

**Permit by Rule (PBR) Registration
Technical Review**

Company:	Enterprise Products Operating LLC	Registration No.:	154999
Nearest City:	La Porte	Project No.:	353656
County:	Harris	Project Type:	Revision
Project Reviewer:	James Qu	Regulated Entity No.:	RN100210665
Unit Name:	Morgans Point Complex	Customer Reference No.:	CN603211277
PBR No(s).:	106.261, 106.476, 106.492	Project Received Date:	February 15, 2023
Physical Location:	1200 n Broadway St, la Porte, TX		

Project Overview / Process Description

Enterprise Products Operating LLC owns and operates Morgans Point Complex at Harris County, TX. The site is currently authorized under NSR permit 20289 and several PBRs and standard exemptions.

The purpose of this PBR registration is to revise the emissions from the ethane tank system (EPN FLARE-4; PBR registration 154999) and additional ethane loading (EPN FLARE-1; NSR Permit 20289) at the Morgan’s Point Complex. Ethane loading will occur at the existing loading docks. This project consists of:

- Loading arm purges, controlled by the existing cold flare (EPN FLARE-1) under 106.261.
- Fugitive emissions from new piping components (EPN FUG-1) under 106.261.
- A refrigerated storage tank (Facility Identification Number [FIN] ET3-TK) under 106.476; and
- Update previous emissions for a low pressure (LP) tank flare (EPN FLARE-4) under 106.492.

Project will remove: EPN FLARE-3, WSAC3, HTR-3, FUG-4 (and incorporated in FUG-1).

The new refrigerated ethane tank will be equipped with a boil-off gas compressor and BOG condensing system that will recompress any emissions generated from filling or withdrawing liquids from the tank (FIN ET3-TK) and route them back to the tank; therefore, there will be no normal operation emissions from this tank. The new LP tank flare (EPN FLARE-4), which is dedicated to this tank, will control any related upset emissions. The loading arm purges will be increased due to increased number of ships and controlled by an existing flare (EPN FLARE- 1). A portable combustor or flare will be used to control MSS activities (authorized under 106.263 without registration).

An upstream/downstream analysis was conducted to determine potential emission increases from affected equipment because of this project. The existing Wet Surface Air Cooler (WSAC) system and Regeneration Heater system are expected to have an increase in actual emissions from the proposed project; therefore, emissions from these sources are included in the federal applicability analysis.

This project only involves an increase of the annual emissions from EPN FLARE-1 to accommodate increased annual loading arm purges. This registration is requesting increases in annual PTE of EPN FLARE-1 while the hourly emissions of this EPN are retained unchanged. There will be no changes to BACT and impact analysis, and not circumventing major NSR.

PBR registration 154999 should be incorporated into permit 20289 at the next amendment or renewal.

Permit by Rule Requirements - 30 TAC Chapter 106

General Requirements

Registration Fee Reference No.:	Application fee: 618849 / 582EA000528662
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Is this registration certified?	Yes
Is planned MSS included in the registration?	No
Are there affected NSR or Title V authorizations for the project?	Yes
<i>NSR and/or Title V authorizations:</i>	NSR 20289; O1339
If there are affected Title V authorizations, is monitoring being submitted as part of this registration?	Yes
Are there any upstream or downstream affects associated with this registration?	Yes
Are associated upstream/downstream emissions either included in the registration OR within current permitted limits with no changes to underlying air authorizations for the applicable units regarding BACT, health and environmental impacts, or other representations.	Yes*

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Are emissions for each PBR authorized facility less than the § 106.4(a)(1) limits?	Yes
Are total emissions from all sitewide PBR authorized facilities less than the § 106.4(a)(4) limits, OR has the site been subject to public notice requirements?	Yes
Are there permit limits on using PBRs at the site?	No
Is the facility subject to the NO _x Mass Cap and Trade Program?	No
Is the facility in compliance with all other applicable rules and regulations?	Yes
Does the registration include an appropriate PBR workbook, and has the workbook been verified?	Yes
Notes: WSAC system EPN: WSAC-1-2, Ethane Regeneration System EPN HTR-1-2 will not have an increase in potential to emit (PTE) emissions and are included as upstream affected emission sources in the federal permitting analysis.	

Federal Applicability

Does this project trigger a PSD or Nonattainment review?	No
Does the Major NSR applicability analysis include all associated upstream and/or downstream emissions?	Yes
Are there any applicable standards under NSPS, NESHAP, or NESHAP for source categories (MACT)?	Yes
If Yes, list applicable subparts:	NSPS A, Kb
Notes: Company represents that the site is an existing major stationary source for PSD and NNSR.	

Permit by Rule Requirements - Compliance Demonstrations

PBR 106.261 Facilities (Emission Limitations)

- (a)(1) The facilities or changes will be located > 100 ft from any off-site receptor.
- (a)(2) Total new or increased emissions authorized by this section are below 6.0 pounds per hour (lb/hr) and ten tons per year.
- (a)(3) NA
- (a)(4) There will not be any changes or additions of any existing abatement equipment.
- (a)(5) Visible emissions will not exceed the 5.0 % opacity limit.
- (a)(6)-(7) Notification and all required documentation have been submitted.
- (b) This registration is not for authorization for construction or to change a facility authorized under another section of this chapter or under standard permit.

Notes:

PBR 106.476 Pressurized Tanks or Tanks Vented to Control

Enterprise will construct a new refrigerated ethane tank. The tank emissions will be recompressed and sent back to the tank. Therefore, no normal operation emissions will be released from the refrigerated tank. Emission upsets from the tank will be controlled by the new LP tank flare (EPN FLARE-4).

Notes:

PBR 106.492 Flares

Smokeless gas flares which meet the following conditions of this section are permitted by rule:

Enterprise will comply with the operational requirements of this subsection.

(1) design requirements.

(1)(A) The flare shall be equipped with a flare tip designed to provide good mixing with air, flame stability, and a tip velocity less than 60 feet per second (ft/sec) for gases having a lower heating value less than 1,000 British thermal units per cubic foot (Btu/ft³) or a tip velocity less than 400 ft/sec for gases having a lower heating value greater than 1,000 Btu/ft³.

(1)(B) The flare shall be equipped with a continuously burning pilot or other automatic ignition system that assures gas ignition and provides immediate notification of appropriate personnel when the ignition system ceases to function. A gas flare which emits no more than 4.0 pounds per hour (lb/hr) of reduced sulfur compounds, excluding sulfur oxides, is exempted from the immediate notification requirement, provided the emission point height meets the requirements of §106.352(4) of this title (relating to Oil and Gas Production Facilities).

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(1)(C) A flare which burns gases containing more than 24 parts per million by volume (ppmv) of sulfur, chlorine, or compounds containing either element shall be located at least 1/4 mile from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the flare or the owner of the property upon which the flare is located.

(1)(D) The heat release of a flare which emits sulfur dioxide (SO₂) or hydrogen chloride (HCl) shall be greater than or equal to the following values:

For HCl $Q = 2.73 \times 10^5 \times \text{HCl}$

For SO₂ $Q = 0.53 \times 10^5 \times \text{SO}_2$

Where Q = heat release, British thermal units per hour, based on lower heating value

HCl = HCl emission rate, lb/hr

SO₂ = SO₂ emission rate, lb/hr

(2) operational conditions.

(2)(A) The flare shall burn a combustible mixture of gases containing only carbon, hydrogen, nitrogen, oxygen, sulfur, chlorine, or compounds derived from these elements. When the gas stream to be burned has a net or lower heating value of more than 200 Btu/ft³ prior to the addition of air, it may be considered combustible.

(2)(B) A flare which burns gases containing more than 24 ppmv of sulfur, chlorine, or compounds containing either element shall be registered with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7 prior to construction of a new flare or prior to the use of an existing flare for the new service.

(2)(C) Under no circumstances shall liquids be burned in the flare.

Notes:

Compliance History and Site Review

In accordance with 30 TAC Chapter 60, a compliance history report was reviewed on: **February 21, 2023**

Site rating / classification: **5.29 / Satisfactory** Company rating / classification: **4.15 / Satisfactory**

Has any action occurred on the basis of the compliance history or rating? **No**

Did the Regional Office provide site approval and confirm distances? **NA**

Project Emissions Increases

New / Modified Facilities (Registered) and Affected Facilities (Upstream / Downstream)			Project Emissions Increases (tpy)							
EPN	FIN	Permit No.	VOC	NO _x	CO	PM	PM ₁₀	PM _{2.5}	SO ₂	Other
FLARE-4	FLARE-4	154999	0.17	0.86	3.44	-	-	-	0.04	
FLARE-1	FLARE-1	154999	0.01	0.22	0.89	-	-	-	0.01	
FUG-1	FUG-1	154999	1.70	-	-	-	-	-	-	
HTR-1	HTR-1	20289	0.30	1.40	3.36	0.42	0.42	0.42	0.08	
HTR-2	HTR-2	20289	0.30	1.40	3.36	0.42	0.42	0.42	0.08	
MSS Activities	MSS Activities	106.263 (unregistered)	0.15	1.10	4.39	-	-	-	-	
WSAC1	WSAC1	20289	-	-	-	2.49	1.19	<0.01	-	
WSAC2	WSAC2	20289	-	-	-	2.49	1.19	<0.01	-	
Total Project Emissions Increases			2.62	4.99	15.44	5.82	3.21	0.85	0.21	

Project emission increases for existing sources are based on the permitted PTE as authorized in NSR 20289 with a zero baseline and assumes the anticipated increases will be equal to the currently permitted emissions for these sources.

106.261(a)(2) Emissions

Chemical	Criteria Pollutant Designation	CAS No. (optional input)	Emission Threshold (lb/hr)	Emission Threshold (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Meets Threshold?
Propane	VOC		6.00	10.00	1.08E-03	1.82E-02	Yes
Carbon Monoxide	CO		6.00	10.00	-	1.66E+00	Yes
Nitrogen Oxides	NO _x		6.00	10.00	-	4.17E-01	Yes
Sulfur Dioxide	SO ₂		6.00	10.00	-	1.81E-02	Yes
Propylene	VOC		6.00	10.00	3.86E-01	1.69E+00	Yes

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Total 106.261/262 Combined Emissions

	Total Hourly Emissions (lb/hr)	Total Annual Emissions (tpy)
Total VOC Emissions:	3.87E-01	1.71E+00

Emission Summary

EPN / Emission Source	VOC		NOx		CO		PM ₁₀		PM _{2.5}		SO ₂		Other		
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	
New Emission															
FLARE-1 / Loading Arm Purges	-	0.01	-	0.22	-	0.89					-	<0.01			
FUG-1 / Fugitives	0.39	1.70													
Updated Emissions															
FLARE-4 / LP Tank Flare (pilot and sweep gas)	0.04	0.17	0.20	0.86	0.78	3.44					<0.01	0.04			
TOTAL EMISSIONS (TPY):		1.88		1.08		4.35						0.04			
MAXIMUM OPERATING SCHEDULE:			Hours/Day			Days/Week			Weeks/Year			Hours/Year			8,760



February 27, 2023
Date

Michael Partee

Section Manager
Michael Partee

March 3, 2023
Date

Project Reviewer
James Qu, P.E.