

Permit by Rule (PBR) Registration Technical Review

Company:	MHBA CB, L.L.L.P.	Registration No.:	177469
Nearest City:	Alvin	Project No.:	379482
County:	Brazoria	Project Type:	Initial
Project Reviewer:	Celine Rosales	Regulated Entity No.:	RN106398795
Unit Name:	MHBA Chocolate Bayou Plant	Customer Reference No.:	CN605732577
PBR No(s).:	106.261, 106.262	Project Received Date:	September 6, 2024
Physical Location:	Located On Fm 2917 Approximately Eight Miles South Of The Intersection Of Texas Highway 35 And Fm 2917 In Brazoria County Texas		

Project Overview / Process Description

MHBA CB L.L.L.P. owns and operates the MHBA Chocolate Bayou Plant located in Alvin, Brazoria County, Texas. The chemical plant is currently authorized under NSR Permit No. 8372 and Title V Permit No. O2320. The MHBA Chocolate Bayou Plant produces Methylthio Hydroxy Butanoic Acid (MHBA), a supplement in animal feeds.

MHBA CB L.L.L.P. seeks to authorize emissions associated with new fugitive components under PBRs 106.261 and 106.262. These new components are a result of adding a process safety valve to exchanger 44E28. The piping changes will not result in increased capacity, production or throughput. The only project related changes in emission rates will result from the installation of the new piping fugitive components represented in this registration.

This PBR should be incorporated into NSR Permit No. 8372 upon the next renewal or amendment.

Permit by Rule Requirements - 30 TAC Chapter 106

General Requirements

Registration Fee Reference No.:	Application fee: 720260 / 582EA000624427
Is this registration certified?	Yes
Is this an APWL site?	No
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 Permit No. 8372; Title V O2320
If there are affected Title V authorizations, is monitoring being submitted as part of this registration?	No
Are there any upstream or downstream affects associated with this registration?	No
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.	NA
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, site has been to public notice for NSR Permit No. 8372.
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 NOx emissions with project.
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

Federal Applicability

Does this project trigger a PSD or Nonattainment review?	No
Does the Major NSR applicability analysis include all associated upstream and/or	

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downstream emissions?	NA
Are there any applicable standards under NSPS, NESHAP, or NESHAP for source categories (MACT)?	Yes
If Yes, list applicable subparts:	MACT A, H

Permit by Rule Requirements – Compliance Demonstrations

PBR 106.261/262 Facilities (Emission Limitations / Emission and Distance Limitations)

- The emission point(s) associated with the facilities or changes to facilities are located at least 100 ft (**Actual: 3,000 ft**) from the nearest off-site receptor.
- The total new or increase emissions will comply with the applicable hourly and annual emission limits as represented in the table below.
- Any facilities handling chemicals included in §106.262(a)(4) will be > 300 ft (**Actual: 3,000 ft.**) from the nearest property line and > 600 ft (**Actual: 3,000 ft.**) from any off-site receptor and the cumulative amount of any of the listed chemicals resulting from one or more authorizations under this section will be < 500 pounds (**Actual: 57.06 lbs.**) 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).
- There are no changes to or addition of any pollution abatement equipment.
- Visible emissions to the atmosphere, from any point or fugitive source, do not exceed 5.0 percent opacity in any six-minute period.
- This registration does not authorize construction or changes to a facility authorized under another section of this chapter or under standard permit.

Compliance History and Site Review

In accordance with 30 TAC Chapter 60, a compliance history report was reviewed on:	September 13, 2024
Site rating / classification: 0.00 / High	Company rating / classification: 0.00 / High
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

106.261(a)(3) Emissions

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)	Meets Threshold ?
Dimethyl Sulfide	VOC		75-18-3	1	4.38	0.93E-05	8.47E-05	Yes
Dimethyl Disulfide	VOC		624-92-0	1	4.38	6.08E-05	2.66E-04	Yes

106.262(a)(2) Distance

Distance to nearest off-plant receptor (feet):	3000
K value:	8

106.262(a)(2) Emissions – Table 262

Chemical	Criteria Pollutant Designation	CAS No. (optional input)	L Value (mg/m ³)	E, maximum Hourly Emission Threshold (lb/hr)	Actual Emission Threshold (tpy)	Actual Hourly Increases (lb/hr)	Actual Annual Increase (tpy)	Meets Threshold?
Acetone	VOC	67-64-1	590	6.00E+00	5.00E+00	1.63E-04	7.12E-04	Yes
Benzene	VOC	71-43-2	3	3.75E-01	1.64E+00	7.21E-07	3.16E-06	Yes
Methyl Mercaptan	VOC	74-93-1	0.2	2.50E-02	1.10E-01	4.68E-05	2.05E-04	Yes

106.262(a)(2) Emissions – 1997 ACGIH Guide

Chemical	Criteria	CAS No.	L Value	E,	Actual	Actual	Actual	Meets
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	Pollutant Designation	(optional input)	(mg/m ³)	maximum Hourly Emission Threshold (lb/hr)	Emission Threshold (tpy)	Hourly Increases (lb/hr)	Annual Increase (tpy)	Threshold?
Hydrogen cyanide	Other	74-90-8	5	6.25E-01	2.74E+00	1.52E-04	6.64E-04	Yes
Acetic acid	VOC	64-19-7	25	3.13E+00	5.00E+00	1.55E-05	6.81E-05	Yes
Formic acid	VOC	64-18-6	9.4	1.18E+00	5.00E+00	6.47E-05	2.84E-04	Yes
Methyl isobutyl ketone	VOC	108-10-1	205	6.00E+00	5.00E+00	1.88E-04	8.25E-04	Yes
Methanol	VOC	67-56-1	262	6.00E+00	5.00E+00	2.14E-06	9.37E-06	Yes

Total 106.261/262 Combined Emissions

	Total Hourly Emissions (lb/hr)	Total Annual Emissions (tpy)
Total VOC Emissions:	5.61E-04	2.46E-03
Total HCN Emissions:	1.52E-04	6.64E-04

Emission Summary

EPN / Emission Source	VOC		NOx		CO		PM ₁₀		PM _{2.5}		SO ₂		HCN	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
MHBA-FUG / Fugitives	<0.01	<0.01	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01
TOTAL EMISSIONS (TPY):	--	<0.01	--	--	--	--	--	--	--	--	--	--	--	<0.01
MAXIMUM OPERATING SCHEDULE: Hours/Year														8,760

Celine Rosales

09/19/2024

Celine Rosales
Permit Reviewer
Rule Registration Section

Michael Partee

09/20/2024

Michael Partee, Manager
Rule Registrations Section
Air Permits Division