Permits by Rule General Facilities Workbook

TCEQ Document No. 20896 Version 2.0 - Workbook for single project

This workbook is a tool available to assist with projects being authorized under Permits by Rule (PBR) 30 TAC §§ 106.261 and/or 106.262.

Instructions:
This workbook is required for all PBR applications submitted under these rules. Please answer the questions and fill in emissions data in the yellow cells.

Please check our website to be sure you **use the latest version of the workbook for all the features and accurate information. Also, please complete the workbook in the order of the sheets.**

Questions? Contact the Air Permits Division at (512) 239-1250

For rule language of §§106.261 and 106.262, please visit the Texas Secretary of State (SOS) website:

https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=5&ti=30&pt=1&ch=106&sch=K&rl=Y

How to Submit:
After this workbook has been completed, it should be combined with the non-confidential information of the application and submitted as an attachment through the STEERS ePermits system:

https://www3.tceq.texas.gov/steers/

Any confidential information should be submitted as an attachment separate from the non-confidential attachment in the STEERS ePermits system. THSC §382.041 requires us not to disclose any information related to manufacturing processes that is marked Confidential. Mark any information related to secret or proprietary processes or methods of manufacture Confidential if you do not want this information in the public file. All confidential information should be separated from the application and submitted as a separate file. Additional information regarding confidential information can be found at:

https://www.tceq.texas.gov/permitting/air/confidential.html

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Sheet Title *(Click to jump to specific sheet)*:

Click here to go to the General Information sheet.

General Information

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

I. Project Information

Company	Vopak Terminal Deer Park, Inc.
Site Description	Bulk Storage Facility
Project Name Description	Bulk storage and loading of petrochemical products.

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 an New Source Review (NSR) Case-by-Case existing permitted facility, or both?	Modify Existing
Is this site only authorized under Permits by Rule?	No
Is this located at an NSR major source?	Yes
Is there an associated NSR permit?	Yes
Please enter the associated NSR permit(s):	466A

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

Has a §106.4 checklist or compliance demonstration been included in the documentation	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

In the row below, please include the following information for any pollution control equipment related to this registration: how the equipment operates, and the control efficiency achieved.

Emissions of truck and railcar loading operation will be controlled using land flare (EPN: FL-900) that operates with 98 percent control efficiency. Emissions of ship and barge loading operation will be controlled either by Marine Flare No. 1 (EPN: FL-MARINE1) or Marine Flare No. 2 (EPN: FL-MARINE2) with control efficiency of at least 99 percent.

III. Associated Emission Increases

Is this project related to physical or operational changes to facilities authorized under an NSR Case-by-Case permit?	Yes

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.

Please explain how all actual emission increases are authorized appropriately:
Emission increases associated with the proposed project have been authorized appropriately with this PBR registration.

IV. Hours of Operation

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

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 limits; 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.

Please explain how the project meets the above:

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.

Please select the county that this project is located in.	Harris
To search for your county, enter a keyword and then click on the drop-down for your results.	
County attainment status as of September 23, 2019:	This county has a nonattainment designation for
If applicable, is this facility located within the portion of the county that is in nonattainment?	

PSD Applicability Summary

Is this a named source?	Yes
Please select the source category:	Petroleum storage and transfer units with total storage capacity above
Is netting required for the PSD Analysis for this project?	No

If yes, the project increases listed below should be after netting has been performed. Attach the netting information to the application

Pollutant	Project Increase	Threshold	PSD Review Required?
CO	1.03	100	No
NO_X	0.51	40	No
PM	0	25	No
PM_{10}	0	15	No
$PM_{2.5}$	0	10	No
SO_2	0.002	40	No
Ozone (as VOC)	4.74	40	No
Ozone (as NO_X)	0.51	40	No
Pb	0	0.6	No
H_2S	0	10	No
TRS	0	10	No
Reduced sulfur compounds (including H_2S)	0	10	No
H_2SO_4	0	7	No
Fluoride (excluding HF)	0	3	No
CO_2e	0	75000	No

Nonattainment Applicability Summary

Is netting required for the nonattainment analysis for this project?	No

If yes, the project increases listed below should be after netting has been performed. Attach the netting information to the application.

Pollutant	Project Increase	Threshold	NA Review Required?
PM_{10}			
SO_2			
Ozone (as VOC)	4.74	5	No
Ozone (as NO_X)	0.51	5	No

Click here to go to the §106.261 Checklist sheet.

30 TAC §106.261 Checklist

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

Are emission increases being authorized under §106.261 five tons per year or greater?	No
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?	No

I. §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:
To search for contaminants, enter a keyword and then click on the drop-down for your results.

Chemical	Emission Limit (lb/hr)	Emission Limit tpy	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Meets Limit?
isopropyl alcohol	6.00	10.00	5.75E-01	0.00E+00	Yes
ethanol	6.00	10.00	5.54E-01	0.00E+00	Yes
carbon monoxide	6.00	10.00	1.77E+00	8.77E-01	Yes
oxides of nitrogen	6.00	10.00	8.89E-01	4.39E-01	Yes
sulfur dioxide	6.00	10.00	4.02E-04	1.76E-03	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			
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	6.00	10.00			
	6.00	10.00			
	6.00	10.00			
	6.00	10.00			
	6.00	10.00			
	6.00	10.00			

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/m3) as listed and referenced in Table 262 of 30 TAC § 106.262 (relating to Facilities (Emission and Distance Limitations)?	No
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?	Yes

Please enter the chemical name, L value, and emission rates:
If there is no L value available for the chemical, then leave the L value blank.

Chemical	L value (mg/m3)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Is the L value greater than 200 mg/m^3?	Meets Limit?
Ethyl tertiary butyl ether		7.62E-01	0.00E+00	N/A	Yes

Chemical	L value (mg/m3)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Is the L value greater than 200 mg/m^3?	Meets Limit?
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	
				N/A	

Click here to go to the §106.262 Checklist sheet.

30 TAC §106.262 Checklist

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

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.

Distance to nearest off-plant receptor (feet):	1500
K value	24
Are the chemicals being registered included in Table 262 of 30 TAC §106.262(a)(2)?	Yes

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:
To search for contaminants, enter a keyword and then click on the drop-down for your results.

Chemical	L Value (mg/m3)	E, maximum Hourly Emission Limit (lb/hr)	Annual Emission Limit (tpy)	Actual Hourly Increases (lb/hr)	Actual Annual Increase (tpy)	Meets Limit?
Butyl Alcohol, -	76	3.17E+00	5.00E+00	1.13E-01	0.00E+00	
Heptane	350	6.00E+00	5.00E+00	8.83E-01	0.00E+00	
Acetone	590	6.00E+00	5.00E+00	2.41E+00	1.99E-01	Yes
Naphtha	350	6.00E+00	5.00E+00	2.88E+00	3.71E-01	Yes
Octane	350	6.00E+00	5.00E+00	2.85E+00	3.68E-01	Yes
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			

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:
To search for contaminants, enter a keyword and then click on the drop-down for your results.

Chemical	L Value (mg/m3	E, maximum Hourly Emission Limit (lb/hr)	Annual Emission Limit (tpy)	Actual Hourly Increases (lb/hr)	Actual Annual Increase (tpy)	Meets Limit?
Xylene (o-,m-, p-isomers)	434	6.00E+00	5.00E+00	5.04E-01	0.00E+00	
Methyl Isobutyl Ketone	205	6.00E+00	5.00E+00	4.07E-01	0.00E+00	
Methyl ethyl ketone (MEK)	590	6.00E+00	5.00E+00	2.15E+00	0.00E+00	
Isopropyl Ether	0	0.00E+00	0.00E+00	2.73E+00	0.00E+00	
Hexane (n-Hexane)	176	6.00E+00	5.00E+00	2.36E+00	0.00E+00	
Tetrahydrofuran	590	6.00E+00	5.00E+00	3.59E+00	0.00E+00	
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			

Chemical	L Value (mg/m3	E, maximum Hourly Emission Limit (lb/hr)	Annual Emission Limit (tpy)	Actual Hourly Increases (lb/hr)	Actual Annual Increase (tpy)	Meets Limit?
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			
	0	0.00E+00	0.00E+00			

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 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.

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
Are one or more of the following chemicals is handled for this registration?	No
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).	
Distance to property line (feet):	
Distance to any off-plant receptor (feet):	
Cumulative amount of the above listed chemicals authorized under this section (pounds):	
Containers of these chemicals may not be vented or opened directly to the atmosphere at any	

Click here to go to the Rule Summary sheet.

Date: 9/8/2021
Project/Permit: TBD
Company: VOPAK, Inc.

Rule Summary

This sheet provide 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 Limits?	Notes
isopropyl alcohol	0.57			No annual emissions associated with the proposed project. Hourly emission rate meets 106.261(a)(2) emission limits.
ethanol	0.55			No annual emissions associated with the proposed project. Hourly emission rate meets 106.261(a)(2) emission limits.
carbon monoxide	1.77	0.88	Yes	
oxides of nitrogen	0.89	0.44	Yes	
sulfur dioxide	0.00	0.00	Yes	

§106.262(a)(2) Table 262

Chemical	Actual lb/hr	Actual tpy	Meets Limits?	Notes
Butyl Alcohol, -	0.11			No annual emissions associated with the proposed project. Hourly emission rate meets 106.262(a)(2) emission limits.
Heptane	0.88			No annual emissions associated with the proposed project. Hourly emission rate meets 106.262(a)(2) emission limits.
Acetone	2.41	0.20	Yes	
Naphtha	2.88	0.37	Yes	
Octane	2.85	0.37	Yes	

§106.261(a)(3)

Chemical	Actual lb/hr	Actual tpy	Meets Limits?	Notes
Ethyl tertiary butyl ether	0.76			No annual emissions associated with the proposed project. Hourly emission rate meets 106.261(a)(3) emission limits.

§106.262(a)(2) 1997 ACGIH Guide

Chemical	Actual lb/hr	Actual tpy	Meets Limits?	Notes
Xylene (o-,m-, p-isomers)	0.50			No annual emissions associated with the proposed project. Hourly emission rate meets 106.262(a)(2) emission limits.
Methyl Isobutyl Ketone	0.41			No annual emissions associated with the proposed project. Hourly emission rate meets 106.262(a)(2) emission limits.

Methyl ethyl ketone (MEK)	2.15			No annual emissions associated with the proposed project. Hourly emission rate meets 106.262(a)(2) emission limits.
Isopropyl Ether	2.73			No annual emissions associated with the proposed project. Hourly emission rate meets 106.262(a)(2) emission limits.
Hexane (n-Hexane)	2.36			No annual emissions associated with the proposed project. Hourly emission rate meets 106.262(a)(2) emission limits.
Tetrahydrofuran	3.59			No annual emissions associated with the proposed project. Hourly emission rate meets 106.262(a)(2) emission limits.