 2023
Date Application Completed: June 19, 2023

<i>Condition or Section</i>	<i>Description</i>	<i>Date</i>										
Title V Operating Permit Renewal 581499		TBD										
E5-3.	Source 143: VOC fugitive estimate changed from 39.3 tons/year to 38.57 tons/year and CO fugitive estimate changed from 0.35 tons/year to 0.85 tons/year.											
E5-8 through E5-11 (new permit)	Removed listed MACT requirements and referenced Condition E2-7.											
E5-12 and E5-13	Removed listed NSPS requirements and referenced Condition E2-6.											
E6-1.	Source 144: VOC fugitive estimate changed from 16.02 tons/year to 17.97 tons/year.											
E6-9 and E6-10	Removed listed MACT requirements and referenced Condition E2-7.											
E6-11 and E6-12	Removed listed NSPS requirements and referenced Condition E2-6.											
Section E8.	Updated condition numbering as follows: <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Permit 573862</th> <th>Permit 581499</th> </tr> </thead> <tbody> <tr> <td>E8-8. through E8-14.</td> <td>E8-9. through E8-15.</td> </tr> <tr> <td>E8-15.</td> <td>E8-8.</td> </tr> </tbody> </table>	Permit 573862	Permit 581499	E8-8. through E8-14.	E8-9. through E8-15.	E8-15.	E8-8.					
Permit 573862	Permit 581499											
E8-8. through E8-14.	E8-9. through E8-15.											
E8-15.	E8-8.											
E8-4	Source 72: CO fugitive estimate changed from 1.10 tons/year to 1.25 tons/year.											
E8-9 through E8-11	Renumbered and removed listed NSPS requirements and referenced Condition E2-6.											
E8-12 through E8-15	Renumbered and removed listed MACT requirements and referenced Condition E2-7.											
Section E9.	Updated condition numbering as follows: <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Permit 573862</th> <th>Permit 581499</th> </tr> </thead> <tbody> <tr> <td>E9-1.</td> <td>Deleted in renewal</td> </tr> <tr> <td>E9-2. through E9-4.</td> <td>Kept numbering</td> </tr> <tr> <td>E9-5.</td> <td>E9-1. (moved monitoring method for Vent A)</td> </tr> <tr> <td>E9-6. through E9-12.</td> <td>E9-5. through E9-11.</td> </tr> </tbody> </table>	Permit 573862	Permit 581499	E9-1.	Deleted in renewal	E9-2. through E9-4.	Kept numbering	E9-5.	E9-1. (moved monitoring method for Vent A)	E9-6. through E9-12.	E9-5. through E9-11.	
Permit 573862	Permit 581499											
E9-1.	Deleted in renewal											
E9-2. through E9-4.	Kept numbering											
E9-5.	E9-1. (moved monitoring method for Vent A)											
E9-6. through E9-12.	E9-5. through E9-11.											
E9-5 through E9-8	Removed listed MACT requirements and referenced Condition E2-7.											
E9-9 through E9-11	Removed listed NSPS requirements and referenced Condition E2-6.											
E12-4 through E12-6	Removed listed MACT requirements and referenced Condition E2-7.											
E12-7 through E12-9	Removed listed NSPS requirements and referenced Condition E2-6.											
E13-1 through E13-15	Removal of Source 148, PES B-572-1: Acetyl Processing Facility.											
Table Notes	Updated from the January 1, 2019, version to the February 26, 2021, version.											
Item 10 of the Table Notes	Added conditions (a) through (d)											
Attachment 2	Updated Specific Applicability Tables for 40 CFR 60 (NSPS) and 40 CFR 63 (MACT)											
Attachment 4	Added Title V Fee Selection Form APC 36 (CN-1583)											



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TDEC Division of Air Pollution Control

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Permit Writer: ETT

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REGULATORY APPLICABILITY REVIEW

Regulations	Comments/ Requirements (Monitoring/Recordkeeping/Reporting/Testing)
<u>Chapter 6</u>	Not Applicable: This project does not have any fuel burning sources.
<u>Chapter 7</u> 1200-03-07-.07(2) 1200-03-07-.01(5)	Applicable: This project has process emission sources. Compliance is assured by the following: <u>Source 139</u> – VOC: Parametric monitoring of Vents A and B. CO: Parametric monitoring of Vent A and certification of Vent B. <u>Source 141</u> – VOC: Parametric monitoring of Vent A and certification of Vent B. <u>Source 143</u> – VOC: Compliance Assurance Monitoring. CO: Recordkeeping of emissions for Vent I and certification of Vent B. <u>Source 144</u> – VOC: Certification of Vent A and recordkeeping of the number of sample requests. CO, NOx, and PM: Certification. <u>Source 145</u> – PM: Certification. <u>Source 72</u> – VOC: Compliance Assurance Monitoring for Vent A, parametric monitoring and recordkeeping for Vent E. CO: Certification of Vent A. <u>Source 140</u> – VOC: Parametric monitoring for Vent A. <u>Source 142</u> – PM: Certification <u>Source 146</u> – PM: Certification <u>Source 147</u> – CO: Certification
<u>Chapter 10</u> 1200-03-10-.01(2)	Applicable: This facility is subject to the source testing requirements outlined in this chapter. See Item 11 in the Table Notes for more information.
<u>Chapter 14</u> 1200-03-14-.03(2) 1200-03-14-.03(5)	Applicable: This project/facility has sources that emit SO ₂ . Compliance is assured by the following: Source 144 – Certification
<u>Other state regulations:</u> <u>Chapter(s) 16, 18, 22, 25, 27,</u> <u>etc.</u>	Not Applicable: This project does not contain sources subject to these chapters.



STATEMENT OF BASIS
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TDEC Division of Air Pollution Control

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REGULATORY APPLICABILITY REVIEW

Regulations	Comments/ Requirements (Monitoring/Recordkeeping/Reporting/Testing)																										
<u>40 CFR 60</u>	<p>Applicable:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th colspan="4" style="text-align: center;">New Source Performance Standards (40 CFR Part 60)</th> </tr> <tr> <th rowspan="2" style="text-align: center;">NSPS Subpart</th> <th rowspan="2" style="text-align: center;">Rule</th> <th colspan="2" style="text-align: center;">Applies to:</th> </tr> <tr> <th style="text-align: center;">ESRN</th> <th style="text-align: center;">PES</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">A</td> <td>General Provisions</td> <td style="text-align: center;">82-0003-143 82-0003-144 82-0003-72 82-0003-140 82-0003-147</td> <td style="text-align: center;">B-337-3 B-338-3 B-352-1 B-354-1 B-486-1</td> </tr> <tr> <td style="text-align: center;">VV</td> <td>Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006</td> <td style="text-align: center;">82-0003-143 82-0003-144 82-0003-72 82-0003-140</td> <td style="text-align: center;">B-337-3 B-338-3 B-352-1 B-354-1</td> </tr> <tr> <td style="text-align: center;">NNN</td> <td>Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations After December 30, 1983, and on or Before April 25, 2023</td> <td style="text-align: center;">82-0003-72 82-0003-147</td> <td style="text-align: center;">B-352-1 B-486-1</td> </tr> <tr> <td style="text-align: center;">RRR</td> <td>Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes After June 29, 1990, and on or Before April 25, 2023</td> <td style="text-align: center;">82-0003-147</td> <td style="text-align: center;">B-486-1</td> </tr> </tbody> </table>	New Source Performance Standards (40 CFR Part 60)				NSPS Subpart	Rule	Applies to:		ESRN	PES	A	General Provisions	82-0003-143 82-0003-144 82-0003-72 82-0003-140 82-0003-147	B-337-3 B-338-3 B-352-1 B-354-1 B-486-1	VV	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006	82-0003-143 82-0003-144 82-0003-72 82-0003-140	B-337-3 B-338-3 B-352-1 B-354-1	NNN	Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations After December 30, 1983, and on or Before April 25, 2023	82-0003-72 82-0003-147	B-352-1 B-486-1	RRR	Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes After June 29, 1990, and on or Before April 25, 2023	82-0003-147	B-486-1
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<u>40 CFR 61</u>	<p>Not Applicable: This project does not emit the pollutants (benzene, beryllium, arsenic, vinyl chloride or radon) subject to this regulation.</p>																										



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Facility Name: Eastman Chemical Company
Permit Number: 581499
Permit Writer: ETT

Facility ID Number: 82-0003
Date Application Received: June 19, 2023
Date Application Completed: June 19, 2023

REGULATORY APPLICABILITY REVIEW

Regulations	Comments/ Requirements (Monitoring/Recordkeeping/Reporting/Testing)																										
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40 CFR 68 112(r)	Applicable: The facility uses and/or stores chemicals above the threshold quantities outlined in the regulation.																										



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Facility ID Number: 82-0003
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REGULATORY APPLICABILITY REVIEW

Regulations	Comments/ Requirements (Monitoring/Recordkeeping/Reporting/Testing)
40 CFR 64	<p>Applicable: CAM is applicable to two Pollutant Specific Emissions Units (PSEU). The PSEUs... (1) are subject to an emission limitation or standard, and (2) use a control device to achieve compliance, and (3) have potential pre-control emissions that exceed or are equivalent to the major source threshold.</p> <p><u>Source 72</u> – VOC is controlled through water scrubbers and monitored through parametric monitoring of the 24-hour block average flow rate of water feed to the scrubber and the 12-month moving average of combined volumetric level increases of Tanks 22D-50, 22D-51, 22D-60, 22D-61, 22D-100, and 22D-20.</p> <p><u>Source 143</u> – VOC is controlled through water scrubbers and monitored through parametric monitoring of the 24-hour block average flow rate of water feed to the scrubber and the 12-month moving average of combined volumetric level increases of Tanks 32D-50, 32D-51, 32D-60, 32D-61, 32D-100, 32C-120, and 32D-20.</p> <p><u>Source 139</u> – §64.2(b)(1)(i) – Exempt emission limitations or standards proposed by the Administrator after November 15, 1990 – Vent Subject to Group 1 MACT control device requirements. Therefore CAM does not apply.</p>
<u>Special Conditions, Monitoring, Limits</u> State-Only Conditions	<p>Applicable:</p> <p>Source 141 will accept a restricted limit to comply with methyl acetate emissions. Compliance will include EPA Method 18 testing.</p> <p>Source 144 will accept a restricted limit to comply with iodine emissions. Compliance will include engineering assessment.</p>
Modeling Review	Not Applicable: This project does not emit Pb, HCl or HF.
PREVIOUS Permit Number	573862



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EMISSION SUMMARY

Table 2: SOURCE SPECIFIC EMISSIONS

HAPs are included in the VOC total, but are included in the table for additional information.

PERMIT EMISSIONS				
SOURCE 139 – Alcohol Production				
Pollutant	Actual/Controlled Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Allowable/Permitted Allowable
	TPY	TPY	TPY	TPY
CO				28.79
VOC				23.46
Single HAP				
Methanol				17.74
Total HAPs				17.74

PERMIT EMISSIONS				
SOURCE 141 – Ester Production				
Pollutant	Actual/Controlled Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Allowable/Permitted Allowable
	TPY	TPY	TPY	TPY
VOC				9.13
Single HAP				
Methyl Acetate				8.37
Total HAPs				8.37

PERMIT EMISSIONS				
SOURCE 143 – Organic Acid and Anhydride Production				
Pollutant	Actual/Controlled Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Allowable/Permitted Allowable
	TPY	TPY	TPY	TPY
CO				15.85
VOC				44.32
Single HAP				
Acetaldehyde				0.31
Methanol				1.18
Methyl Iodide				2.19
Total HAPs				3.68



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PERMIT EMISSIONS					
SOURCE 144 – Recovery of Carbonylation Reactor Catalyst					
Pollutant	Actual /Controlled Emissions	Regulatory Allowable Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Permitted Allowable
	lb/hr	gr/dscf/lb/hr/lb/MMBTU	lb/hr	lb/hr	ppmvd
PM/PM ₁₀ /PM _{2.5}					
SO ₂					1,000

PERMIT EMISSIONS				
SOURCE 144 – Recovery of Carbonylation Reactor Catalyst				
Pollutant	Actual/Controlled Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Allowable/Permitted Allowable
	TPY	TPY	TPY	TPY
PM/PM ₁₀ /PM _{2.5}				0.9
SO ₂				0.44
NO _x				4.40
CO				1.08
VOC				19.47
Single HAP				
Methyl Iodide				4.67
Total HAPs				4.67
Iodine (state-only)				2.38

Note: Iodine does not meet the definition of a “regulated pollutant” in 1200-03-26-.02, so it’s not counted for fee purposes.



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PERMIT EMISSIONS					
SOURCE 145 – Cooling Towers					
Pollutant	Actual /Controlled Emissions	Regulatory Allowable Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Permitted Allowable
	lb/hr	gr/dscf/lb/hr	lb/hr	lb/hr	lb/hr
PM/PM ₁₀ /PM _{2.5}	1.98				1.98
SO ₂					

PERMIT EMISSIONS				
SOURCE 145 – Cooling Towers				
Pollutant	Actual/Controlled Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Allowable/Permitted Allowable
	TPY	TPY	TPY	TPY
PM/PM ₁₀ /PM _{2.5}	7.67			7.67

PERMIT EMISSIONS				
SOURCE 72 – Organic Acid and Anhydride Production				
Pollutant	Actual/Controlled Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Allowable/Permitted Allowable
	TPY	TPY	TPY	TPY
CO				16.39
VOC				38.63
Single HAP				
Acetaldehyde				0.44
Methanol				1.09
Methyl Iodide				2.43
Total HAPs				3.96

PERMIT EMISSIONS				
SOURCE 140 – Production of Methyl Acetate				
Pollutant	Actual/Controlled Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Allowable/Permitted Allowable
	TPY	TPY	TPY	TPY
VOC				10.18
Single HAP				
Methanol				2.12
Total HAPs				2.12



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PERMIT EMISSIONS					
SOURCE 142 – Cooling Towers					
Pollutant	Actual /Controlled Emissions	Regulatory Allowable Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Permitted Allowable
	lb/hr	gr/dscf/lb/hr	lb/hr	lb/hr	lb/hr
PM/PM ₁₀ /PM _{2.5}	2.58				2.58
SO ₂					

PERMIT EMISSIONS				
SOURCE 142 – Cooling Towers				
Pollutant	Actual/Controlled Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Allowable/Permitted Allowable
	TPY	TPY	TPY	TPY
PM/PM ₁₀ /PM _{2.5}				8.46

PERMIT EMISSIONS					
SOURCE 146 – Cyclohexane Dicarboxylic Acid (CHDA) Production Facility					
Pollutant	Actual /Controlled Emissions	Regulatory Allowable Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Permitted Allowable
	lb/hr	gr/dscf/lb/hr	lb/hr	lb/hr	gr/dscf/lb/hr
PM/PM ₁₀ /PM _{2.5}	2.58	1.01 lb/hr			1.01 lb/hr
SO ₂					

Note: this is only for the vented PM emissions and not Other Emissions Not Otherwise Captured (OENOC)/fugitive emissions for this source.

PERMIT EMISSIONS				
SOURCE 146 – Cyclohexane Dicarboxylic Acid (CHDA) Production Facility				
Pollutant	Actual/Controlled Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Allowable/Permitted Allowable
	TPY	TPY	TPY	TPY
PM/PM ₁₀ /PM _{2.5} *				6.03

Note: Limit also includes the OENOC/fugitive emissions from this source (4.88 tons per year).

PERMIT EMISSIONS				
SOURCE 147 – Production of Methanol and Dimethyl Ether				
Pollutant	Actual/Controlled Emissions	Uncontrolled Emissions	Potential to Emit (PTE)	Allowable/Permitted Allowable
	TPY	TPY	TPY	TPY
PM/PM ₁₀ /PM _{2.5}				0.10
CO				2.87
VOC				5.36
Single HAP				
Methanol				4.01
Total HAPs				4.01



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Table 3: TOTAL EMISSIONS – MSOP-03

HAPs are included in the VOC total, but are included in the table for additional information.

TOTAL EMISSIONS – MSOP-03			
Pollutant	Actual/Controlled Emissions	Uncontrolled Emissions	Potential to Emit (PTE)
	TPY	TPY	TPY
PM/PM ₁₀ /PM _{2.5}	23.16		
SO ₂	0.44		
NO _x	4.40		
CO	64.89		
VOC	150.55		
Single HAP			
Acetaldehyde	0.75		
Methanol	27.51		
Methyl Iodide	9.29		
Iodine	2.38		
Total HAPs	37.55		

***Note:** Iodine limit is based off of the combustion of the methyl iodide emissions and are not included in the VOC and HAP total.*

Table 4: FACILITY WIDE EMISSION LIMITS

Not Applicable

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.