

Permit by Rule (PBR) Registration Technical Review

Company:	Blue Cube Operations LLC	Registration No.:	179161
Nearest City:	Freeport	Project No.:	388866
County:	Brazoria	Project Type:	Initial
Project Reviewer:	Camryn Appert	Regulated Entity No.:	RN108772245
Unit Name:	Blue Cube Operations	Customer Reference No.:	CN604930784
PBR No(s).:	106.262	Project Received Date:	February 13, 2025
Physical Location:	2301 N Brazosport Blvd		

Project Overview / Process Description

Blue Cube Operations LLC (Blue Cube) owns and operates Chlorine 5 Plant located in Brazoria County, Texas. The site is currently authorized under various NSR permits, Title V permit O2202, and various Standard Permits and PBRs. This registration will be incorporated into NSR permit 4022 at the next amendment or renewal.

With this registration, Blue Cube is authorizing the installation of new fugitive components at the chlorine plant fugitive area A13FU7 under PBR 106.262. The new fugitive components are associated with piping changes to be implemented during upcoming turnaround activities.

- Reroute piping to reduce strain on the process system and prevent possible back pressure scenario into the tanks. This project re-routes an existing vent pipeline in a more direct route to an existing scrubber (EPN A13SV3, NSR permit 4022) to alleviate potential process safety concerns. This vent stream is already permitted to go to this control device. This change does not change any composition or flows upstream or downstream of the process.
- Add valve to prevent liquid overflow scenario in the A13FU7 fugitive area, which would cause a release from the pressure relief devices. The common header will be split into low- and high-pressure headers to allow the prevention of overflow.

There will be no impact on the central wastewater treatment facilities or the solid waste facilities. The project will have no upstream or downstream impacts.

Permit by Rule Requirements - 30 TAC Chapter 106

General Requirements

Registration Fee Reference No.:	Application fee: 749503 / 582EA000651636
Is this registration certified?	Yes
Is this an APWL site?	Yes*
<i>*This project occurs within an Air Pollutant Watch List area (APWL1201) but does not include any increases or decreases of any pollutant of concern for that area (arsenic, cobalt, nickel or vanadium).</i>	
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 4022 and Title V O2202
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? NSR permit 4022 has been to public notice.	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?	Yes**
<i>**There are no NO_x emissions associated with this project.</i>	
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

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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?	NA
Are there any applicable standards under NSPS, NESHAP, or NESHAP for source categories (MACT)?	No

Permit by Rule Requirements - Compliance Demonstrations

PBR 106.262 Facilities (Emission and Distance Limitations)

- (a)(1) The facilities or changes will be located **(Actual: >2,000 ft)** from any off-site receptor.
- (a)(2) Total new or increased emissions authorized by this section are below E lb/hr, as determined using the equation $E = L/K$, and 5 tpy.
- (a)(3) Notification and all required documentation have been submitted.
- (a)(4) Any facilities handling chemicals included in §106.262(a)(4) will be **> 300 ft** from the nearest property line and **> 600 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** 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).
- (a)(5) There will not be any changes or additions of any existing abatement equipment.
- (a)(6) Visible emissions will not exceed the 5.0 % opacity limit.
- (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.

Compliance History and Site Review

In accordance with 30 TAC Chapter 60, a compliance history report was reviewed on:	February 18, 2025
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

106.262(a)(2) Distance

Distance to nearest off-plant receptor (feet):	2000
K value:	14

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

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?
Chlorine	Other	7782-50-5	1.5	1.07E-01	4.69E-01	8.00E-02	3.52E-01	Yes

Note: The 106.262 emissions include increases only.

Emission Summary

EPN / Emission Source	VOC		NOx		CO		PM ₁₀		PM _{2.5}		SO ₂		Chlorine	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
A13FU7 / Process Area Fugitives	--	--	--	--	--	--	--	--	--	--	--	--	0.08	0.35
TOTAL EMISSIONS (TPY):														0.35
MAXIMUM OPERATING SCHEDULE:			Hours/Day		Days/Week		Weeks/Year		Hours/Year		8,760			

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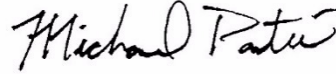
Project No. 388866



March 5, 2025

Date

Ms. Camryn Appert
Permit Reviewer
Rule Registration Section



March 6, 2025

Date

Michael Partee, Manager
Rule Registrations Section
Air Permits Division