

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



EXAMPLE A

NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR AN AIR QUALITY PERMIT

PROPOSED AIR QUALITY PERMIT NUMBERS: 19394 AND PSDTX1612

APPLICATION AND PRELIMINARY DECISION. Chevron Phillips Chemical Company LP has applied to the Texas Commission on Environmental Quality (TCEQ) for:
Amendment of Permit 19394
Issuance of Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1612

This application would authorize modification to the Chevron Phillips Chemical Orange Plant located at 5309 Farm-to-Market Road 1006, Orange, Orange County, Texas 77630. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. **AVISO DE IDIOMA ALTERNATIVO.** El aviso de idioma alternativo en español está disponible en <https://www.tceq.texas.gov/permitting/air/newsourcereview/airpermits-pendingpermit-apps>. This application was submitted to the TCEQ on October 4, 2022. The existing facility will emit the following air contaminants in a significant amount: carbon monoxide and organic compounds. In addition, the facility will emit the following air contaminants: carbon monoxide, hazardous air pollutants, hydrogen sulfide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less and sulfur dioxide.

The executive director has determined that the emissions of air contaminants from the proposed facility which are subject to PSD review will not violate any state or federal air quality regulations and will not have any significant adverse impact on soils, vegetation, or visibility. All air contaminants have been evaluated, and "best available control technology" will be used for the control of these contaminants.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary determination summary and executive director's air quality analysis, will be available for viewing and copying at the TCEQ central office, the TCEQ Beaumont regional office, and the Orange Texas Library, 220 North 5th Street, Orange, Orange County, Texas, beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review in the Beaumont regional office of the TCEQ.

INFORMATION AVAILABLE ONLINE. These documents are accessible through the Commission's Web site at www.tceq.texas.gov/goto/cid: the executive director's preliminary decision which includes the draft permit, the executive director's preliminary determination summary, the air quality analysis, and, once available, the executive director's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. The public location mentioned above, the Orange Texas Library, provides public access to the internet. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application. <https://gisweb.tceq.texas.gov/LocationMapper/?marker=-93.781111,30.048055&level=13>.

PUBLIC COMMENT/PUBLIC MEETING. You may submit public comments or request a public meeting about this application. The purpose of a public meeting is to provide the opportunity to submit comment or to ask questions about the application. The TCEQ will hold a public meeting if the executive director determines that there is a significant degree of public interest in the application, if requested by an interested person, or if requested by a local legislator. A public meeting is not a contested case hearing. **You may submit additional written public comments within 30 days of the**

date of newspaper publication of this notice in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.

After the deadline for public comment, the executive director will consider the comments and prepare a response to all public comment. **The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application.**

OPPORTUNITY FOR A CONTESTED CASE HEARING. A contested case hearing is a legal proceeding similar to a civil trial in a state district court. **A person who may be affected by emissions of air contaminants from the facility is entitled to request a hearing. A contested case hearing request must include the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number; (2) applicant's name and permit number; (3) the statement "I/we request a contested case hearing;" (4) a specific description of how you would be adversely affected by the application and air emissions from the facility in a way not common to the general public; (5) the location and distance of your property relative to the facility; (6) a description of how you use the property which may be impacted by the facility; and (7) a list of all disputed issues of fact that you submit during the comment period. If the request is made by a group or association, one or more members who have standing to request a hearing must be identified by name and physical address. The interests the group or association seeks to protect must also be identified. You may also submit your proposed adjustments to the application/permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing within 30 days following this notice to the Office of the Chief Clerk, at the address provided in the information section below.**

A contested case hearing will only be granted based on disputed issues of fact or mixed questions of fact and law that are relevant and material to the Commission's decisions on the application. The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. Issues that are not submitted in public comments may not be considered during a hearing.

EXECUTIVE DIRECTOR ACTION. If a timely contested case hearing request is not received or if all timely contested case hearing requests are withdrawn, the executive director may issue final approval of the application. The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the CID. If any timely hearing requests are received and not withdrawn, the executive director will not issue final approval of the permit and will forward the application and requests to the Commissioners for their consideration at a scheduled commission meeting.

MAILING LIST. You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

AGENCY CONTACTS AND INFORMATION. Public comments and requests must be submitted either electronically at www14.tceq.texas.gov/epic/eComment/, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Chevron Phillips Chemical Company LP at the address stated above or by calling Ms. Cody Farmer, Sr Environmental Engineer - Orange & Port Arthur Plants at (409) 882-6363.

Notice Issuance Date: September 27, 2023

COMISIÓN DE CALIDAD AMBIENTAL DE TEXAS



EJEMPLO A

AVISO DE SOLICITUD Y DECISIÓN PRELIMINAR PARA UN PERMISO DE CALIDAD DEL AIRE

PERMISO DE CALIDAD DEL AIRE NÚMEROS PROPUESTOS: 19394 y PSDTX1612

SOLICITUD Y DECISIÓN PRELIMINAR. Chevron Phillips Chemical Company LP, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ, por sus siglas en inglés) para la:

Enmienda del Permiso de Calidad del Aire 19394

Emisión del Permiso de Prevención del Deterioro Significativo (PSD, por sus siglas en inglés) de Calidad del Aire PSDTX1612.

Esta solicitud autorizaría la modificación del Chevron Phillips Chemical Orange Plant ubicado en 5309 Farm-to-Market Road 1006, Orange, Condado de Orange, Texas 77630. Esta solicitud se procesó de manera acelerada, según lo permitido por las reglas de la comisión en 30 Código Administrativo de Texas, Capítulo 101, Subcapítulo J. Esta solicitud se presentó a la TCEQ el 4 de Octubre, 2022. La instalación existente emitirá los siguientes contaminantes del aire en una cantidad significativa: monóxido de carbono y compuestos orgánicos. Además, la instalación emitirá los siguientes contaminantes del aire: monóxido de carbono, contaminantes atmosféricos peligrosos, sulfuro de hidrógeno, óxidos de nitrógeno, compuestos orgánicos, partículas, incluidas partículas con diámetros de 10 micras o menos y 2,5 micras o menos y dióxido de azufre.

El director ejecutivo ha determinado que las emisiones de contaminantes atmosféricos de la instalación modificada que están sujetas a la revisión de la PSD no violarán ninguna regulación estatal o federal de calidad del aire y no tendrán ningún impacto adverso significativo en los suelos, la vegetación o la visibilidad. Todos los contaminantes del aire han sido evaluados, y se utilizará la "mejor tecnología de control disponible" para el control de estos contaminantes.

El director ejecutivo ha completado la revisión técnica de la solicitud y ha preparado un proyecto de permiso que, de ser aprobado, establecería las condiciones en las que la instalación debe operar. La solicitud de permiso, la decisión preliminar del director ejecutivo, el bosquejo del permiso y el resumen de determinación preliminar del director ejecutivo y el análisis de la calidad del aire del director ejecutivo, estarán disponibles para su visualización y copia en la oficina central de la TCEQ, la oficina regional de la TCEQ en Beaumont y La Biblioteca de Orange Texas, 220 North 5th Street, Orange, Condado de Orange, Texas a partir del primer día de publicación de este aviso. El archivo de cumplimiento de la instalación, si existe alguno, está disponible para su revisión pública en la oficina regional de Beaumont de la TCEQ.

INFORMACIÓN DISPONIBLE EN LÍNEA. Estos documentos pueden consultarse a través del sitio Web de la Comisión en www.tceq.texas.gov/goto/cid: la decisión preliminar del director ejecutivo que incluye el bosquejo del permiso, el resumen de la determinación preliminar del director ejecutivo, el análisis de la calidad del aire y, una vez disponible, la respuesta del director ejecutivo a los comentarios y la decisión final sobre esta solicitud. Acceda a la Base de Datos Integrada de comisionados (CID, por sus siglas en inglés) utilizando el enlace anterior e ingrese el número de permiso para esta solicitud. La ubicación pública mencionada anteriormente, la Biblioteca de Orange, Texas, proporciona acceso público a Internet. Este enlace a un mapa electrónico de la ubicación general del sitio o instalación se proporciona como cortesía pública y no como parte de la solicitud o aviso. Para conocer la ubicación exacta, consulte la solicitud. <https://gisweb.tceq.texas.gov/LocationMapper/?marker=-93.781111,30.048055&level=13>.

COMENTARIO PÚBLICO/REUNIÓN PÚBLICA Puede enviar comentarios públicos o solicitar una reunión pública sobre esta solicitud. El propósito de una reunión pública es para brindar la oportunidad de enviar comentarios o hacer preguntas sobre la solicitud. La TCEQ convocará una reunión pública si el director ejecutivo determina que existe un grado significativo de interés público en la solicitud, si lo solicita una persona interesada o si lo solicita un legislador local. Una reunión pública no es una audiencia de caso impugnado. **Puede enviar comentarios públicos adicionales por escrito dentro de los 30 días de la fecha de publicación de este aviso en el periódico de la manera establecida en el párrafo CONTACTOS E INFORMACIÓN DE LA AGENCIA a continuación.**

Después de la fecha límite para comentarios públicos, el director ejecutivo considerará los comentarios y preparará una respuesta a todos los comentarios públicos. **La respuesta a los comentarios, junto con la decisión del director ejecutivo sobre la solicitud, se enviará por correo a todos los que enviaron comentarios públicos o están en una lista de correo para esta solicitud.**

OPORTUNIDAD PARA UNA AUDIENCIA DE CASO IMPUGNADO. Una audiencia de caso impugnado es un procedimiento legal similar a un juicio civil en un tribunal de distrito estatal. **Una persona que pueda verse afectada por las emisiones de contaminantes atmosféricos de la instalación tiene derecho a solicitar una audiencia. Una solicitud de audiencia de caso impugnado debe incluir lo siguiente: (1) su nombre (o para un grupo o asociación, un representante oficial), dirección postal, número de teléfono diurno; (2) nombre y número de permiso del solicitante; (3) la declaración "Yo/nosotros solicito/solicitamos una audiencia de caso impugnado;" (4) una descripción específica de cómo se vería afectado negativamente por la aplicación y las emisiones atmosféricas de la instalación de una manera no común para el público en general; (5) la ubicación y distancia de su propiedad en relación con la instalación; (6) una descripción de cómo usa la propiedad que puede verse afectada por la instalación; y (7) una lista de todos los problemas de hecho en disputa que envíe durante el periodo de comentarios. Si la solicitud es hecha por un grupo o asociación, uno o más miembros que tienen legitimación para solicitar una audiencia deben ser identificados por su nombre y dirección física. También deben identificarse los intereses que el grupo o asociación busca proteger. También puede presentar los cambios propuestos a la solicitud / permiso que satisfagan sus inquietudes. Las solicitudes de una audiencia de caso impugnado deben presentarse por escrito dentro de los 30 días siguientes a este aviso a la Oficina del Secretario Oficial, en la dirección proporcionada en la sección de información a continuación.**

Una audiencia de caso impugnado solo se concederá sobre la base de cuestiones de hecho en disputa o cuestiones mixtas de hecho y de derecho que sean relevantes y materiales para las decisiones de la Comisión sobre la solicitud. La Comisión sólo podrá conceder una solicitud de audiencia de un asunto impugnado sobre asuntos que el solicitante haya presentado en sus observaciones oportunas que no hayan sido retiradas posteriormente. Los asuntos que no se presentan en comentarios públicos no pueden ser considerados durante una audiencia.

ACCIÓN DEL DIRECTOR EJECUTIVO. Si no se recibe una solicitud de audiencia de caso impugnado oportunamente o si se retiran todas las solicitudes de audiencia de caso impugnado oportunamente, el director ejecutivo puede emitir la aprobación final de la solicitud. La respuesta a los comentarios, junto con la decisión del director ejecutivo sobre la solicitud, se enviará por correo a todos los que enviaron comentarios públicos o están en una lista de correo para esta solicitud, y se publicará electrónicamente en el CID. Si se reciben solicitudes de audiencia oportunas y no se retiran, el director ejecutivo no emitirá la aprobación final del permiso y enviará la solicitud y las solicitudes a los Comisionados para su consideración en una reunión programada de la comisión.

LISTA DE CORREO. Puede solicitar ser incluido en una lista de correo para obtener información adicional sobre esta solicitud enviando una solicitud a la Oficina del Secretario Oficial a la dirección a continuación.

CONTACTOS E INFORMACIÓN DE LA AGENCIA. Los comentarios y solicitudes públicas deben enviarse electrónicamente a www14.tceq.texas.gov/epic/eComment/, o por escrito a la Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Si se comunica con la TCEQ electrónicamente, tenga en cuenta que su dirección de correo electrónico, al igual que su dirección postal física, se convertirá en parte del registro público de la agencia. Para obtener más información sobre esta solicitud de permiso o el proceso de permisos, llame al Programa de Educación Pública al número gratuito 1-800-687-4040. Si desea información en español, puede llamar al 1-800-687-4040.

También se puede obtener más información de Chevron Phillips Chemical Company LP en la dirección indicada anteriormente o llamando a la Sra. Cody Farmer, Ingeniera Ambiental Senior al (409) 882-6363.

Fecha de Emisión del Aviso: Septiembre 27, 2023

Special Conditions

Permit Number 19394 and PSDTX1612

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 requirements specified in the special conditions.

Federal Applicability

2. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60):
 - A. Subpart A, General Provisions.
 - B. Subpart DDD, Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry.
3. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63:
 - A. Subpart A, General Provisions.
 - B. Subpart VVVVVV, National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources (applicable for chromium compounds).

Operational Limitations

4. The facility will produce polymers (including copolymers and homopolymers) subject to the short-term (lb/hr) and rolling 12-month production limits referenced in confidential Table A-1 of TCEQ/NSR project number 348389. Production records shall be updated monthly with the pounds of polymer produced during the previous month and rolling 12 months to date. **(TBD)**
5. 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. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions with the exception of those listed below.
 - A. Safety relief valves that discharge to the atmosphere only as a result of fire or failure of utilities.
 - B. The Reactor Emergency Relief Valves.
 - C. Two pressure safety valves located on V-501 Isobutane Storage Tank.
6. Total VOC emitted to the atmosphere after the purge column through product loadout including silo vents shall not exceed 94 pounds of VOC/million (MM) pounds of high density polyethylene pellets on an hourly average, and 80 pounds of VOC/MM pounds of high density polyethylene pellets on a

rolling 12-month basis. Compliance with limit will be demonstrated by Special Condition (SC) No. 26 and 27. **(TBD)**

7. Particulate matter (PM) grain loading shall not exceed 0.01 grains per dscf of air from any non-combustion vent.

There shall be no visible emissions exceeding 30 seconds in any six-minute period as determined using U.S. Environmental Protection Agency (EPA) Test Method 22.

8. Baghouse Filter Requirements:

A. The filtered vents covered by this permit shall not operate unless filters and associated equipment are maintained in good working order and operating.

B. Filter monitoring:

- (1) For EPNs 55, 57, 63, 64, 65, 66, 67, 68, 70, 70A, and 80, all filter vents will be inspected for visible emissions once per quarter. For EPNs 61, 62, 69F817, 69F826, 69F847, 69F848, and V-202, all filter vents shall be inspected for visible emissions once per day of operation. **(TBD)**
- (2) For EPN 69F817, the differential pressure across the baghouse shall be monitored during operation of the blower and be recorded at least once an hour when the blower is operating. For EPN V-202, the differential pressure across the baghouse shall be monitored during the operation of the eductor and be recorded at least once an hour when the eductor is operating. The pressure drop shall be at least 0.2 inches of water-column and shall not exceed 6 inches of water column. **(TBD)**

The monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or at least annually, whichever is more frequent, and shall be accurate to within 0.1 inches water-column. The monitoring device shall be checked and maintained to provide accurate readings consistent with the manufacturer's specifications.

Quality assured (or valid) data must be generated when the blender vent is operating except during the performance of a daily zero check. Loss of valid data due to periods of monitor breakdown, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in hours) that the blender vent operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

C. For all filter EPNs, (with the exception of EPN 70, which is a cyclone) a spare-parts filter inventory will be maintained on site.

D. This condition (SC No. 8.D.) applies only while filters are in operation. All baghouse filters shall be visually inspected at least once per day and preventive maintenance and repairs performed as necessary to ensure good operating condition in accordance with manufacturer's specifications.

E. Baghouse filter blow downs (manually dumping the filter fines) shall be performed no less than once per week, with the following exceptions:

EPN 69F826: No less than once per day.

EPN 69F847: No less than twice per day.

EPN 69F848: No less than twice per day.

- F. Records of all baghouse filter inspections, visible emissions observations, maintenance (including blow downs), repairs, filter changes, filter inventory, and manufacturer's specifications shall be maintained on site and made available at the request of personnel from TCEQ or any air pollution control agency.
9. The sulfur content of the natural gas fuel may not exceed 4 grains of sulfur per dry 100 standard cubic feet.
10. Flares shall be designed and operated in accordance with the following requirements:
- A. The flare systems shall be designed such that the combined assist natural gas and waste stream to each flare meets the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal, upset, and maintenance flow conditions.
- The heating value and velocity requirements 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 (or as required per NSPS Subpart) 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, infrared monitor, or ultraviolet monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated or have a calibration check performed 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 air assist to the flare.
- D. The permit holder shall install a continuous flow monitor and composition analyzer that provide a record of the vent stream flow and composition (total VOC or Btu content) to the flare. The flow monitor sensor and analyzer sample points shall be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow and composition (or Btu content) shall be recorded each hour. (Flow monitors and analyzers have been installed.)

The monitors shall be calibrated or have a calibration check performed on an annual basis to meet the following accuracy specifications: the flow monitor shall be $\pm 5.0\%$, temperature monitor shall be $\pm 2.0\%$ at absolute temperature, and pressure monitor shall be ± 5.0 mm Hg.

A minimum of one type of composition analyzer shall be operating while the flare is in operation. The following requirements apply to the composition analyzer:

- (1) For a Gas Chromatography (GC) Analyzer

Calibration of the analyzer shall follow the procedures and requirements of Section 10.0 of 40 CFR Part 60, Appendix B, Performance Specification 9, as amended through October 17, 2000 (65 FR 61744), except that the multi-point calibration procedure in Section 10.1 of Performance Specification 9 shall be performed at least once every calendar quarter instead of once every month, and the mid-level calibration check procedure in Section 10.2 of Performance Specification 9 shall be performed at least once every calendar week instead of once every 24 hours. The calibration gases used for calibration procedures shall be in accordance with Section 7.1 of Performance Specification 9. Net heating value of the gas combusted in the flare shall be calculated according to the equation given in 40 CFR § 60.18(f)(3) as amended through October 17, 2000 (65 FR 61744).

(2) For a Tunable Filter Spectroscopy (TFS) Analyzer

The analyzer shall be calibrated, installed, operated, and maintained in accordance with manufacturer recommendations. Net heating value of the gas combusted in the flare shall be calculated according to the equation given in 40 CFR § 60.18(f)(3) as amended through October 17, 2000 (65 FR 61744).

The monitors and analyzers shall operate as required by this section at least 95% of the time when the flare is operational, averaged over a rolling 12 month period. Flared gas net heating value and actual exit velocity determined in accordance with 40 CFR §§ 60.18(f)(3) and 60.18(f)(4) shall be recorded at least once every hour. Hourly mass emission rates shall be determined and recorded using the above readings and the emission factors used in the permit application (PI-1 dated June 28, 2013). **(4/18)**

11. The following requirements apply to capture systems for the flare (EPN 58):

A. Comply with one of the following:

- (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.

B. If there is a bypass for the control device, 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 bypass does not include authorized analyzer vents, highpoint bleeder vents, low point drains, or rupture discs upstream of pressure relief valves if the pressure between the disc and relief valve is monitored and recorded at least weekly.

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

C. The date and results of each inspection performed shall be recorded. If the results of any inspection are not satisfactory, the deficiencies shall be recorded and the permit holder shall promptly take necessary corrective action, recording each action with the date completed.

12. The cooling tower (EPN 60) shall comply with the following requirements:

- A. The cooling tower water shall be monitored monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.
- B. Cooling water VOC concentrations above 0.08 ppmw indicate faulty heat exchange equipment. Equipment shall be maintained so as to minimize VOC emissions into the cooling water. 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.

Emissions from the cooling tower are not authorized if the VOC concentration of the water returning to the cooling tower exceeds 0.8 ppmw. The VOC concentrations above 0.8 ppmw are not subject to extensions for delay of repair under this permit condition. The results of the monitoring and maintenance efforts shall be recorded.

13. The cooling tower (EPN 60) shall be operated and monitored in accordance with the following:
- A. The cooling tower shall be equipped with drift eliminators having manufacturer's design assurance of 0.001% drift or less. Drift eliminators shall be maintained and inspected at least annually. The permit holder shall maintain records of all inspections and repairs.
 - B. Total dissolved solids (TDS) shall not exceed 19,563 ppmw. Dissolved solids in the cooling water drift are considered to be emitted as PM, PM₁₀, and PM_{2.5} as represented in the permit application calculations.
 - C. Cooling water shall be sampled at least once per week for total dissolved solids (TDS). **(6/21)**
 - D. Cooling water sampling shall be representative of the cooling tower feed water and shall be conducted using approved methods. **(6/21)**
 - (1) The analysis method for TDS shall be EPA Method 160.1, ASTM D5907, or SM 2540 C [SM - 19th edition of Standard Methods for Examination of Water]. Water samples should be capped upon collection, and transferred to a laboratory area for analysis.
 - (2) Alternate sampling and analysis methods may be used to comply with Special Condition 13.C with written approval from the TCEQ Regional Director.
 - (3) Records of all instrument calibrations and test results and process measurements used for the emission calculations shall be retained.
 - E. Emission rates of PM, PM₁₀ and PM_{2.5} shall be calculated using the measured TDS, the design drift rate and the daily maximum and average actual cooling water circulation rate for the short term and annual average rates. Alternately, the design maximum circulation rate may be used for all calculations. Emission records shall be updated monthly. **(6/21)**
14. Storage tank service shall be limited to storing the following liquid: **(TBD)**

Tank Identifier	Storage Tank Type	Service
V-700 (FIN V-726)	Internal Floating Roof	Feed Monomer
V-710	Fixed Roof	Ethylene Derivative
V-711	Fixed Roof	Ethylene Derivative
V-720	Fixed Roof	Ethylene Derivative
V-730	Internal Floating Roof	Overhead Purge
V-740	Fixed Roof	Light Byproduct

15. Storage tanks (EPNs: V-700, V-710, V-711, V-720, V-730, and V-740) are subject to the following requirements: The control requirements specified in parts A–E of this condition shall not apply (1) where the VOC has an aggregate partial pressure of less than 0.50 psia at the maximum feed temperature or 95°F, whichever is greater, or (2) to storage tanks smaller than 25,000 gallons. **(TBD)**

- A. The tank emissions must be controlled by an internal floating deck or “roof” shall be installed. A domed external floating roof tank is equivalent to an internal floating roof tank. The floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the floating roof: (1) a liquid-mounted seal, (2) two continuous seals mounted one above the other, or (3) a mechanical shoe seal.
- B. For any tank equipped with a floating roof, the permit holder shall perform the visual inspections and any seal gap measurements specified in Title 40 Code of Federal Regulations § 60.113b (40 CFR § 60.113b) Testing and Procedures (as amended at 54 FR 32973, Aug. 11, 1989) or according to the alternative specified in 40 CFR § 60.110b(e) (as amended at 86 FR 5019, Jan. 19, 2021) to verify fitting and seal integrity. Records shall be maintained of the dates inspection was performed, any measurements made, results of inspections and measurements made (including raw data), and actions taken to correct any deficiencies noted.
- C. The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650 dated November 1, 1998 except that an internal floating cover need not be designed to meet rainfall support requirements and the materials of construction may be steel or other materials.
- D. Internal floating roof storage tanks shall be designed to completely drain its entire contents to a sump in a manner that limits the volume of free-standing liquid in the tank or the sump as follows:

NPS (in.)	Vu (gal.)
2	9
3	14
4	32
6	75

Where NPS is the nominal piping size of the sump pipe and Vu is the maximum volume of the free-standing liquid in the tank or sump.

- E. Tanks shall be constructed or equipped with a connection to a vapor recovery system that routes vapors from the vapor space under the landed roof to a control device.
 - F. Except for labels, logos, etc. not to exceed 15 percent of the tank total surface area, uninsulated tank exterior surfaces exposed to the sun shall be white or unpainted aluminum.
 - G. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all storage tanks during the previous calendar month and the past consecutive 12 month period. The record shall include tank identification number, control method used, tank capacity in gallons, name of the material stored, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures.
- Emissions from tanks shall be calculated using the methods that were used in confidential Tables A-15 to determine the MAERT limits in TCEQ/NSR project number 348389.
- 16. The permit holder shall maintain and update a monthly emissions record which includes calculated emissions of VOC from all railcar and truck loading operations of liquid product over the previous rolling 12-month period. The record shall include the loading spot, control method used, quantity loaded in gallons, name of the liquid loaded, vapor molecular weight, liquid temperature in degrees

Fahrenheit, liquid vapor pressure at the liquid temperature in psia, liquid throughput for the previous month and rolling 12 months to date. Records of VOC temperature are not required to be kept for liquids loaded from unheated tanks which receive liquids at or below ambient temperatures.

Emission calculations shall be based on the representations submitted as part of the TCEQ/NSR project number 348389 permit application. Emissions shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations." **(TBD)**

17. All rail and truck liquid loading of ethylene derivatives, overhead purge, light byproduct, and filter flush shall be bottom or submerged fill. All lines and connectors used in truck and railcar liquid loading shall be visually inspected for any defects prior to hookup. Lines and connectors that are visibly damaged shall be removed from service. Operations shall cease immediately upon detection of any liquid leaking from the lines or connections. **(TBD)**
18. Tank truck loading emissions of the overhead purge, light byproduct, and filter flush shall be vented to the flare (EPN-58). The flare and capture system shall be designed and operated as outlined in Special Conditions 10 and 11. **(TBD)**
19. Each tank truck loaded with overhead purge, light byproduct, and filter flush shall be leak checked and certified annually in accordance with Title 40 Code of Federal Regulations Part 63 (40 CFR 63), Subpart R. The permit holder shall not allow a tank truck to be filled unless it has passed a leak-tight test within the past year as evidenced by a certificate which shows the date the tank truck last passed the leak-tight test required by this condition and the identification number of the tank truck. **(TBD)**
20. Railcar loading operations of polyethylene pellets shall be limited to the rates established in confidential Table A-3 of TCEQ/NSR project number 348389. Loading records shall be updated to include the maximum hourly loading rate each month as well as the pounds of product loaded during the previous month and rolling 12 months to date. **(TBD)**
21. Railcar loading operations of polyethylene pellets shall demonstrate compliance with the following requirements: **(TBD)**
 - A. The loading of polyethylene pellets onto railcars shall result in no visible emissions during loading. Personnel shall inspect for visible emissions once per calendar quarter when pellet loading activities are occurring.
 - B. Railcar loading arms shall be hard piped with telescoping extenders. The manufacturer's maintenance recommendations shall be followed and recorded to ensure proper operation.

Fugitives

Piping, Valves, Connectors, Pumps, and Compressors in VOC Service – 28VHP

22. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
 - A. The requirements of paragraphs G and H shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (psia) at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

- (1) piping and instrumentation diagram (PID);
 - (2) a written or electronic database or electronic file;
 - (3) color coding;
 - (4) a form of weatherproof identification; or
 - (5) designation of exempted process unit boundaries.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.
- 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. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in Paragraph A above. If an unsafe to monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.
- F. Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;
- (1) a cap, blind flange, plug, or second valve must be installed on the line or valve;
or
 - (2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once within the 72 hour period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings

of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

- G. Accessible valves 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 relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. If a relief valve is equipped with rupture disc, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

Replacements for leaking components shall be re-monitored within 15 days of being placed back into VOC service.

- H. Except as may be provided for in the special conditions of this permit, all pump, compressor, and agitator 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 automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. 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.
- I. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 ppmw or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump, compressor, and agitator seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days and a record of the attempt shall be maintained.
- J. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, 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 within 15 days of the detection of the leak. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components

on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shut down as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shut down or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

- K. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.
- L. Alternative monitoring frequency schedules of 30 TAC 115.352 - 115.359 or National Emission Standards for Organic Hazardous Air Pollutants, 40 CFR Part 63, Subpart H, may be used in lieu of Items G through H of this condition.
- M. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS) and does not constitute approval of alternative standards for these regulations.

28CNTA (Connectors Inspected Annually)

- 23. In addition to the weekly physical inspection required by SC No. 22, Item E, all connectors in gas/vapor and light liquid service shall be monitored annually with an approved gas analyzer in accordance with SC No. 22, Items G thru K. Alternative monitoring frequency schedules ("skip options") of Title 40 Code of Federal Regulations Part 63, Subpart H, National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks, may be used in lieu of the monitoring frequency required by this permit condition. Compliance with this condition does not assure compliance with requirements of applicable state or federal regulation and does not constitute approval of alternative standards for these regulations.
- 24. All pump, compressor, and agitator seals subject to instrument monitoring in accordance with SC 14 are subject to a leak definition of 500 ppmv instead of the 2000 ppmv limit shown in SC No. 22.I.
- 25. The monitoring provisions of SC No. 22 do not apply to piping in dedicated natural gas, steam, or plant air service. Components on tank vents, filter vents, pellet classifier, blender vent, fines separator, and pellet dryer (EPN's 60 - 70, 70A, and 273) are not subject to the provisions of SC No. 22, but an audio, visual, olfactory (AVO) inspection should be completed on these components once per quarter. **(TBD)**

Sampling, Monitoring and Record Keeping

- 26. Compliance with VOC emission limits for the polyethylene pellet/fluff handling systems between the purge column and the pellet dryer will be determined as follows:

A. The permit holder shall perform stack sampling and other testing as required to establish the actual pattern and quantities of total VOC being emitted into the atmosphere from the following EPNs to demonstrate compliance with the MAERT:

- (1) One of three Fluff Filters (EPNs 66, 67, or 68), depending on which silo is receiving product during the test.
- (2) one of the Fluff Filters (EPNs 63, 64, or 65)
- (3) two of the Blender Vent Filters (EPNs 69F847 and 69F848)
- (4) and the Pellet Dryer (EPN 273).

The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual and the U.S. Environmental Protection Agency (EPA) Reference Methods. **(TBD)**

Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60) testing which must have EPA approval shall be submitted to the TCEQ Regional Director. Any agreement to waive the testing of VOC emissions from fluff sources listed above must include a permit amendment or alteration to modify the compliance determination method described in SC 19. A. – C.

B. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:

- (1) Proposed date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.
- (6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.
- (7) Procedures/parameters to be used to determine worst case emissions during the sampling period. Parameters to determine worst-case emissions shall include, but are not limited to: worst-case polyethylene grade and worst-case production rate.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.

C. Air contaminants emitted from the polyethylene fluff sources to be tested for include Total VOC.

D. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after increase in production, as authorized in permit amendment TCEQ/NSR project number 348389 and at such other times (identified below) as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be

submitted to the appropriate regional office. Re-sampling or re-testing of VOC sources listed above is required when: **(TBD)**

- (1) Production rate or residual VOC after the dryer exceeds the rates or amounts as described in SC 26.E.
 - (2) A material is processed through the system with a VOC off-gassing rate higher than that last tested.
 - (3) Physical changes to the number and size of vents present when the test was last conducted.
 - (4) Physical changes to the process resulting in differences in temperature, air flow or product flow since the test was last conducted.
- E. The facility being sampled shall operate at maximum polyethylene production per SC 4 during stack emission testing. To the extent possible, testing shall be conducted during production of polymers that have historically been shown to have higher residual VOC content. These conditions/parameters and any other primary operating parameters that affect the emission rate shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if the polyethylene production rate is at least 10% greater than the rate achieved during the most recent stack test, stack sampling shall be performed at the new operating conditions within 120 days. **(TBD)**

- F. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled "Chapter 14, Contents of Sampling Reports" of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TCEQ Regional Office.

One copy to each local air pollution control program.

Continuous Determination of Compliance

27. Compliance with VOC emission limits described in SC No. 6 for the polyethylene pellet/fluff handling systems shall be determined as follows:

- A. Emissions after the pellet dryer and through product loadout will be determined by calculation using monthly production rates and monthly average sampling and testing of the polyethylene for residual VOC immediately after the pellet dryer. A VOC head space test approved by the TCEQ Regional Director shall be used to determine the residual VOC. Monthly average sampling will be based on a minimum of three samples. Separate samples are required for each product type produced during the month.

Polymer production rates and monitoring records will be maintained at the plant site and will include (but are not limited to):

- (1) Day and time of sample.
- (2) Actual plant production rate at the time of sampling and monthly production rate.
- (3) Product number and melt index.
- (4) Monthly polymer handling emissions will be calculated by the following equation: **(TBD)**

$$E=(C)(M)$$

Where

E = Emissions, pounds of VOC/month

C = Concentration after the dryer, pounds of VOC/MM pounds of high density polyethylene

M = Monthly production, MM pounds of high density polyethylene/month

- B. Emissions between the purge column and the pellet dryer will be determined by calculation using the VOC emission rate measured in the test described in SC 26.
- C. Compliance with the VOC emission limits in SC 6 shall be determined by totaling the emission rates calculated from procedures in SC 26. A and B for the same time period and production rate. The calculations shall be reduced to total pounds VOC/million pounds of polyethylene produced.

Projected Actual Emissions (PAE) Monitoring

28. The project associated with the permit application PI-1 dated July 26, 2021 (NSR Permit No. 4140A, Project No. 331520), was determined to not be subject to major new source review through the use of projected actual emission rates for the facilities associated with the project. Actual emissions from the sources as listed in the table of this special condition shall be monitored as represented in the application and records maintained, and reports provided in accordance with 30 TAC §116.127 for the specified number of years from the resumption of regular operations. Records shall include the date of resumption of regular operations after the project change. **(9/22)**

Source Facility	EPN	Pollutant(s)	Projected Actual Emissions, (tons/year)	Monitoring Special Conditions	Maintain Records (Years)
Flare	58 (authorized under NSR Permit No. 19394)	VOC	85.65	10 (authorized under NSR Permit No. 19394)	5

Planned Maintenance, Startup, and Shutdown Activities - Ethylene Derivative Unit

29. This permit authorizes the emissions from the Ethylene Derivative Unit for the planned maintenance, startup, and shutdown (MSS) activities summarized in the MSS Activity Summary (Attachment C) attached to this permit.

Additionally, this permit authorizes emissions from the following temporary facilities used to support planned MSS activities at permanent site facilities: frac tanks, containers, vacuum trucks, portable or temporary control devices identified in Special Condition 37, and controlled recovery systems. Emissions from temporary facilities are authorized provided the temporary facility (a) does not

remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned MSS activities at the permanent site facilities listed in this Attachment, and (c) does not operate as a replacement for an existing authorized facility.

Attachment A identifies the inherently low emitting MSS activities that may be performed at the plant. Emissions from activities identified in Attachment A shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from the activities listed in Attachment A must be revalidated annually. This revalidation shall consist of the estimated emissions for each type of activity and the basis for that emission estimate.

Routine maintenance activities, as identified in Attachment B may be tracked through the work orders or equivalent. Emissions from activities identified in Attachment B shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

The performance of each planned MSS activity not identified in Attachment A and the emissions associated with it shall be recorded and include at least the following information: **(TBD)**

- A. the process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;
- B. the type of planned MSS activity and the reason for the planned activity;
- C. the common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;
- D. the date and time of the MSS activity and its duration;
- 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 permit application, consistent with good engineering practice.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis.

30. Process units and facilities associated with the Ethylene Derivative Unit, with the exception of those identified in Special Conditions 32, 33, 35, and Attachment A shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements. **(TBD)**
 - A. The process equipment shall be depressurized to a control device or a controlled recovery system prior to venting to atmosphere, degassing, or draining liquid. Equipment that only contains material that is liquid with VOC partial pressure less than 0.50 psi at the normal process temperature and 95°F may be opened to atmosphere and drained in accordance with paragraph C of this special condition. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded.
 - B. If mixed phase materials must be removed from process equipment, the cleared material shall be routed to a knockout drum or equivalent to allow for managed initial phase separation. If the VOC partial pressure is greater than 0.50 psi at either the normal process temperature or 95°F, any vents in the system must be routed to a control device or a controlled recovery system. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. Control must remain in place until degassing has been completed or the system is no longer vented to atmosphere.

- C. All liquids from process equipment or storage vessels must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be drained into a closed vessel or closed liquid recovery system unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour of being drained.
 - D. If the VOC partial pressure is greater than 0.50 psi at the normal process temperature or 95°F, facilities shall be degassed using good engineering practice to ensure air contaminants are removed from the system through the control device or controlled recovery system to the extent allowed by process equipment or storage vessel design. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. The facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The venting shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery system utilized shall be recorded with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.
 - (1) For MSS activities identified in Attachment B, the following option may be used in lieu of (2) below. The facilities being prepared for maintenance shall not be vented directly to atmosphere until the VOC concentration has been verified to be less than 10 percent of the lower explosive limit (LEL) per the site safety procedures.
 - (2) The locations and/or identifiers where the purge gas or steam enters the process equipment or storage vessel and the exit points for the exhaust gases shall be recorded (process flow diagrams [PFDs] or piping and instrumentation diagrams [P&IDs] may be used to demonstrate compliance with the requirement). If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system before the vent stream may be sampled to verify acceptable VOC concentration prior to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition 30. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged. If there is not a connection (such as a sample, vent, or drain valve) available from which a representative sample may be obtained, a sample may be taken upon entry into the system after degassing has been completed. The sample shall be taken from inside the vessel so as to minimize any air or dilution from the entry point. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. Documented site procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures) that achieve at least the same level of purging may be used in lieu of the above.
31. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below. **(TBD)**
- A. VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR 60, Appendix A) with the following exceptions:
 - (1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate

(RF) shall be recorded. If the RF of the VOC (or mixture of VOCs) to be monitored is greater than 2.0, the VOC concentration shall be determined as follows:

VOC Concentration = Concentration as read from the instrument*RF

In no case should a calibration gas be used such that the RF of the VOC (or mixture of VOCs) to be monitored is greater than 5.0.

- (2) Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes, recording VOC concentration each minute. As an alternative the VOC concentration may be monitored over a five-minute period with an instrument designed to continuously measure concentration and record the highest concentration read. The highest measured VOC concentration shall be recorded and shall not exceed the specified VOC concentration limit prior to uncontrolled venting.
- B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.
- (1) The air contaminant concentration measured as defined in (3) is less than 80 percent of the range of the tube and is at least 20 percent of the maximum range of the tube.
 - (2) The tube is used in accordance with the manufacturer's guidelines.
 - (3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:
measured contaminant concentration (ppmv) < release concentration.
Where the release concentration is:
10,000*mole fraction of the total air contaminants present that can be detected by the tube.
The mole fraction may be estimated based on process knowledge. The release concentration and basis for its determination shall be recorded.
- Records shall be maintained of the tube type, range, measured concentrations, and time the samples were taken.
- C. Lower explosive limit measured with a lower explosive limit detector.
- (1) The detector shall be calibrated within 30 days of use with a certified pentane gas standard at 25% of the lower explosive limit (LEL) for pentane. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.
 - (2) A functionality test shall be performed on each detector within 24 hours of use with a certified gas standard at 25% of the LEL for pentane. The LEL monitor shall read no lower than 90% of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.
 - (3) A certified methane, ethylene, or propylene gas standard equivalent to 25% of the LEL for pentane may be used for calibration and functionality tests provided that the LEL response is within 95% of that for pentane.
32. This permit authorizes emissions from FINs V-726 and V-730 (EPNs V-700 and V-730) during planned floating roof landings. Tank roof landings include all operations when the tank floating roof is on its supporting legs. These emissions are subject to the maximum allowable emission rates indicated on the MAERT. The following requirements apply to tank roof landings. **(TBD)**

- A. Upon landing the floating roof the vapor under the roof shall be directed to control until the tank is degassed per the requirements of this condition or the roof is refloated.
- B. If the VOC partial pressure of the liquid previously stored in the tank is greater than 0.50 psi at 95°F, tank refilling or degassing of the vapor space under the landed floating roof must begin within 24 hours after the tank has been drained unless the vapor under the floating roof is routed to control or a controlled recovery system during this period. The tank shall not be opened except as necessary to set up for degassing and cleaning. Floating roof tanks with liquid capacities less than 100,000 gallons may be degassed without control if the VOC partial pressure of the standing liquid in the tank has been reduced to less than 0.02 psia prior to ventilating the tank. Controlled degassing of the vapor space under landed roofs shall be completed as follows:
- (1) Any gas or vapor removed from the vapor space under the floating roof must be routed to a control device or a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. The locations and identifiers of vents other than permanent roof fittings and seals, control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the vapor space under the floating roof when degassing to the control device or controlled recovery system.
 - (2) The vapor space under the floating roof shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the control device or controlled recovery system to the extent allowed by the storage tank design.
 - (3) A volume of purge gas equivalent to twice the volume of the vapor space under the floating roof must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition 30.
 - (4) The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged.
 - (5) Degassing must be performed every 24 hours unless there is no standing liquid in the tank or the VOC partial pressure of the remaining liquid in the tank is less than 0.15 psia.
- C. The tank shall not be opened or ventilated without control, except as allowed below until one of the criteria in part D of this condition is satisfied.
- Air circulation in the tank vapor space shall be minimized.
- (a) One manway may be opened to allow access to the tank to remove or de-volatilize the remaining liquid. Other manways or access points may be opened as necessary to remove or de-volatilize the remaining liquid. Wind barriers shall be installed at all open manways and access points to minimize air flow through the tank.
 - (b) Access points shall be closed when not in use.
- D. The tank may be opened without restriction and ventilated without control, after all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure less than 0.02 psia. These criteria shall be demonstrated in any one of the following ways.

- (1) Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure of the liquid mixture remaining in the tank to less than 0.02 psia. This liquid shall be added during tank degassing if practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC partial pressure may be estimated based on this information and engineering calculations.
- (2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:
 - (a) Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR 435 Subpart A Appendix 1.
 - (b) Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).
 - (c) Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv through the procedure in Special Condition 4.
- (3) No standing liquid verified through visual inspection.

The permit holder shall maintain records to document the method used to release the tank.

E. Tanks shall be refilled as rapidly as practicable until the roof is off its legs with the following exceptions:

- (1) Only one tank with a landed floating roof can be filled at any time at a rate not to exceed 1,143 bbl/hr .
- (2) The vapor space below the tank roof is directed to a control device when the tank is refilled until the roof is floating on the liquid. The control device used and the method and locations used to connect the control device shall be recorded. All vents from the tank being filled must exit through the control device.

F. The occurrence of each roof landing and the associated emissions shall be recorded and the rolling 12-month tank roof landing emissions shall be updated on a monthly basis. These records shall include at least the following information:

- (1) the identification of the tank and emission point number, and any control devices or recovery systems used to reduce emissions;
- (2) the reason for the tank roof landing;
- (3) for the purpose of estimating emissions, the date, time, and other information specified for each of the following events:
 - (a) the roof was initially landed,
 - (b) all liquid was pumped from the tank to the extent practical,
 - (c) start and completion of controlled degassing, and total volumetric flow,
 - (d) all standing liquid was removed from the tank or any transfers of low VOC partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to <0.02 psi,
 - (e) if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow,
 - (f) refilling commenced, liquid filling the tank, and the volume necessary to float the roof; and

- (g) tank roof off supporting legs, floating on liquid;
 - (4) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events c and g with the data and methods used to determine it. The emissions associated with roof landing activities shall be calculated using the methods described in Sections 7.1.3.3 and 7.1.3.4 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 – Liquid Storage Tanks" dated June 2020 (or later edition) and the permit application.
33. Fixed roof storage tanks (EPNs V-710, V-711, V-720, and V-740) are subject to the requirements of Special Condition 32.C. and 32.D. If the ventilation of the vapor space is controlled, the emission control system shall meet the requirements of Special Condition 32.B.(1) through 32.B.(4). Records shall be maintained per Special Condition 32.F.(3)c through 32.F.(3)e, and 32.F.(4). **(TBD)**
34. The following requirements apply to vacuum and air mover truck operations to support planned MSS at this site: **(TBD)**
- A. Prior to initial use, identify any liquid in the truck. Record the liquid level and document the VOC partial pressure. After each liquid transfer, identify the liquid, the volume transferred, and its VOC partial pressure.
 - B. If vacuum pumps or blowers are operated when liquid is in or being transferred to the truck, the following requirements apply:
 - (1) If the VOC partial pressure of the liquid in or being transferred to the truck is greater than 0.50 psi at 95°F, the vacuum/blower exhaust shall be routed to a control device or a controlled recovery system.
 - (2) Equip fill line intake with a "duckbill" or equivalent attachment if the hose end cannot be submerged in the liquid being collected.
 - (3) A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.
 - (a) For each liquid transfer made with the vacuum operating, record the duration of any periods when air may have been entrained with the liquid transfer. The reason for operating in this manner and whether a "duckbill" or equivalent was used shall be recorded. Short, incidental periods, such as those necessary to walk from the truck to the fill line intake, do not need to be documented.
 - (b) If the vacuum truck exhaust is controlled with a control device other than an engine or oxidizer, VOC exhaust concentration upon commencing each transfer, at the end of each transfer, and at least every hour during each transfer shall be recorded, measured using an instrument meeting the requirements of Special Condition 31.A or 31.B.
 - C. Record the volume in the vacuum truck at the end of the day, or the volume unloaded, as applicable.
 - D. The permit holder shall determine the vacuum truck emissions each month using the daily vacuum truck records and the calculation methods utilized in the permit application. If records of the volume of liquid transferred for each pick-up are not maintained, the emissions shall be determined using the physical properties of the liquid vacuumed with the greatest potential emissions. Rolling 12-month vacuum truck emissions shall also be determined on a monthly basis.
 - E. If the VOC partial pressure of all the liquids vacuumed into the truck is less than 0.10 psi, this shall be recorded when the truck is unloaded or leaves the plant site and the emissions may be estimated as the maximum potential to emit for a truck in that service as documented in

the permit application. The recordkeeping requirements in Special Condition 33.A through 33.D do not apply.

35. The following requirements apply to frac, or temporary, tanks and vessels used in support of MSS activities. **(TBD)**
- A. The exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled, sampled, gauged, or when removing material.
 - B. These tanks/vessels must be covered and equipped with fill pipes that discharge within 6 inches of the tank/vessel bottom.
 - C. These requirements do not apply to vessels storing less than 450 gallons of liquid that are closed such that the vessel does not vent to atmosphere except when filling, sampling, gauging, or when removing material.
 - D. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all frac tanks during the previous calendar month and the past consecutive 12 month period. This record must be updated by the last day of the month following. The record shall include tank identification number, dates put into and removed from service, control method used, tank capacity and volume of liquid stored in gallons, name of the material stored, VOC molecular weight, and VOC partial pressure at the estimated monthly average material temperature in psia. Filling emissions for tanks shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations" and standing emissions determined using: the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks."
 - E. If the tank/vessel is used to store liquid with VOC partial pressure less than 0.10 psi at 95°F, records may be limited to the days the tank is in service and the liquid stored. Emissions may be estimated based upon the potential to emit as identified in the permit application.
36. Additional occurrences of MSS activities authorized by this permit (see Attachments A, B, and C) may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity. **(TBD)**
37. Control devices required by this permit for emissions from planned MSS activities are limited to those identified in this condition. Control devices shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Each device used must meet all the requirements identified for that type of control device.

Controlled recovery systems identified in this permit shall be directed to an operating process or to a collection system that is vented through a control device meeting the requirements of this permit condition. **(TBD)**

- A. Carbon Adsorption System (CAS).
 - (1) The CAS shall consist of 2 carbon canisters in series with adequate carbon supply for the emission control operation.
 - (2) The CAS shall be sampled downstream of the first can and the concentration recorded at least once every hour of CAS run time to determine breakthrough of the VOC.
 - (3) The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 31.A or B.

- (4) Breakthrough is defined as the highest measured VOC concentration at or exceeding 100 ppmv above background. When the condition of breakthrough of VOC from the initial saturation canister occurs, the waste gas flow shall be switched to the second canister and a fresh canister shall be placed as the new final polishing canister within four hours. Sufficient new activated carbon canisters shall be maintained at the site to replace spent carbon canisters such that replacements can be done in the above specified time frame.
 - (5) Records of CAS monitoring shall include the following:
 - (a) Sample time and date.
 - (b) Monitoring results (ppmv).
 - (c) Canister replacement log.
- B. Single canister systems are allowed if the time the carbon canister is in service is limited to no more than 30 percent of the minimum potential saturation time. The permit holder shall maintain records for these systems, including the calculations performed to determine the saturation time. The time limit on carbon canister service shall be recorded and the expiration date attached to the carbon can.
- C. Portable Thermal Oxidizer.
- (1) The thermal oxidizer firebox exit temperature shall be maintained at not less than 1400°F and waste gas flows shall be limited to assure at least a 0.5 second residence time in the fire box while waste gas is being fed into the oxidizer.
 - (2) The thermal oxidizer exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. The temperature measurements shall be made at intervals of six minutes or less and recorded at that frequency.
 - (3) The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or $\pm 2.5^\circ\text{C}$.
 - (4) The portable thermal oxidizer shall be limited to 100 hours per year.
- D. Plant Flare, EPN 58.
- (1) The plant flare shall meet the requirements of Special Condition 10.
 - (2) The plant flare capture system shall meet the requirements of Special Condition 11.

Date: TBD

Permit 19394
 Attachment A

Inherently Low Emitting Activities – Ethylene Derivative Unit

Activity	Emissions
	VOC
Management of sludge from pits, ponds sumps, and water conveyances	X
Aerosol cans	X
Carbon can replacement	X
Instrumentation / analyzer maintenance	X
Meter proving	X
Replacement of analyzer filters and screens	X
Maintenance on water treatment systems (cooling, boiler, potable)	X
Soap and other aqueous based cleaners	X
Cleaning / maintaining sight glasses	X
Hydroblast slab activities	X
Draining of low vapor pressure materials to the process sewer	X
Sampling and sample system purging	X
Pigging	X
Water washing empty drums or totes	X
Calibration of analytical equipment	X
Catalyst charging / handling	X
Filter replacement	X

Dated: TBD

Permit 19394
Attachment B

Routine Maintenance Activities – Ethylene Derivative Unit

Filter Replacement

Reactor Maintenance

Catalyst Additive/Handling

Minor Facilities (i.e. pumps, valves, piping, filters, compressors, sight glasses, etc. with isolated volumes < 45 ft³)

Date: TBD

DRAFT

Permit 19394
 Attachment C

MSS Activity Summary – Ethylene Derivative Unit

Facilities	Description	Emissions Activity	EPN
EDU MSS Activities	Flare emissions for Ethylene Derivative Unit	EDU MSS controlled by plant flare	58
EDU Dryer	Flare emissions for Ethylene Derivative Unit dryer regeneration	Dryer regeneration controlled by plant flare	58
V-726, V-730	Controlled roof landings	Vent to portable thermal control	MSS-CONT
V-726, V-730	Vent to atmosphere post control	Vent to atmosphere	MSS-ATM
Equipment Venting MSS Emissions	Includes all process vessels, fixed roof tanks, piping, and components	Vent to atmosphere after control	MSS-ATM
Equipment Venting MSS Emissions	Includes all process vessels, fixed roof tanks, piping, and components handling low vapor pressure materials not requiring ventilation to control	Vent to atmosphere	MSS-ATM
Air and Vacuum Mover	Collect and remove material from tanks, process equipment, piping, frac tanks, and portable tanks/containers	Vent to portable thermal control	MSS-CONT
Air and Vacuum Mover	Collect and remove material from tanks, process equipment, piping, frac tanks, and portable tanks/containers	Vent to carbon control	MSS-CONT
Air and Vacuum Mover	Collect and remove material from tanks, process equipment, piping, frac tanks, and portable tanks/containers	Vent to atmosphere after control	MSS-ATM
Frac Tank	High and Low vapor pressure products	Vent to atmosphere	MSS-ATM
See Attachment A	Miscellaneous low emitting activities	See Attachment A	MSS-ATM
See Attachment B	Routine maintenance activities	See Attachment B	MSS-ATM

Date: TBD

Emission Sources - Maximum Allowable Emission Rates

Permit Number 19394 and PSDTX1612

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, sources, and related activities. 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	
			lbs/hour	TPY (4)
55	C Activator Vent Filter	VOC	0.83	1.04
		CO	2.34	2.95
		PM	0.04	0.16
		PM ₁₀	0.04	0.16
		PM _{2.5}	0.04	0.16
56	Catalyst Activation Heater	VOC	0.04	0.07
		NO _x	0.64	1.28
		SO ₂	<0.01	<0.01
		PM	0.05	0.10
		PM ₁₀	0.05	0.10
		PM _{2.5}	0.05	0.10
		CO	0.54	1.08
57	Catalyst Storage Filter	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
58	Flare	VOC	245.09	137.81
		NO _x	64.07	47.46
		SO ₂	2.81	1.35
		CO	255.36	189.16
		H ₂ S	0.03	0.01
59	Fugitives (5)	VOC	12.80	29.58

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
60	Cooling Tower (5)	VOC	0.50	2.21
		PM	1.17	3.21
		PM ₁₀	0.09	0.40
		PM _{2.5}	<0.01	<0.01
61 and 62	1A Filter	VOC	(6)	(6)
		PM	0.20	0.85
		PM ₁₀	0.20	0.85
		PM _{2.5}	0.20	0.85
63, 64, and 65	Fluff Filter	VOC	(6)	(6)
		PM	0.27	1.20
		PM ₁₀	0.27	1.20
		PM _{2.5}	0.27	1.20
66, 67, and 68	Fluff Filter	VOC	(6)	(6)
		PM	0.03	0.11
		PM ₁₀	0.03	0.11
		PM _{2.5}	0.03	0.11
69A	Pellet Classifier	VOC	(6)	(6)
69F817	Vacuum System Filter	VOC	(6)	(6)
		PM	0.05	0.22
		PM ₁₀	0.05	0.22
		PM _{2.5}	0.05	0.22

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
69F826	Pellet Transfer Filter	VOC	(6)	(6)
		PM	< 0.01	0.02
		PM ₁₀	< 0.01	0.02
		PM _{2.5}	< 0.01	0.02
69F847	Blender Vent Filter	VOC	(6)	(6)
		PM	< 0.01	0.02
		PM ₁₀	< 0.01	0.02
		PM _{2.5}	< 0.01	0.02
69F848	Blender Vent Filter	VOC	(6)	(6)
		PM	0.05	0.21
		PM ₁₀	0.05	0.21
		PM _{2.5}	0.05	0.21
70	Fines Separator	VOC	(6)	(6)
		PM	<0.01	0.02
		PM ₁₀	<0.01	0.02
		PM _{2.5}	<0.01	0.02
70A	Blender Silo Vent Filter	VOC	(6)	(6)
		PM	<0.01	0.02
		PM ₁₀	<0.01	0.02
		PM _{2.5}	<0.01	0.02

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
80	B Activator Vent Filter	VOC	0.42	0.93
		CO	1.20	2.63
		PM	0.01	0.04
		PM ₁₀	0.01	0.04
		PM _{2.5}	0.01	0.04
		NH ₃	0.96	2.11
		SO ₂	0.22	0.48
273	Pellet Dryer H	VOC	(6)	(6)
61, 62, 63, 64, 65, 66, 67, 68, 69A, 69F817, 69F826, 69F847, 69F848, 70, 70A, 273, and QCAP	VOC Emission Cap - Purge Column to Product Loadout	VOC	6.58	24.53
AV-001	CPF Analyzers	VOC	0.30	1.32
EDERFUG	Ethylene Derivative Unit Fugitives (5)	VOC	0.50	2.19
V-700	Tank No. V-726	VOC	0.04	0.10
V-710	Tank No. V-710	VOC	0.95	2.09
V-711	Tank No. V-711	VOC	0.95	2.09
V-720	Tank No. V-720	VOC	0.95	0.54
V-730	Tank No. V-730	VOC	0.03	0.11
V-740	Tank No. V-740	VOC	0.01	0.01
V-202	First Stage Reactor Activator Pot	PM	0.01	0.01
		PM ₁₀	0.01	0.01
		PM _{2.5}	0.01	0.01
EDERLLD	Railcar Uncollected Loading	VOC	11.07	(7)
EDERTRLD	Tank Truck Uncollected Loading	VOC	11.07	(7)

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
EDERLOADCAP	Railcar and Tank Truck Uncollected Loading Annual Emissions Cap	VOC	(7)	8.43
Q-817	Q-817 Loading Arm/Chute	VOC	(6)	(6)
		PM	0.04	(8)
		PM ₁₀	0.04	(8)
		PM _{2.5}	0.04	(8)
Q-818	Q-818 Loading Arm/Chute	VOC	(6)	(6)
		PM	0.04	(8)
		PM ₁₀	0.04	(8)
		PM _{2.5}	0.04	(8)
Q-819	Q-819 Loading Arm/Chute	VOC	(6)	(6)
		PM	0.04	(8)
		PM ₁₀	0.04	(8)
		PM _{2.5}	0.04	(8)
Q-820	Q-820 Loading Arm/Chute	VOC	(6)	(6)
		PM	0.04	(8)
		PM ₁₀	0.04	(8)
		PM _{2.5}	0.04	(8)
Q-821	Q-821 Loading Arm/Chute	VOC	(6)	(6)
		PM	0.04	(8)
		PM ₁₀	0.04	(8)
		PM _{2.5}	0.04	(8)

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
Q-822	Q-822 Loading Arm/Chute	VOC	(6)	(6)
		PM	0.04	(8)
		PM ₁₀	0.04	(8)
		PM _{2.5}	0.04	(8)
Q-823	Q-823 Loading Arm/Chute	VOC	(6)	(6)
		PM	0.04	(8)
		PM ₁₀	0.04	(8)
		PM _{2.5}	0.04	(8)
Q-824	Q-824 Loading Arm/Chute	VOC	(6)	(6)
		PM	0.04	(8)
		PM ₁₀	0.04	(8)
		PM _{2.5}	0.04	(8)
Q-CAP	Q-817 through Q-824 Annual Cap	VOC	(6)	(6)
		PM	(8)	0.13
		PM ₁₀	(8)	0.13
		PM _{2.5}	(8)	0.13
MSS-CONT	Controlled Ethylene Derivative Unit MSS	VOC	2.28	0.11
		PM	0.16	0.02
		PM ₁₀	0.16	0.02
		PM _{2.5}	0.16	0.02
		SO ₂	0.45	0.06
		NO _x	1.15	0.09
		CO	1.93	0.21

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
MSS-ATM	Uncontrolled Ethylene Derivative Unit MSS	VOC	40.60	2.31
		PM	0.10	0.01
		PM ₁₀	0.05	0.01
		PM _{2.5}	0.01	0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
 NO_x - total oxides of nitrogen
 SO₂ - sulfur dioxide
 PM - total particulate matter, suspended in the atmosphere, including PM10 and PM2.5, as represented
 PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM2.5, as represented
 PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
 CO - carbon monoxide
 NH₃ - ammonia
 H₂S - hydrogen sulfide
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) EPNs 61, 62, 63, 64, 65, 66, 67, 68, 69A, 69F817, 69F826, 69F847, 69F848, 70, 70A, 273, and Q-817 through Q-824 will be subject to a group emission cap for VOC emissions instead of having emission limits for each emission point. The emission rates of 6.58 pounds per hour and 24.53 tons per year represent the combined VOC emissions from all emission points from the purge column to product loadout.
- (7) EPNs EDERRLLD and EDERTRLD will be subject to an annual group emission cap for VOC emissions instead of having emission limits for each emission point. The emission rate of 8.43 tons per year represent the combined VOC emissions from uncollected truck and railcar loading. Hourly emissions are represented for each EPN.
- (8) EPNs Q-817, Q-818, Q-819, Q-820, Q-821, Q-822, Q-823, and Q-824, will be subject to an annual group emission cap for PM, PM₁₀, and PM_{2.5} emissions instead of having emission limits for each emission point. The emission rate 0.13 tons per year each of PM, PM₁₀, and PM_{2.5} represent the combined PM from all emission points from the rail loading arm chutes. Hourly emissions are represented for each EPN and represent the maximum loading rate from each rail loading arm chute.

Date: TBD

Preliminary Determination Summary

Chevron Phillips Chemical Company LP
Permit Numbers 19394 and PSDTX1612

I. Applicant

Chevron Phillips Chemical Company LP
5309 Fm 1006
Orange, TX 77630-8030

II. Project Location

Orange Plant
5309 Fm 1006
Orange County
Orange, Texas 77630

III. Project Description

Chevron Phillips Chemical Company (CPChem) proposes amend NSR permit 19394 to construct an ethylene derivative production unit at their Orange Plant, a high-density polyethylene facility that currently consists of two product lines. The Orange Plant is a named major source, and the proposed project changes exceed the major modification threshold for Prevention of Significant Deterioration (PSD). Upon completion of the amendment to NSR Permit 19394, initial PSD Permit PSDTX1612 will be issued. As part of the amendment, CPChem proposes to incorporate by consolidation the following permits by rule (PBR) or standard permits (SP): 156258, 169954, 150883, 156198, 160729, and 170028.

The proposed ethylene derivative production unit will include associated storage, unloading, loading, piping fugitives, and misc. auxiliary equipment required for the production. The primary increases of emissions are associated with additional waste gas sent to the flare as well as new storage tanks, which are part of the addition of the ethylene derivative unit.

Maintenance, start-up, and shut-down activities are authorized in this NSR Permit and have been added as part of this amendment.

IV. Emissions

Air Contaminant	Proposed Allowable Emission Rates (tpy)
VOC	215.43
NO _x	48.83
SO ₂	1.91
CO	196.03
PM/PM ₁₀ /PM _{2.5}	6.36/3.55/3.16
H ₂ S	0.03
NH ₃	2.11

Maintenance, start-up, and shut-down activities (MSS) are authorized in this NSR Permit and the MSS activities associated with the ethylene derivative production unit have been added as part of this amendment. Detailed maintenance, startup, and shutdown (MSS) emissions are included.

The flare, EPN 58, controls routine waste gas from the polyethylene product lines as well as certain maintenance activities from the EDU. Emissions associated with existing equipment are included in the current MAERT limits for EPN 58. As noted above, additional normal and maintenance activities associated with the EDU are being added in this amendment.

MSS operations have been detailed in Attachments A, B, and C of the conditions. Attachment C provides a summary of the MSS activities that are controlled. Atmospheric venting of equipment, venting of equipment to portable control devices, solids handling associated with catalysts, and other listed activities are permitted under controlled and atmospheric scenarios.

V. Federal Applicability

The following chart illustrates the annual project emissions for each pollutant and whether this pollutant triggers PSD or Nonattainment (NA) review.

Pollutant	Project Emissions (tpy)	Major Mod Trigger (tpy)	NA Triggered Y/N	PSD Triggered Y/N
VOC	91.63	25 for NA 40 for PSD	N	Y
NO _x	37.49	25 for NA 40 for PSD	N	N
SO ₂	1.41	40	N	N
CO	103.65	100	N	Y
PM	1.59	25	N	N
PM ₁₀	1.39	15	N	N
PM _{2.5}	0.04	10	N	N
H ₂ S	0.01	10	N	N

This site is an existing major source. It is located in Orange County, which is considered in attainment for all pollutants. Nonattainment review is not required.

This site is located in Orange County and is considered a major source. The netting analysis shows the project increases for CO and VOC are above major modification thresholds. PSD review is required. GHG PSD will not be required, as the CO₂e tons per year (tpy) are below the threshold (56,294 tpy < 75,000 tpy). As noted above, project increases will include MSS emissions.

Project increases are based on baseline actual emission rates compared to the potential to emit emission rates. Netting was not performed for this project.

	NO _x (tpy)	CO (tpy)	SO ₂ (tpy)	PM (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)	H ₂ S (tpy)	VOC (tpy)	CO ₂ e (tpy)
Project increase	37.49	103.65	1.41	1.59	1.39	0.04	0.01	91.63	56,294
PSD threshold	40	100	40	25	15	10	10	40	75,000

All pollutants with emissions increases were addressed via refined modeling and are included in the Air Quality Analysis below.

VI. Control Technology Review

BACT was addressed for each EPN that was either new or affected by the project. A summary of each of the new or affected facilities is summarized below.

Residual VOC:

The annual residual VOC cap is based on 80 lb VOC/MMlb product. Hourly maximum emissions are based on 94 lb VOC/MMlb product. CPChem provided stack test and head space sampling results that indicate that the hourly emissions and annual emissions are both well below the 80 lb VOC/MMlb product guidelines for current BACT. Because the TCEQ BACT guidance does not specify whether the 80 lb VOC/MMlb product is long- or short-term, BACT is satisfied.

Flare:

NO_x emissions will be limited to 0.138 lb/MMBtu. CO emissions will be limited to 0.55 lb/MMBtu. SO₂ emissions will be minimized by requiring the flare to fire natural gas that contains no more than 4 grains of sulfur per 100 dry standard cubic feet. VOC emissions will be reduced by 99% for compounds up to three carbons, with 98% reduction for all other VOC emissions. The flare will meet the 40 CFR 60.18 destruction requirements. BACT is satisfied.

Fugitive Emissions, including new Ethylene Derivative Unit Fugitive Emissions:

VOC fugitives are monitored using the 28VHP LDAR Program. The 28CNTA LDAR program will also be utilized at the site. This meets the BACT requirements.

Analyzer Vents:

Analyzer vents have been represented by sampling connections fugitive emission factors using SO₂ w/ C₂ as the basis. There is no established BACT for sampling connections; however, based on the nature of the vents this is a conservative approach and is acceptable.

Storage Tanks:

Internal Floating Roof Storage Tanks will be equipped with a submerged fill pipe. The tanks will store material with a vapor pressure above 0.5 psia. The tanks will be equipped with a

mechanical shoe primary seal and a rim mounted secondary seal. The tanks will have uninsulated exterior surfaces painted white and will have a drain dry design. For MSS, the tanks will be routed to control while degassing. The control must be maintained until the VOC concentration is less than 10,000 ppmv VOC. This satisfies BACT for routine and MSS operations for IFR storage tanks.

Fixed Roof Storage Tanks will store materials with vapor pressures below 0.5 psia. The tanks will be equipped with a submerged fill pipe and the uninsulated exterior surfaces will be painted white. For MSS, the liquid will be sent to a covered vessel for draining. The vapor stream will be controlled until there is no standing liquid or the VOC vapor pressure is less than 0.02 psia. This satisfies BACT for routine and MSS operations.

Railcar and Truck Loading:

Railcars and some tank trucks will be loaded with a material that has a vapor pressure below 0.5 psia. Loading will be conducted via submerged fill. This satisfies BACT.

Tank Truck Loading of materials with a vapor pressure greater than 0.5 psia or greater will be controlled. The emissions will be routed to the flare with a 99.2% collection efficiency and 98% destruction efficiency. Leak testing of tank trucks in accordance with 40 CFR Part 63, Subpart R is required. This satisfies BACT.

MSS Emissions from the Ethylene Derivative Unit:

EDU planned MSS activities from floating roof storage tanks and regeneration of the EDU dryer are controlled by the plant flare, EPN 58. In addition to these activities, CPChem proposes to utilize air movers, vacuum movers, and frac tanks to assist with MSS activities for lower vapor pressure materials.

MSS activities with material with vapor pressures above 0.5 psia will be controlled to either 98% for thermal control or 100 ppm for carbon control. This equipment will be purged to the flare, portable thermal control, or portable carbon control until the concentration in the equipment vapor space is reduced to either 10% of the LEL or 10,000 ppmv prior to opening to the atmosphere.

Equipment containing material with vapor pressures below 0.5 psia may only be vented to the atmosphere once liquids have been removed to the greatest extent possible. Equipment containing vapor pressures greater than 0.5 psia may not be vented to the atmosphere as noted above for MSS-CONT. Records of inherently low emitting activities and routine maintenance activities that may tracked with work or purchase orders is required. This satisfies BACT for uncontrolled MSS operations.

Railcar Loading Arm/Chutes:

CPChem is using telescoping loading arms for polyethylene pellets. Polyethylene pellets have been treated through a series of filters prior to being loaded in the silos to remove fine particulate matter. In addition, the telescoping loading arms extend into the railcars, further reducing the potential for particulate matter emission to occur. BACT for PM emissions is satisfied.

VII. Air Quality Analysis

The air quality analysis (AQA) is acceptable for all review types and pollutants. The results are summarized below.

A. De Minimis Analysis

A De Minimis analysis was initially conducted to determine if a full impacts analysis would be required. The De Minimis analysis modeling results for 1-hr and 8-hr CO indicate that the project is below the respective de minimis concentrations and no further analysis is required.

Table 1. Modeling Results for PSD De Minimis Analysis in Micrograms Per Cubic Meter ($\mu\text{g}/\text{m}^3$)

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	De Minimis ($\mu\text{g}/\text{m}^3$)
CO	1-hr	32	2000
CO	8-hr	28	500

The GLCmax represent the maximum predicted concentrations over five years of meteorological data.

B. Air Quality Monitoring

The De Minimis analysis modeling results indicate that CO is below its monitoring significance level.

Table 2. Modeling Results for PSD Monitoring Significance Levels

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	Significance ($\mu\text{g}/\text{m}^3$)
CO	8-hr	28	575

The GLCmax represents the maximum predicted concentration over five years of meteorological data.

C. National Ambient Air Quality Standards (NAAQS) Analysis

The De Minimis analysis modeling results indicate that 1-hr and 8-hr CO are less than the de minimis concentrations and no further analysis is required.

D. Increment Analysis

PSD increments do not exist for CO.

E. Additional Impacts Analysis

The applicant performed an Additional Impacts Analysis as part of the PSD AQA. The applicant conducted a growth analysis and determined that population will not significantly increase as a result of the proposed project. The applicant conducted a soils and

vegetation analysis and determined that all evaluated criteria pollutant concentrations are below their respective secondary NAAQS. The applicant meets the Class II visibility analysis requirement by complying with the opacity requirements of 30 TAC Chapter 111. The Additional Impacts Analyses are reasonable and possible adverse impacts from this project are not expected.

The ADMT evaluated predicted concentrations from the proposed project to determine if emissions could adversely affect a Class I area. The nearest Class I area, Breton National Wildlife Refuge, is located approximately 475 kilometers (km) from the project site.

The predicted concentrations of PM₁₀, PM_{2.5}, NO₂, and SO₂ for all averaging times, are all less than de minimis levels at a distance of 0.1 km from the proposed sources in the direction the Breton National Wildlife Refuge Class I area. The Breton National Wildlife Refuge Class I area is an additional 474.9 km from the location where the predicted concentrations of PM₁₀, PM_{2.5}, NO₂, and SO₂ for all averaging times are less than de minimis. Therefore, emissions from the proposed project are not expected to adversely affect the Breton National Wildlife Refuge Class I area.

F. Minor Source NSR and Air Toxics Review

The following tables summarize the review for minor source NSR and air toxics.

Table 3. Project-Related Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m ³)	De Minimis (µg/m ³)
SO ₂	1-hr	7.95	16.34
H ₂ S	1-hr	0.01	2 (If property is residential, recreational, business, or commercial)

Table 4. Modeling Results for Minor NSR De Minimis

Pollutant	Averaging Time	GLCmax (µg/m ³)	De Minimis (µg/m ³)
SO ₂	1-hr	0.94	7.8
SO ₂	3-hr	7.36	25
PM ₁₀	24-hr	1.99	5
PM _{2.5}	24-hr	1.18	1.2
PM _{2.5}	Annual	0.02	0.2
NO ₂	1-hr	5.05	7.5
NO ₂	Annual	0.03	1

The GLCmax are the maximum predicted concentrations associated with one year of meteorological data.

Intermittent guidance was relied on for the 1-hr SO₂ and 1-hr NO₂ De Minimis analyses. See section 4 for additional information.

The justification for selecting the EPA's interim 1-hr NO₂ and 1-hr SO₂ De Minimis levels was based on the assumptions underlying EPA's development of the 1-hr NO₂ and 1-hr SO₂ De Minimis levels. As explained in EPA guidance memoranda^{1,2}, the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr NO₂ and 1-hr SO₂ NAAQS.

The PM_{2.5} De Minimis levels are the EPA recommended De Minimis levels. The use of the EPA recommended De Minimis levels is sufficient to conclude that a proposed source will not cause or contribute to a violation of a PM_{2.5} NAAQS based on the analyses documented in EPA guidance and policy memoranda³.

To evaluate secondary PM_{2.5} impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's Guideline on Air Quality Models (GAQM). Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as Modeled Emission Rates for Precursors (MERPs). The basic idea behind the MERPs is to use technically credible air quality modeling to relate precursor emissions and peak secondary pollutants impacts from a source. Using data associated with the worst-case hypothetical source, the applicant estimated 24-hr and annual secondary PM_{2.5} concentrations of 0.006 µg/m³ and 0.0002 µg/m³, respectively. When these estimates are added to the GLCmax listed in the table above, the results are less than the De Minimis levels.

Table 5. Minor NSR Project (Increases Only) Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax (µg/m ³)	10% ESL (µg/m ³)
ethylene 74-85-1	1-hr	70.75	140
ethylene 74-85-1	Annual	0.51	3.4
isobutane 75-28-5	1-hr	124.77	2300
n-butane 106-97-8	1-hr	30.76	6600
n-hexane 110-54-3	1-hr	100.44	560
n-hexane 110-54-3	Annual	0.36	20
n-octane 111-65-9	1-hr	23.56	560
n-octane 111-65-9	Annual	0.15	54

¹ www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf

² www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf

³ www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html

Pollutant & CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	10% ESL ($\mu\text{g}/\text{m}^3$)
2,2-dimethylbutane 75-83-2	1-hr	2.37	560
2,2-dimethylbutane 75-83-2	Annual	0.05	20
n-heptane 142-82-5	1-hr	5.79	1000
isopentane 78-78-4	1-hr	4.92	5900
(E)-3-octene 1419-01-8	1-hr	0.3	340
1-hexadecene 629-73-2	1-hr	13.43	570
1-teterecosene 10192-32-2	1-hr	9.25×10^{-7}	570
benzene 71-43-2	1-hr	0.002	17
benzene 71-43-2	Annual	0.0001	0.45

Table 5 above summarizes the twelve pollutants with project increases were evaluated for the health effects analysis/ Modeling and Effects Review Applicably (MERA). Eight of the pollutants in the table satisfied step 3 of the MERA. No additional analysis was required.

1-hexene, 1-octene, cis-3-octene, and hexadecane required additional analysis, and the results are summarized below.

Table 6. Minor NSR Production Project-Related Modeling Results for Health Effects since Most Recent Site-wide Modeling

Pollutant & CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	25% ESL ($\mu\text{g}/\text{m}^3$)
1-hexene 592-41-6	1-hr	121.59	425

Table 7. Minor NSR Production Project-Related Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	10% ESL ($\mu\text{g}/\text{m}^3$)
1-hexene 592-41-6	1-hr	10.46	170

Table 8. Minor NSR MSS Project Modeling Results for Health Effects since Most Recent Site-wide Modeling

Pollutant & CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	50% ESL ($\mu\text{g}/\text{m}^3$)
1-hexene 592-41-6	1-hr	886.63	850

Table 9. Minor NSR MSS Project-Related Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	25% ESL ($\mu\text{g}/\text{m}^3$)
1-hexene 592-41-6	1-hr	496.35	425

Table 10. Minor NSR MSS Project-Related Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	ESL ($\mu\text{g}/\text{m}^3$)
1-hexene 592-41-6	1-hr	886.63	1700

Tables 6 – 10 above provide the supporting information showing that 1-hexene modeling was conducted using the contribution from routine and MSS activities. Step 4 of the MERA for routine emissions was satisfied. Step 5 of the MERA was satisfied when evaluating the MSS contribution of 1-hexene emissions.

Table 11. Minor NSR Site-wide Modeling Results for Health Effects

Pollutant	CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	GLCmax Location	GLCni ($\mu\text{g}/\text{m}^3$)	GLCni Location	ESL ($\mu\text{g}/\text{m}^3$)
1-octene	111-66-0	1-hr	5359.45	W Property Line	73.65	807m W	3400
cis-3-octene	14850-22-7	1-hr	0.31	NA	NA	NA	2
hexadecane	544-76-3	1-hr	603.32	NA	NA	NA	3500

Site-wide modeling for 1-octene, cis-3-octene, and hexadecane was conducted. The GLCmax and the GLCni locations are listed in Table 11 above. The locations are listed by their approximate distance and direction from the property line of the project site. The 1-hr GLCni for 1-octene was below the ESL and satisfied step 7 of the MERA. Cis-3-octene, and hexadecane were also modeled site-wide. In both cases, the 1-hr GLCmax was below the ESL and satisfied step 7 of the MERA. Modeled parameters were found to be conservative, and no additional analysis was required.

VIII. Conclusion

Based on the representations provided in the application, including the confidential application files, the proposed amendment to NSR Permit 19394 and initial issuance of associated permit PSDTX1612 meets all applicable rules, regulations, and requirements of the Texas Clean Air Act.