RECES
Environmental Consulting

February 25, 2025

Director, Air Permits Division
Texas Commission on Environmental Quality (TCEQ)
Air Permits Division (MC-163)
12100 Park 35 Circle
Austin, Texas 78753

Subject: **PBR Registration No. 108961 Update**
ChampionX, LLC
Dilley 508 Facility
Frio County, Texas
CN602898751, RN106479314

Dear Director,

On behalf of ChampionX LLC, RECES, LLC is submitting this Permit by Rule (PBR) application to update the existing registration No. 108961. Included with this submission are the PI-7 application along with documents in compliance with 30 TAC §106.473, §106.261 and §106.262. All other supporting information and calculations are also provided.

The $450 PBR Registration fee has been submitted via e-pay in STEERS.

Should you have any questions or comments, or need additional information, please feel free to contact me at (949) 734-0313; dmoin@reces-llc.com, or Mr. Harry Chen of ChampionX at (281) 632-8121; harry.chen@championx.com.

Sincerely,

D. Moin

Don Moin
Senior Project Manager
RECES, LLC

cc: Harry Chen – ChampionX

Texas Commission on Environmental Quality (TCEQ)

Permit by Rule (PBR) Registration 109861 Update

30 TAC §106.473, §106.261, §106.262

Prepared for:

CHAMPIONX

ChampionX LLC
Dilley 508 Facility
1500 South Business IH-35
Frio County

CN602898751 / RN106479314

Prepared by:

RECES, LLC
reces-llc.com
contact@reces-llc.com

February 2025

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SECTION 1.0
INTRODUCTION

1.0 INTRODUCTION

ChampionX LLC owns and operates the specialty chemical distribution facility in Dilley, Frio County. The facility is currently authorized to PBR Registration No. 109861 issued April 26, 2023. ChampionX is hereby submitting this application to the Texas Commission on Environmental Quality (TCEQ) to update the current registration.

This submission package includes TCEQ registration form PI-7 and documented compliance with 30 TAC §106.261, §106.262, §106.473, §106.4 (General requirements), and §106.8 (Recordkeeping), along with all supporting documents and calculations. A core data form is not included with this permit application, as a CN (602898751) and an RN (106479314) has been established and there are no changes to company or facility information.

SECTION 2.0

TCEQ FORM PI-7

Registration for Permits by Rule (PBR)
Form PI-7
(Page 1)
Texas Commission on Environmental Quality

I. Registrant Information
A. Company or Other Legal Customer Name:
ChampionX LLC
B. Company Official Contact Information (☐ Mr. ☐ Mrs. ☒ Ms. ☐ Other:) _____
Name: Melinda White
Title: SH&E Manager
Mailing Address: 11177 S Stadium Drive
City: Sugar Land
State: TX
ZIP Code: 77478
Telephone Number: 281-632-8096
Fax Number:
Email Address: mawhite@championx.com
All PBR registration responses will be sent via email.
C. Technical Contact Information (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other:) _____
Name: Harry Chen
Title: SHEQ Global Compliance Technical Lead
Company Name: ChampionX LLC
Mailing Address: 11177 S Stadium Drive
City: Sugar Land
State: TX
ZIP Code: 77478
Telephone Number: 281-632-8121
Fax Number:
Email Address: harry.chen@championx.com

Registration for Permits by Rule (PBR)
Form PI-7
(Page 2)
Texas Commission on Environmental Quality

II. Facility and Site Information
A. Name and Type of Facility
Facility Name: ChampionX Dilly 508 Facility
Type of Facility: ☒ Permanent ☐ Temporary
For portable units, please provide the serial number of the equipment being authorized below.
Serial No(s):
B. Facility Location Information
Street Address: 1500 South Business IH-35
If there is no street address, provide written driving directions to the site and provide the closest city or town, county, and ZIP code for the site (attach description if additional space is needed).
City: Odessa
County: Ector
ZIP Code: 79762
C. TCEQ Core Data Form
Is the Core Data Form (TCEQ Form Number 10400) attached? ☐ YES ☒ NO
If "NO," provide customer reference number (CN) and regulated entity number (RN) below.
Customer Reference Number (CN): CN602898751
Regulated Entity Number (RN): RN106479314
D. TCEQ Account Identification Number (if known):
E. Type of Action
☐ Initial Application ☑ Change to Registration
For Change to Registration provide the Registration Number: 109861
F. PBR number(s) claimed under 30 TAC Chapter 106
(List all the individual rule number(s) that are being claimed.)
106 261
106 262
106 473

II. Facility and Site Information *(continued)*	
G. Historical Standard Exemption or PBR	
Are you claiming a historical standard exemption or PBR?	☐ YES ☒ NO
If "YES," enter rule number(s) and associated effective date in the spaces provided below.	
Rule Number(s):	Effective Date:
Rule Number(s):	Effective Date:
Rule Number(s):	Effective Date:
H. Previous Standard Exemption or PBR Registration Number	
Is this authorization for a change to an existing facility previously authorized under a standard exemption or PBR?	☒ YES ☐ NO
If "YES," enter previous standard exemption number(s) and PBR registration number(s) and associated effective date in the spaces provided below.	
Standard Exemption and PBR Registration Number(s): 109861	
Effective Date: 04/26/2023	
Standard Exemption and PBR Registration Number(s):	
Effective Date:	
I. Other Facilities at this Site Authorized by Standard Exemption, PBR, or Standard Permit	
Are there any other facilities at this site that are authorized by an Air Standard Exemption, PBR, or Standard Permit?	☐ YES ☒ NO
If "YES," enter standard exemption number(s), PBR registration number(s), and Standard Permit registration number(s), and associated effective date in the spaces provided below.	
Standard Exemption and PBR Registration Number(s):	
Effective Date:	
Standard Exemption and PBR Registration Number(s):	
Effective Date:	
J. Other Air Preconstruction Permits	
Are there any other air preconstruction permits at this site?	☐ YES ☒ NO
If "YES," enter permit number(s) in the spaces provided below.	
Permit Number(s): 133985	
Permit Number(s):	

II.	**Facility and Site Information *(continued)***
K.	Affected Air Preconstruction Permits
Does the PBR being claimed directly affect any permitted facility?	☐ YES ☒ NO
If "YES," enter the permit number(s) in the spaces provided below.	
Permit Number(s):	
Permit Number(s):	
L.	Federal Operating Permit (FOP) Requirements (30 TAC Chapter 122 Applicability)
Is this facility located at a site that is required to obtain an FOP pursuant to 30 TAC Chapter 122?	☐ YES ☒ NO ☐ To Be Determined
If the site currently has an existing FOP, enter the permit number:	
1.	Check the requirements of 30 TAC Chapter 122 that will be triggered if this claim is accepted *(check all that apply)*.
☐ Initial Application for an FOP ☐ Significant Revision for an SOP ☐ Minor Revision for an SOP	
☐ Operational Flexibility/Off Permit Notification for an SOP ☐ Revision for a GOP	
☐ To Be Determined ☒ None	
2.	Identify the type(s) of FOP issued and/or FOP application(s) submitted/pending for the site. (*check all that apply*)
☐ SOP ☐ GOP ☐ GOP Application/Revision (submitted or under APD review)	
☒ N/A ☐ SOP Application/Revision (submitted or under APD review)	
III.	**Fee Information** *(see Section VII. for address to send fee or go to www.tceq.texas.gov/epay to pay online)*
A.	Fee Requirements
Is a fee required per 30 TAC § 106.50?	☒ YES ☐ NO
If "NO," specify the exception. There are three exceptions to paying a PBR fee. *(check all that apply)*	
1.	Registration is solely to establish a federally enforceable emission limit. ☐
2.	Registration is within six months of an initial PBR review, and is addressing deficiencies, administrative changes, or other allowed changes. ☐
3.	Registration is for a remediation project (30 TAC § 106.533). ☐

III. Fee Information *(see Section VII. for address to send fee or go to www.tceq.texas.gov/epay to pay online)*	
B. Fee Amount	
1. A $100 fee is required if *any* of the answers in III.B.1 are "YES."	
This business has less than 100 employees.	☐ YES ☒ NO
This business has less than $6 million dollars in annual gross receipts.	☐ YES ☒ NO
This registration is submitted by a governmental entity with a population of less than 10,000.	☐ YES ☒ NO
This registration is submitted by a non-profit organization.	☐ YES ☒ NO
2. A $450 fee is required for all other registrations.	
C. Payment Information	
Check/money order/transaction or voucher number:	
Individual or company name on check:	
Fee Amount: $ 450	
Was fee paid online?	☒ YES ☐ NO
IV. Selected Facility Reviews and Voluntary Registrations *Only*	
Note: *If registering any of the PBRs listed in IV.B., or if voluntarily registering any other PBR(s), complete this section, then skip to Section VI. below:*	
A. List any PBRs that are being voluntarily registered.	
106.	
106.	
B. PBR Checklists	
If you are registering any of the following PBRs, did you attach the applicable PBR checklists that shows your facility meets all general and specific requirements?	☐ YES ☐ NO
• *Animal Feeding Operations § 106.161, Livestock Auction Facilities § 106.162, Saw Mills § 106.223, Grain Handling, Storage and Drying § 106.283, Auto Body Refinishing Facilities § 106.436,* or *Air Curtain Incinerator § 106.496.* (If "NO" then you ***must*** provide ***all*** technical information outlined in Section V.)	
C. Distances to Property Line and Nearest Off-Property Structure	
Distance from this facility's emission release point to the nearest property line:	feet
Distance from this facility's emission release point to the nearest off-property structure:	feet

V.	**Technical Information Including State and Federal Regulatory Requirements** **Check the appropriate box to indicate what is included in your submittal.** ***Note:*** *Any technical or essential information needed to confirm that facilities are meeting the requirements of the PBR must be provided. Not providing key information could result in a deficiency of the project.*
A.	PBR requirements (Checklists are optional; however, your review will go faster if you provide applicable checklists.)
Did you demonstrate that the general requirements in 30 TAC § 106.4 are met?	☒ YES ☐ NO
Did you demonstrate that the individual requirements of the specific PBR are met?	☒ YES ☐ NO
B. Confidential Information Included (If confidential information is submitted with this registration, all confidential pages must be properly marked "CONFIDENTIAL.")	☒ YES ☐ NO
C. Process Flow Diagram?	☒ YES ☐ NO
D. Process Description?	☒ YES ☐ NO
E. Maximum Emissions Data and Calculations?	☒ YES ☐ NO
Note: *If the facilities listed in this registration are subject to the Mass Emissions Cap & Trade program under* ***30 TAC Chapter 101****,* ***Subchapter H, Division 3****, the owner/operator of these facilities must possess* NO_x *allowances equivalent to the actual* NO_x *emissions from these facilities.*	
F. Distance from Property Line and Nearest Off-Property Structure	
Distance from this facility's emission release point to the nearest property line: 90	feet
Distance from this facility's emission release point to the nearest off-property structure: 400	feet
G. Project Status	
Has the company implemented the project or waiting on a response from TCEQ?	☒ Implemented ☐ Waiting
H. Projected Start of Construction and Projected Start of Operation Dates:	
Projected Start of Construction (provide date):	
Project Start of Operation (provide date):	
VI.	**Delinquent Fees and Penalties**
This form **will not be processed** until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ is paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ website at www.tceq.texas.gov/agency/financial/fees/delin/index.html.	

Reset Form Print Form

SECTION 3.0
PROCESS DESCRIPTION

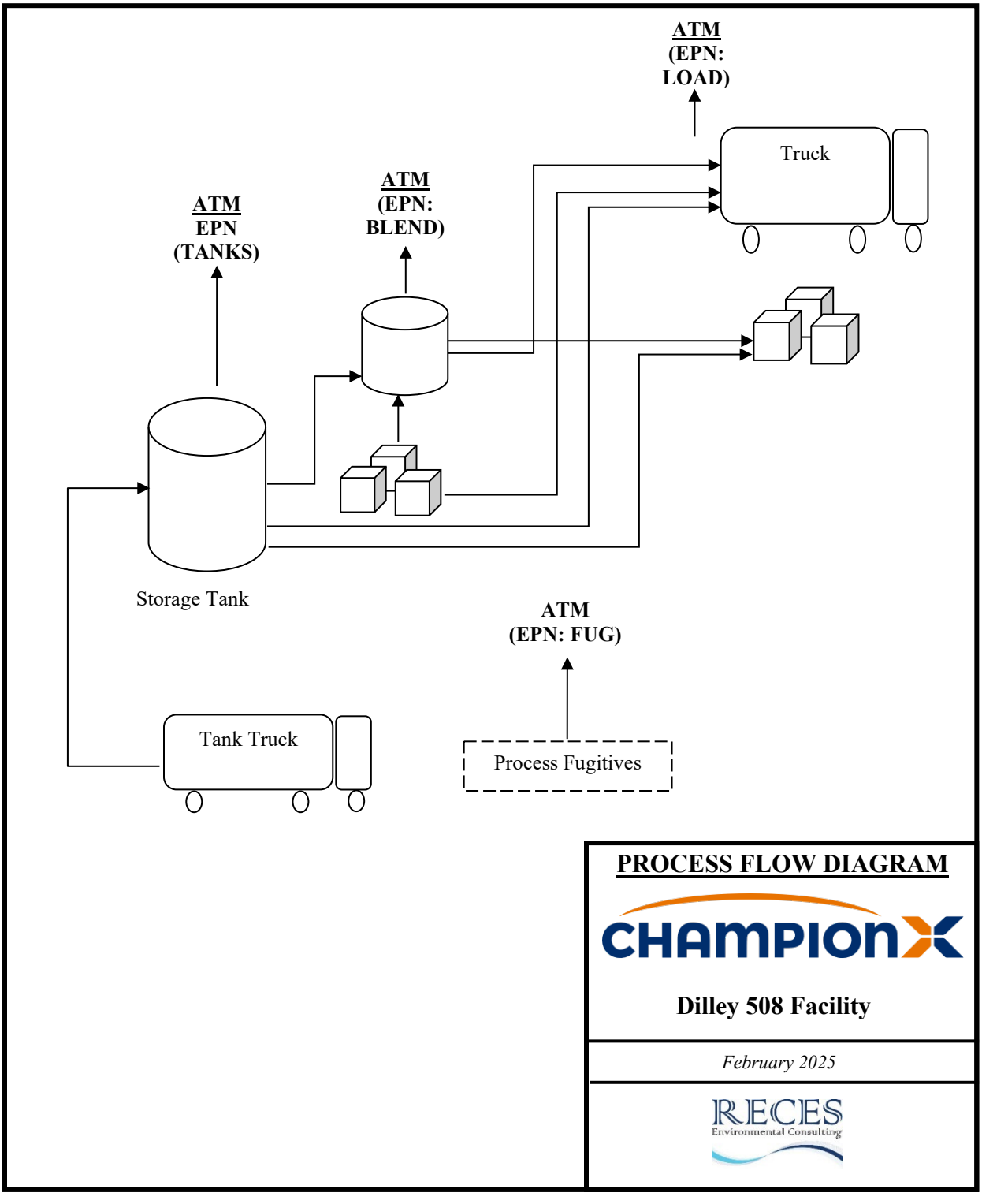
3.0 PROCESS DESCRIPTION

ChampionX will receive bulk chemicals and products by truck for transfer to onsite storage tanks. Chemicals will also be delivered to the facility in totes or drums. Liquid will be transferred for mixing new formulations in designated blend tanks. Finished products will be loaded to trucks, totes or drums for transport offsite. To minimize emission, all filling/loading operations will utilize submerged or bottom-fill method.

Due to the nature of the oilfield chemical business and the constant change in market demands, ChampionX is proposing to have the operational flexibility to handle new product formulations not to exceed the worst-case emissions as represented in the 261/262 chemical emissions provided herein.

Chemical evaluation and emissions calculations along with TCEQ Table 1(a) are provided in Section 6.0 of this application. The Process Flow Diagram is Provided on the next page.

Process Flow Diagram



SECTION 4.0

COMPLIANCE REVIEW

4.0 COMPLIANCE REVIEW

The operations at ChampionX Dilley 508 facility meet the requirements of 30 TAC §106.473, §106.261 & §106.262. The requirements of §106.4 and §106.8 are also satisfied as demonstrated in this section.

30 TAC §106.473 (March 14, 1997 amended September 4, 2000)

Organic liquids loading or unloading equipment for railcars, tank trucks, or drums; and storage containers, tanks, or change of service of the material loaded, unloaded, or stored is permitted by rule, provided that all of the following conditions of this section are met.:

(1) Uncontrolled emissions calculated using the version of AP-42 in effect at the time are less than 25 tons per year of organic compounds or of any other air contaminant.

Total emissions from the facility will emit less than 25 tons per year of any air contaminant.

(2) The loading rate of the facilities does not exceed 20,000 gallons per day averaged over any consecutive 30-day period.

The loading rate of the facility will be less than 20,000 gallons per day averaged over a consecutive 30-day period.

(3) The capacity of any tank does not exceed 25,000 gallons, except that tanks having a capacity of less than 40,000 gallons may be used to store sweet crude oil, sweet natural gas condensate, gasoline, and petroleum fuels.

The storage tanks will be less than 25,000 gallon capacity.

(4) The facilities are used exclusively for the loading, unloading, or storage of:

(A) organic liquids normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings;

(B) petroleum, petroleum fuels, other motor vehicle fuels, and natural gas liquids, none of which have a true vapor pressure of 11.0 pounds per square inch, absolute, or greater at maximum temperature of use;

Chemicals loaded and stored at the facility will be used as solvents and oil field surface coating operations. Liquids will be organic with a true vapor pressure of less than 11 psia. Other chemicals not covered under this section will be authorized under sections 106.261 and/or 106.262.

(5) The facilities will meet any applicable requirements of Chapter 115 of this title (relating to Control of Air Pollution from Volatile Organic Compounds);

All applicable requirements of Chapter 115 regarding the control of air pollution from VOC chemicals will be adhered to.

(6) Facilities used for the loading, unloading, or storage of any compound listed in 40 Code of Federal Regulations 261, Appendix VIII are not permitted by rule under this section.

Compounds listed in 40 Code of Federal Regulations 261 Appendix VIII are not being authorized herein.

30 TAC §106.261 (March 14, 1997 amended November 1, 2003)

a) Except as specified under subsection (b) of this section, facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.

(1) The facilities or changes shall be located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.

The facility will be located at least 100 ft. from any recreational area, residence or other structure not occupied or used solely by the owner or operator of the facilities.

(2) Total new or increased emissions, including fugitives, shall not exceed 6.0 pounds per hour (lb/hr) and ten tons per year of the following materials: acetylene, argon, butane, crude oil, refinery petroleum fractions (except for pyrolysis naphthas and pyrolysis gasoline) containing less than ten volume percent benzene, carbon monoxide, cyclohexane, cyclohexene, cyclopentane, ethyl acetate, ethanol, ethyl ether, ethylene, fluorocarbons Numbers 11, 12, 13, 14, 21, 22, 23, 113, 114, 115, and 116, helium, isohexane, isopropyl alcohol, methyl acetylene, methyl chloroform, methyl cyclohexane, neon, nonane, oxides of nitrogen, propane, propyl alcohol, propylene, propyl ether, sulfur dioxide, alumina, calcium carbonate, calcium silicate, cellulose fiber, cement dust, emery dust, glycerin mist, gypsum, iron oxide dust, kaolin, limestone, magnesite, marble, pentaerythritol, plaster of paris, silicon, silicon carbide, starch, sucrose, zinc stearate, or zinc oxide.

Total new or increased emissions, including fugitives will not exceed 6 lbs/hr and 10 tons/yr of any materials listed above. See Section 6.0 for speciated chemical distance and emissions limit calculations.

(3) Total new or increased emissions, including fugitives, shall not exceed 1.0 lb/hr of any chemical having a limit value (L) greater than 200 milligrams per cubic meter (mg/m3) as listed

and referenced in Table 262 of §106.262 of this title (relating to Facilities (Emission and Distance Limitations)) or of any other chemical not listed or referenced in Table 262. Emissions of a chemical with a limit value of less than 200 mg/m3 are not allowed under this section.

New or increased emissions, including fugitives, will not be emitted in a quantity greater than 1.0 pound per hour for any chemical having a limit value (L) greater than 200 mg/m3. Chemicals with limit values less than 200 mg/m3 are being authorized under section 106.262. See Section 6.0 for chemical distance and emissions limit calculations.

(4) For physical changes or modifications to existing facilities, there shall be no changes to or additions of any air pollution abatement equipment.

There will be no changes or additions of air pollution abatement equipment.

(5) Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.

Visible emissions, except uncombined water, will not exceed 5.0% opacity in any six-minute period.

(6) For emission increases of five tons per year or greater, notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.

VOC emissions as a result of the operation being authorized herein, will not be greater than 5 tons per year. Therefore, this section is not applicable.

(7) For emission increases of less than five tons per year, notification must be provided using either:

(A) Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any; or

(B) Form PI-7 by March 31 of the following year summarizing all uses of this permit by rule in the previous calendar year. This annual notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.

PI-7 application including project description, chemical names with limit values and emission calculations are included with this submission.

(b) The following are not authorized under this section:

(1) Construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and

(2) Any change to any facility authorized under another section of this chapter or authorized under a standard permit.

There are no standard permits in effect or authorization under another section for this process.

30 TAC §106.262 (March 14, 1997 amended November 1, 2003)

(a) Facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.

(1) Emission points associated with the facilities or changes shall be located at least 100 feet from any off-plant receptor. Off-plant receptor means any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.

Emissions associated with this PBR authorization will be located at least 100 feet from any off-plant receptor.

(2) New or increased emissions, including fugitives, of chemicals shall not be emitted in a quantity greater than five tons per year nor in a quantity greater than E as determined using the equation E = L/K.

New or increased emissions, including fugitives, of chemicals will not be emitted in a quantity greater than 5 tons per year and no individual chemical emissions will exceed the allowable pounds per hour (lbs/hr) as determined using the equation E = L/K. The distance from the closest tank farm to the nearest offsite receptor is approximately 400 feet (K value =104). See Section 6.0 for speciated chemical distance and emissions limit calculations.

(3) Notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, and data identifying specific chemical names, L values, D values, and a description of pollution control equipment, if any.

Notification using Form PI-7 is hereby being submitted with this application.

(4) The facilities in which the following chemicals will be handled shall be located at least 300 feet from the nearest property line and 600 feet from any off-plant receptor and the cumulative amount of any of the following chemicals resulting from one or more authorizations under this section (but not including permit authorizations) shall not exceed 500 pounds on the plant property and all listed chemicals shall be handled only in unheated containers operated in compliance with the United States Department of Transportation regulations (49 Code of Federal Regulations, Parts 171-178): acrolein, allyl chloride, ammonia (anhydrous), arsine, boron trifluoride, bromine, carbon disulfide, chlorine, chlorine dioxide, chlorine trifluoride, chloroacetaldehyde, chloropicrin, chloroprene, diazomethane, diborane, diglycidyl ether, dimethylhydrazine, ethyleneimine, ethyl mercaptan, fluorine, formaldehyde (anhydrous), hydrogen bromide, hydrogen chloride, hydrogen cyanide, hydrogen fluoride, hydrogen selenide, hydrogen sulfide, ketene, methylamine, methyl bromide, methyl hydrazine, methyl isocyanate, methyl mercaptan, nickel carbonyl, nitric acid, nitric oxide, nitrogen dioxide, oxygen difluoride, ozone, pentaborane, perchloromethyl mercaptan, perchloryl fluoride, phosgene, phosphine, phosphorus trichloride, selenium hexafluoride, stibine, liquified sulfur dioxide, sulfur pentafluoride, and tellurium hexafluoride. Containers of these chemicals may not be vented or opened directly to the atmosphere at any time.

The above-listed chemicals will not be handled at the facility; therefore, this subsection does not apply.

(5) For physical changes or modifications to existing facilities, there shall be no changes or additions of air pollution abatement equipment.

There will be no changes or additions of air pollution abatement equipment.

(6) Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.

Visible emissions, except uncombined water, will not exceed 5.0% opacity in any six-minute period.

(b) The following are not authorized under this section except as noted in subsection (c) of this section:

(1) Construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and

(2) Any change to any facility authorized under another section of this chapter or authorized under a standard permit.

(c) If a facility has been authorized under another section of this chapter or under a standard permit, subsection (a)(2) and (3) of this section may be used to qualify the use of other chemicals at the facility.

Subsections (a)(2) and (a)(3) of this section are being claimed to qualify the use of other chemicals at this facility.

30 TAC §106.4 (amended April 17, 2014)

(a) To qualify for a permit by rule, the following general requirements must be met.

(1) Total actual emissions authorized under permit by rule from the facility shall not exceed the following limits, as applicable:

(A) 250 tons per year (tpy) of carbon monoxide (CO) or nitrogen oxides (NOX);

There will be no emissions of CO and NOx from the operations at the facility.

(B) 25 tpy of volatile organic compounds (VOC), sulfur dioxide (SO2), or inhalable particulate matter (PM);

There will be no emissions of SO2, or PM associated with the operations being authorized herein. Total emissions from VOCs will not exceed 25 tpy.

(C) 15 tpy of particulate matter with diameters of 10 microns or less (PM10);

There will be no emissions of PM10 or So2 associated with the operations being authorized herein. VOC emissions will not exceed 25 tpy.

(D) 10 tpy of particulate matter with diameters of 2.5 microns or less (PM2.5); or

There will be no emissions of PM2.5 associated with the operations being authorized herein.

(E) 25 tpy of any other air contaminant except:
(i) water, nitrogen, ethane, hydrogen, and oxygen; and
(ii) notwithstanding any provision in any specific permit by rule to the contrary, greenhouse gases as defined in §101.1 of this title (relating to Definitions).

Total actual emissions will not exceed 25 tpy of VOCs or any other air contaminant.

(2) Any facility or group of facilities, which constitutes a new major stationary source, as defined in §116.12 of this title (relating to Nonattainment and Prevention of Significant Deterioration Review Definitions), or any modification which constitutes a major modification, as defined in §116.12 of this title, under the new source review requirements of the Federal Clean Air Act (FCAA), Part D (Nonattainment) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder, must meet the permitting requirements of Chapter 116, Subchapter B of this title (relating to New Source Review Permits) and cannot qualify for a permit by rule under this chapter. Persons claiming a permit by rule under this chapter should see the requirements of §116.150 of this title (relating to New Major Source or Major Modification in Ozone Nonattainment Areas) to ensure that any applicable netting requirements have been satisfied.

The facility is located in Frio County and will not be an existing major stationary source.

(3) Any facility or group of facilities, which constitutes a new major stationary source, as defined in 40 Code of Federal Regulations (CFR) §52.21, or any change which constitutes a major modification, as defined in 40 CFR §52.21, under the new source review requirements of the FCAA, Part C (Prevention of Significant Deterioration) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder because of emissions of air contaminants other than greenhouse gases, must meet the permitting requirements of Chapter 116, Subchapter B of this title and cannot qualify for a permit by rule under this chapter. Notwithstanding any provision in any specific permit by rule to the contrary, a new major stationary source or major modification which is subject to Chapter 116, Subchapter B, Division 6 of this title due solely to emissions of greenhouse gases may use a permit by rule under this chapter for air contaminants that are not greenhouse gases. However, facilities or projects which require a prevention of significant deterioration permit due to emissions of greenhouse gases may not commence construction or operation until the prevention of significant deterioration permit is issued.

The facility will not be an existing major stationary source, and the proposed operations will not constitute a new major stationary source.

(4) Unless at least one facility at an account has been subject to public notification and comment as required in Chapter 116, Subchapter B or Subchapter D of this title (relating to New Source Review Permits or Permit Renewals), total actual emissions from all facilities permitted by rule at an account shall not exceed 250 tpy of CO or NOX ; or 25 tpy of VOC or SO2 or PM; or 15 tpy of PM10 ; or 10 tpy of PM2.5 ; or 25 tpy of any other air contaminant except water, nitrogen, ethane, hydrogen, oxygen, and GHGs (as specified in §106.2 of this title (relating to Applicability)).

Total actual emissions will not exceed 250 tpy of carbon monoxide or nitrogen oxides; or 25 tpy of VOC or sulfur dioxide or particulate matter; or 15 tpy of PM10; or 10 tpy of PM2.5; or 25 tpy of any other air contaminant except water, nitrogen, ethane, hydrogen, oxygen, and GHGs.

(5) Construction or modification of a facility commenced on or after the effective date of a revision of this section or the effective date of a revision to a specific permit by rule in this chapter must meet the revised requirements to qualify for a permit by rule.

Revised requirements will be met for the facility if constructed or modified on or after the effective date of a revision.

(6) A facility shall comply with all applicable provisions of the FCAA, §111 (Federal New Source Performance Standards) and §112 (Hazardous Air Pollutants), and the new source review requirements of the FCAA, Part C and Part D and regulations promulgated thereunder.

The facility will comply with all applicable provisions of the FCAA.

(7) There are no permits under the same commission account number that contain a condition or conditions precluding the use of a permit by rule under this chapter.

There are no permits under the same commission account number that contain a condition precluding the use of a permit by rule.

(8) The proposed facility or group of facilities shall obtain allowances for NOX if they are subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).

There will be no emissions of NOx associated with the proposed change.

(b) No person shall circumvent by artificial limitations the requirements of §116.110 of this title (relating to Applicability).

Artificial limitations of requirements of §116.110 will not be circumvented.

(c) The emissions from the facility shall comply with all rules and regulations of the commission and with the intent of the Texas Clean Air Act (TCAA), including protection of health and property of the public, and all emissions control equipment shall be maintained in good condition and operated properly during operation of the facility.

The emissions associated with the Dilley 508 facility operations as represented herein, will comply with all rules and regulations and intent of the TCAA and all emissions control equipment will be maintained in good condition and operated properly.

(d) Facilities permitted by rule under this chapter are not exempted from any permits or registrations required by local air pollution control agencies. Any such requirements must be in accordance with Texas Health and Safety Code, §382.113 and any other applicable law.

The operations at the ChampionX Dilley facility as represented herein, will meet any such requirements.

30 TAC §106.8 (adopted to be effective November 1, 2001)

(a) Owners or operators of facilities and sources that are de minimis as Designated in §116.119 of this title (relating to De Minimis Facilities or Sources) are not subject to this section.

The operations being authorized herein will not be designated as de minimis and will be subject to this section.

(b) Owners or operators of facilities operating under a permit by rule (PBR) in Subchapter C of this chapter (relating to Domestic and Comfort Heating and Cooling) or under those PBRs that only name the type of facility and impose no other conditions in the PBR itself do not need to comply with specific recordkeeping requirements of subsection (c) of this section. A list of these PBRs will be available through the commission's Austin central office, regionally offices, and the commission's website. Upon request from the commission or any air pollution control program having jurisdiction, claimants must provide information that would demonstrate compliance with §106.4 of this title (relating to Requirements for Permitting by Rule), or the general requirements, if any, in affect at the time of the claim, and the PBR under which the facility is authorized.

The operations being authorized herein will be required to comply with specific recordkeeping requirements of subsection (c) of this section.

(c) Owners or operators of all other facilities authorized to be constructed and operate under a PBR must retain records as follows:

(1) Maintain a copy of each PBR and the applicable general conditions of §106.4 of this title or the general requirements, if any, in effect at the time of the claim under which the facility is operating. The PBR and general requirements claimed should be the version in effect at the time of construction or installation or changes to an existing facility, whichever is most recent. The PBR holder may elect to comply with a more recent version of the applicable PBR and general requirements:

A copy of this PBR and the applicable general conditions of §106.4 of this title will be maintained.

(2) Maintain records containing sufficient information to demonstrate compliance with the following:

*(*A) All applicable general requirements of §106.4 of this title or the general requirements, if any, in effect at the time of the claim; and

(C) All applicable PBR conditions

Records with all applicable general requirements of §106.4 of this title and all applicable PBR conditions will be maintained.

(3) Keep all required records at the facility site. If however, the facility normally operates unattended, records must be maintained at an office within Texas having day-to-day operational control of the plant site:

All required records will be kept at the Dilley facility or at an office in Texas having day to day control of the plant site.

(4) Make the records available in a reviewable format at the request of personnel from the commission or any air pollution control program having jurisdiction;

All records will be available in reviewable format at the request of personnel from the commission or any air pollution control program having jurisdiction.

(5) Beginning April 1, 2002, keep records to support a compliance demonstration for any consecutive 12-month period. Unless specifically required by a PBR, records regarding the quantity of air contaminants emitted by a facility to demonstrate compliance with §106.4 of this title prior to April 1, 2002 are not required under this section; and

All records will be kept to support a compliance demonstration for any consecutive 12-month period.

(6) For facilities located at sites designated as major in accordance with §122,10(13) of this title (relating to General Definitions) or subject to or potentially subject to any applicable federal requirement, retain all records demonstrating compliance for at least five years. For facilities located at all other sites, all records demonstrating compliance must be retained for at least two years. These record retention requirements supersede any retention conditions of an individual PBR.

All records demonstrating compliance will be retained for at least two years.

SECTION 5.0
TCEQ CHECKLISTS

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

The following checklist was developed by the Texas Commission on Environmental Quality (TCEQ), **Air Permits Division**, to assist applicants in determining whether or not a facility meets all of the applicable requirements. Before claiming a specific Permit by Rule (PBR), a facility must first meet all of the requirements of **Title 30 Texas Administrative Code § 106.4** (30 TAC § 106.4), "Requirements for Permitting by Rule." Only then can the applicant proceed with addressing requirements of the specific Permit by Rule being claimed.

The use of this checklist is not mandatory; however, it is the responsibility of each applicant to show how a facility being claimed under a PBR meets the general requirements of 30 TAC § 106.4 and also the specific requirements of the PBR being claimed. If all PBR requirements cannot be met, a facility will not be allowed to operate under the PBR and an application for a construction permit may be required under 30 TAC § 116.110(a).

Registration of a facility under a PBR can be performed by completing **Form PI-7** (Registration for Permits by Rule) or **Form PI-7-CERT** (Certification and Registration for Permits by Rule). The appropriate checklist should accompany the registration form. Check the most appropriate answer and include any additional information in the spaces provided. If additional space is needed, please include an extra page and reference the question number. The PBR forms, tables, checklists, and guidance documents are available from the TCEQ, Air Permits Division Web site at: www.tceq.texas.gov/permitting/air/nav/air_pbr.html.

1. 30 TAC § 106.4(a)(1) and (4): Emission limits	
List emissions in tpy for **each** facility (add additional pages or table if needed):	
• Are the SO_2, PM_{10}, VOC, or other air contaminant emissions claimed for **each** facility in this PBR submittal less than 25 tpy?	☒ YES ☐ NO
• Are the NO_x and CO emissions claimed for each facility in this PBR submittal less than 250 tpy?	☒ YES ☐ NO
*If the answer to both is "Yes," continue to the question below. If the answer to either question is "No," a **PBR cannot be claimed**.*	
Has any facility at the property had public notice and opportunity for comment under 30 TAC Section 116 for a regular permit or permit renewal? (This does not include public notice for voluntary emission reduction permits, grandfathered existing facility permits, or federal operating permits.)	☐ YES ☒ NO
If "Yes," skip to Section 2. If "No," continue to the questions below.	
If the site has had no public notice, please answer the following:	
• Are the SO_2, PM_{10}, VOC, or other emissions claimed for **all** facilities in this PBR submittal less than 25 tpy?	☒ YES ☐ NO
• Are the NO_x and CO emissions claimed for all facilities in this PBR submittal less than 250 tpy?	☒ YES ☐ NO
If the answer to both questions is "Yes," continue to Section 2.	
*If the answer to either question is "No," **a PBR cannot be claimed**. A permit will be required under Chapter 116.*	

2. 30 TAC § 106.4(a)(2): Nonattainment check	
$ Are the facilities to be claimed under this PBR located in a designated ozone nonattainment county?	☐ YES ☒ NO
If "Yes," please indicate which county by checking the appropriate box to the right.	
(Marginal) - Hardin, Jefferson, and Orange counties:	☐ BPA
(Moderate) - Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties:	☐ HGA
(Moderate) - Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant counties	☐ DFW
If "Yes," to any of the above, continue to the next question. If "No," continue to Section 3.	
• Does this project trigger a nonattainment review?	☐ YES ☐ NO
Does this project trigger a nonattainment review?	
• Is the project's potential to emit (PTE) for emissions of VOC or NO_x increasing by 100 tpy or more? *PTE is the maximum capacity of a stationary source to emit any air pollutant under its worst-case physical and operational design unless limited by a permit, rules, or made federally enforceable by a certification.*	☐ YES ☐ NO
• Is the site an existing major nonattainment site and are the emissions of VOC or NO_x increasing by 40 tpy or more?	☐ YES ☐ NO
If needed, attach contemporaneous netting calculations per nonattainment guidance.	
Additional information can be found at: www.tceq.texas.gov/permitting/air/forms/newsourcereview/tables/nsr_table8.html and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html	
*If "Yes," to any of the above, the project is a major source or a major modification and **a PBR may not be used**. A Nonattainment Permit review must be completed to authorize this project. If "No," continue to Section 3.*	
3. 30 TAC § 106.4(a)(3): Prevention of Significant Deterioration (PSD) check	
Does this project trigger a review under PSD rules?	
To determine the answer, review the information below:	
• Are emissions of any regulated criteria pollutant increasing by 100 tpy of any criteria pollutant at a named source?	☐ YES ☒ NO
• Are emissions of any criteria pollutant increasing by 250 tpy of any criteria pollutant at an unnamed source?	☐ YES ☒ NO
• Are emissions increasing above significance levels at an existing major site?	☐ YES ☒ NO
PSD information can be found at: www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/Tables/10173tbl.pdf and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html *If "Yes," to any of the above, **a PBR may not be used**. A PSD Permit review must be completed to authorize the project. If "No," continue to Section 4.*	

4. 30 TAC § 106.4(a(6): Federal Requirements	
$ Will all facilities under this PBR meet applicable requirements of Title 40 Code of Federal Regulations (40 CFR) Part 60, New Source Performance Standards (NSPS)?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable?	
• Will all facilities under this PBR meet applicable requirements of 40 CFR Part 63, Hazardous Air Pollutants Maximum Achievable Control Technology (MACT) standards?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable?	
• Will all facilities under this PBR meet applicable requirements of 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAPs)?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable?	
If "Yes" to any of the above, please attach a discussion of how the facilities will meet any applicable standards.	
5. 30 TAC § 106.4(a)(7): PBR prohibition check	
• Are there any air permits at the site containing conditions which prohibit or restrict the use of PBRs?	☐ YES ☒ NO
If "Yes," PBRs may not be used or their use must meet the restrictions of the permit. A new permit or permit amendment may be required.	
List permit number(s):	
6. 30 TAC § 106.4(a)(8): NO_x Cap and Trade	
• Is the facility located in Harris, Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?	☐ YES ☒ NO
If "Yes," answer the question below. If "No," continue to Section 7.	
• Will the proposed facility or group of facilities obtain required allowances for NO_x if they are subject to 30 TAC Chapter 101, Subchapter H, Division 3 (relating to the Mass Emissions Cap and Trade Program)?	☐ YES ☐ NO

Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106

7. Highly Reactive Volatile Organic Compounds (HRVOC) check		
• Is the facility located in Harris County?		☐ YES ☒ NO
If "Yes," answer the next question. If "No," skip to the box below.		
• Will the project be constructed after June 1, 2006?		☒ YES ☐ NO
If "Yes," answer the next question. If "No," skip to the box below.		
• Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☒ NO
If "Yes," complete the information below:		
	lb/hr	tpy
► 1,3-butadiene		
► all isomers of butene (e.g., isobutene [2-methylpropene or isobutylene])		
► alpha-butylene (ethylethylene)		
► beta-butylene (dimethylethylene, including both cis- and trans-isomers)		
► ethylene		
► propylene		
• Is the facility located in Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?		☐ YES ☒ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
• Will the project be constructed after June 1, 2006?		☐ YES ☐ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
• Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☐ NO
If "Yes," complete the information below:		
	lb//hr	tpy
► ethylene		
► propylene		

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Texas Commission on Enviromental Quality
Title 30 Texas Administrative Code § 106.261
Permit By Rule (PBR) Checklist
Facilities (Emission Limitations)

The following checklist is designed to help you confirm that you meet Title 30 Texas Administrative Code § 106.261 (30 TAC § 106.261) requirements. If you do not meet all the requirements, you may alter the project design or operation in such a way that all the requirements of the PBR are met or you may obtain a construction permit. The PBR forms, tables, checklists, and guidance documents are available from the Texas Commission on Environmental Quality (TCEQ) Air Permits Division website at, www.tceq.texas.gov/permitting/air/air_permits.html

For additional assistance with your application, including resources to help calculate your emissions, please visit the Small Business and Local Government Assistance (SBLGA) webpage at the following link: www.TexasEnviroHelp.org

Check The Most Appropriate Answer		
	Is a description or checklist of how this claim meets the general requirements for the use of PBRs in 30 TAC § 106.4 attached?	☒ YES ☐ NO ☐ NA
b1	Is this claim for construction of a facility authorized in another section of this chapter or for which a standard permit is in effect? *If "YES," this PBR cannot be used to authorize emissions from the project.*	☐ YES ☒ NO ☐ NA
b2	Is this claim for any change to any facility authorized under another section of this chapter or authorized under a standard permit? *If "YES," this PBR cannot be used to authorize emissions from the project.*	☐ YES ☒ NO ☐ NA
a1	Are facilities or changes located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located?	☒ YES ☐ NO ☐ NA

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Check The Most Appropriate Answer *(continued)*

a2 Are total new or increased emissions, including fugitives, less than or equal to 6.0 pounds per hour (lb/hr) and ten tons per year of the following materials[1] ☒ YES ☐ NO ☐ NA

Check All That Apply

☐ acetylene	☐ cyclopentane	☐ kaolin	☐ propane
☐ alumina	☐ emery dust	☐ limestone	☐ propyl alcohol
☐ argon	☐ ethanol	☐ magnesite	☐ propyl ether
☐ butane	☐ ethyl acetate	☐ marble	☐ propylene
☐ calcium carbonate	☐ ethyl ether	☐ methyl acetylene	☐ silicon
☐ calcium silicate	☐ ethylene	☐ methyl chloroform	☐ silicon carbide
☐ carbon monoxide	☐ glycerin mist	☐ methyl cyclohexane	☐ starch
☐ cellulose fiber	☐ gypsum	☐ neon	☐ sucrose
☐ cement dust	☐ helium	☐ nonan	☐ sulfur dioxide
☐ crude oil	☐ iron oxide dust	☐ oxides of nitrogen	☐ zinc oxide
☐ cyclohexane	☐ isohexane	☐ pentaerythritol	☐ zinc stearate
☐ cyclohexene	☒ isopropyl alcohol	☐ plaster of paris	

☒ refinery petroleum fractions (except for pyrolysis naphthas and pyrolysis gasoline) containing less than ten volume percent benzene

☐ fluorocarbons Numbers 11, 12, 13, 14, 21, 22, 23, 113, 114, 115, and 116

[1]Any upstream and/or downstream actual emission increases that result from a project for which this PBR is claimed need to be authorized appropriately. Any associated upstream and/or downstream emissions authorized as part of the PBR claim will need to be included as part of the total new or increased emissions, unless: 1) these emissions stay below current authorized emission limits; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT, health and environmental impacts, or other representations (i.e. construction plans, operating procedures, throughputs, maximum emission rates, etc.); and 3) this claim is certified via PI-7 CERT or APD-CERT. Notwithstanding the exclusion of any upstream and/or downstream emissions under this PBR claim, the total of all emission increases, including upstream and/or downstream actual emission increases, are required to be part of the PBR registration to determine major new source review applicability under Title 30 TAC Chapter 116. The emission increases associated with the PBR claim and all upstream and/or downstream actual emission increases may not circumvent major new source review requirements under 30 TAC Chapter 116.

Texas Commission on Enviromental Quality
Title 30 Texas Administrative Code § 106.261
Permit By Rule (PBR) Checklist
Facilities (Emission Limitations)

Check The Most Appropriate Answer		
a3	Are total new or increased emissions, including fugitives, less than or equal to 1.0 lb/hr of any chemical having a limit value (L) greater than 200 milligrams per cubic meter (mg/m^3) as listed and referenced in Table 262 of 30 TAC § 106.262 of this title (relating to Facilities (Emission and Distance Limitations)? [2]	☒ YES ☐ NO ☐ NA
List chemical(s): See Section 6.0 (Emission Calcs.)	L value(s): See Section 6.0 (Emission Calcs.)	
	Are total new or increased emissions, including fugitives, less than or equal to 1.0 lb/hr of any chemical not listed or referenced in Table 262? [1] List chemical(s): See Section 6.0 (Emission Calcs.)	☒ YES ☐ NO ☐ NA
	Are total new or increased emissions, including fugitives, of a chemical with a limit value of less than 200 mg/m^3*?* [1] *If "YES" the authorization of the chemical is not allowed under this section. We suggest you use 30 TAC § 106.262 to authorize the emissions, if applicable.*	☒ YES ☐ NO ☐ NA
a4	Are there any changes to or additions of any existing air pollution abatement equipment?	☐ YES ☒ NO ☐ NA
a5	Will there be any visible emissions, except uncombined water, emitted to the atmosphere from any point or fugitive source in amounts greater than 5.0% opacity in any six-minute period?	☐ YES ☒ NO ☐ NA
a6	Are emission increases five tons per year or greater? *If "YES," this checklist must be attached to a Form PI-7 within ten days following the installation or modification of the facilities.* [**Note:** *The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.*]	☐ YES ☒ NO ☐ NA
a7	Are emission increases less than five tons per year? *If "YES," this checklist must be attached to a Form PI-7 and include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any. (pick one):* ☒ Within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any ☐ By March 31 of the following year summarizing all uses of this permit by rule in the previous calendar year.	☒ YES ☐ NO ☐ NA

[2] Any upstream and/or downstream actual emission increases that result from a project for which this PBR is claimed need to be authorized appropriately. Any associated upstream and/or downstream emissions authorized as part of the PBR claim will need to be included as part of the total new or increased emissions, unless: 1) these emissions stay below current authorized emission limits; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT, health and environmental impacts, or other representations (i.e. construction plans, operating procedures, throughputs, maximum emission rates, etc.); and 3) this claim is certified via PI-7 CERT or APD-CERT. Notwithstanding the exclusion of any upstream and/or downstream emissions under this PBR claim, the total of all emission increases, including upstream and/or downstream actual emission increases, are required to be part of the PBR registration to determine major new source review applicability under Title 30 TAC Chapter 116. The emission increases associated with the PBR claim and all upstream and/or downstream actual emission increases may not circumvent major new source review requirements under 30 TAC Chapter 116.

Texas Commission on Environmental Quality
Title 30 Texas Administrative Code § 106.262
Permit by Rule (PBR) Checklist
Facilities (Emission and Distance Limitations)

The following checklist is designed to help you confirm that you meet Title 30 Texas Administrative Code § 106.262 (30 TAC § 106.262) requirements. If you do not meet all the requirements, you may alter the project design or operation in such a way that all the requirements of the PBR are met or you may obtain a construction permit. The PBR forms, tables, checklists, and guidance documents are available from the Texas Commission on Environmental Quality (TCEQ), Air Permits Division Web site at, www.tceq.texas.gov/nav/permits/air_permits.html.

For additional assistance with your application, including resources to help calculate your emissions, please visit the Small Business and Local Government Assistance (SBLGA) webpage at the following link: www.TexasEnviroHelp.org

Check the Most Appropriate Answer				
	Is a description or checklist of how this claim meets the general requirements for the use of PBRs in 30 TAC § 106.4 attached?	☒ YES	☐ NO	☐ N/A
b1.	Is this claim for construction of a facility authorized in another section of this chapter or for which a standard permit is in effect? *If "YES," this PBR cannot be used to authorize emissions from the project.*	☐ YES	☒ NO	☐ N/A
b2.	Is this claim for any change to any facility authorized under another section of this chapter or authorized under a standard perm? *If "YES," this PBR cannot be used to authorize emissions from the project.*	☐ YES	☒ NO	☐ N/A
c.	Is the facility authorized under another section of this chapter or under a standard permit? *If "YES," subsection (a)(2) and (3) of this section may be used to qualify the use of other chemicals at the facility.*	☒ YES	☐ NO	☐ N/A
a1.	Are facilities or changes located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located?	☒ YES	☐ NO	☐ N/A
a2.	Are new or increased emissions, including fugitives, emitted in a quantity less than five tons per year or in a quantity less than E as determined by using the equation E=L/K?[1] See Table 262 Figures 1 and 2. *If "YES," the notification shall include a description of the project, calculations for all emissions being claimed under this PBR:*	☒ YES	☐ NO	☐ N/A
Chemical:	L value:	D: 400	K: 104	
a3.	Is this checklist attached to a Form PI-7 within ten days following the installation or modification of the facilities? *If "YES," the notification shall include a description of the project, calculations, and data identifying specific chemical names, L values, and a description of pollution control equipment, if any.*	☒ YES	☐ NO	☐ N/A

[1] Any upstream and/or downstream actual emission increases that result from a project for which this PBR is claimed need to be authorized appropriately. Any associated upstream and/or downstream emissions authorized as part of the PBR claim will need to be included as part of the total new or increased emissions, unless: 1) these emissions stay below current authorized emission limits; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT, health and environmental impacts, or other representations (i.e. construction plans, operating procedures, throughputs, maximum emission rates, etc.); and 3) this claim is certified via PI-7 CERT or APD-CERT. Notwithstanding the exclusion of any upstream and/or downstream emissions under this PBR claim, the total of all emission increases, including upstream and/or downstream actual emission increases, are required to be part of the PBR registration to determine major new source review applicability under Title 30 TAC Chapter 116. The emission increases associated with the PBR claim and all upstream and/or downstream actual emission increases may not circumvent major new source review requirements under 30 TAC Chapter 116.

Title 30 Texas Administrative Code § 106.262
Permit by Rule (PBR) Checklist
Facilities (Emission and Distance Limitations)

Check the Most Appropriate Answer			
a4. Are one or more of the following chemicals is handled for this registration? (Check all that apply) *If "YES," answer the following four questions.*			☒ YES ☐ NO ☐ N/A
☐ acrolein	☐ diazomethane	☐ hydrogen sulfide	☐ ozone
☐ allyl chloride	☐ diborane	☐ ketene	☐ pentabornev
☐ ammonia (anhydrous)	☐ diglycidyl ether	☐ methylamine	☐ perchloromethyl mercaptan
☐ arsine	☐ dimethylhydrazine	☐ methyl bromide	☐ perchloryl fluoride
☐ boron trifluoride	☐ ethyleneimine	☐ methyl hydrazine	☐ phosgene
☐ bromine	☐ ethyl mercaptan	☐ methyl isocyanate	☐ phosphine
☐ carbon disulfide	☐ fluorine	☐ methyl mercaptan	☐ phosphorus trichloride
☐ chlorine	☐ formaldehyde (anhydrous)	☐ nickel carbonyl	☐ selenium
☐ chlorine dioxide	☐ hydrogen bromide	☐ nitric acid	☐ hexafluoride stibine
☐ chlorine trifluoride	☐ hydrogen chloride	☐ nitric oxide	☐ liquefied sulfur dioxide
☐ chloroacetaldehyde	☐ hydrogen cyanide	☐ nitrogen dioxide	☐ sulfur pentafluorid
☐ chloropicrin	☐ hydrogen fluoride	☐ oxygen difluoride	☐ tellurium hexafluoride
☐ chloroprene	☐ hydrogen selenide		
	Are all facilities are located at least 300 feet from the nearest property line and 600 feet from any off-plant receptor?		☐ YES ☐ NO ☐ N/A
	Are the cumulative amount of any of the following chemicals resulting from one or more authorizations under this section (but not including permit authorizations) less than or equal to 500 pounds on the plant property?		☐ YES ☐ NO ☐ N/A
	Are all listed chemicals handled only in unheated containers operated in compliance with the United States Department of Transportation regulation (49 Code of Federal Regulation, Parts 171-178)?		☐ YES ☐ NO ☐ N/A
a5.	Are there any changes to or additions of any existing air pollution abatement equipment?		☐ YES ☒ NO ☐ N/A
a6.	Will there be any visible emissions, except uncombined water, emitted to the atmosphere from any point or fugitive source in amounts greater that 5.0% opacity in any six-minute period?		☐ YES ☒ NO ☐ N/A

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D (feet)	K	Value Description
100	326	E=maximum allowable hourly emission, and never to exceed 6 pounds per hour.
200	200	
300	139	
400	104	
600	65	
700	54	
800	46	K=value from the table on this page. (interpolate intermediate values)
900	39	
1,000	34	
2,000	14	D=distance to the nearest off-plant receptor
3,000 or more	8	

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Acetone	590.
Acetaldehyde	9.
Acetone	4.
Acetonitrile	34.
Acetylene	2662.
N-Amyl Acetate	2.7
Sec-Amyl Acetate	1.1
Benzene	3.
Beryllium and Compounds	0.0005
Boron Trifluride, as HF	0.5
Butyl Alcohol,	76.
Butyl Acrylate	19.
Butyl Chromate	0.01
Butyl Glycidyl Ether	30.
Butyl Mercaptain	0.3
Butyraldehyde	1.4
Butyric Acid	1.8
Butyronitrile	22.
Carbon Tetrachloride	12.
Chloroform	10.
Chlorophenol	0.2
Chloroprene	3.6
Chromic Acid	0.01
Chromium Metal, Chromium II and III Compounds	0.1
Chromium VI Compounds	0.01
Coal Tar Pitch Volatiles	0.1
Creosote	0.1
Cresol	0.5
Cumene	50.
Dicyclopentadiene	3.1
Diethylaminoethanol	5.5

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Diisobutyl Ketone	63.9
Dimethyl Aniline	6.4
Dioxane	3.6
Dipropylamine	8.4
Ethyl Acrylate	0.5
Ethylene Dibromide	0.38
Ethylene Glycol	26.
Ethylene Glycol Dinitrate	0.1
Ethylidene 2-norbornene, 5	7.
Ethyl Mercaptan	0.08
Ethyl Sulfide	1.6
Glycolonitrile	5.
Halothane	16.
Heptane	350.
Hexanediamine, 1, 6	0.32
Hydrogen Chloride	1.
Hydrogen Fluoride	0.5
Hydrogen Sulfide	1.1
Isoamyl Acetate	133.
Isoamyl Alcohol	15.
Isobutyronitrile	22.
Kepone	0.001
Kerosene	100.
Malononitrile	8.
Mesityl Oxide	40.
Methyl Acrylate	5.8
Methyl Amyl Ketone	9.4
Methyl-T-Butyl Ether	45.
Methyl Butyl Ketone	4.
Methyl Disulfide	2.2

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Methylenebis (2-chloroaniline) (MOCA)	0.003
Methylene Chloride	26.
Methyl Isoamyl Ketone	5.6
Methyl Mercaptan	0.2
Merthyl Methacrylate	34.
Methyl Propyl Ketone	530.
Methyl Sulfide	0.3
Mineral Spirits	350.
Naphtha	350.
Nickel, Inorganic Compounds	0.015
Nitroglycerine	0.1
Nitropropane	5.
Octane	350.
Parathion	0.05
Pentane	350.
Perchloroethylene	33.5
Petroleum Ether	350.
Phenyl Mercaptan	0.4
Propionitrile	14.
Propyl Acetate	62.6
Propylene Oxide	20.
Propyl Mercaptan	0.23
Silica-amorphous-precipitated, silica gel	4.
Silicon Carbide	4.

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Stoddard Solvent	350.
Styrene	21.
Succiononitrile	20.
Tolidin	0.02
Trichloroethylene	135.
Trinethylamine	0.1
Valeric Acid	0.34
Vinyl Acetate	15.
Vinyl Chloride	2.
Note: The time weighted average (TWA) threshold Limit Value (TLV) published by the American Conference of Governmental Industrial Hygienists (AGGIH), in its TLVs and BEIs guide (1997 Edition) shall be used for compounds not included in the table. The Short Term Exposure Level (STEL) or Ceiling Limit (annotated with a "C") published by the ACGIH shall be used for compounds that do not have a published TWA TLV. This section cannot be used if the compound is not listed in the table or does not have a published TWA TLV, STEL, or Ceiling Limit in the ACGIH TLVs and BEIs guide.	

TCEQ - **Exemption § 106.473 Checklist**
(Previously Standard Exemption 53)
Organic and Inorganic Liquid Loading and Unloading

The following checklist is designed to help you can confirm that you meet Exemption § 106.473, previously standard exemption 53 (STDX 53) requirements. **Any "no" answers indicate that the claim of registration may not meet all requirements for the use of Exemption § 106.473, previously standard exemption 53.**

If you do not meet all the requirements, you may alter the project design/operation in such a way that all the requirements of the exemption are met, or obtain a construction permit.

For additional assistance with your application, including resources to help calculate your emissions, please visit the Small Business and Local Government Assistance (SBLGA) webpage at the following link: www.TexasEnviroHelp.org

Please Complete The Following:			
Have you included a description of how this exemption claim meets the general rule for the use of exemptions (§ 106.4 checklist is available)?	☒ YES	☐ NO	☐ N/A
Are all the facilities claimed for exemption specifically named in the general section of § 106.473, previously STDX 53? **Attach a description.**	☒ YES	☒ NO	☐ N/A
Are all uncontrolled emissions, calculated using the version of AP-42 in effect at the time, less than 25 TPY of organic compounds or of any other air contaminant? **Attach calculations.**	☐ YES	☒ NO	☐ N/A
Will the loading rate of the facilities always be less than 20,000 gallons per day averaged over any consecutive 30-day period?	☒ YES	☐ NO	☐ N/A
Is the capacity of each tank less than or equal to 25,000 gallons (40,000 gallons for storage of sweet crude oil, sweet natural gas condensate, gasoline, and petroleum fuels)?	☒ YES	☐ NO	☐ N/A
Are all the chemicals to be loaded, unloaded, or stored described in § 106.473(4)(A) and (B), previously STDX 53(d)(1) and (2)? **Attach a list of the chemicals.**	☒ YES	☐ NO	☐ N/A
Will the facilities meet the applicable requirements of 30 TAC 115?	☒ YES	☐ NO	☐ N/A
Have you checked 40 CFR 261, Appendix VIII to ensure that no listed compound is to be loaded, unloaded, or stored under this exemption?	☒ YES	☐ NO	☐ N/A

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SECTION 6.0
EMISSION CALCULATIONS

6.0 EMISSION CALCULATIONS

This section provides the methodology and calculations to demonstrate potential emissions. Calculation and data tables are provided in this section as follows:

- TCEQ Table 1(a)
- PTE Summary
- Liquid Properties
- 261/262 Chemical Evaluation Table
- PBR Chemical Emissions Limit Summary Table
- Storage Tank Emissions
- Blending Emissions
- Loading Emissions
- Process Fugitives Emissions

The confidential speciated products list is provided in Appendix A submitted as confidential file.

Emissions calculations demonstrate potential emissions from each chemical and for each emission source accordingly. ChampionX is proposing to have the operational flexibility to store or blend any compound not to exceed the worst-case emissions as demonstrated herein.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date: February 2025	**Permit No.: 109861**	**Regulated Entity No.: RN106479314**
Area Name: ChampionX Dilley 508 Facility		**Customer Reference No.: CN602898751**

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
(A) EPN	(B) FIN	(C) NAME		(A) Pound Per Hour	(B) TPY
TANKS	TANKS	Storage Tanks	VOC	2.60	0.52
BLEND	BLEND	Blending	VOC	0.14	0.004
LOAD	LOAD	Tote and Truck Loading	VOC	2.62	0.37
FUGITIVES	FUGITIVES	Process Fugitives	VOC	0.13	0.57

EPN = Emission Point Number
FIN = Facility Identification Number

			Updated Rates and Emissions (Feb 2025)			
EPN	Product		Annual Throughput	Max Fill rate	VOC Emissions	
ID	ID	MIN	gal/yr	gals/hr	Max lbs/hr	tons/yr
BT1	CORR10488A	B13E9	250,000	4,500	0.09	0.0015
BT2	CORR21334A	B18C1	250,000	4,500	0.02	0.0004
TT23	BIOC11139A	B13K7	250,000	4,500	0.26	0.0045
TT24	BIOC11139A	B13K7	250,000	4,500	0.26	0.0045
T3	CORR10488A	B13E9	250,000	4,500	0.09	0.0015
T4	CORR12525B	E17C2	250,000	4,500	2.35	0.1685
T5	CORR16290A	T20C2	250,000	4,500	0.10	0.0016
T6	HSCV66405A	R-60210	250,000	4,500	1.97	0.0325
T7	BIOC16975	J16B1	250,000	4,500	0.32	0.0052
T8	ACPC00010A	R18F5	250,000	4,500	1.73	0.1078
T9	Product 10196	B13T8	250,000	4,500	1.99	0.0558
T10	PARA01975A	H19B9	250,000	4,500	1.08	0.0522
T24	CORR10211B	R-53538	250,000	4,500	2.60	0.0867
T25	DI H2O	-	-	-	-	-
T26	DI H2O	-	-	-	-	-
T28	HSCV11619A	W15X1	250,000	4,500	0.08	0.0014
BLEND	-	-	966,000	4,500	0.14	0.0035
LOAD	-	-	3,716,000	4,500	2.62	0.3689
FUGITIVES	-	-	-	-	0.13	0.5692

TANKS	2.60	0.5240
BLEND	0.14	0.0035
LOAD	2.62	0.3689
FUGITIVES	0.13	0.5692

Liquid Properties

Product ID	MIN	psia @ 70 F	psia @ 95 F	MW (lb/lb-mol)	Water Vapor Wt %
CORR10488A	B13E9	0.31	0.63	18.7	92.3%
CORR21334A	B18C1	0.30	0.62	18.3	98.0%
CORR12525B	E17C2	1.60	2.93	32.7	0.0%
CORR16290A	T20C2	0.31	0.64	18.7	91.9%
ACPC00010A	R18F5	0.35	0.70	92.5	0.0%
Product 10196	B13T8	0.44	0.88	43.9	13.9%
BIOC11139A	B13K7	0.30	0.61	19.1	77.7%
CORR10211B	R-53538	0.93	1.77	31.0	11.5%
HSCV11619A	W15X1	0.30	0.61	18.6	92.6%
PARA01975A	H19B9	0.69	1.34	28.3	19.7%
BIOC16975	J16B1	0.31	0.63	20.9	76.0%
HSCV66405A	R-60210	0.31	0.62	31.6	0.0%
FOAM21408A	A17B8	0.31	0.62	18.7	96.3%
FOAM21006A	T13K4	0.31	0.62	19.4	92.4%
FOAM21003A	T13R2	0.30	0.61	18.1	99.3%
FOAM21002A	T13R3	0.29	0.59	18.5	97.1%
FOAM21595FB	S13T8	0.31	0.62	20.1	89.2%
FOAM21593FB	S13U1	0.31	0.62	18.3	98.0%

AVG Water % 63.7%

Speciated Chemical Emissions Evaluation

PBR 106.261 & 106.262 (E=L / K) Emissions Calculation Table

Distance to Offsite Receptor (ft) = **400**

"K" value = **104**

Product		Component	CAS No.	Storage Tank Emissions		Blending Emissions		Loading Emissions		Process Fugitive Emissions		Total Emissions		"L" Value	(E) Value E=L/K	Allowable Emissions	
ID	MIN	Name	No	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	Max lbs/hr	tons/yr	(mg/m3)	lbs/hr	lbs/hr	tons/yr
CORR10488A	B13E9	Methanol	67-56-1	8.4E-02	2.8E-03	8.4E-02	8.8E-05	5.1E-02	1.5E-03	2.1E-03	9.3E-03	8.6E-02	1.4E-02	262	2.52	2.52	5.00
		2-Mercaptoethanol	60-24-2	1.1E-03	3.5E-05	1.1E-03	1.1E-06	6.5E-04	1.9E-05	2.7E-05	1.2E-04	1.1E-03	1.7E-04	NL	1.00	1.00	4.38
		Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	5.7E-03	1.9E-04	5.7E-03	6.0E-06	3.4E-03	9.8E-05	1.4E-04	6.3E-04	5.8E-03	9.2E-04	NL	1.00	1.00	4.38
		Fatty acid-Diethylenetriamine, Acetate	68153-60-6	2.8E-05	9.4E-07	2.8E-05	3.0E-08	1.7E-05	4.9E-07	7.2E-07	3.1E-06	2.9E-05	4.6E-06	NL	1.00	1.00	4.38
		Ethanol, 2,2'-oxybis-, reaction products with ammonia	68877-16-7	5.7E-06	1.9E-07	5.7E-06	6.0E-09	3.5E-06	9.9E-08	1.4E-07	6.3E-07	5.8E-06	9.3E-07	NL	1.00	1.00	4.38
		Water	7732-18-5	1.1E+00	3.6E-02	1.1E+00	1.1E-03	6.6E-01	1.9E-02	2.8E-02	1.2E-01	1.1E+00	1.8E-01	-	-	-	-
CORR21334A	B18C1	Water	7732-18-5	1.1E+00	1.8E-02	1.1E+00	1.5E-02	6.7E-01	9.6E-03	2.9E-02	1.3E-01	1.1E+00	1.7E-01	-	-	-	-
		Fatty Acids, Tall-oil, Reaction Products With Polyethylenepolyamines, Acetates	64754-93-4	2.2E-05	3.7E-07	2.2E-05	3.1E-07	1.4E-05	1.9E-07	5.9E-07	2.6E-06	2.3E-05	3.5E-06	NL	1.00	1.00	4.38
		Pyridine, Alkyl Derivs., Acetates	168612-09-7	2.0E-05	3.3E-07	2.0E-05	2.7E-07	1.2E-05	1.7E-07	5.3E-07	2.3E-06	2.0E-05	3.1E-06	NL	1.00	1.00	4.38
		Ethoxylated tallow alkylamines, acetate salt	68551-33-7	1.7E-05	2.8E-07	1.7E-05	2.3E-07	1.0E-05	1.5E-07	4.5E-07	2.0E-06	1.7E-05	2.6E-06	NL	1.00	1.00	4.38
		Poly(oxy-1,2-ethanediyl), α-(nonylphenyl)-ω-hydroxy-, branched, phosphates	68412-53-3	8.7E-05	1.4E-06	8.7E-05	1.2E-06	5.3E-05	7.5E-07	2.3E-06	1.0E-05	8.9E-05	1.3E-05	NL	1.00	1.00	4.38
		2-Butoxyethanol	111-76-2	2.8E-03	4.7E-05	2.8E-03	3.9E-05	1.7E-03	2.4E-05	7.5E-05	3.3E-04	2.9E-03	4.4E-04	121	1.16	1.16	5.00
		Ethanol, 2-Mercapto-	60-24-2	2.8E-03	4.6E-05	2.8E-03	3.8E-05	1.7E-03	2.4E-05	7.4E-05	3.2E-04	2.9E-03	4.3E-04	NL	1.00	1.00	4.38
		Acetic Acid	64-19-7	1.7E-02	2.8E-04	1.7E-02	2.3E-04	1.0E-02	1.5E-04	4.5E-04	2.0E-03	1.7E-02	2.6E-03	25	0.24	0.24	1.05
CORR12525B	E17C2	Methanol	67-56-1	2.3E+00	1.7E-01	-	-	2.4E+00	1.8E-01	2.9E-02	1.3E-01	2.4E+00	4.7E-01	262	2.52	2.52	5.00
		Tall Oil Fatty Acid	61790-12-3	5.4E-06	3.9E-07	-	-	5.7E-06	4.3E-07	6.9E-08	3.0E-07	5.7E-06	1.1E-06	NL	1.00	1.00	4.38
		Alkylpyridine	68391-11-7	3.5E-03	2.5E-04	-	-	3.6E-03	2.7E-04	4.4E-05	1.9E-04	3.7E-03	7.1E-04	NL	1.00	1.00	4.38
		C18 Unsaturated Fatty Acid Dimer	61788-89-4	1.3E-02	9.6E-04	-	-	1.4E-02	1.1E-03	1.7E-04	7.5E-04	1.4E-02	2.8E-03	NL	1.00	1.00	4.38
		Reaction product of diethylenetriamine and tall-oil (fatty)	61790-69-0	3.6E-03	2.6E-04	-	-	3.8E-03	2.9E-04	4.6E-05	2.0E-04	3.9E-03	7.5E-04	NL	1.00	1.00	4.38
		1-Propene, hydroformylation products, high boiling	68551-11-1	2.8E-02	2.0E-03	-	-	2.9E-02	2.2E-03	3.5E-04	1.5E-03	2.9E-02	5.7E-03	NL	1.00	1.00	4.38
		Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	6.2E-07	4.4E-08	-	-	6.5E-07	4.8E-08	7.8E-09	3.4E-08	6.5E-07	1.3E-07	NL	1.00	1.00	4.38

Speciated Chemical Emissions Evaluation

PBR 106.261 & 106.262 (E=L / K) Emissions Calculation Table

Distance to Offsite Receptor (ft) = **400**

"K" value = **104**

Product		Component	CAS No.	Storage Tank Emissions		Blending Emissions		Loading Emissions		Process Fugitive Emissions		Total Emissions		"L" Value	(E) Value E=L/K	Allowable Emissions	
ID	MIN	Name	No	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	Max lbs/hr	tons/yr	(mg/m3)	lbs/hr	lbs/hr	tons/yr
CORR16290A	T20C2	Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	2.6E-03	4.3E-05	2.6E-03	3.6E-05	1.6E-03	2.3E-05	6.5E-05	2.8E-04	2.7E-03	3.9E-04	NL	1.00	1.00	4.38
		2-Mercaptoethanol	60-24-2	4.9E-04	8.1E-06	4.9E-04	6.7E-06	3.0E-04	4.3E-06	1.2E-05	5.4E-05	5.0E-04	7.3E-05	NL	1.00	1.00	4.38
		Methanol	67-56-1	9.3E-02	1.5E-03	9.3E-02	1.3E-03	5.6E-02	8.1E-04	2.3E-03	1.0E-02	9.6E-02	1.4E-02	262	2.52	2.52	5.00
		Water	7732-18-5	1.1E+00	1.8E-02	1.1E+00	1.5E-02	6.7E-01	9.5E-03	2.7E-02	1.2E-01	1.1E+00	1.6E-01	-	-	-	-
		Ethanol, 2,2'-oxybis-, reactio	68877-16-7	2.6E-06	4.3E-08	2.6E-06	3.6E-08	1.6E-06	2.3E-08	6.5E-08	2.9E-07	2.7E-06	3.9E-07	NL	1.00	1.00	4.38
		Fatty acid-Diethylenetriamin	68153-60-6	1.3E-05	2.2E-07	1.3E-05	1.8E-07	7.9E-06	1.1E-07	3.3E-07	1.4E-06	1.3E-05	1.9E-06	NL	1.00	1.00	4.38
HSCV66405A	R-60210	Water	7732-18-5	8.0E-01	1.3E-02	-	-	4.8E-01	6.9E-03	1.2E-02	5.3E-02	8.1E-01	7.3E-02	-	-	-	-
		Hexahydro-1,3,5-Tris(2-Hydr	1029713	7.0E-01	1.2E-02	-	-	4.2E-01	6.0E-03	1.1E-02	4.6E-02	7.1E-01	6.4E-02	NL	1.00	1.00	4.38
		Methanol	67-56-1	4.7E-01	7.8E-03	-	-	2.8E-01	4.1E-03	7.1E-03	3.1E-02	4.8E-01	4.3E-02	262	2.52	2.52	5.00
ACPC00010A	R18F5	Toluene	108-88-3	1.7E+00	1.1E-01	-	-	1.7E+00	5.6E-02	2.9E-02	1.3E-01	1.7E+00	2.9E-01	188	1.81	1.81	5.00
		Ethoxylated Nonylphenol	9016-45-9	8.5E-03	5.3E-04	-	-	8.6E-03	2.8E-04	1.5E-04	6.4E-04	8.7E-03	1.4E-03	NL	1.00	1.00	4.38
		EO - PO - 4-Tert-Butylphenol	68188-99-8	5.3E-04	3.3E-05	-	-	5.3E-04	1.7E-05	9.1E-06	4.0E-05	5.4E-04	9.0E-05	NL	1.00	1.00	4.38
		Heavy Aromatic Naphtha	64742-94-5	1.7E-02	1.1E-03	-	-	1.7E-02	5.6E-04	3.0E-04	1.3E-03	1.8E-02	2.9E-03	-	-	6.00	10.00
Product 10196	B13T8	Water	7732-18-5	3.2E-01	9.0E-03	-	-	3.3E-01	4.8E-03	4.2E-03	1.8E-02	3.3E-01	3.2E-02	-	-	-	-
		Methanol	67-56-1	9.9E-01	2.8E-02	-	-	1.0E+00	1.5E-02	1.3E-02	5.6E-02	1.0E+00	9.9E-02	262	2.52	2.52	5.00
		2-Mercaptoethanol	60-24-2	2.4E-02	6.7E-04	-	-	2.4E-02	3.6E-04	3.1E-04	1.4E-03	2.5E-02	2.4E-03	NL	1.00	1.00	4.38
		Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	9.7E-01	2.7E-02	-	-	9.8E-01	1.4E-02	1.3E-02	5.5E-02	9.9E-01	9.7E-02	NL	1.00	1.00	4.38
		Fatty acid-Diethylenetriamine, Acetate	68153-60-6	3.4E-04	9.4E-06	-	-	3.4E-04	5.0E-06	4.3E-06	1.9E-05	3.4E-04	3.3E-05	NL	1.00	1.00	4.38
		Ethanol, 2,2'-oxybis-, reaction products with ammonia	68877-16-7	6.8E-05	1.9E-06	-	-	6.8E-05	1.0E-06	8.7E-07	3.8E-06	6.9E-05	6.7E-06	NL	1.00	1.00	4.38
BIOC11139A	B13K7	Glutaraldehyde	111-30-8	1.7E-03	5.8E-05	-	-	1.0E-03	1.5E-05	4.3E-05	1.9E-04	1.7E-03	2.6E-04	0.2	0.002	0.002	0.01
		Water	7732-18-5	9.0E-01	3.1E-02	-	-	5.5E-01	7.8E-03	2.3E-02	1.0E-01	9.3E-01	1.4E-01	-	-	-	-
		Biocide ADBAC 50	Mixture	2.6E-01	8.9E-03	-	-	1.6E-01	2.2E-03	6.6E-03	2.9E-02	2.6E-01	4.0E-02	NL	1.00	1.00	4.38
CORR10211B	R-53538	Methanol	67-56-1	2.4E+00	8.0E-02	-	-	2.4E+00	4.2E-02	2.4E-02	1.1E-01	2.5E+00	2.3E-01	262	2.52	2.52	5.00
		Benzyl-(C12-C16 Alkyl)-Dime	68424-85-1	1.9E-01	6.3E-03	-	-	1.9E-01	3.3E-03	1.9E-03	8.4E-03	1.9E-01	1.8E-02	NL	1.00	1.00	4.38
		Water	7732-18-5	3.4E-01	1.1E-02	-	-	3.4E-01	5.9E-03	3.4E-03	1.5E-02	3.4E-01	3.2E-02	-	-	-	-
HSCV11619A	W15X1	Diethanolamine	111-42-2	9.5E-05	1.6E-06	-	-	5.7E-05	8.2E-07	2.5E-06	1.1E-05	9.7E-05	1.3E-05	2	0.02	0.02	0.08
		Monoethanolamine	141-43-5	3.2E-04	5.5E-06	-	-	1.9E-04	2.8E-06	8.4E-06	3.7E-05	3.3E-04	4.5E-05	NL	1.00	1.00	4.38
		Methanol	67-56-1	8.3E-02	1.4E-03	-	-	5.0E-02	7.2E-04	2.2E-03	9.6E-03	8.5E-02	1.2E-02	262	2.52	2.52	5.00
		Hexahydro-1,3,5-Tris(2-Hydr	4719-04-4	2.3E-04	4.0E-06	-	-	1.4E-04	2.0E-06	6.2E-06	2.7E-05	2.4E-04	3.3E-05	NL	1.00	1.00	4.38
		Water	7732-18-5	1.0E+00	1.8E-02	-	-	6.3E-01	9.1E-03	2.8E-02	1.2E-01	1.1E+00	1.5E-01	-	-	-	-

Speciated Chemical Emissions Evaluation

PBR 106.261 & 106.262 (E=L / K) Emissions Calculation Table

Distance to Offsite Receptor (ft) = **400**

"K" value = **104**

Product		Component	CAS No.	Storage Tank Emissions		Blending Emissions		Loading Emissions		Process Fugitive Emissions		Total Emissions		"L" Value	(E) Value E=L/K	Allowable Emissions	
ID	MIN	Name	No	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	Max lbs/hr	tons/yr	(mg/m3)	lbs/hr	lbs/hr	tons/yr
PARA01975A	H19B9	Water	7732-18-5	2.7E-01	1.3E-02	-	-	2.6E-01	6.8E-03	5.9E-03	2.6E-02	2.7E-01	4.5E-02	-	-	-	-
		Methanol	67-56-1	1.0E+00	5.0E-02	-	-	1.0E+00	2.7E-02	2.3E-02	1.0E-01	1.1E+00	1.8E-01	262	2.52	2.52	5.00
		Isopropanol	67-63-0	7.3E-03	3.5E-04	-	-	7.2E-03	1.9E-04	1.6E-04	7.1E-04	7.4E-03	1.2E-03	-	-	6.00	10.00
		Xylene	1330-20-7	1.1E-02	5.2E-04	-	-	1.1E-02	2.7E-04	2.4E-04	1.0E-03	1.1E-02	1.8E-03	434	4.17	4.17	5.00
		2-Mercaptoethanol	60-24-2	3.1E-04	1.5E-05	-	-	3.0E-04	7.9E-06	6.8E-06	3.0E-05	3.2E-04	5.3E-05	NL	1.00	1.00	4.38
		Benzene	71-43-2	1.5E-02	7.1E-04	-	-	1.5E-02	3.8E-04	3.3E-04	1.4E-03	1.5E-02	2.5E-03	3	0.029	0.03	0.13
		Benzyl-(C12-C18 Linear Alkyl)-Dimethyl-Ammonium Chloride	68391-01-5	1.1E-05	5.5E-07	-	-	1.1E-05	2.9E-07	2.5E-07	1.1E-06	1.2E-05	1.9E-06	NL	1.00	1.00	4.38
		Ethylbenzene	100-41-4	3.1E-03	1.5E-04	-	-	3.1E-03	8.1E-05	7.0E-05	3.0E-04	3.2E-03	5.4E-04	434	4.17	4.17	5.00
		Tall Oil Fatty Acids, Reaction Products	85586-18-1	9.4E-04	4.5E-05	-	-	9.2E-04	2.4E-05	2.1E-05	9.1E-05	9.6E-04	1.6E-04	NL	1.00	1.00	4.38
		Poly(Dimethylsiloxane)	63148-62-9	6.0E-03	2.9E-04	-	-	5.9E-03	1.5E-04	1.3E-04	5.8E-04	6.1E-03	1.0E-03	NL	1.00	1.00	4.38
		Ethoxylated Nonylphenol	9016-45-9	2.1E-04	9.9E-06	-	-	2.0E-04	5.3E-06	4.6E-06	2.0E-05	2.1E-04	3.5E-05	NL	1.00	1.00	4.38
BIOC16975	J16B1	Water	7732-18-5	1.0E+00	1.7E-02	-	-	6.1E-01	8.7E-03	2.3E-02	9.9E-02	1.0E+00	1.2E-01	-	-	-	-
		Reaction Product of Silica an	67762-90-7	1.6E-04	2.6E-06	-	-	9.6E-05	1.4E-06	3.6E-06	1.6E-05	1.6E-04	2.0E-05	NL	1.00	1.00	4.38
		Methanol	67-56-1	1.8E-01	2.9E-03	-	-	1.1E-01	1.5E-03	4.0E-03	1.8E-02	1.8E-01	2.2E-02	262	2.52	2.52	5.00
		Isopropanol	67-63-0	7.0E-02	1.2E-03	-	-	4.3E-02	6.1E-04	1.6E-03	7.0E-03	7.2E-02	8.8E-03	-	-	6.00	10.00
		n-Alkyl dimethyl benzyl amm	68391-01-5	1.0E-04	1.7E-06	-	-	6.2E-05	8.9E-07	2.3E-06	1.0E-05	1.0E-04	1.3E-05	NL	1.00	1.00	4.38
		Tall Oil Fatty Acids, Reaction	85586-18-1	9.1E-03	1.5E-04	-	-	5.5E-03	7.9E-05	2.1E-04	9.0E-04	9.3E-03	1.1E-03	NL	1.00	1.00	4.38
		Tetrakis(hydroxymethyl) pho	55566-30-8	4.0E-05	6.7E-07	-	-	2.4E-05	3.5E-07	9.1E-07	4.0E-06	4.1E-05	5.0E-06	NL	1.00	1.00	4.38
		Decamethyl cyclopentasiloxa	541-02-6	1.7E-04	2.8E-06	-	-	1.0E-04	1.5E-06	3.8E-06	1.7E-05	1.7E-04	2.1E-05	NL	1.00	1.00	4.38
		Cyclic dimethylsiloxane tetra	556-67-2	1.2E-03	2.0E-05	-	-	7.2E-04	1.0E-05	2.7E-05	1.2E-04	1.2E-03	1.5E-04	NL	1.00	1.00	4.38
		Poly(Dimethylsiloxane)	63148-62-9	5.8E-02	9.6E-04	-	-	3.5E-02	5.0E-04	1.3E-03	5.8E-03	5.9E-02	7.2E-03	NL	1.00	1.00	4.38
FOAM21408A	A17B8	Water	7732-18-5	-	-	1.1E+00	2.2E-03	6.8E-01	1.4E-03	-	-	1.1E+00	3.6E-03	-	-	-	-
		1-PROPANAMINIUM, 3-AMINO-N-(CARBOXYMETHYL)-N,N-DIMETHYL-, N-COCO ACYL DERIVS., HYDROXIDE, INNER SALTS	61789-40-0	-	-	4.3E-02	8.5E-05	2.6E-02	5.4E-05	-	-	4.3E-02	1.4E-04	NL	1.00	1.00	4.38
FOAM21006A	T13K4	Water	7732-18-5	-	-	1.1E+00	2.2E-03	6.8E-01	1.4E-03	-	-	1.1E+00	3.6E-03	-	-	-	-
		1-PROPANAMINIUM, 3-AMINO-N-(CARBOXYMETHYL)-N,N-DIMETHYL-, N-COCO ACYL DERIVS., HYDROXIDE, INNER SALTS	61789-40-0	-	-	9.1E-02	1.8E-04	5.5E-02	1.1E-04	-	-	9.1E-02	2.9E-04	NL	1.00	1.00	4.38
		Glycerin	56-81-5	-	-	1.7E-06	3.3E-09	1.0E-06	2.1E-09	-	-	1.7E-06	5.5E-09	10	0.10	0.10	0.42
		FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH POLYETHYLENEPOLYAMINES, ACETATES	64754-93-4	-	-	3.3E-04	6.5E-07	2.0E-04	4.1E-07	-	-	3.3E-04	1.1E-06	NL	1.00	1.00	4.38

Speciated Chemical Emissions Evaluation

PBR 106.261 & 106.262 (E=L / K) Emissions Calculation Table

Distance to Offsite Receptor (ft) =	**400**
"K" value =	**104**

Product		Component	CAS No.	Storage Tank Emissions		Blending Emissions		Loading Emissions		Process Fugitive Emissions		Total Emissions		"L" Value	(E) Value E=L/K	Allowable Emissions	
ID	MIN	Name	No	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	Max lbs/hr	tons/yr	(mg/m3)	lbs/hr	lbs/hr	tons/yr
FOAM21003A	T13R2	Fatty Amide. Sodium Salt	Proprietary	-	-	9.9E-01	1.6E-05	4.9E-03	1.0E-05	-	-	9.9E-01	2.6E-05	NL	1.00	1.00	4.38
		Water	7732-18-5	-	-	9.9E-01	2.2E-03	6.7E-01	1.4E-03	-	-	9.9E-01	3.6E-03	-	-	-	-
FOAM21002A	T13R3	Fatty Amide. Sodium Salt	Proprietary	-	-	3.2E-02	6.2E-05	1.9E-02	3.9E-05	-	-	3.2E-02	1.0E-04	NL	1.00	1.00	4.38
		Glycerin	56-81-5	-	-	2.6E-05	5.2E-08	1.6E-05	3.3E-08	-	-	2.6E-05	8.5E-08	10	0.10	0.10	0.42
		Water	7732-18-5	-	-	1.1E+00	2.1E-03	6.4E-01	1.3E-03	-	-	1.1E+00	3.4E-03	-	-	-	-
FOAM21595FB	S13T8	2-Butoxyethanol	111-76-2	-	-	1.3E-03	2.5E-06	7.7E-04	1.6E-06	-	-	1.3E-03	4.1E-06	121	1.16	1.16	5.00
		Glycerin	56-81-5	-	-	2.9E-06	5.7E-09	1.7E-06	3.6E-09	-	-	2.9E-06	9.2E-09	10	0.10	0.10	0.42
		N-(3-Coco Amidopropyl)-N,N-Dimethyl-Glycine Betaine	61789-40-0	-	-	1.3E-01	2.6E-04	8.1E-02	1.7E-04	-	-	1.3E-01	4.3E-04	NL	1.00	1.00	4.38
		Fumaric acid, polymer with Sodium allylsulfonate	68715-83-3	-	-	3.2E-06	6.4E-09	2.0E-06	4.0E-09	-	-	3.2E-06	1.0E-08	NL	1.00	1.00	4.38
		Water	7732-18-5	-	-	1.1E+00	2.2E-03	6.7E-01	1.4E-03	-	-	1.1E+00	3.6E-03	-	-	-	-
FOAM21593FB	S13U1	Water	7732-18-5	-	-	1.1E+00	2.2E-03	6.8E-01	1.4E-03	-	-	1.1E+00	3.6E-03	-	-	-	-
		Potassium Chloride	7447-40-7	-	-	2.2E-02	4.4E-05	1.4E-02	2.8E-05	-	-	2.2E-02	7.2E-05	NL	1.00	1.00	4.38

Notes:
Chemical Max vapor weight obtained using Raoults Law
PBR Section from 30 TAC Chapter 106 Rule 261 & 262
TLVs obtained from Table 262 or the 1997 ACGIH TLVs
NL= Not Listed
N/A= Not Applicable
1 lb/hr default value if TLV not established. 6 lbs/hr default if calculated "E" is greater than 6 lb/hr

PBR 261 / 262 Chemical Emissions Limit Summary Table

						Distance (ft) =	400	K =	104
Chemical Name	CAS No.	Section Claimed	L value	TLV Source	Pollutant	Emissions Limit, E=L/K	Emissions Limit	Actual Emissions	Actual Emissions
Name	No.	30 TAC 106.	mg/m3	name	Type	lbs/hr	tpy	lbs/hr	tpy
1-PROPANAMINIUM, 3-AMINO-N-(CARBOXYMETHYL)-N,N-DIMETHYL-, N-COCO ACYL DERIVS., HYDROXIDE, INNER SALTS	61789-40-0	261 (a)(3)	NL	N/A	VOC	1.00	4.38	1.34E-01	8.62E-04
1-Propene, hydroformylation products, high boiling	68551-11-1	261 (a)(3)	NL	N/A	VOC	1.00	4.38	2.94E-02	5.72E-03
2-Butoxyethanol	111-76-2	262(a)(2)	121	1997 ACGIH	VOC	1.16	5.00	2.90E-03	4.42E-04
2-Mercaptoethanol	60-24-2	261 (a)(3)	NL	N/A	VOC	1.00	4.38	2.46E-02	3.12E-03
Acetic Acid	64-19-7	262(a)(2)	25	1997 ACGIH	VOC	0.24	1.05	1.74E-02	2.62E-03
Alkylpyridine	68391-11-7	261 (a)(3)	NL	N/A	VOC	1.00	4.38	3.66E-03	7.11E-04
Benzene	71-43-2	262(a)(2)	3	TABLE 262	HAP	0.03	0.13	1.52E-02	2.53E-03
Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	261 (a)(3)	NL	N/A	VOC	1.00	4.38	9.95E-01	1.16E-01
Benzyl-(C12-C18 Linear Alkyl)-Dimethyl-Ammonium Chloride	68391-01-5	261 (a)(3)	NL	N/A	VOC	1.00	4.38	1.05E-04	1.47E-05
Biocide ADBAC 50	Mixture	261 (a)(3)	NL	N/A	VOC	1.00	4.38	2.65E-01	4.01E-02
C18 Unsaturated Fatty Acid Dimer	61788-89-4	261 (a)(3)	NL	N/A	VOC	1.00	4.38	1.42E-02	2.76E-03
Cyclic dimethylsiloxane tetramer	556-67-2	261 (a)(3)	NL	N/A	VOC	1.00	4.38	1.22E-03	1.48E-04
Decamethyl cyclopentasiloxane	541-02-6	261 (a)(3)	NL	N/A	VOC	1.00	4.38	1.71E-04	2.08E-05
Diethanolamine	111-42-2	262(a)(2)	2	1997 ACGIH	VOC	0.02	0.08	9.72E-05	1.34E-05
EO - PO - 4-Tert-Butylphenol - 4-Nonylphenol - HCHO Resin	68188-99-8	261 (a)(3)	NL	N/A	VOC	1.00	4.38	5.43E-04	9.03E-05
Ethanol, 2,2'-oxybis-, reaction products with ammonia	68877-16-7	261 (a)(3)	NL	N/A	VOC	1.00	4.38	6.91E-05	8.02E-06
Ethanol, 2-Mercapto-	60-24-2	261 (a)(3)	NL	N/A	VOC	1.00	4.38	2.46E-02	3.12E-03
Ethoxylated Nonylphenol	9016-45-9	261 (a)(3)	NL	N/A	VOC	1.00	4.38	8.71E-03	1.48E-03
Ethoxylated tallow alkylamines, acetate salt	68551-33-7	261 (a)(3)	NL	N/A	VOC	1.00	4.38	1.74E-05	2.62E-06
Ethylbenzene	100-41-4	262(a)(2)	434	1997 ACGIH	VOC	4.17	5.00	3.22E-03	5.37E-04
Fatty acid-Diethylenetriamine, Acetate	68153-60-6	261 (a)(3)	NL	N/A	VOC	1.00	4.38	3.43E-04	3.99E-05

PBR 261 / 262 Chemical Emissions Limit Summary Table

						Distance (ft) =	400	K =	104
Chemical Name	CAS No.	Section Claimed	L value	TLV Source	Pollutant	Emissions Limit, E=L/K	Emissions Limit	Actual Emissions	Actual Emissions
Name	No.	30 TAC 106.	mg/m3	name	Type	lbs/hr	tpy	lbs/hr	tpy
Fatty Acids, Tall-oil, Reaction Products With Polyethylenepolyamines, Acetates	64754-93-4	261 (a)(3)	NL	N/A	VOC	1.00	4.38	3.29E-04	4.53E-06
Fatty Amide. Sodium Salt	Proprietary	261 (a)(3)	NL	N/A	VOC	1.00	4.38	9.92E-01	1.28E-04
Fumaric acid, polymer with Sodium allylsulfonate	68715-83-3	261 (a)(3)	NL	N/A	VOC	1.00	4.38	3.24E-06	1.04E-08
Glutaraldehyde	111-30-8	262(a)(2)	0.2	1997 ACGIH	VOC	0.00	0.01	1.73E-03	2.62E-04
Glycerin	56-81-5	262(a)(2)	10	1997 ACGIH	VOC	0.10	0.42	2.65E-05	9.94E-08
Heavy Aromatic Naphtha	64742-94-5	261 (a)(2)	-	N/A	VOC	6.00	10.00	1.76E-02	2.92E-03
Hexahydro-1,3,5-Tris(2-Hydroxyethyl)-S-T	4719-04-4	261 (a)(3)	NL	N/A	VOC	1.00	4.38	2.41E-04	3.32E-05
Hexahydro-1,3,5-Tris(2-Hydroxyethyl)-S-Triazine	1029713	261 (a)(3)	NL	N/A	VOC	1.00	4.38	7.07E-01	6.38E-02
Isopropanol	67-63-0	261 (a)(2)	-	N/A	VOC	6.00	10.00	7.21E-02	1.00E-02
Methanol	67-56-1	262(a)(2)	262	1997 ACGIH	HAP	2.52	5.00	2.46E+00	1.08E+00
Monoethanolamine	141-43-5	261 (a)(3)	NL	N/A	VOC	1.00	4.38	3.28E-04	4.51E-05
N-(3-Coco Amidopropyl)-N,N-Dimethyl-Glycine Betaine	61789-40-0	261 (a)(3)	NL	N/A	VOC	1.00	4.38	1.34E-01	8.62E-04
n-Alkyl dimethyl benzyl ammonium chlorides	68391-01-5	261 (a)(3)	NL	N/A	VOC	1.00	4.38	1.05E-04	1.47E-05
Poly(Dimethylsiloxane)	63148-62-9	261 (a)(3)	NL	N/A	VOC	1.00	4.38	5.93E-02	8.24E-03
Poly(oxy-1,2-ethanediyl), α-(nonylphenyl)-ω-hydroxy-, branched, phosphates	68412-53-3	261 (a)(3)	NL	N/A	VOC	1.00	4.38	8.93E-05	1.35E-05
Potassium Chloride	7447-40-7	261 (a)(3)	NL	N/A	VOC	1.00	4.38	2.25E-02	7.22E-05
Pyridine, Alkyl Derivs., Acetates	168612-09-7	261 (a)(3)	NL	N/A	VOC	1.00	4.38	2.05E-05	3.09E-06
Reaction product of diethylenetriamine and tall-oil (fatty)	61790-69-0	261 (a)(3)	NL	N/A	VOC	1.00	4.38	3.86E-03	7.51E-04
Reaction Product of Silica and Poly(Dimethylsiloxane)	67762-90-7	261 (a)(3)	NL	N/A	VOC	1.00	4.38	1.62E-04	1.98E-05
Tall Oil Fatty Acid	61790-12-3	261 (a)(3)	NL	N/A	VOC	1.00	4.38	5.74E-06	1.12E-06
Tall Oil Fatty Acids, Reaction Products	85586-18-1	261 (a)(3)	NL	N/A	VOC	1.00	4.38	9.28E-03	1.29E-03

PBR 261 / 262 Chemical Emissions Limit Summary Table

						Distance (ft) =	400	K =	104
Chemical Name	CAS No.	Section Claimed	L value	TLV Source	Pollutant	Emissions Limit, E=L/K	Emissions Limit	Actual Emissions	Actual Emissions
Name	No.	30 TAC 106.	mg/m3	name	Type	lbs/hr	tpy	lbs/hr	tpy
Tetrakis(hydroxymethyl) phosphonium sulfate	55566-30-8	261 (a)(3)	NL	N/A	VOC	1.00	4.38	4.13E-05	5.02E-06
Toluene	108-88-3	262(a)(2)	188	1997 ACGIH	HAP	1.81	5.00	1.74E+00	2.90E-01
Xylene	1330-20-7	262(a)(2)	434	1997 ACGIH	HAP	4.17	5.00	1.10E-02	1.83E-03
Water	7732-18-5	-	-	N/A		-	-	1.13E+00	1.13E+00

Total HAP TPY	**1.38**
Total VOC TPY	**0.27**
Total	**1.64**

Notes:

PBR Section from 30 TAC Chapter 106 Rule 261 & 262

TLVs obtained from Table 262 or the 1997 ACGIH TLVs

NL= Not Listed

N/A= Not Applicable

1 lb/hr default value if TLV not established. 6 lbs/hr default if calculated "E" is greater than 6 lb/hr

Storage Tank Emissions

Emissions from storage tanks has been determined using the Environmental Protection Agency (EPA) AP-42 Chapter 7, section 7.1.3.1 (Routine Losses from Fixed Roof Tanks), Amended October 2024.

Annual emissions are equal to the sum of the working losses plus the standing losses. Working losses occur as vapors in the vessel are displaced to the atmosphere by the liquid being filled into the vessel.

$$\text{Annual Emissions (TPY)} = (L_W + L_S) / (2{,}000 \text{ lbs/ton})$$

Where,

L_W = Working Losses, lbs/yr
L_S = Standing Losses, lbs/yr

Hourly Emissions Have been calculated using the following equation:

(ER = mw * Pva * FRmax / R * Tmax)*

Where,

ER = lbs/hr

MW = Average molar mass of the liquid (lb/lbmol)

PVA = Vapor pressure of the tank contents at 95 °F

FRMAX = Maximum filling rate in gal/hr

R = Ideal gas constant $\left(80.274 \frac{psia \cdot gal}{lbmol \cdot °R} \right)$

Reference: Remote Document Server (RDS) number, 466146
*ER= max hourly emission rate (lbs/hr), mw = molecular weight (lb/lb-mol), Pva = vapor pressure at 95 F (psia), Frmax = maximum filling rate (gal/hr), R = 80.274 (psia*gal)/lb-mol*R), Tmax = 554.67 R*

Storage Tank Emissions (EPN:TANKS)

Basis: **EPA AP-42 Chapter 7 (October 2024)**

		Units	Value	
total loss = Ls + Lw	LT	tons/yr	Calculated	
standing loss = 365 Vv Wv Ke Ks	Ls	lb/yr	Calculated	
working loss = 0.001 Mv Pv Q/42 Kn Kp	Lw	lb/yr	Calculated	
Breather vent pressure range	ΔPb	psi	0.06	0.03 - (-.03)
Daily Vapor pressure range	ΔPv	psi	0.403	Pmax - Pavg
Solar insolation factor	I	Btu/ft2-day	1477	San Antonio, TX
Atmospheric Pressure	P_A	psia	1427	San Antonio, TX
Annual Average Temperature	T	°F	70	San Antonio, TX
Daily Maximum Ambient Temperature	T_{AX}	°F	79.8	San Antonio, TX
Daily Minimum Ambient Temperature	T_{AN}	°F	59.5	San Antonio, TX
Daily average ambient temperature range	ΔTa	°F	20.3	
Product factor	Kp	-	1	

Vertical Fixed Roof Tanks Venting to Atmosphere:

Tank Number (EPN)	Liquid Stored	PVA	PVM	Mv	D	Hs	Tank Capacity		Roof Type (Cone/Dome/ Horizontal)	Tank Color
		Average Vapor Pressure (psia)	Maximum Vapor Pressure (psia)	Vapor Molecular Weight	Tank Diameter (ft)	Tank Shell Height / Length (ft)	CuFt	Gal		
BT1	CORR10488A	0.31	0.63	18.67	8	16	804	6,014	Cone	Aluminum (unpainted)
BT2	CORR21334A	0.30	0.62	18.28	8	16	804	6,014	Cone	Aluminum (unpainted)
TT23	BIOC11139A	0.30	0.61	19.07	8	21	1,072	8,018	Cone	Aluminum (unpainted)
TT24	BIOC11139A	0.30	0.61	19.07	8	21	1,072	8,018	Cone	Aluminum (unpainted)
T3	CORR10488A	0.31	0.63	18.67	8	16	804	6,014	Cone	Aluminum (unpainted)
T4	CORR12525B	1.60	2.93	32.70	8	16	804	6,014	Cone	Aluminum (unpainted)
T5	CORR16290A	0.31	0.64	18.68	8	16	804	6,014	Cone	Aluminum (unpainted)
T6	HSCV66405A	0.31	0.62	31.58	8	16	804	6,014	Cone	Aluminum (unpainted)
T7	BIOC16975	0.31	0.63	20.85	8	16	804	6,014	Cone	Aluminum (unpainted)
T8	ACPC00010A	0.35	0.70	92.49	8	16	804	6,014	Cone	Aluminum (unpainted)
T9	Product 10196	0.44	0.88	43.91	8	16	804	6,014	Cone	Aluminum (unpainted)
T10	PARA01975A	0.69	1.34	28.26	8	16	804	6,014	Cone	Aluminum (unpainted)
T24	CORR10211B	0.93	1.77	31.02	8	16	804	6,014	Cone	White
T28	HSCV11619A	0.30	0.61	18.61	8	16	804	6,014	Cone	White

0

Storage Tank Emission Calculations

Tank Number (EPN)	Material Stored	α	ΔTv	Hvo	Vv	Wv	Ke	Ks	Q	Kn	Ls	Lw	LT	Water Liq Wt %	Total VOC Emissions (ton/yr)
		Paint Solar Absorb Factor	Daily Vapor Temp. Range °F	Vapor Space Outage (ft)	Vapor Space Volume (ft3)	Vapor Density (lb/ft3)	Vapor Space Expan. Factor	Vented Vapor Sat. Factor	Annual Thruput (Bbls/yr)	Turnover Factor	Standing Loss (lb/yr)	Working Loss (lb/yr)	Total Losses including Water (ton/yr)		
BT1	CORR10488A	0.12	19.58	8.08	406.3	0.00102	0.0371	0.88	5,952	1.00	4.951	34.0	0.0195	92.3%	1.5E-03
BT2	CORR21334A	0.12	19.58	8.08	406.3	0.00097	0.0371	0.89	5,952	1.00	4.741	32.5	0.0186	98.0%	3.8E-04
TT23	BIOC11139A	0.12	19.58	10.75	540.4	0.00101	0.0371	0.85	5,952	1.00	6.288	33.6	0.0199	77.7%	4.5E-03
TT24	BIOC11139A	0.12	19.58	10.75	540.4	0.00101	0.0371	0.85	5,952	1.00	6.288	33.6	0.0199	77.7%	4.5E-03
T3	CORR10488A	0.12	19.58	8.08	406.3	0.00102	0.0371	0.88	5,952	1.00	4.951	34.0	0.0195	92.3%	1.5E-03
T4	CORR12525B	0.12	19.58	8.08	406.3	0.00919	0.0371	0.59	5,952	1.00	30.035	307.0	0.1685	0.0%	1.7E-01
T5	CORR16290A	0.12	19.58	8.08	406.3	0.00104	0.0371	0.88	5,952	1.00	5.021	34.6	0.0198	91.9%	1.6E-03
T6	HSCV66405A	0.12	19.58	8.08	406.3	0.00170	0.0371	0.88	5,952	1.00	8.274	56.8	0.0325	0.0%	3.3E-02
T7	BIOC16975	0.12	19.58	8.08	406.3	0.00114	0.0371	0.88	5,952	1.00	5.531	38.0	0.0218	76.0%	5.2E-03
T8	ACPC00010A	0.12	19.58	8.08	406.3	0.00564	0.0371	0.87	5,952	1.00	27.035	188.5	0.1078	0.0%	1.1E-01
T9	Product 10196	0.12	19.58	8.08	406.3	0.00341	0.0371	0.84	5,952	1.00	15.784	113.9	0.0649	13.9%	5.6E-02
T10	PARA01975A	0.12	19.58	8.08	406.3	0.00345	0.0371	0.77	5,952	1.00	14.636	115.2	0.0649	19.7%	5.2E-02
T24	CORR10211B	0.25	24.96	8.08	406.3	0.00510	0.0471	0.71	5,952	1.00	25.422	170.4	0.0979	11.5%	8.7E-02
T28	HSCV11619A	0.25	24.96	8.08	406.3	0.00098	0.0471	0.89	5,952	1.00	6.048	32.6	0.0193	92.6%	1.4E-03
												Total	0.6950		0.5240

Emissions are caculated using methodology & Equations from AP-42 Section 7.1 (dated June 2020)

Storage Tank Calculations Methodology and Formulas:

Total routine losses from fixed roof tanks are equal to the sum of the standing loss and working loss

$$L_T = L_S + L_W$$

LT = total routine losses, lb/yr
LS = standing losses, lb/yr
LW = working losses, lb/yr

Standing Loss Equation

$$L_S = 365\ V_V\ W_V\ K_E\ K_S$$

where:
LS = standing loss, lb/yr
VV = vapor space volume, ft3, see Equation 1-3
WV = stock vapor density, lb/ft3
KE = vapor space expansion factor, per day
KS = vented vapor saturation factor, dimensionless
365 = constant, the number of daily events in a year, (days/year)

Working Loss Equation

$$L_W = V_Q\ K_N\ K_P\ W_V\ K_B$$

where:
LW = working loss, lb/yr
VQ = net working loss throughput, ft3/yr (5.614Q)

1	KN = working loss turnover (saturation) factor, dimensionless. For turnovers >36, KN=(180+N)6N. For turnovers <36, KN=1.	
1	KP = working loss product factor, dimensionless	(for crude oils, KP = 0.75; adjustment of KP may be appropriate in the case of splash loading into a tank. For all other organic liquids KP=1)
	WV = stock vapor density, lb/ft3	
1	KB = vent setting correction factor, dimensionless	(1 for vent settings of +/- 0.03 psig)

Storage Tanks Max Hourly Emissions (EPN:TANKS)

Tank Number (EPN)	Material Stored	Mol. Wt.	Vapor Pressure Max @95F	Max Fill Rate (Frmax)	Max Hourly Emission Rate (Including Water)	Water Liq Wt	Max Hourly VOC Emissions
ID	ID	lb/lbmol	psia	gal/hr	lbs/hr	%	lbs/hr
BT1	CORR10488A	18.7	0.63	4,500	1.18	92.3%	0.09
BT2	CORR21334A	18.3	0.62	4,500	1.13	98.0%	0.02
TT23	BIOC11139A	19.1	0.61	4,500	1.16	77.7%	0.26
TT24	BIOC11139A	19.1	0.61	4,500	1.16	77.7%	0.26
T3	CORR10488A	18.7	0.63	4,500	1.18	92.3%	0.09
T4	CORR12525B	32.7	2.93	1,100	2.35	0.0%	2.35
T5	CORR16290A	18.7	0.64	4,500	1.19	91.9%	0.10
T6	HSCV66405A	31.6	0.62	4,500	1.97	0.0%	1.97
T7	BIOC16975	20.9	0.63	4,500	1.32	76.0%	0.32
T8	ACPC00010A	92.5	0.70	1,200	1.73	0.0%	1.73
T9	Product 10196	43.9	0.88	2,700	2.31	13.9%	1.99
T10	PARA01975A	28.3	1.34	1,600	1.35	19.7%	1.08
T24	CORR10211B	31.0	1.77	2,400	2.94	11.5%	2.60
T25	DI H2O	-	-	-	-	-	-
T26	DI H2O	-	-	-	-	-	-
T28	HSCV11619A	18.6	0.61	4,500	1.13	92.6%	0.08

Max lbs/hr 2.60

(ER = mw * Pva * FRmax / R * Tmax)*

Where,
ER = lbs/hr
MW = Average molar mass of the liquid (lb/lbmol)
PVA = Vapor pressure of the tank contents at 95 °F
FRMAX = Maximum filling rate in gal/hr
R = Ideal gas constant $\left(80.274 \frac{psia \cdot gal}{lbmol \cdot °R}\right)$
TMAX = 554.67 °R (i.e., 95 °F).

Blending Emissions

Emissions will occur as a result of vapor displacement during mixing of liquid in the storage tank. After transfers have been completed, the liquid is mixed using pumped circulation for approximately 30-60 minutes.

The ideal gas law equation and vapor/liquid equilibrium relationship is used to calculate resulting emissions. It is assumed that the gas is saturated with vapors of the liquid over which it is flowing. Therefore, the displaced gas will fit the conditions of an ideal gas.

Methodology:
"EPA Guidance document: Control of Volatile Organic Compound Emissions from Batch Processes (dated February 1994)" Ideal Gas Law and vapor/liquid equilibrium relationships

1) Emission rate of VOCs in exit gas:

$$ER = \frac{(Yi) * (Vr) * (PT) * (M)}{(R) * (T)} \quad \text{(Eq. 3-7)}$$

where,

ER: mass emission rate
Yi: mole fraction in vapor phase (use Eq. 3-9)
Vr: volumetric gas displacement rate
PT: pressure of the vessel vapor space
M: molecular weight of the VOC
R: ideal gas law constant
T: temperature of the vessel vapor space

2) General equation for Raoult's Law

$$Yi = \frac{Pi}{PT} \quad \frac{Xi * Pi^*}{PT} \text{ (Eq. 3-9)}$$

where,

Yi: mole fraction of i in the vapor
Pi: partial pressure of component i
Xi: mole fraction of component i in the liquid
Pi*: vapor pressure of component i at temperature T
PT: the total pressure in the vessel vapor space

3) Substitute Eq. 3-9 into Eq. 3-7 to solve for the hourly/annual emission rates

$$ER = \frac{(MxPi) * (Vr)}{(R) * (T)}$$

ChampionX Dilley 508 Facility

Blending/Mixing Emissions Calculations (EPN:BLEND)

Ideal Gas Law and vapor/liquid equilibrium relationships

Ideal Gas Law Constant (R): 1.3144 $ft^3 \cdot atm/lb\text{-}mol \cdot K$

Temperature (T): 311 K

Conversion Factors: 1 ft^3 = 7.48 gallons

1 atm = 14.70 psia

$$E_R = \frac{(MxP_i) * (V_{r)}}{(R) * (T)}$$

									Emissions (ER)	
Liquid ID	VP @ 70 F (psia)	VP @ 95 F (psia)	Mol Wt (lb/lb-mol)	Max Filling Rate (gals/hr)	Annual (gal/yr)	Max lbs/hr including water vapor	tons/yr including water vapor	Water Wt %	VOC Max lbs/hr	VOC tons/yr
CORR10488A	0.31	0.63	18.67	4,500	250,000	1.18	1.6E-02	92.3%	9.1E-02	1.2E-03
CORR21334A	0.30	0.62	18.28	4,500	250,000	1.13	1.5E-02	98.0%	2.3E-02	3.1E-04
CORR16290A	0.31	0.64	18.68	4,500	250,000	1.20	1.6E-02	91.9%	9.6E-02	1.3E-03
FOAM21408A	0.31	0.62	18.67	4,500	36,000	1.16	2.3E-03	96.3%	4.3E-02	8.5E-05
FOAM21006A	0.31	0.62	19.41	4,500	36,000	1.21	2.4E-03	92.4%	9.2E-02	1.8E-04
FOAM21003A	0.30	0.61	18.14	4,000	36,000	0.99	2.2E-03	99.3%	7.2E-03	1.6E-05
FOAM21002A	0.29	0.59	18.50	4,500	36,000	1.08	2.1E-03	97.1%	3.2E-02	6.2E-05
FOAM21595FB	0.31	0.62	20.06	4,500	36,000	1.25	2.5E-03	89.2%	1.4E-01	2.7E-04
FOAM21593FB	0.31	0.62	18.29	4,500	36,000	1.14	2.2E-03	98.0%	2.2E-02	4.4E-05
							Max Lbs/Hr		**0.135**	
							Total tons/yr			**0.004**

Blending Emissions Methodology and sample calcualtions

After liquid transfers are completed, emissions will occur as a res **(Eq. 3-7)**
The gas is saturated with the vapors of the liquid over which it is flowing (VOC content cannot be greater than saturation).
The displaced gas will fit the conditions of an ideal gas, therefore the ideal gas law is used.

Loading Emissions

Volatile Organic Compound (VOC) emissions occur as a result of the displacement of vapors during the loading process. Filling / loading operations include:

Maximum hourly emissions are based on the maximum filling rate (gallons per hour). Vapor loss will be minimized by utilizing submerged or bottom-filling for all loading operations.

Loading Losses Emission Factor Equation

The emission factors for loading products are based on AP-42, Volume I, Fifth Edition -- January 1995, Section 5.2, Transportation and Marketing of Petroleum Liquids. The emissions from loading operations use equation 5.2.2.1.1(1) as follows:

$$LL = 12.46 (SPM/T)$$

Where

LL = loading loss, (lb/1000 gallons) of liquid loaded
S = saturation factor
P = true vapor pressure of liquid (psia)
M = molecular weight of vapors (lb/lb-mole)
T = temperature of bulk liquids stored (ºR)

Annual and Maximum Hourly Emission Rate Equations

Annual Emissions (tons/yr) = (LL) * (Annual Throughput) * (1 ton/2000 lbs)
Max Hourly Emissions (lbs/hr) = (LL) * (Maximum Hourly Loading Rate

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Loading Emission Calculations (LOAD)

Basis:

Saturation Factor (S):	0.6	clean dedicated service
Avg Temperature:	70	°F
Max Temperature:	95	°F

Product	Vapor Pressure		Molecular Weight	Loading Loss (LL)		Max Filling Rate	Loading Throughput	Emissions including water vapor		Water Wt	VOC Emissions	
ID	psia @ 70F	psia @95F	lb/lb-mol	Avg lb/Mgal	Max lb/Mgal	gal/hr	gal/yr	Max lbs/hr	tons/yr	%	Max lbs/hr	tons/yr
CORR10488A	0.31	0.63	18.7	0.082	0.158	4,500	500,000	0.7127	0.0204	92.3%	0.0549	0.0016
CORR21334A	0.30	0.62	18.3	0.078	0.151	4,500	250,000	0.6816	0.0097	98.0%	0.0137	0.0002
CORR12525B	1.60	2.93	32.7	0.737	1.292	1,900	500,000	2.4547	0.1842	0.0%	2.4547	0.1842
CORR16290A	0.31	0.64	18.7	0.083	0.161	4,500	250,000	0.7235	0.0104	91.9%	0.0583	0.0008
ACPC00010A	0.35	0.70	92.5	0.452	0.871	2,000	250,000	1.7418	0.0565	0.0%	1.7418	0.0565
Product 10196	0.44	0.88	43.9	0.273	0.519	4,500	250,000	2.3341	0.0342	13.9%	2.0086	0.0294
BIOC11139A	0.30	0.61	19.1	0.081	0.157	4,500	250,000	0.7050	0.0101	77.7%	0.1575	0.0023
CORR10211B	0.93	1.77	31.0	0.409	0.741	4,000	250,000	2.9636	0.0511	11.5%	2.6242	0.0452
HSCV11619A	0.30	0.61	18.6	0.078	0.152	4,500	250,000	0.6851	0.0098	92.6%	0.0508	0.0007
PARA01975A	0.69	1.34	28.3	0.276	0.510	2,600	250,000	1.3269	0.0346	19.7%	1.0656	0.0278
BIOC16975	0.31	0.63	20.9	0.091	0.177	4,500	250,000	0.7963	1.1E-02	76.0%	1.9E-01	2.7E-03
HSCV66405A	0.31	0.62	31.6	0.136	0.265	4,500	250,000	1.1903	1.7E-02	0.0%	1.2E+00	1.7E-02
FOAM21408A	0.31	0.62	18.7	0.081	0.157	4,500	36,000	0.7044	1.5E-03	96.3%	2.6E-02	5.4E-05
FOAM21006A	0.31	0.62	19.4	0.084	0.163	4,500	36,000	0.7319	1.5E-03	92.4%	5.5E-02	1.1E-04
FOAM21003A	0.30	0.61	18.1	0.077	0.150	4,500	36,000	0.6757	1.4E-03	99.3%	4.9E-03	1.0E-05
FOAM21002A	0.29	0.59	18.5	0.075	0.146	4,500	36,000	0.6563	1.3E-03	97.1%	1.9E-02	3.9E-05
FOAM21595FB	0.31	0.62	20.1	0.086	0.168	4,500	36,000	0.7541	1.6E-03	89.2%	8.2E-02	1.7E-04
FOAM21593FB	0.31	0.62	18.3	0.079	0.153	4,500	36,000	0.6892	1.4E-03	98.0%	1.4E-02	2.8E-05
Max Lbs/hr								2.9636			**2.6242**	
Total Tons/yr									0.4580			**0.3689**

Sample Loading Calculation of VOC Emissions for product CORR10488A

Saturation Factor (S):	0.6	
Liquid Molecular Weight:	18.7	lb/lb-mol
Liquid Vapor Pressure at 70 F:	0.31	psia
Liquid Vapor Pressure at 95 F:	0.63	psia
Annual Throughput:	500,000	gal/yr
Max Hourly Load Rate:	4,500	gal/hr

Avg Loading Loss (LL avg) = 12.46 * 0.6 * 18.7 lb/lb-mol * 0.310 psia / 530 R = 0.082 lbs/Mgal

Annual Emissions (TPY) = (0.082 lbs/1,000 gal) * (250,000 gal/yr) * (1 ton/2,000 lbs)

Annual Emissions including water vapor = 0.0204 tpy

Annual VOC Emissions= 0.0102 * (1 - 92.3 % water wt) = **0.0016** **tpy**

Max Loading Loss (LL max) = 12.46 * 0.6 * 18.7 lbs/lb-mol * 0.63 psia / 555 R = 0.158 lbs/Mgal

Hourly Emissions (lbs/hr) = (0.158 lbs/1,000 gal) * 4,500 gal/hr

Max Hourly Emissions including water vapor = 0.713 lbs/hr

Max Hourly VOC/HAP Emissions = 0.976 * (1 - 92.3 % water wt) = **0.0549** **lbs/hr**

Component Fugitive Emissions

Fugitive emission losses are based on the facilities' equipment and piping component count estimates. The emission factors used to calculate emissions were taken from the TCEQ Technical Guidance for Equipment Leak Fugitives, October 2000. The calculations use the SOCMI without ethylene emission factors to estimate uncontrolled fugitive emissions.

The annual emissions are based on each component being in service for 8760 hours per year. The maximum hourly emissions are based on each component in service for one hour.

Annual Emissions (tons/yr) = NC * EF * (1-CE) * 8760 / 2000

Max Hourly Emissions (lb/hr) = NC * Emission Factor * (1-CE)

where,

NC = number of like component counts (components)

EF = SOCMI w/out ethylene Factors, (lb/hr/component)

CE = Control Efficiency based on LDAR program,(%)

Piping Fugitive Emissions (EPN:FUG)

Estimated Fugitive Emissi Basis: Average SOCMI w/o C2 Emission Factors
Annual Hours of Service: 8,760

Component Type	Item Count	EPA Fugitive Factors[1] (lb/hr/comp.)	Max Emission Rate (lbs/hr)	Control Efficiency (%)	Total Emissions (tons/yr)
Valves					
Gas/Vapor	0	0.0089	0.000	0%	0.000
Light Liquid	28	0.0035	0.098	0%	0.429
Heavy Liquid		0.0007	0.000	0%	0.000
Pumps					
Light Liquid	6	0.0386	0.232	0%	1.014
Heavy Liquid		0.0161	0.000	0%	0.000
Flanges					
Gas/Vapor		0.0029	0.000	0%	0.000
Light Liquid	56	0.0005	0.028	0%	0.123
Heavy Liquid		0.00007	0.000	0%	0.000
Other					
Open-ended Lines[2]	2	0.0040	0.01	100%	0.00

Total Emissions (tons/yr):	1.57
Total Emissions (lbs/hr):	0.36
Avg Water Weight %	64%
VOC Emissions (tons/yr):	**0.57**
VOCEmissions (lbs/hr):	**0.13**

[1] *All factors are in Lb/hr/component. Factors obtained from EPA 453/R-95-017*

[2] *Open ended lines will be capped or plugged when not in use.*

Sample Calculation of VOC Emissions for Valves:

Item Count: 28 Valves
Emission Factor: 0.0035 lbs/hr/valve
Control Efficiency %: 0.0%
Emissions (lbs/hr) = 40 valves * 0.0035 lbs/hr/comp.
= 0.098 lbs/hr
Emissions (tons/yr)= [(0.14 lbs/hr * 8,760 hrs/yr) / 2000 lbs/ton]
= 0.429 tons/yr

APPENDIX A

Non-confidential Chemical Speciation

ChampionX Dilley 508 Facility

Non-Confidential Product / Chemical Speciation

Product		Component	CAS No.	MW	Moles	Total Moles	Liquid Mole Fraction	VP@70 F	Comp. VP	Mixture VP	Vapor Mole Fraction	Mv (Comp)	Mv (Mixture)	Vapor Fraction
ID	MIN	Name	No	lb/lb-mol	n	n	n	psia	psia	psia	n	lb/lb-mol	lb/lb-mol	n
CORR10488A	B13E9	Methanol	67-56-1	32.0	0.0003	0.0470	0.0065	1.9800	0.0129	0.3101	0.0416	1.3300	18.7	0.0712
		2-Mercaptoethanol	60-24-2	78.1	0.0003	0.0470	0.0067	0.0100	0.0001	0.3101	0.0002	0.0170	18.7	0.0009
		Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	150.0	0.0004	0.0470	0.0093	0.0200	0.0002	0.3101	0.0006	0.0900	18.7	0.0048
		Fatty acid-Diethylenetriamine, Acetate	68153-60-6	279.5	0.0002	0.0470	0.0050	0.0001	0.0000	0.3101	0.0000	0.0005	18.7	0.0000
		Ethanol, 2,2'-oxybis-, reaction products with ammonia	68877-16-7	133.2	0.0001	0.0470	0.0021	0.0001	0.0000	0.3101	0.0000	0.0001	18.7	0.0000
		Water	7732-18-5	18.0	0.0456	0.0470	0.9703	0.3060	0.2969	0.3101	0.9576	17.2371	18.7	0.9230
CORR21334A	B18C1	Water	7732-18-5	18.0	0.0453	0.0461	0.9830	0.3060	0.3008	0.3025	0.9944	17.9099	18.3	0.9798
		Fatty Acids, Tall-oil, Reaction Products With Polyethylenepolyamines, Acetates	64754-93-4	500.0	0.0001	0.0461	0.0022	0.0001	0.0000	0.3025	0.0000	0.0004	18.3	0.0000
		Pyridine, Alkyl Derivs., Acetates	168612-09-7	250.0	0.0002	0.0461	0.0039	0.0001	0.0000	0.3025	0.0000	0.0003	18.3	0.0000
		Ethoxylated tallow alkylamines, acetate salt	68551-33-7	500.0	0.0001	0.0461	0.0017	0.0001	0.0000	0.3025	0.0000	0.0003	18.3	0.0000
		Poly(oxy-1,2-ethanediyl), α-(nonylphenyl)-ω-hydroxy-, branched, phosphates	68412-53-3	250.0	0.0001	0.0461	0.0017	0.0010	0.0000	0.3025	0.0000	0.0014	18.3	0.0001
		2-Butoxyethanol	111-76-2	118.2	0.0001	0.0461	0.0029	0.0400	0.0001	0.3025	0.0004	0.0459	18.3	0.0025
		Ethanol, 2-Mercapto-	60-24-2	78.1	0.0001	0.0461	0.0022	0.0790	0.0002	0.3025	0.0006	0.0453	18.3	0.0025
		Acetic Acid	64-19-7	60.1	0.0001	0.0461	0.0023	0.5970	0.0014	0.3025	0.0046	0.2750	18.3	0.0150
CORR12525B	E17C2	Methanol	67-56-1	32.1	0.0094	0.0116	0.8048	1.9800	1.5934	1.5969	0.9978	32.0308	32.7	0.9794
		Tall Oil Fatty Acid	61790-12-3	280.0	0.0003	0.0116	0.0215	0.0000	0.0000	1.5969	0.0000	0.0001	32.7	0.0000
		Alkylpyridine	68391-11-7	80.0	0.0004	0.0116	0.0384	0.0250	0.0010	1.5969	0.0006	0.0481	32.7	0.0015
		C18 Unsaturated Fatty Acid Dimer	61788-89-4	565.0	0.0001	0.0116	0.0061	0.0870	0.0005	1.5969	0.0003	0.1871	32.7	0.0057
		Reaction product of diethylenetriamine and tall-oil (fatty)	61790-69-0	200.0	0.0002	0.0116	0.0214	0.0190	0.0004	1.5969	0.0003	0.0508	32.7	0.0016
		1-Propene, hydroformylation products, high boiling	68551-11-1	400.0	0.0012	0.0116	0.1030	0.0150	0.0015	1.5969	0.0010	0.3871	32.7	0.0118

ChampionX Dilley 508 Facility

Non-Confidential Product / Chemical Speciation

Product		Component	CAS No.	MW	Moles	Total Moles	Liquid Mole Fraction	VP@70 F	Comp. VP	Mixture VP	Vapor Mole Fraction	Mv (Comp)	Mv (Mixture)	Vapor Fraction
ID	MIN	Name	No	lb/lb-mol	n	n	n	psia	psia	psia	n	lb/lb-mol	lb/lb-mol	n
		Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	284.0	0.0001	0.0116	0.0048	0.0000	0.0000	1.5969	0.0000	0.0000	32.7	0.0000
CORR16290A	T20C2	Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	150.0	0.0002	0.0511	0.0043	0.0200	0.0001	0.3150	0.0003	0.0407	18.7	0.0022
		2-Mercaptoethanol	60-24-2	78.1	0.0002	0.0511	0.0031	0.0100	0.0000	0.3150	0.0001	0.0077	18.7	0.0004
		Methanol	67-56-1	32.0	0.0004	0.0511	0.0072	1.9800	0.0143	0.3150	0.0455	1.4572	18.7	0.0780
		Water	7732-18-5	18.0	0.0502	0.0511	0.9821	0.3060	0.3005	0.3150	0.9541	17.1736	18.7	0.9194
		Ethanol, 2,2'-oxybis-, reaction	68877-16-7	133.2	0.0000	0.0511	0.0010	0.0001	0.0000	0.3150	0.0000	0.0000	18.7	0.0000
		Fatty acid-Diethylenetriamine	68153-60-6	279.5	0.0001	0.0511	0.0023	0.0001	0.0000	0.3150	0.0000	0.0002	18.7	0.0000
HSCV66405A	R-60210	Water	7732-18-5	18.0	0.0306	0.0339	0.9002	0.3060	0.2754	0.3863	0.7130	12.8335	31.6	0.4064
		Hexahydro-1,3,5-Tris(2-Hydro	4719 -04- 4	219	0.0018	0.0339	0.0538	0.367	0.0197	0.3863	0.0511	11.1941	31.6	0.3545
		Methanol	67-56-1	32.0	0.0016	0.0339	0.0460	1.9800	0.0911	0.3863	0.2359	7.5491	31.6	0.2391
ACPC00010A	R18F5	Toluene	108-88-3	92.1	0.0090	0.0102	0.8790	0.3900	0.3428	0.3466	0.9890	91.0894	92.5	0.9849
		Ethoxylated Nonylphenol	9016-45-9	200.0	0.0004	0.0102	0.0415	0.0190	0.0008	0.3466	0.0023	0.4545	92.5	0.0049
		EO - PO - 4-Tert-Butylphenol -	68188-99-8	98.9	0.0007	0.0102	0.0662	0.0015	0.0001	0.3466	0.0003	0.0283	92.5	0.0003
		Heavy Aromatic Naphtha	64742-94-5	109.0	0.0001	0.0102	0.0134	0.2180	0.0029	0.3466	0.0084	0.9171	92.5	0.0099
Product 10196	B13T8	Water	7732-18-5	18.0	0.0057	0.0117	0.4905	0.3060	0.1501	0.4413	0.3401	6.1221	43.9	0.1394
		Methanol	67-56-1	32.0	0.0015	0.0117	0.1313	1.9800	0.2599	0.4413	0.5889	18.8452	43.9	0.4292
		2-Mercaptoethanol	60-24-2	78.0	0.0016	0.0117	0.1360	0.0190	0.0026	0.4413	0.0059	0.4567	43.9	0.0104
		Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	283.9	0.0012	0.0117	0.0990	0.2900	0.0287	0.4413	0.0651	18.4762	43.9	0.4208
		Fatty acid-Diethylenetriamine, Acetate	68153-60-6	279.5	0.0012	0.0117	0.1007	0.0001	0.0000	0.4413	0.0000	0.0064	43.9	0.0001
		Ethanol, 2,2'-oxybis-, reaction products with ammonia, morph	68877-16-7	133.2	0.0005	0.0117	0.0425	0.0001	0.0000	0.4413	0.0000	0.0013	43.9	0.0000
BIOC11139A	B13K7	Glutaraldehyde	111-30-8	100.0	0.0010	0.0483	0.0207	0.0040	0.0001	0.2997	0.0003	0.0277	19.1	0.0015
		Water	7732-18-5	18.0	0.0389	0.0483	0.8059	0.3060	0.2466	0.2997	0.8227	14.8085	19.1	0.7766
		Biocide ADBAC 50	Mixture	23.9	0.0084	0.0483	0.1734	0.3060	0.0531	0.2997	0.1770	4.2310	19.1	0.2219
CORR10211B	R-53538	Methanol	67-56-1	32.0	0.0128	0.0341	0.3755	1.9800	0.7435	0.9342	0.7958	25.4670	31.0	0.8210
		Benzyl-(C12-C16 Alkyl)-Dimeth	68424-85-1	283.9	0.0008	0.0341	0.0227	0.2900	0.0066	0.9342	0.0071	2.0015	31.0	0.0645
		Water	7732-18-5	18.0	0.0205	0.0341	0.6018	0.3060	0.1841	0.9342	0.1971	3.5518	31.0	0.1145
		Diethanolamine	111-42-2	105.1	0.0000	0.0344	0.0011	0.0040	0.0000	0.2984	0.0000	0.0016	18.6	0.0001

ChampionX Dilley 508 Facility

Non-Confidential Product / Chemical Speciation

Product		Component	CAS No.	MW	Moles	Total Moles	Liquid Mole Fraction	VP@70 F	Comp. VP	Mixture VP	Vapor Mole Fraction	Mv (Comp)	Mv (Mixture)	Vapor Fraction
ID	MIN	Name	No	lb/lb-mol	n	n	n	psia	psia	psia	n	lb/lb-mol	lb/lb-mol	n
HSCV11619A	W15X1	Monoethanolamine	141-43-5	61.1	0.0002	0.0344	0.0064	0.0040	0.0000	0.2984	0.0001	0.0053	18.6	0.0003
		Methanol	67-56-1	32.0	0.0002	0.0344	0.0064	1.9800	0.0128	0.2984	0.0428	1.3684	18.6	0.0735
		Hexahydro-1,3,5-Tris(2-Hydro	4719-04-4	219.3	0.0018	0.0344	0.0526	0.0001	0.0000	0.2984	0.0000	0.0039	18.6	0.0002
		Water	7732-18-5	18.0	0.0321	0.0344	0.9334	0.3060	0.2856	0.2984	0.9571	17.2281	18.6	0.9259

ChampionX Dilley 508 Facility

Non-Confidential Product / Chemical Speciation

Product		Component	CAS No.	MW	Moles	Total Moles	Liquid Mole Fraction	VP@70 F	Comp. VP	Mixture VP	Vapor Mole Fraction	Mv (Comp)	Mv (Mixture)	Vapor Fraction
ID	MIN	Name	No	lb/lb-mol	n	n	n	psia	psia	psia	n	lb/lb-mol	lb/lb-mol	n
PARA01975A	H19B9	Water	7732-18-5	18	0.0234	0.0334	0.7008	0.306	0.2145	0.6937	0.3092	5.5647	28.3	0.1969
		Methanol	67-56-1	32.05	0.0079	0.0334	0.2381	1.98	0.4714	0.6937	0.6796	21.7815	28.3	0.7708
		Isopropanol	67-63-0	60.1	0.0001	0.0334	0.0030	0.59	0.0018	0.6937	0.0025	0.1527	28.3	0.0054
		Xylene	1330-20-7	106.2	0.0004	0.0334	0.0113	0.13	0.0015	0.6937	0.0021	0.2246	28.3	0.0079
		2-Mercaptoethanol	60-24-2	78.1	0.0001	0.0334	0.0038	0.015	0.0001	0.6937	0.0001	0.0065	28.3	0.0002
		Benzene	71-43-2	78.1	0.0001	0.0334	0.0019	1.44	0.0028	0.6937	0.0040	0.3110	28.3	0.0110
		Benzyl-(C12-C18 Linear Alkyl)-Dimethyl-Ammonium Chloride	68391-01-5	340.0	0.0002	0.0334	0.0049	0.0001	0.0000	0.6937	0.0000	0.0002	28.3	0.0000
		Ethylbenzene	100-41-4	106.2	0.0001	0.0334	0.0027	0.16	0.0004	0.6937	0.0006	0.0660	28.3	0.0023
		Tall Oil Fatty Acids, Reaction Products	85586-18-1	113.2	0.0002	0.0334	0.0064	0.019	0.0001	0.6937	0.0002	0.0197	28.3	0.0007
		Poly(Dimethylsiloxane)	63148-62-9	74.01	0.0004	0.0334	0.0122	0.097	0.0012	0.6937	0.0017	0.1258	28.3	0.0045
		Ethoxylated Nonylphenol	9016-45-9	200	0.0005	0.0334	0.0150	0.001	0.0000	0.6937	0.0000	0.0043	28.3	0.0002
BIOC16975	J16B1	Water	7732-18-5	18	0.0294	0.0330	0.8927	0.306	0.2732	0.3103	0.8803	15.8463	20.8506	0.7600
		Reaction Product of Silica and	67762-90-7	200	0.0001	0.0330	0.0021	0.0019	0.0000	0.3103	0.0000	0.0025	20.8506	0.0001
		Methanol	67-56-1	32.05	0.0005	0.0330	0.0137	1.98	0.0271	0.3103	0.0873	2.7973	20.8506	0.1342
		Isopropanol	67-63-0	60.1	0.0003	0.0330	0.0098	0.59	0.0058	0.3103	0.0186	1.1172	20.8506	0.0536
		n-Alkyl dimethyl benzyl ammo	68391-01-5	340.0	0.0005	0.0330	0.0148	0.0001	0.0000	0.3103	0.0000	0.0016	20.8506	0.0001
		Tall Oil Fatty Acids, Reaction P	85586-18-1	113.2	0.0007	0.0330	0.0208	0.019	0.0004	0.3103	0.0013	0.1439	20.8506	0.0069
		Tetrakis(hydroxymethyl) phos	55566-30-8	406	0.0002	0.0330	0.0049	0.0001	0.0000	0.3103	0.0000	0.0006	20.8506	0.0000
		Decamethyl cyclopentasiloxar	541-02-6	370	0.0000	0.0330	0.0006	0.004	0.0000	0.3103	0.0000	0.0027	20.8506	0.0001
		Cyclic dimethylsiloxane tetran	556-67-2	296	0.0000	0.0330	0.0010	0.019	0.0000	0.3103	0.0001	0.0189	20.8506	0.0009
		Poly(Dimethylsiloxane)	63148-62-9	74.01	0.0013	0.0330	0.0397	0.097	0.0039	0.3103	0.0124	0.9195	20.8506	0.0441
FOAM21408A	A17B8	Water	7732-18-5	18.0	0.0541	0.0541	0.9987	0.3060	0.3056	0.3062	0.9980	17.9837	18.7	0.9631
		1-PROPANAMINIUM, 3-AMINO-N-(CARBOXYMETHYL)-N,N-DIMETHYL-, N-COCO ACYL DERIVS., HYDROXIDE, INNER SALTS	61789-40-0	342.5	0.0001	0.0541	0.0013	0.4800	0.0006	0.3062	0.0020	0.6893	18.7	0.0369

ChampionX Dilley 508 Facility

Non-Confidential Product / Chemical Speciation

Product		Component	CAS No.	MW	Moles	Total Moles	Liquid Mole Fraction	VP@70 F	Comp. VP	Mixture VP	Vapor Mole Fraction	Mv (Comp)	Mv (Mixture)	Vapor Fraction
ID	MIN	Name	No	lb/lb-mol	n	n	n	psia	psia	psia	n	lb/lb-mol	lb/lb-mol	n
FOAM21006A	T13K4	Water	7732-18-5	18.0	0.0518	0.0520	0.9958	0.3060	0.3047	0.3060	0.9957	17.9423	19.4	0.9243
		1-PROPANAMINIUM, 3-AMINO-N-(CARBOXYMETHYL)-N,N-DIMETHYL-, N-COCO ACYL DERIVS., HYDROXIDE, INNER SALTS	61789-40-0	342.5	0.0001	0.0520	0.0027	0.4800	0.0013	0.3060	0.0043	1.4650	19.4	0.0755
		Glycerin	56-81-5	92.1	0.0000	0.0520	0.0009	0.0001	0.0000	0.3060	0.0000	0.0000	19.4	0.0000
		FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH POLYETHYLENEPOLYAMINES, ACETATES	64754-93-4	150.0	0.0000	0.0520	0.0005	0.0200	0.0000	0.3060	0.0000	0.0053	19.4	0.0003
FOAM21004A	T13R1	Fatty Amide. Sodium Salt	Proprietary	150.0	0.0020	0.0386	0.0518	0.0200	0.0010	0.2869	0.0036	0.5416	18.5	0.0293
		Glycerin	56-81-5	92.1	0.0005	0.0386	0.0141	0.0001	0.0000	0.2869	0.0000	0.0005	18.5	0.0000
		Water	7732-18-5	18.0	0.0361	0.0386	0.9341	0.3060	0.2858	0.2869	0.9964	17.9548	18.5	0.9707
FOAM21003A	T13R2	Fatty Amide. Sodium Salt	Proprietary	150.0	0.0007	0.0506	0.0132	0.0200	0.0003	0.3022	0.0009	0.1308	18.1	0.0072
		Water	7732-18-5	18.0	0.0499	0.0506	0.9868	0.3060	0.3020	0.3022	0.9991	18.0043	18.1	0.9928
FOAM21002A	T13R3	Fatty Amide. Sodium Salt	Proprietary	150.0	0.0020	0.0386	0.0518	0.0200	0.0010	0.2869	0.0036	0.5416	18.5	0.0293
		Glycerin	56-81-5	92.1	0.0005	0.0386	0.0141	0.0001	0.0000	0.2869	0.0000	0.0005	18.5	0.0000
		Water	7732-18-5	18.0	0.0361	0.0386	0.9341	0.3060	0.2858	0.2869	0.9964	17.9548	18.5	0.9707
FOAM21595FB	S13T8	2-Butoxyethanol	111-76-2	118.2	0.0002	0.0503	0.0031	0.0170	0.0001	0.3051	0.0002	0.0206	20.1	0.0010
		Glycerin	56-81-5	92.1	0.0001	0.0503	0.0015	0.0001	0.0000	0.3051	0.0000	0.0000	20.1	0.0000
		N-(3-Coco Amidopropyl)-N,N-Dimethyl-Glycine Betaine	61789-40-0	342.5	0.0002	0.0503	0.0040	0.4800	0.0019	0.3051	0.0063	2.1538	20.1	0.1074
		Fumaric acid, polymer with Sodium allylsulfonate	68715-83-3	260.0	0.0000	0.0503	0.0006	0.0001	0.0000	0.3051	0.0000	0.0001	20.1	0.0000
		Water	7732-18-5	18.0	0.0499	0.0503	0.9907	0.3060	0.3032	0.3051	0.9935	17.8837	20.1	0.8916

ChampionX Dilley 508 Facility

Non-Confidential Product / Chemical Speciation

Product		Component	CAS No.	MW	Moles	Total Moles	Liquid Mole Fraction	VP@70 F	Comp. VP	Mixture VP	Vapor Mole Fraction	Mv (Comp)	Mv (Mixture)	Vapor Fraction
ID	MIN	Name	No	lb/lb-mol	n	n	n	psia	psia	psia	n	lb/lb-mol	lb/lb-mol	n
FOAM21593FB	S13U1	Water	7732-18-5	18.0	0.0543	0.0546	0.9945	0.3060	0.3043	0.3058	0.9952	17.9327	18.3	0.9803
		Potassium Chloride	7447-40-7	74.5	0.0003	0.0546	0.0055	0.2700	0.0015	0.3058	0.0048	0.3609	18.3	0.0197

Raoult's Law is used to calculate the vapor pressure and molecular weight of the product at 70 degrees F based on its chemical components and associated liquid weight percent.

Where,

Liquid Wt% = chemical component maximum weight percent
MW = chemical component molecular weight
Moles = max weight % / molecular weight
Total Moles = sum of all components
Liquid Mole Fraction = component mole / total moles
VP@70 F = chemical vapor pressure at 70 degrees F
Comp. VP @ 70 F = liquid mole fraction /chemical partial vapor pressure
Mixture VP @ 70 F = sum of component vapor pressures
Vapor Mole Fraction = component vapor pressure / mixture vapor pressure
Mv (Comp) = chemical molecular weight x mixture molecular weight
Mv (Mixture) = mixture molecular weight
Vapor Wt Fraction = chemical component vapor weight fraction

ATTACHMENT A

TCEQ GENERAL PBR WORKBOOK

General Information

This sheet provides general rule information for both General Facility PBRs.

Instructions:
Please fill out all input / yellow cells unless marked optional. Attach the federal applicability review to the application for each project.
An optional supplemental information field has been provided at the end of this worksheet. This field should be used for demonstration of rule or policy compliance.

I. Project Information

Requested Information	Response
Company Name	ChampionX LLC
Site Description	Dilley 508 Facility
General Project Description	PBR Update
I acknowledge that I am submitting an authorized TCEQ workbook and any necessary attachments. Except for inputting the requested data and adjusting row height, I have not changed the TCEQ application workbook in any way, including but not limited to changing formulas, formatting, content, or protections.	I agree
Please indicate which rule, or both, are applicable to this project:	Both
Does this project authorize a new facility, modify a New Source Review (NSR) Case-by-Case existing permitted facility, or both?	Modify Existing
Is this site only authorized under Permits by Rule?	Yes

II. General Rule Requirements for §106.261 and/or §106.262

Requested Information	Response
Has a §106.4 checklist or compliance demonstration been included in the documentation submitted to TCEQ?	Yes
Is this registration for construction of a facility authorized in another section of this chapter or for which a standard permit is in effect?	No
Is this registration for any change to any facility authorized under another section of this chapter or authorized under a standard permit?	No
Are facilities or changes located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located?	Yes
Are there any changes to or additions of any existing air pollution abatement equipment?	No
Will there be any visible emissions, except uncombined water, emitted to the atmosphere from any point or fugitive source in amounts greater than 5.0% opacity in any six-minute period?	No
Please include the following information for any pollution control equipment related to this registration: how the equipment operates, and the control efficiency achieved.	N/A

III. Associated Emission Increases

Any upstream and/or downstream actual emission increases that result from a project for which this PBR is claimed need to be authorized appropriately. Any associated upstream and/or downstream emissions authorized as part of the PBR claim will need to be included as part of the total new or increased emissions, unless: 1) these emissions stay below current authorized emission thresholds; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT, health and environmental impacts, or other representations (i.e. construction plans, operating procedures, throughputs, maximum emission rates, etc.); and 3) this claim is certified via PI-7 CERT or APD-CERT. Notwithstanding the exclusion of any upstream and/or downstream emissions under this PBR claim, the total of all emission increases, including upstream and/or downstream actual emission increases, are required to be part of the PBR registration to determine major new source review applicability under Title 30 TAC Chapter 116. The emission increases associated with the PBR claim and all upstream and/or downstream actual emission increases may not circumvent major new source review requirements under 30 TAC Chapter 116.

Requested Information	Response
Is this project related to physical or operational changes to facilities authorized under an NSR Case-by-Case permit?	No

IV. Hours of Operation

Project emission increases associated with a change to a facility that only result in an annual emissions increase can be authorized as part of the PBR claim if the following information is met: 1) the hourly emissions stay at or below current authorized emission thresholds; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT or health and environmental impacts; and 3) this claim is certified via PI-7- CERT. The annual emission increases associated with the PBR claim may not circumvent major new source review requirements under 30 TAC Chapter 116.

Requested Information	Response
Does this project include only annual increases for permitted facilities?	No

V. Federal Applicability

Complete separate federal permitting application materials to determine applicability of Nonattainment (NA) and Prevention of Significant Deterioration (PSD) applicability, including netting if applicable. Include this analysis in your permit application.

Requested Information	Response
Please select the county that this project is located in.	Frio
County attainment status as of November 4, 2022:	unclassifiable/attainment

If applicable, is this facility located within the portion of the county that is in nonattainment?	No

PSD Applicability Summary

Requested Information	Response
Is this a named source?	No
Is netting required for the PSD Analysis for this project?	No

Pollutant	Project Increase (TPY)	Threshold (TPY)	PSD Review Required?
CO	0		
NO_X	0		
PM	0		
PM_{10}	0		
$PM_{2.5}$	0		
SO_2	0		
Ozone (as VOC)	0		
Ozone (as NO_X)	0		
Pb	0		
H_2S	0		
TRS	0		
Reduced sulfur compounds (including H_2S)	0		
H_2SO_4	0		
Fluoride (excluding HF)	0		
CO_2e	0		
Determination:			

Determination:			

Supplemental Information (Optional)

Click here to go to the §106.261 Checklist sheet.

30 TAC §106.261 Checklist

This sheet provides compliance demonstration and emission thresholds for 30 TAC §106.261.

Instructions:
Please fill out all input / yellow cells unless marked optional. Also, please note that emissions must be fully speciated and cannot have general categories listed (e.g.

I. General Information	
Are emission increases being authorized under §106.261 five tons per year or greater?	No
The company may submit a notification by March 31 of the following year summarizing all uses of this permit by rule in the previous calendar year.	
Is this project an annual notification?	Yes

II. §106.261(a)(2)

Are there new or increased emissions listed under §106.261(a)(2), including fugitives, less than or equal to 6.0 pounds per hour (lb/hr) and ten tons per year? Yes

Please select chemical and enter emission rates:

Chemical	Criteria Pollutant Designation	CAS No. (optional input)	Emission Threshold (lb/hr)	Emission Threshold (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Meets Threshold?
Refinery Petroleum Fractions	VOC	64742-94-5	6.00	10.00	0.02	2.92E-03	Yes
Isopropyl Alcohol	VOC	67-63-0	6.00	10.00	0.07	0.01	Yes
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			
			6.00	10.00			

III. §106.261(a)(3)

Are there new or increased emissions, including fugitives, less than or equal to 1.0 lb/hr of any chemical having a limit value (L) greater than 200 milligrams per cubic meter (mg/m^3) as listed and referenced in Table 262 of 30 TAC § 106.262 relating to Facilities (Emission and Distance Limitations)?

Are there new or increased emissions, including fugitives, less than or equal to 1.0 lb/hr of any chemical not listed or referenced in Table 262?

Please enter the chemical name, L value (for chemicals listed in table 262), and emission rates:
If there is no L value available for the chemical, then leave the L value blank.

Chemical	Criteria Pollutant Designation	L Value (mg/m^3)	CAS No. (optional input)	Emission Threshold (lb/hr)	Emission Threshold (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)
1-PROPANAMINIUM, 3-AMINO-N-(CARBOXYMETHYL)-N,N-DIMETHYL-, N-COCO ACYL DERIVS., HYDROXIDE, INNER SALTS	VOC		61789-40-0	1.00	4.38	0.13	8.62E-04
1-Propene, hydroformylation products, high boiling	VOC		68551-11-1	1.00	4.38	0.03	5.72E-03
2-Mercaptoethanol	VOC		60-24-2	1.00	4.38	0.02	3.12E-03
Alkylpyridine	VOC		68391-11-7	1.00	4.38	3.66E-03	7.11E-04
Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	VOC		68424-85-1	1.00	4.38	0.99	0.12
Benzyl-(C12-C18 Linear Alkyl)-Dimethyl-Ammonium Chloride	VOC		68391-01-5	1.00	4.38	1.05E-04	1.47E-05
Biocide ADBAC 50	VOC		Mixture	1.00	4.38	0.26	0.04
C18 Unsaturated Fatty Acid Dimer	VOC		61788-89-4	1.00	4.38	0.01	2.76E-03
Cyclic dimethylsiloxane tetramer	VOC		556-67-2	1.00	4.38	1.22E-03	1.48E-04
Decamethyl cyclopentasiloxane	VOC		541-02-6	1.00	4.38	1.71E-04	2.08E-05
EO - PO - 4-Tert-Butylphenol - 4-Nonylphenol - HCHO Resin	VOC		68188-99-8	1.00	4.38	5.43E-04	9.03E-05
Ethanol, 2,2'-oxybis-, reaction products with ammonia	VOC		68877-16-7	1.00	4.38	6.91E-05	8.02E-06
Ethanol, 2-Mercapto-	VOC		60-24-2	1.00	4.38	0.02	3.12E-03
Ethoxylated Nonylphenol	VOC		9016-45-9	1.00	4.38	8.71E-03	1.48E-03

Chemical	Criteria Pollutant Designation	L Value (mg/m^3)	CAS No. (optional input)	Emission Threshold (lb/hr)	Emission Threshold (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)
Ethoxylated tallow alkylamines, acetate salt	VOC		68551-33-7	1.00	4.38	1.74E-05	2.62E-06
Fatty acid-Diethylenetriamine, Acetate	VOC		68153-60-6	1.00	4.38	3.43E-04	3.99E-05
Fatty Acids, Tall-oil, Reaction Products With Polyethylenepolyamines, Acetates	VOC		64754-93-4	1.00	4.38	3.29E-04	4.53E-06
Fatty Amide. Sodium Salt	VOC		Proprietary	1.00	4.38	0.99	1.28E-04
Fumaric acid, polymer with Sodium allylsulfonate	VOC		68715-83-3	1.00	4.38	3.24E-06	1.04E-08
Hexahydro-1,3,5-Tris(2-Hydroxyethyl)-S-T	VOC		4719-04-4	1.00	4.38	2.41E-04	3.32E-05

Click here to go to the §106.262 Checklist sheet.

30 TAC §106.262 Checklist

This sheet provides compliance demonstration and emission thresholds for 30 TAC §106.262.

Instructions:
Please fill out all input / yellow cells unless marked optional. For multiple K values, please submit additional copies of this worksheet, or submit the multiple projects version. For the same chemical, the worst-case distance shall be used.

I. §106.262(a)(2)

New or increased emissions, including fugitives, of chemicals shall not be emitted in a quantity greater than five tons per year nor in a quantity greater than E as determined using the equation E = L/K.

Are the chemicals being registered included in Table 262 of 30 TAC §106.262(a)(2)?	Yes
Distance to nearest off-plant receptor (feet):	400
K value:	104

Chemicals listed in the 1997 Edition of the ACGIH TLV and BEI Guide are available in this worksheet beginning on Row 36.

Please select applicable chemicals from dropdown and enter emission rates:

Chemical	Criteria Pollutant Designation	CAS No. (optional input)	L Value (mg/m^3)	E, maximum Hourly Emission Threshold (lb/hr)	Annual Emission Threshold (tpy)	Actual Hourly Increases (lb/hr)	Actual Annual Increase (tpy)	Meets Threshold?
Benzene	VOC	71-43-2	3	0.03	0.13	0.02	2.53E-03	Yes
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			
			0	0	0			

Emission thresholds specified in this table may be displayed as rounded values. Actual emission rates for each chemical should not exceed the emission threshold as calculated using the corresponding distance and L value.

Are the chemicals being registered not listed in Table 262, but have a published TLV in the 1997 Edition of the ACGIH TLV and BEI Guide?	Yes

Please select applicable chemicals from dropdown and enter emission rates:

Chemical	Criteria Pollutant Designation	CAS No.	L Value (mg/m^3)	E, maximum Hourly Emission Threshold (lb/hr)	Annual Emission Threshold (tpy)	Actual Hourly Increases (lb/hr)	Actual Annual Increase (tpy)	Meets Threshold?
2-Butoxyethanol	VOC					2.90E-03	4.42E-04	
Acetic Acid	VOC	64-19-7	25	0.24	1.05	0.02	2.62E-03	Yes
Diethanolamine	VOC	111-42-2	2	0.02	0.08	9.72E-05	1.34E-05	Yes
Ethylbenzene	VOC					3.22E-03	5.37E-04	
Glutaraldehyde	VOC	111-30-8	0.2	1.92E-03	8.42E-03	1.73E-03	2.73E-04	Yes
Glycerin	VOC					2.65E-05	9.94E-08	
Methanol	VOC	67-56-1	262	2.52	5.00	2.46	1.08	Yes
Toluene	VOC	108-88-3	188	1.81	5.00	1.74	0.29	Yes
Xylene	VOC					0.01	1.83E-03	

NOTE: The time weighted average (TWA) Threshold Limit Value (TLV) published by the American Conference of Governmental Industrial Hygienists (ACGIH), in its TLVs and BEIs (Biological Exposure Indices) guide **(1997 Edition)** shall be used for compounds not included in the table. The Short Term Exposure Level (STEL) or Ceiling Limit (annotated with a "C") published by the ACGIH shall be used for compounds that do not have a published TWA TLV. This section cannot be used if the compound is not listed in the table or does not have a published TWA TLV, STEL, or Ceiling Limit in the ACGIH TLVs and BEIs guide.

Emission thresholds specified in this table may be displayed as rounded values. Actual emission rates for each chemical should not exceed the emission threshold as calculated using the corresponding distance and L value.

II. §106.262(a)(3)-(a)(4)

Notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities.	I agree
*Does this registration handle any of the following chemicals?	No

Chemical	Criteria Pollutant Designation	CAS No.	L Value (mg/m^3)	E, maximum Hourly Emission Threshold (lb/hr)	Annual Emission Threshold (tpy)	Actual Hourly Increases (lb/hr)	Actual Annual Increase (tpy)	Meets Threshold?

*Chemical List: acrolein, allyl chloride, ammonia (anhydrous), arsine, boron trifluoride, bromine, carbon disulfide, chlorine, chlorine dioxide, chlorine trifluoride, chloroacetaldehyde, chloropicrin, chloroprene, diazomethane, diborane, diglycidyl ether, dimethylhydrazine, ethyleneimine, ethyl mercaptan, fluorine, formaldehyde (anhydrous), hydrogen bromide, hydrogen chloride, hydrogen cyanide, hydrogen fluoride, hydrogen selenide, hydrogen sulfide, ketene, methylamine, methyl bromide, methyl hydrazine, methyl isocyanate, methyl mercaptan, nickel carbonyl, nitric acid, nitric oxide, nitrogen dioxide, oxygen difluoride, ozone, pentaborane, perchloromethyl mercaptan, perchloryl fluoride, phosgene, phosphine, phosphorus trichloride, selenium hexafluoride, stibine, liquified sulfur dioxide, sulfur pentafluoride, and tellurium hexafluoride.

**These chemicals shall be handled at least 300 feet from the nearest property line and 600 feet from any off-plant receptor, and the cumulative amount of any of these chemicals resulting from one or more authorizations under this section (but not including permit authorizations) shall not exceed 500 pounds on the plant property and all listed chemicals shall be handled only in unheated containers operated in compliance with the United States Department of Transportation regulations (49 Code of Federal Regulations, Parts 171-178).

Click here to go to the Rule Summary sheet.

Date: 2/24/2025
Project/Permit: _____
Company: _____

Rule Summary

This sheet provides the emissions summary from chemicals authorized under §106.261 and/or §106.262.

Instructions:
If the company is representing a different method to demonstrate compliance, please include a note next to the applicable chemical and attach additional sheets to the application.

§106.261(a)(2)

Chemical	Actual lb/hr	Actual tpy	Meets Threshold?	Notes
Refinery Petroleum	0.02	2.92E-03	Yes	
Isopropyl Alcohol	0.07	0.01	Yes	

§106.262(a)(2) Table 262

Chemical	Actual lb/hr	Actual tpy	Meets Threshold?	Notes
Benzene	0.02	2.53E-03	Yes	

§106.261(a)(3)

Chemical	Actual lb/hr	Actual tpy	Meets Threshold?	Notes
1-PROPANAMINIUM, 3-	0.13	8.62E-04	Yes	
1-Propene,	0.03	5.72E-03	Yes	
2-Mercaptoethanol	0.02	3.12E-03	Yes	
Alkylpyridine	3.66E-03	7.11E-04	Yes	
Benzyl-(C12-C16 Alkyl)-	0.99	0.12	Yes	
Benzyl-(C12-C18 Linear	1.05E-04	1.47E-05	Yes	
Biocide ADBAC 50	0.26	0.04	Yes	
C18 Unsaturated Fatty	0.01	2.76E-03	Yes	
Cyclic dimethylsiloxane	1.22E-03	1.48E-04	Yes	
Decamethyl	1.71E-04	2.08E-05	Yes	
EO - PO - 4-Tert-	5.43E-04	9.03E-05	Yes	
Ethanol, 2,2'-oxybis-,	6.91E-05	8.02E-06	Yes	
Ethanol, 2-Mercapto-	0.02	3.12E-03	Yes	
Ethoxylated Nonylphenol	8.71E-03	1.48E-03	Yes	
Ethoxylated tallow	1.74E-05	2.62E-06	Yes	
Fatty acid-	3.43E-04	3.99E-05	Yes	
Fatty Acids, Tall-oil,	3.29E-04	4.53E-06	Yes	
Fatty Amide. Sodium	0.99	1.28E-04	Yes	
Fumaric acid, polymer	3.24E-06	1.04E-08	Yes	
Hexahydro-1,3,5-Tris(2-	2.41E-04	3.32E-05	Yes	

§106.262(a)(2) 1997 ACGIH Guide

Chemical	Actual lb/hr	Actual tpy	Meets Threshold?	Notes
2-Butoxyethanol	2.90E-03	4.42E-04		
Acetic Acid	0.02	2.62E-03	Yes	
Diethanolamine	9.72E-05	1.34E-05	Yes	
Ethylbenzene	3.22E-03	5.37E-04		
Glutaraldehyde	1.73E-03	2.73E-04	Yes	
Glycerin	2.65E-05	9.94E-08		
Methanol	2.46	1.08	Yes	
Toluene	1.74	0.29	Yes	
Xylene	0.01	1.83E-03		

Emission Point Summary Table

The emission point summary table provided here is optional.

Instructions:
Please fill out the Emission Point Summary Table for the project emissions, including all emissions and rules being registered. Additional rows can be added if needed.

"Other" Criteria Pollutant (Optional)	

EPN / Source Name	Rule(s)	VOC (lb/hr)	VOC (tpy)	NO_x (lb/hr)	NO_x (tpy)	CO (lb/hr)	CO (tpy)	SO_2 (lb/hr)	SO_2 (tpy)	PM (lb/hr)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (tpy)	Other (lb/hr)	Other (tpy)
TANKS	§106.261,	2.60	0.53														
BLEND	§106.261,	0.14	< 0.01														
LOAD	§106.261,	2.62	0.37														
FUG	§106.261,	0.13	0.57														
Total Emissions (tpy)			1.47		0.00		0.00		0.00		0.00		0.00		0.00		0.00

Maximum Operating Schedule	**Hours/Day**		**Days/Week**		**Weeks/Year**		**Hours/Year**	8760	
Notes	Other chemicals being authroized under 106.261 for which TLV is not listed and defualt to 1 lb/hr have not been included in this workbook due to insufficient data entry rows. Please see the PBR Emissions Limit Summary Table provided with the registration application.								