

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO

Union Carbide Corporation

AUTHORIZING THE OPERATION OF

High Pressure II Unit
Industrial Organic Chemicals

LOCATED AT

Calhoun County, Texas

Latitude 28° 30' 59" Longitude 96° 46' 5"

Regulated Entity Number: RN102181526

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O2026 Issuance Date: _____

For the Commission

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General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions: Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:
 - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
 - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

- C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
 - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
 - E. Emission units subject to 40 CFR Part 63, Subparts H, and FFFF as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, §§ 113.130, and 113.890, respectively, which incorporates the 40 CFR Part 63 Subparts by reference.
2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
- A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
 - B. Title 30 TAC § 101.3 (relating to Circumvention)
 - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
 - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
 - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
 - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
 - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
 - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
 - I. Title 30 TAC § 101.222 (relating to Demonstrations)
 - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)

3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
 - A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:
 - (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
 - (ii) Title 30 TAC § 111.111(a)(1)(E)
 - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
 - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the “Applicable Requirements Summary” attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:
 - (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
 - (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum

required value does not constitute creation of an alternative fuel.

- (3) Records of all observations shall be maintained.
- (4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
- (5) Compliance Certification:
 - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement.

However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)
- (iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
 - (1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.
 - (2) Records of all observations shall be maintained.
 - (3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible

emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A)
- (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader

C. For visible emissions from all other sources not specified in 30 TAC § 111.111(a)(1), (4), or (7); the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(8)(A) (relating to Requirements for Specified Sources)

- (ii) Title 30 TAC § 111.111(a)(8)(B)(i) or (ii)
- (iii) For a source subject to 30 TAC § 111.111(a)(8)(A), complying with 30 TAC § 111.111(a)(8)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
 - (1) An observation of visible emissions from a source which is required to comply with 30 TAC § 111.111(a)(8)(A) shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter.
 - (2) Records of all observations shall be maintained.
 - (3) Visible emissions observations of sources operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of sources operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each source during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
 - (4) Compliance Certification:
 - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(8) and (a)(8)(A)
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the

appropriate opacity test specified in 30 TAC § 111.111(a)(8)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- D. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
- E. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).
- F. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
 - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
 - (ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)
 - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)
- 4. For storage vessels maintaining working pressure as specified in 30 TAC Chapter 115, Subchapter B, Division 1: “Storage of Volatile Organic Compounds,” the permit holder shall comply with the requirements of 30 TAC § 115.112(c)(1).
- 5. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:

- A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)
 - B. Title 40 CFR § 60.8 (relating to Performance Tests)
 - C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)
 - D. Title 40 CFR § 60.12 (relating to Circumvention)
 - E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
 - F. Title 40 CFR § 60.14 (relating to Modification)
 - G. Title 40 CFR § 60.15 (relating to Reconstruction)
 - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)
6. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.
 7. For miscellaneous chemical process facilities subject to maintenance wastewater requirements as specified in 40 CFR § 63.2485, Table 7, the permit holder shall comply with the requirements of 40 CFR § 63.105 (relating to Maintenance Wastewater Requirements) (Title 30 TAC Chapter 113, Subchapter C, § 113.890 incorporated by reference).
 8. For miscellaneous chemical process facilities with Group 2 wastewater streams subject to wastewater operations requirements in 40 CFR Part 63, Subpart FFFF, the permit holder shall comply with the requirements of 40 CFR § 63.132(a), (a)(1), (a)(1)(i), and (a)(3) as specified in § 63.2485(a) (Title 30 TAC Chapter 113, Subchapter C, § 113.890 incorporated by reference).
 9. For the transfer of site remediation materials subject to 40 CFR Part 63, Subpart GGGGG off-site to another facility, the permit holder shall comply with the following requirements (Title 30 TAC, Subchapter C, § 113.1160 incorporated by reference):
 - A. Title 40 CFR § 63.7936(a), for the transfer of site remediation materials
 - B. Title 40 CFR § 63.7936(b)(1), for transfer to a landfill or land disposal unit
 - C. Title 40 CFR § 63.7936(b)(2), for transfer to a facility subject to 40 CFR Part 63, Subpart DD
 - D. Title 40 CFR § 63.7936(b)(3), (b)(3)(i) - (iv), for transfer to a facility managing the site remediation material according to the requirements of 40 CFR Part 63, Subpart GGGGG

10. For containers managing remediation materials subject to 40 CFR Part 63, Subpart GGGGG, the permit holder shall comply with the following requirements (Title 30 TAC Chapter 113, Subchapter C, § 113.1160 incorporated by reference):
- A. Title 40 CFR § 63.922(b)(1) - (3), (c), (d), (d)(1) - (5), (e), and (f), (f)(1) - (4) (relating to Standards - Container Level 1 Controls)
 - B. Title 40 CFR § 63.923(b)(1) - (3), (c), (d), (d)(1) - (5), (e), and (f), (f)(1) - (4) (relating to Standards - Container Level 2 Controls)
 - C. Title 40 CFR § 63.924(b)(1) - (2), (c)(1), and (d) (relating to Standards - Container Level 3 Controls)
 - D. Title 40 CFR § 63.925(a)(1) - (8), and (b)(1) - (3) (relating to Test Methods and Procedures)
 - E. Title 40 CFR § 63.926(a)(1) - (3) (relating to Inspection and Monitoring Requirements)
 - F. Title 40 CFR § 63.7901(b) and (b)(1), for initial demonstration of compliance
 - G. Title 40 CFR § 63.7901(b)(2), for initial demonstration of compliance
 - H. Title 40 CFR § 63.7901(c), (c)(1), and (c)(2), for initial demonstration of compliance
 - I. Title 40 CFR § 63.7901(d), and (d)(1) - (4), for initial demonstration of compliance
 - J. Title 40 CFR § 63.7901(e), (e)(1), and (e)(2), for initial demonstration of compliance
 - K. Title 40 CFR § 63.7902(b), (b)(1), and (b)(2), for inspection and monitoring
 - L. Title 40 CFR § 63.7903(b) and (b)(1), for continuous demonstration of compliance
 - M. Title 40 CFR § 63.7903(b)(2), (b)(2)(i), (b)(2)(ii), for continuous demonstration of compliance
 - N. Title 40 CFR § 63.7903(c)(4), (c)(4)(i), and (c)(4)(ii), for continuous demonstration of compliance
 - O. Title 40 CFR § 63.7903(d)(5), (d)(5)(i), and (d)(5)(ii), for continuous demonstration of compliance

- P. Title 40 CFR § 63.7903(e)(1) - (3), for continuous demonstration of compliance
- Q. Title 40 CFR § 63.7952(c), for recordkeeping

Additional Monitoring Requirements

- 11. The permit holder shall comply with the periodic monitoring requirements as specified in the attached “Periodic Monitoring Summary” upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time specified in the “Periodic Monitoring Summary,” for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

- 12. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
 - A. Are incorporated by reference into this permit as applicable requirements
 - B. Shall be located with this operating permit
 - C. Are not eligible for a permit shield
- 13. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
- 14. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit’s compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity

and throughput, hours of operation, material safety data sheets (MSDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

15. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.
16. Use of Discrete Emission Credits to comply with the applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) If applicable, offsets for Title 30 TAC Chapter 116
 - (iv) Temporarily exceed state NSR permit allowables
 - B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:
 - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
 - (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
 - (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)

- (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122
- (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Risk Management Plan

- 17. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

Protection of Stratospheric Ozone

- 18. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone.
 - A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.

Permit Location

- 19. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary 16

Applicable Requirements Summary 19

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
1041	INDUSTRIAL PROCESS COOLING TOWERS	N/A	63FFFF	40 CFR Part 63, Subpart FFFF	No changing attributes.
561	STORAGE TANKS/ VESSELS	N/A	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
GRP-MONCVNT	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	2PURCOL, EAVACOL, FGSEP, ISOCOL	R5-127-MON	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
GRP-MONCVNT	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	2PURCOL, EAVACOL, FGSEP, ISOCOL	63FFFF	40 CFR Part 63, Subpart FFFF	No changing attributes.
GRPUNLDGHI	LOADING/ UNLOADING OPERATIONS	SDL15, SDL16, SDL17	R5-211	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
GRPVENT1	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	549, 552, 553	R5-127-1	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Vent gas stream emissions of ethylene associated with the formation, handling, and storage of solidified low- density polyethylene in which no more than 1.1 pounds of ethylene per 1,000 pounds of product are emitted.
GRPVENT1	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	549, 552, 553	R5-127-2	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Vent gas stream emissions of the specified classes of VOCs including aldehydes, alcohols, aromatics, ethers, olefins, peroxides, amines, acids,

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					esters, ketones, sulfides, and branched chain hydrocarbons (C and above)., Combined 24-Hour VOC Weight = Combined VOC weight is greater than 100 pounds (45.4 kg)., VOC Concentration = VOC concentration is less than 30,000 ppmv.
GRPVENT2	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	1039, 253, 270, 284, 289, 306, 414, 547, 669	R5-127-3	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
GRPVENT1B	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282	R5-127-1	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Vent gas stream emissions of ethylene associated with the formation, handling, and storage of solidified low-density polyethylene in which no more than 1.1 pounds of ethylene per 1,000 pounds of product are emitted.
GRPVENT1B	EMISSION POINTS/ STATIONARY VENTS/ PROCESS VENTS	254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282	R5-127-2	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Vent gas stream emissions of the specified classes of VOCs including aldehydes, alcohols, aromatics, ethers, olefins, peroxides, amines, acids, esters, ketones, sulfides, and branched chain hydrocarbons (C and above)., Combined 24-Hour VOC Weight = Combined VOC

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					weight is greater than 100 pounds (45.4 kg)., VOC Concentration = VOC concentration is less than 30,000 ppmv.
HP2FUGS	FUGITIVE EMISSION UNITS	N/A	63FFFF	40 CFR Part 63, Subpart FFFF	No changing attributes.
HP2FUGS	FUGITIVE EMISSION UNITS	N/A	63H	40 CFR Part 63, Subpart H	No changing attributes.
UNLDGLOW	LOADING/ UNLOADING OPERATIONS	N/A	R5-211	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
1041	EU	63FFFF	112(B) HAPS	40 CFR Part 63, Subpart FFFF	§ 63.2490(a)-Table10 § 63.104(a) [G]§ 63.104(d) § 63.104(e) § 63.104(e)(1) [G]§ 63.104(e)(2) § 63.2490(a) § 63.2490(b) § 63.2490(c)	For each heat exchange system, as defined in §63.101, comply with the requirements of §63.104 and the requirements referenced therein except as specified in §63.2490.	[G]§ 63.104(b)	[G]§ 63.104(e)(2) [G]§ 63.104(f)(1)	[G]§ 63.104(f)(2)
561	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(c)(1)	Tanks shall not store VOC, other than crude oil or condensate, unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(b).	** See Periodic Monitoring Summary	None	None
GRP-MONCVNT	EP	R5-127-MON	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.121(c)(1) § 115.122(c)(1) § 115.122(c)(1)(B)	Any process vent containing one or more VOC or classes of VOC specified in §115.121(c)(1)(A)-(C), shall be controlled as per §115.122(c)(1).	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2)	None
GRP-MONCVNT	EP	63FFFF	112(B) HAPS	40 CFR Part 63, Subpart FFFF	§ 63.2455(a)-Table 1.1.a.ii § 63.11(b) § 63.2450(b) § 63.2455(a) § 63.2455(b) § 63.2455(b)(1) § 63.982(b) § 63.983(a)(1) § 63.983(a)(2) § 63.983(d)(1) § 63.983(d)(1)(i) [G]§ 63.983(d)(2)	For each Group 1continuous process vent, the owner or operator must reduce emissions of total organic HAP by venting emissions through a closed vent system to a flare.	[G]§ 63.115(d)(2)(v) § 63.115(d)(3)(iii) § 63.983(b) [G]§ 63.983(b)(1) [G]§ 63.983(b)(2) [G]§ 63.983(b)(3) [G]§ 63.983(c)(1) § 63.983(c)(2) § 63.983(c)(3) § 63.983(d)(1) § 63.983(d)(1)(ii) § 63.987(c) § 63.997(b)	§ 63.2450(f)(2) § 63.2450(f)(2)(i) § 63.2450(f)(2)(ii) § 63.983(b) [G]§ 63.983(d)(2) § 63.987(c) § 63.998(a)(1)(ii) § 63.998(a)(1)(iii)(A) § 63.998(a)(1)(iii)(B) [G]§ 63.998(b)(1) [G]§ 63.998(b)(2) [G]§ 63.998(b)(3) [G]§ 63.998(b)(5)	§ 63.2450(f)(2)(ii) § 63.2450(q) § 63.997(b)(1) § 63.997(c)(3) § 63.998(a)(1)(iii)(A) [G]§ 63.998(b)(3) [G]§ 63.999(a)(1) § 63.999(b)(5) § 63.999(c)(1) [G]§ 63.999(c)(2) § 63.999(c)(3) § 63.999(c)(6) [G]§ 63.999(c)(6)(f)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.983(d)(3) § 63.987(a) § 63.997(b)(1) § 63.997(c)(3)		§ 63.997(b)(1) § 63.997(c)(2) § 63.997(c)(3) § 63.997(c)(3)(i) § 63.997(c)(3)(ii)	[G]§ 63.998(c)(1) [G]§ 63.998(d)(1) § 63.998(d)(3)(i) § 63.998(d)(3)(ii) § 63.998(d)(5)	§ 63.999(c)(6)(iv) [G]§ 63.999(d)(1) [G]§ 63.999(d)(2)
GRPUNLDG HI	EU	R5-211	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(b)(3)(A) § 115.212(b)(2) § 115.214(b)(1)(B) § 115.214(b)(1)(D) § 115.214(b)(1)(D)(i)	Plants, excluding gasoline bulk plants, which load <20,000 gallons of VOC into transport vessels per day with a true vapor pressure of 1.5 psia or greater are exempt from this division, except for the specified requirements.	§ 115.214(b)(1)(A) § 115.214(b)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B) § 115.216(3)(D)	None
GRPVENT1	EU	R5-127-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(A) § 115.127(c)(1)	A vent gas stream from a LDPE plant emitting less than or equal to 1.1 lbs of ethylene/1,000 lbs of product from all the vent gas streams associated with the solidified product is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(A)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(A)	None
GRPVENT1	EP	R5-127-2	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(C) § 115.127(c)(1)	A vent gas stream having a concentration of the VOC specified in § 115.121(c)(1)(B) and (C) less than 30,000 ppmv is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(C)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(C)	None
GRPVENT2	EP	R5-127-3	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(B) § 115.127(c)(1)	A vent gas stream with a combined weight of the VOC or classes of compounds specified in § 115.121(c)(1)(B)-(C) of 100 lbs (45.4 kg), or less, in a continuous 24-hour period is exempt from §	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						115.121(c)(1).			
GRPVNT1B	EP	R5-127-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(A) § 115.127(c)(1)	A vent gas stream from a LDPE plant emitting less than or equal to 1.1 lbs of ethylene/1,000 lbs of product from all the vent gas streams associated with the solidified product is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(A)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(A)	None
GRPVNT1B	EP	R5-127-2	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(c)(1)(C) § 115.127(c)(1)	A vent gas stream having a concentration of the VOC specified in § 115.121(c)(1)(B) and (C) less than 30,000 ppmv is exempt from § 115.121(c)(1).	[G]§ 115.125 § 115.126(2) § 115.126(3)(C)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(C)	None
HP2FUGS	EU	63FFFF	112(B) HAPS	40 CFR Part 63, Subpart FFFF	§ 63.2480(a) The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart FFFF	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart FFFF	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart FFFF	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart FFFF	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart FFFF
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.166 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Sampling connection systems. §63.166(a)-(c)	[G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f)	Standards: Pumps in heavy liquid service. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					[G]§ 63.162(g) § 63.162(h) [G]§ 63.171			[G]§ 63.181(i)	§ 63.182(c)(4) [G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Valves in heavy liquid service. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Connectors in heavy liquid service. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Agitators in heavy liquid service. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Instrumentation systems. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	§ 63.172(a) [G]§ 63.172(h) § 63.172(i) § 63.172(j)(1)	Owners/operators of closed-vent systems and control devices used to comply with provisions of	[G]§ 63.172(f)(1) [G]§ 63.172(f)(2) § 63.172(g) [G]§ 63.172(h)	§ 63.118(a)(3) § 63.172(j)(1) § 63.181(a) [G]§ 63.181(b)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.172(j)(2) § 63.172(m)	this subpart shall comply with the provisions of this section, except as provided in §63.162(b).	§ 63.172(j)(1) § 63.172(j)(2) [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(c) [G]§ 63.181(d) § 63.181(g) § 63.181(g)(1)(i) § 63.181(g)(1)(ii) [G]§ 63.181(g)(2) [G]§ 63.181(g)(3)	§ 63.182(c)(4) [G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	§ 63.172(d) § 63.11(b) § 63.172(e) [G]§ 63.172(h) § 63.172(m)	Flares used to comply with this subpart shall comply with the requirements of § 63.11(b) of 40 CFR 63, Subpart A.	§ 63.172(e) [G]§ 63.172(h) [G]§ 63.180(b) [G]§ 63.180(d) [G]§ 63.180(e)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(g) § 63.181(g)(1)(i) § 63.181(g)(1)(ii) § 63.181(g)(1)(iii) § 63.181(g)(1)(iv) [G]§ 63.181(g)(2)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.173 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Agitators gas/vapor service and in light liquid service. §63.173(a)-(j).	[G]§ 63.173 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.174 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Connectors in gas/vapor service and in light liquid service. §63.174(a)-(j)	[G]§ 63.174 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.163 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g)	Standards: Pumps in light liquid service. §63.163(a)-(j)	[G]§ 63.163 [G]§ 63.176 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(h)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.162(h) [G]§ 63.171 [G]§ 63.176			[G]§ 63.181(h)(3) § 63.181(h)(4) [G]§ 63.181(h)(5) § 63.181(h)(6) § 63.181(h)(7) § 63.181(h)(8)	[G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.167 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171 [G]§ 63.175	Standards: Open-ended valves or lines. §63.167(a)-(e).	[G]§ 63.175 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) § 63.181(h) [G]§ 63.181(h)(1) [G]§ 63.181(h)(2) § 63.181(h)(4) [G]§ 63.181(h)(5) § 63.181(h)(6) § 63.181(h)(7) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
HP2FUGS	EU	63H	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.168 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171 [G]§ 63.175	Standards: Valves in gas/vapor service and in light liquid service. §63.168(a)-(j)	[G]§ 63.168 [G]§ 63.175 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(h) [G]§ 63.181(h)(1) [G]§ 63.181(h)(2) § 63.181(h)(4) [G]§ 63.181(h)(5) § 63.181(h)(6) § 63.181(h)(7)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
UNLDGLOW	EU	R5-211	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(b)(2) § 115.212(b)(2) § 115.214(b)(1)(B) § 115.214(b)(1)(D) § 115.214(b)(1)(D)(i)	Vapor pressure (at land-based operations). All land-based loading and unloading of VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division except as specified.	§ 115.214(b)(1)(A) § 115.214(b)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None

Additional Monitoring Requirements

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Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 561	
Control Device ID No.: 246	Control Device Type: Flare
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112
Pollutant: VOC	Main Standard: § 115.112(c)(1)
Monitoring Information	
Indicator: Pilot Flame	
Minimum Frequency: Once per hour	
Averaging Period: n/a	
Deviation Limit: Absence of flare pilot flame	
<p>Periodic Monitoring Text: Measure and record the presence of the pilot flame or maintain records of alarm events and duration of alarm events. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame or using an alarm that uses a thermocouple or other equivalent device to detect the absence of a flame. The monitoring instrumentation shall be maintained, calibrated and operated in accordance with manufacturer's specifications or other written procedures. Any monitoring data which indicates the lack of a pilot flame shall be considered and reported as a deviation.</p>	

New Source Review Authorization References

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New Source Review Authorization References by Emission Unit..... 29

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: PSDTX118M4	Issuance Date: 01/20/2011
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 2023	Issuance Date: 01/20/2011
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.261	Version No./Date: 09/04/2000
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.264	Version No./Date: 09/04/2000
Number: 106.373	Version No./Date: 09/04/2000
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.495	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
1039	BLENDER VENT	2023
1041	COOLING TOWER	2023
253	#1 REACTION EXTRUDER DRIER	2023, 106.264/09/04/2000
254	#1 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
255	#1 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
256	#1 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
257	#1 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
258	#1 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
259	#1 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
260	#1 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
261	BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
262	BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
263	BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
264	BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
265	BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
266	BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
267	BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
268	BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
270	#2 REACTION EXTRUDER DRIER	2023
271	#2 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
272	#2 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
273	#2 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
274	#2 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
275	#2 REACTION PRIMARY STORAGE BIN	2023, 106.261/11/01/2003,

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
		106.262/11/01/2003
276	#2 REACTION BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
277	#2 REACTION BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
278	#2 REACTION BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
279	#2 REACTION BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
280	#2 REACTION BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
281	#2 REACTION BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
282	#2 REACTION BULK STORAGE BIN	2023, 106.261/11/01/2003, 106.262/11/01/2003
284	MIX TANK VENT	2023
289	REFRIGERATED ISOPROPANOL TANK VENT	2023
2PURCOL	NO. 2 PURGE COLUMN	2023
306	SCRAP BIN	2023
414	SCREEN PACK CLEANER/DIE PLATE CLEANER	106.264/09/04/2000, 106.495/09/04/2000

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
547	PREHEAT BIN	2023
549	HOLDING BIN	2023
552	COOLING BIN	2023
553	COOLING BIN	2023
561	INHIBITOR TANK	2023
669	A/O MIX TANK	2023
EAVACOL	EA/VA REMOVAL COLUMN	2023
FGSEP	FURNACE GAS ENTRAINMENT SEPARATOR	2023
HP2FUGS	FUGITIVE EMISSIONS	2023, 106.261/11/01/2003
ISOCOL	ISO COLUMN C-901 OVERHEAD	2023
SDL15	HP2 PROPYLENE UNLOADING	2023
SDL16	HP2 ISOPROPANOL TANK TRUCK UNLOADING	2023
SDL17	HP2 ETHYL ACRYLATE TANK CAR UNLOADING	2023
UNLDGLOW	LOW VAPOR PRESSURE VOC UNLOADING	2023

Appendix A

Acronym List 34

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM	.....	actual cubic feet per minute
AMOC	.....	alternate means of control
ARP	.....	Acid Rain Program
ASTM	.....	American Society of Testing and Materials
B/PA	.....	Beaumont/Port Arthur (nonattainment area)
CAM	.....	Compliance Assurance Monitoring
CD	.....	control device
COMS	.....	continuous opacity monitoring system
CVS	.....	closed-vent system
D/FW	.....	Dallas/Fort Worth (nonattainment area)
DR	.....	Designated Representative
ELP	.....	El Paso (nonattainment area)
EP	.....	emission point
EPA	.....	U.S. Environmental Protection Agency
EU	.....	emission unit
FCAA Amendments	.....	Federal Clean Air Act Amendments
FOP	.....	federal operating permit
GF	.....	grandfathered
gr/100 scf	.....	grains per 100 standard cubic feet
HAP	.....	hazardous air pollutant
H/G/B	.....	Houston/Galveston/Brazoria (nonattainment area)
H ₂ S	.....	hydrogen sulfide
ID No.	.....	identification number
lb/hr	.....	pound(s) per hour
MMBtu/hr	.....	Million British thermal units per hour
MRRT	.....	monitoring, recordkeeping, reporting, and testing
NA	.....	nonattainment
N/A	.....	not applicable
NADB	.....	National Allowance Data Base
NO _x	.....	nitrogen oxides
NSPS	.....	New Source Performance Standard (40 CFR Part 60)
NSR	.....	New Source Review
ORIS	.....	Office of Regulatory Information Systems
Pb	.....	lead
PBR	.....	Permit By Rule
PM	.....	particulate matter
ppmv	.....	parts per million by volume
PSD	.....	prevention of significant deterioration
RO	.....	Responsible Official
SO ₂	.....	sulfur dioxide
TCEQ	.....	Texas Commission on Environmental Quality
TSP	.....	total suspended particulate
TVP	.....	true vapor pressure
U.S.C.	.....	United States Code
VOC	.....	volatile organic compound

Appendix B

Major NSR Summary Table..... 36

Major NSR Summary Table

Permit Number: 2023, PSDTX118M4				Issuance Date: January 20, 2011			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
246	Flare (10)	Acetone	0.03	0.02	13	2, 13	
		CO	25.63	16.62	13	2, 13	
		NOx	4.97	3.22	13	2, 13	
		Ethylene (11)	28.57	20.32	13	2, 13	
		Vinyl Acetate (11)	1.51	1.60	13, 17	2, 13, 17	17
		Ethyl Acrylate (11)	1.20	0.04	13, 17	2, 13, 17	17
		Propylene (11)	6.96	2.66	13	2, 13	
		Toluene (11)	0.01	0.01	13	2, 13	
		VOC	38.31	24.64	13	2, 13	

Major NSR Summary Table

Permit Number: 2023, PSDTX118M4				Issuance Date: January 20, 2011			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
246	Flare Maintenance, Start-Up, (10) and Shutdown Emissions only	Acetone	0.02	0.01	13	11, 13	
		CO	158.87	12.29	13	11, 13	
		NOx	31.18	2.41	13	11, 13	
		VOC	260.53	18.02	13	11, 13	
		Ethylene (12)		7.42	13	11, 13	
		Propylene (12)		0.50	13	11, 13	
		Vinyl Acetate (12)		0.01	13	11, 13	
		Ethyl Acrylate (12)		0.01	13	11, 13	
		Vinyltrimethoxysilane (12)		0.01	13	11, 13	
		Mineral Spirits (12)		0.01	13	11, 13	

Major NSR Summary Table

Permit Number: 2023, PSDTX118M4				Issuance Date: January 20, 2011			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
251	Reactor No. 1 Process Fugitives (4)	Acetone	0.19	0.85			
		CO	0.01	0.01			
		VOC	13.57	59.42	8, 9, 12, 17	8, 9, 12, 17	17
252	No. 1 Cyclone Scrubber Vent	VOC	0.06	0.01		2	
253	No. 1 Extruder Drier	Vinyl Acetate	7.00	(5)	3, 4	2, 3, 4	
		Ethylene	4.00	(5)	3, 4	2, 3, 4	
		Propylene	0.20	(5)		2	
		Ethyl Acrylate	0.01	(5)		2	
		Acetone	0.07	(5)		2	
		PM	1.30	5.69	5, 6	2, 5, 6	5

Major NSR Summary Table

Permit Number: 2023, PSDTX118M4				Issuance Date: January 20, 2011			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
254-260	No. 1 Primary Storage Bins	Vinyl Acetate	21.73	(5)	3, 4, 17	2, 3, 4, 17	17
		Ethylene	32.00	(5)	3, 4	2, 3, 4	
		Propylene	1.54	(5)		2	
		Ethyl Acrylate	0.01	(5)	17	2, 17	17
		Acetone	0.58	(5)		2	
		PM	(5)		5, 6	2, 5, 6	5
261-268	No. 1 Bulk Storage Bins	Vinyl Acetate	21.73	19.50 (6)	3, 4, 17	2, 3, 4, 17	17
		Ethylene	32.00	118.00 (6)	3, 4	2, 3, 4	
		Propylene	1.54	4.67		2	
		Ethyl Acrylate	0.01	0.01	17	2, 17	17
		Acetone	0.58	0.62		2	
		PM	2.05	8.98	5, 6	2, 5, 6	5

Major NSR Summary Table

Permit Number: 2023, PSDTX118M4			Issuance Date: January 20, 2011				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
269	Reactor No. 2 Process Fugitives (4)	CO	0.60	2.64			
		VOC	7.78	34.08	8, 12	8, 12	
270	No. 2 Extruder Drier	Ethylene	4.00	(7)		2	
		Propylene	0.20	(7)		2	
		Acetone	0.07	(7)		2	
		PM	1.30	5.69	5, 6	2, 5, 6	5
271-275	No. 2 Primary Storage Bins	Vinyl Acetate	21.73	(7)	3, 4, 17	2, 3, 4, 17	17
		Ethylene	32.00	(7)	3, 4	2, 3, 4	
		Propylene	1.54	(7)		2	
		Ethyl Acrylate	0.01	(7)	17	2, 17	17
		Acetone	0.58	(7)		2	
		PM	(7)	(7)	5, 6	2, 5, 6	5

Major NSR Summary Table

Permit Number: 2023, PSDTX118M4				Issuance Date: January 20, 2011			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
276-282	No. 2 Bulk Storage Bins	Vinyl Acetate	21.73	19.50 (8)	3, 4, 17	2, 3, 4, 17	17
		Ethylene	32.00	118.00 (8)	3, 4	2, 3, 4	
		Propylene	1.54	4.67		2	
		Ethyl Acrylate	0.01	0.01	17	2, 17	17
		Acetone	0.58	0.62		2	
		PM	2.05	8.98	5, 6	2, 5, 6	5
A-299	No. 1 Dryer Sample Filter	PM	0.01	0.01	5, 6	5, 6	5
A-300	No. 2 Dryer Sample Filter	PM	0.01	0.01	5, 6	5, 6	5
410	No. 1 Fines Stream Filter	PM	0.01	0.01	5, 6	2, 5, 6	5
411	No. 2 Fines Stream Filter	PM	0.01	0.01	5, 6	2, 5, 6	5

Major NSR Summary Table

Permit Number: 2023, PSDTX118M4			Issuance Date: January 20, 2011				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
413	PND Catalyst Feed Tank	VOC	1.00	0.01		16	
546	Vulcanizables Fines Separator Dust Collector	PM	0.20	0.94	5, 6	2, 5, 6	5
547	Vulcanizables Preheat Bin	PM	0.30	0.55	5, 6	2, 5, 6	5
548	Vulcanizables Peroxide Tank	Acetophenone (11)	4.92	0.88		16	
		Cumene (11)	1.23	0.30		16	
		Phenol (11)	1.23	0.30		16	
		Toluene (11)	0.01	0.01		16	
		VOC	12.33	2.19		16	

Major NSR Summary Table

Permit Number: 2023, PSDTX118M4			Issuance Date: January 20, 2011				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
549	Vulcanizables Holding Bin	Acetophenone (11)	2.00	8.76			
		Cumene (11)	0.50	2.19			
		Phenol (11)	0.50	2.19			
		Toluene (11)	0.01	0.01			
		VOC	5.00	21.90			
552 and 553	Vulcanizables Cooling Bin Nos. 1 and 2	PM	0.12	0.11	5, 6	2, 5, 6	5
		VOC	(9)	(9)		2	
562	Mineral Spirits Tank	VOC	0.25	0.02		16	
563	Propylene Unloading Process Fugitives (4)	VOC	0.05	0.23	8	8	
669	Anti-Oxidant Mix Tank	Acetone	11.43	0.16		16	
		VOC	2.80	0.11		16	

Major NSR Summary Table

Permit Number: 2023, PSDTX118M4			Issuance Date: January 20, 2011				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
670	East A/O Run Tank	VOC	2.80	0.15		16	
		Acetone	5.72	0.24		16	
671	West Vinyl Acetate Run tank	VOC	2.80	0.15		16	
672	Old Run Tank	Acetone	2.57	0.03		16	
		Vinyl Acetate	1.26	0.02		16	
1004	Vulcanizables Fines Separator Baghouse	PM	0.20	0.94	5, 6	2, 5, 6	5
1011	No. 1 Process Analyzer Vent	VOC	0.01	0.01			
1012	No. 2 Process Analyzer Vent	VOC	0.01	0.01			
1021	Vulcanizables Feeder Vent	PM	0.01	0.01	5, 6	5, 6	5

Major NSR Summary Table

Permit Number: 2023, PSDTX118M4			Issuance Date: January 20, 2011				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
1039	Vulcanizables Blender Vent	VOC	(9)	(9)		2	
1041	Cooling Tower Vent	VOC	0.42	1.84	14, 17	14, 17	17
1051	Process Analyzer Combined Vent	CO	0.01	0.01			
		VOC	0.01	0.01			
1058	Vulcanizables Product Area Baghouse	PM	0.20	0.94	5, 6	2, 5, 6	5
1059	No. 1 Classifier Sample Filter	PM	0.01	0.01	5, 6	5, 6	5
1060	No. 2 Classifier Sample Filter	PM	0.01	0.01	5, 6	5, 6	5
1061	Vulcanizables Transfer Filter	PM	0.01	0.01	5, 6	2, 5, 6	5
1177	Analyzer Vent	VOC	0.03	0.13			

Footnotes:

- (1) Emission point identification – either specific equipment designation or emission point number from plot plan
- (2) Specific point source names. For fugitive sources use area name or fugitive source name
- (3) CO – carbon monoxide
NO_x – total oxides of nitrogen
PM – particulate matter, suspended in the atmosphere, including PM₁₀
PM₁₀ – particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.
VOC – volatile organic compounds as defined in Title 30 Texas Administrative Code 101.1
- (4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
- (5) Annual emission limits for the VOC from EPN's 253 through 268 are reflected in the emission rates for EPN's 261 through 268. The hourly and annual PM emissions from EPN's 254 through 268 are reflected in the emission rates for EPN's 261 through 268.
- (6) Total VOC emissions from EPN's 253 through 268 are not to exceed 124.1 tons per year (tpy).
- (7) Annual emission limits for the VOC from EPN's 270 through 282 are reflected in the emission rates for EPN's 276 through 282. The hourly and annual PM emissions from EPN's 271 through 282 are reflected in the emission rates for EPN's 276 through 282.
- (8) Total VOC emissions from EPN's 270 through 282 are not to exceed 118 tpy.
- (9) The VOC emissions from this source are accounted for at EPN 549.
- (10) Emissions from this flare are only from these permitted facilities.
- (11) The allowable emission rates listed for individual VOC species from this EPN are included in the total VOC emission rates.
- (12) Annual MSS emissions of individual VOC species for Fuel Gas Burn System including furnace gas header shutdowns/maintenance are limited as indicated. The allowable emission rates listed for individual MSS VOC species from this EPN are included in the Flare 246 total MSS VOC emission rates.

* Emissions rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/Day 7 Days/week 52 Weeks/year

** Compliance with annual emission limits is based on a rolling 12-month period.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AIR QUALITY PERMIT
A PERMIT IS HEREBY ISSUED TO
Union Carbide Corporation
AUTHORIZING THE CONTINUED OPERATION OF
Chemicals and Plastics Manufacturing Facility
LOCATED AT Seadrift, Calhoun County, Texas
LATITUDE 28° 30' 30" LONGITUDE 096° 46' 15"



- Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code § 116.116 (30 TAC § 116.116)]
- Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the TCAA, including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10% of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120(a), (b) and (c)]
- Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
- Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify to the Office of Permitting, Remediation, and Registration the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
- Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
- Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
- Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]
- Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)]
- Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with § 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC § 116.115(b)(2)(G)]
- Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition are applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
- This permit may be appealed pursuant to 30 TAC § 50.139.
- This permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
- There may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
- Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in TCAA § 382.003(3) or violate TCAA § 382.085, as codified in the Texas Health and Safety Code. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.

PERMITS 2023 and PSD-TX-118M4

Date: March 30, 2006

A handwritten signature in black ink, appearing to read "Glenn Shankle".

Glenn Shankle
Executive Director
Texas Commission on Environmental Quality

SPECIAL CONDITIONS

Permit Numbers 2023 and PSDTX118M4

EMISSION STANDARDS

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit. **(4/04)**

OPERATING LIMITS

2. The annual production of each polymer and copolymer is limited to the values specified in the confidential section of the permit application submitted on September 2, 1994. Monthly production records shall be kept and maintained at the plant site. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ). These records shall be kept for two years after the data is obtained.
3. The combined ethylene emissions to the atmosphere downstream of the extruder shall not exceed 1,100 pounds per million pounds of product produced for each production line. Vinyl acetate emissions from the pellets downstream of the extruder shall not exceed 1,278 pounds per million pounds of product produced. Compliance with this condition shall be demonstrated by quarterly sealed can-gas chromatographic test(s) or other test(s) as approved by the TCEQ Regional Director. Samples for the test(s) shall be taken at the inlet to the spin dryer. Only one set of samples is required per reactor per quarter. Records of each test shall be kept and maintained at the plant site. These records shall be made available to representatives of the TCEQ. These records shall be kept for two years after the data is obtained.
4. New product variations which are produced at this facility shall not exceed the maximum ethylene or vinyl acetate emission levels specified in Special Condition No. 3. Compliance with this condition shall be demonstrated by sealed can-gas chromatographic test(s) or other test(s) approved by the TCEQ Regional Director on a sample of pellets from the first run of each new product. Records of the first run of each new product variation and the results of the pellet residual emission tests shall be kept and maintained at the plant site. These records shall be made available to representatives of the TCEQ. These records shall be kept for two years after the data is obtained.
5. Visible emissions from this facility shall be limited as follows:
 - A. There shall be no visible emissions during normal operation from the following filtered vents: No. 1 Fines/Streamer Filter (Emission Point No. [EPN] 410), No. 2 Fines Separator Dust Collector Fines/Streamer Filter (EPN 411), Fines Separator Dust Collector (EPN 546), Fines Separator Baghouse (EPN 1004), and Feeder Vent (EPN 1021). When there are visible emissions from any one filtered vent, the operation associated with that

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- particular filtered vent shall be isolated and shut down in a timely and orderly manner. Failed or damaged parts shall be repaired or replaced. **(10/06)**
- B. The holder of this permit shall notify the appropriate TCEQ Regional Office within 24 hours of occurrence when the duration of visible emissions from any source covered by this permit exceeds five minutes in any two-hour period. This notification shall include date and time of occurrence, duration, cause and corrective action taken.
- C. These records shall be kept and maintained at the plant site. These records shall be made available to representatives of the TCEQ. These records shall be kept for two years after the data is obtained.
6. All particulate matter (PM) abatement and collection equipment covered by this permit shall be properly maintained and operated during the operation of these facilities. Cleaning and maintenance of the abatement equipment shall be performed, as necessary, so that the equipment efficiency can be adequately maintained. These records shall be kept and maintained at the plant site. These records shall be made available to representatives of the TCEQ. These records shall be kept for two years after the data is obtained. The following steps shall be performed, at a minimum, to ensure the proper operation of the abatement equipment:
- A. The exterior of all PM abatement and collection equipment and all connecting duct work shall be inspected quarterly by facility personnel for physical defects such as holes or cracks that may cause leaks and excess emissions or losses in PM removal efficiency.
- B. The permit holder shall maintain a spare parts filter inventory for the emission points covered under this permit.
- C. The permit holder shall keep a record of each quarterly inspection detailing the results of the inspections including any repairs.
7. Particulate dust collected from all PM abatement and collection equipment shall be disposed of in such a manner to prevent it from becoming airborne.
8. Piping, Valves, Connectors, Flanges, Pumps and Compressors in Volatile Organic Compounds (VOC) Service except the Ethyl Acrylate (EA) Injection Line - 28M
- A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.5 pound per square inch (psi), absolute at 100°F or at maximum process operating temperature if less than 100°F or (2) where the operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list to be made available upon request.

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- B. Construction of new and reworked piping, valves, and pump and compressor systems shall conform to applicable American National Standards Institute, American Petroleum Institute, American Society of Mechanical Engineers or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves, as defined in 30 TAC Chapter 115, shall be identified in a list to be made available upon request.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring period after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically-tested at no less than normal operating pressure and adjustments made, as necessary, to obtain leak-free performance. Flanges shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be closed.

- F. Accessible valves, including pressure safety valves (PSVs), shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and PSVs equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For PSVs equipped with rupture discs, a pressure gauge shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next scheduled process shutdown. An approved gas analyzer shall conform to requirements listed in Title 40 Code of Federal Regulations §§ 60.485(a) and (b) [40 CFR §§ 60.485(a) and (b)].
- G. Except as may be provided for in the special conditions of this permit, all pump and compressor seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. Seal systems that prevent emissions may include (but are not limited to) dual pump seals with barrier

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fluid at higher pressure than process pressure or seals degassing to vent control systems kept in good working order.

Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

- H. Damaged or leaking valves, flanges, compressor seals, and pump seals found to be emitting VOC in excess of 10,000 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping liquids) shall be tagged and replaced or repaired. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. The TCEQ Executive Director, at his discretion, may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown.
 - I. The results of the required fugitive monitoring and maintenance program shall be made available to the TCEQ Executive Director or a designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, and corrective actions taken for all components. Records of flange inspections are not required unless a leak is detected.
 - J. Fugitive emission monitoring required by an applicable New Source Performance Standard (NSPS), 40 CFR Part 60, or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS), 40 CFR Part 61, may be used in lieu of Items F through I of this condition.
 - K. Compliance with the requirements of this condition does not assure compliance with requirements of NSPS or NESHAPS and does not constitute approval of alternative standards for these regulations.
9. Piping, valves, flanges, pumps and compressors in the EA injection line shall be subject to Special Condition No. 8 except that a leak level of 500 ppmv shall be used in Special Condition No. 8.H.
10. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the maximum allowable emission rates table (MAERT). Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a

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concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions. **(4/04)**

11. This permit authorizes emissions from Flare 246 for the following maintenance, start-up, and shutdown activities: **(1/11)**

- Fuel gas burn system including furnace gas header shutdowns/maintenance as limited by the MAERT.
- Vent gas compressor start-ups, up to 10 times per rolling 12-month period for a duration of 30 minutes per start-up.
- Vent gas compressor shutdowns, up to 10 times per rolling 12-month period for a duration of 24 hours per shutdown.
- Full blowdown of reactor and recycle gas system for plant maintenance up to four times per rolling 12-month period for a duration of two hours per blow down.
- Short blowdown of reactor for plant maintenance up to 50 times per rolling 12-month period for a duration of fifteen second per event.
- Reactor blowdown only for plant maintenance may occur 68 times per rolling 12-month period for a duration of five minutes per event.

Maintenance, start-up, and shutdown activities not in the above list are not authorized by this permit. These emissions are subject to the maximum allowable emission rates indicated on the MAERT. The performance of each maintenance activity and the emissions associated with it shall be recorded and the rolling 12-month emissions shall be updated on a monthly basis. These records shall include at least the following information:

- A. The physical location at which emissions from the MSS activity occurred, including the emission point number, common name, and any other identifier for the point at which the emissions were released into the atmosphere;
- B. The type of planned maintenance, startup, or shutdown activity and the reason for the planned activity;
- C. The common name and the facility identification number of the facilities at which the MSS activity and emissions occurred;
- D. The date and time of the MSS activity and its duration; and

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- E. The estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the amendment application and be consistent with good engineering practice. **(10/06)**

- 12. The following unsafe-to-monitor or difficult-to-monitor PSVs are exempt from the monitoring requirements of Special Condition No. 8 and are exempt from the control requirements of Special Condition No. 10 (list actual valve numbers):

<u>PSV No.</u>	<u>Description</u>
-----	No. 1 Hyper 2nd Stage Discharge
-----	No. 1 Product Receiver Edward=s Valve
-----	No. 2 Product Receiver Edward=s Valve
PSV 201-1	No. 1 Hyper Interstage
PSV 202-1	No. 2 Hyper Interstage
PSV 202-2	No. 2 Hyper Second Stage Discharge
PSV 537-33	No. 2 Gunk Tank Blowback Supply Line
PSV 592-30	No. 1 Purge Column Vent Condenser Tubes
PSV 623-30	Furnace Gas Suction Separator
PSV 623-31R	No. 2 Furnace Gas
PSV 623-35	No. 1 Furnace Gas
PSV 624-31	Furnace Gas Header
PSV 700-89	Fuel Gas Header

- 13. The Large Flare (EPN 246) and associated closed vent capture system shall be designed and operated in accordance with the following requirements: **(6/09)**

- A. The flare system shall be designed such that the combined assist natural gas and waste stream to the flare meets the 40 CFR § 60.18 specifications of minimum heating value under normal, upset, and maintenance flow conditions. Flare EPN 246 is not subject to maximum tip velocity requirements as specified in 40 CFR § 60.18.

The heating value shall be satisfied during operations authorized by this permit. Flare testing per 40 CFR § 60.18(f) may be requested by the appropriate regional office to demonstrate compliance with these requirements.

- B. The flare shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flame shall be continuously monitored by a thermocouple or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each

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monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.

- C. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. This shall be ensured by the use of steam assist to the flare.
- D. The following requirements apply to the closed vent capture system which includes all equipment that contains, collects, and transports air pollutants from a source to Flare EPN 246.

To control pollutants other than particulate, either:

- (1) Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or
 - (2) Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.
- E. All bypasses for Flare EPN 246 shall comply with either of the following requirements:
 - (1) Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
 - (2) Once a month, inspect the valves, verifying the position of the valves and the condition of the car seals prevent flow out the bypass.

A deviation shall be reported if the monitoring or inspections indicate bypass of the control device.

- F. Records of the inspections required shall be maintained and if the results of any of the above inspections are not satisfactory, the permit holder shall promptly take necessary corrective action.
14. The VOC associated with cooling tower water shall be monitored monthly with an air stripping system meeting the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or an approved equivalent sampling method. The heat exchange and cooling tower system shall be maintained so as to minimize VOC emissions.

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Faulty equipment shall be repaired at the earliest opportunity, but no later than the next scheduled shutdown of the process unit in which the leak occurs. The results of the monitoring and maintenance efforts shall be recorded and such records shall be maintained at the plant site for a period of two years. The records shall be made readily available to the TCEQ Executive Director upon request.

This permit does not authorize any emission rates from the cooling tower and heat exchanger system(s) other than those listed on the attached MAERT. Emissions from repairs and delay of repair are not authorized for emission rates in excess of those listed on the attached MAERT. **(4/04)**

15. This condition applies to EPNs 546, 1004, and 1058. All equipment used for conveying of powders or resins to storage silos must be equipped with fabric filters having a maximum filtering velocity of 4.0 feet per minute (ft/min) with mechanical shaking or 7.0 ft/min with air cleaning. Transfer of powders or resins must be accomplished in an enclosed system. **(4/04)**

16. Storage and Loading of VOC

A. For the PND Catalyst Feed Tank (EPN 413), all uninsulated tank exterior surfaces exposed to the sun shall be white or aluminum. **(1/09)**

B. For purposes of assuring compliance with VOC emission limitations, the holder of this permit shall meet the specified throughput limits for the following tanks:

<u>EPN</u>	<u>Throughput Limit based on a rolling 12-month period</u>
413	78,000 gallons per year (gal/yr)
548	508,460 gal/yr
562	448,000 gal/yr
669	92,500 gal/yr
670	49,000 gal/yr
671	47,500 gal/yr
672	2,900 gal/yr

Monthly throughput records shall be kept. These records shall be maintained at the plant site for at least two years and be made available to representatives of the TCEQ upon request. **(10/06)**

C. Operation without visible liquid leaks or spills shall be maintained at all loading and unloading facilities, regardless of vapor pressure. This does not apply to momentary dripping associated with the initial connection or disconnection of fittings. Sustained

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dripping from fittings during loading and unloading operations is not permitted. Any liquid spill that occurs during loading and unloading activities shall be cleaned up immediately to minimize air emissions.

17. These facilities shall comply with the applicable requirements contained in 40 CFR Part 63, for Miscellaneous Organic Chemical Manufacturing - MON, Subpart FFFF.

Dated: January 20, 2011

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 2023 and PSDTX118M4

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
246	Flare (10)	Acetone	0.03	0.02
		CO	25.63	16.62
		NO _x	4.97	3.22
		Ethylene (11)	28.57	20.32
		Vinyl Acetate (11)	1.51	1.60
		Ethyl Acrylate (11)	1.20	0.04
		Propylene (11)	6.96	2.66
		Toluene (11)	0.01	0.01
		VOC	38.31	24.64
246	Flare Maintenance, Start-Up, (10) and Shutdown Emissions (MSS) only	Acetone	0.02	0.01
		CO	158.87	12.29
		NO _x	31.18	2.41
		VOC	260.53	18.02
		Ethylene (12)		7.42
		Propylene (12)		0.50
		Vinyl Acetate (12)		0.01
		Ethyl Acrylate (12)		0.01
		Vinyltrimethoxysilane (12)		0.01
		Mineral Spirits (12)		0.01
251	Reactor No. 1 Process Fugitives (4)	Acetone	0.19	0.85
		CO	0.01	0.01
		VOC	13.57	59.42
252	No. 1 Cyclone Scrubber Vent	VOC	0.06	0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
253	No. 1 Extruder Drier	Vinyl Acetate	7.00	(5)
		Ethylene	4.00	(5)
		Propylene	0.20	(5)
		Ethyl Acrylate	0.01	(5)
		Acetone	0.07	(5)
		PM	1.30	5.69
254 - 260	No. 1 Primary Storage Bins	Vinyl Acetate	21.73	(5)
		Ethylene	32.00	(5)
		Propylene	1.54	(5)
		Ethyl Acrylate	0.01	(5)
		Acetone	0.58	(5)
		PM	(5)	
261 - 268	No. 1 Bulk Storage Bins	Vinyl Acetate	21.73	19.50 (6)
		Ethylene	32.00	118.00 (6)
		Propylene	1.54	4.67
		Ethyl Acrylate	0.01	0.01
		Acetone	0.58	0.62
		PM	2.05	8.98
269	Reactor No. 2 Process Fugitives (4)	CO	0.60	2.64
		VOC	7.78	34.08
270	No. 2 Extruder Drier	Ethylene	4.00	(7)
		Propylene	0.20	(7)
		Acetone	0.07	(7)
		PM	1.30	5.69
271 - 275	No. 2 Primary Storage Bins	Vinyl Acetate	21.73	(7)
		Ethylene	32.00	(7)
		Propylene	1.54	(7)
		Ethyl Acrylate	0.01	(7)
		Acetone	0.58	(7)

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
		PM	(7)	
276 - 282	No. 2 Bulk Storage Bins	Vinyl Acetate	21.73	19.50 (8)
		Ethylene	32.00	118.00 (8)
		Propylene	1.54	4.67
		Ethyl Acrylate	0.01	0.01
		Acetone	0.58	0.62
		PM	2.05	8.98
A-299	No. 1 Dryer Sampler Filter	PM	0.01	0.01
A-300	No. 2 Dryer Sampler Filter	PM	0.01	0.01
410	No. 1 Fines Streamer Filter	PM	0.01	0.01
411	No. 2 Fines Streamer Filter	PM	0.01	0.01
413	PND catalyst Feed Tank	VOC	1.00	0.01
546	Vulcanizables Fines Separator Dust Collector	PM	0.20	0.94
547	Vulcanizables Preheat Bin	PM	0.30	0.55
548	Vulcanizables Peroxide Tank	Acetophenone(11)	4.92	0.88
		Cumene (11)	1.23	0.30
		Phenol (11)	1.23	0.30
		Toluene (11)	0.01	0.01
		VOC	12.33	2.19
549	Vulcanizables Holding Bin	Acetophenone(11)	2.00	8.76
		Cumene (11)	0.50	2.19
		Phenol (11)	0.50	2.19
		Toluene (11)	0.01	0.01
		VOC	5.00	21.90
552 and 553	Vulcanizables Cooling Bin	PM	0.12	0.11

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
	Nos. 1 and 2	VOC	(9)	(9)
562	Mineral Spirits Tank	VOC	0.25	0.02
563	Propylene Unloading Process Fugitives (4)	VOC	0.05	0.23
669	Anti-Oxidant Mix Tank	Acetone	11.43	0.16
		VOC	2.80	0.11
670	East A/O Run Tank	VOC	2.80	0.15
		Acetone	5.72	0.24
671	West Vinyl Acetate Run Tank	VOC	2.80	0.15
672	Old Run Tank	Acetone	2.57	0.03
		Vinyl Acetate	1.26	0.02
1004	Vulcanizables Fines Separator Baghouse	PM	0.20	0.94
1011	No. 1 Process Analyzer Vent	VOC	0.01	0.01
1012	No. 2 Process Analyzer Vent	VOC	0.01	0.01
1021	Vulcanizables Feeder Vent	PM	0.01	0.01
1039	Vulcanizables Blender Vent	VOC	(9)	(9)
1041	Cooling Tower	VOC	0.42	1.84
1051	Process Analyzer Combined Vent	CO	0.01	0.01
		VOC	0.01	0.01
1058	Vulcanizables Product Area Baghouse	PM	0.20	0.94
1059	No. 1 Classifier Sampler Filter	PM	0.01	0.01
1060	No. 2 Classifier Sampler Filter	PM	0.01	0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
1061	Vulcanizables Transfer Filter	PM	0.01	0.01
1177	Analyzer Vent	VOC	0.03	0.13

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

- (1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
- (2) Specific point source names. For fugitive sources use area name or fugitive source name.
- (3) CO - carbon monoxide
NO_x - total oxides of nitrogen
PM - particulate matter, suspended in the atmosphere, including PM₁₀
PM₁₀ - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code ' 101.1
- (4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
- (5) Annual emission limits for the VOC from EPNs 253 through 268 are reflected in the emission rates for EPNs 261 through 268. The hourly and annual PM emissions from EPNs 254 through 268 are reflected in the emission rates for EPNs 261 through 268.
- (6) Total VOC emissions from EPNs 253 through 268 are not to exceed 124.1 tons per year (tpy).
- (7) Annual emission limits for the VOC from EPNs 270 through 282 are reflected in the emission rates for EPNs 276 through 282. The hourly and annual PM emissions from EPNs 271 through 282 are reflected in the emission rates for EPNs 276 through 282.
- (8) Total VOC emissions from EPNs 270 through 282 are not to exceed 118 tpy.
- (9) The VOC emissions from this source are accounted for at EPN 549.
- (10) Emissions from this flare are only from these permitted facilities.
- (11) The allowable emission rates listed for individual VOC species from this EPN are included in the total VOC emission rates.
- (12) Annual MSS emissions of individual VOC species for Fuel Gas Burn System including furnace gas header shutdowns/maintenance are limited as indicated. The allowable emission rates listed for individual MSS VOC species from this EPN are included in the Flare 246 total MSS VOC emission rates.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:
24 Hrs/day 7 Days/week 52 Weeks/year

** Compliance with annual emission limits is based on a rolling 12-month period.

Dated January 20, 2011