



Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	02/06/2024	
Media Program:	Air	
Regulatory Program(s)	Title V, NESHAP	
Company Name:	OCI Beaumont, LLC	
Facility Name:	OCI Beaumont	
Facility Physical Location:	5470 North Twin City Highway (Lat 30.017336, Long -94.035029)	
(city, state, zip code)	Nederland, TX 77627	
Mailing address:	5470 North Twin City Highway	
(city, state, zip code)	Nederland, TX 77627	
County/Parish:	Jefferson County	
Facility Phone Number	409-723-1966	
Facility Contact:	Lisa Anderson	Senior Environmental Specialist
	Lisa.anderson@oci-global.com	
FRS Number:	110070071770	
Identification/Permit Number:	RN102559291 / Title V – O1645; NSR – 901; GHGPSDTX50	
Media Identifier Number:	AFS 36-0042-3792	
NAICS:	325199 - All Other Basic Organic Chemical Manufacturing	
SIC:	2869 – Industrial Organic Chemicals	
Personnel participating in inspection:		
Kenneth R. McPherson	EPA Region 6 ECDAT	Life Scientist
Justin Chen	EPA Region 6 ECDAT	Environmental Engineer
Ben Donaldson	EPA Region 6 ECDAT	Environmental Engineer
Dan Hoyt	EPA OECA AED	Environmental Engineer
Nathan Hicks	EPA OECA AED	Physical Scientist
Phil Myers, PhD	EPA NEIC	Mechanical Engineer
Richard Helmich, PhD	EPA NEIC	Senior Chemist
Zach Adamson	OCI-Beaumont	Plant Director
Lisa Anderson	OCI-Beaumont	Senior Environmental Specialist
Brian Lucas	OCI-Beaumont	Health, Safety and Environment Manager
EPA Lead Inspector Signature/Date		
	Kenneth R. McPherson	Date
Supervisor Signature/Date		
	James Leathers	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA inspectors Kenneth McPherson (EPA Region 6, “Region 6”), Justin Chen (Region 6), Ben Donaldson (Region 6), Dan Hoyt and Nathan Hicks (EPA Office of Enforcement and Compliance Assurance “OECA”) accompanied by Philip Myers and Richard Helmich (National Enforcement Investigations center, “NEIC”) arrived at the OCI Beaumont facility (“Facility”) in Nederland, Texas at 13:18 on February 6, 2024, for an unannounced inspection. The EPA inspectors held an opening conference with OCI Beaumont LLC (OCI Beaumont) representatives Zach Adamson, Plant Director; Lisa Anderson, Senior Environmental Specialist; and Brian Lucas, Health, Safety, and Environment Manager. Inspector Chen presented his credentials to Zach Adamson and Lisa Anderson, while Inspector McPherson informed them that we were conducting an EPA inspection to evaluate potential sources of excess emissions using EPA’s Geospatial Measurement of Air Pollution (“GMAP”) vehicle and to evaluate compliance with the Facility’s Title V Air Permit and the Clean Air Act. The scope of the inspection was a partial compliance evaluation (“PCE”). This inspection occurred as part of a multi-scale monitoring project in the Beaumont-Port Arthur, Texas area. Photographs and videos taken during the inspection can be found in Appendix 1 and 2, respectively. The sign-in sheet for the opening conference is attached as Appendix 3.

FACILITY DESCRIPTION

OCI Beaumont is a chemical manufacturing Facility that operates under Clean Air Act (“CAA”) Title V Permit Number O1645 issued on January 18, 2023. OCI Beaumont operates an integrated ammonia and methanol production complex located on a 62-acre site at the Beaumont Works Industrial Park (“BWIP”) south of Beaumont, Texas on the Neches River. Other facilities at the BWIP include Dow Beaumont Aniline and Jefferson Terminal South. Established in the 1960’s, OCI Beaumont acquired the Facility in 2011. The current permitted annual production is 912,500 metric tons of methanol and 355,875 metric tons of anhydrous ammonia. The Facility has 234 employees, including contractors, and operates 8760 hours per year. The primary feedstock for the methanol plant is natural gas which is combusted with recycle streams (process fuel gas) from various units to produce Syngas. The Syngas is converted to methanol in the reactors, and then refined in four distillation columns to produce the final methanol product, hydrogen gas and a gaseous recycle stream. Methanol is shipped via the docks or pipeline to various customers. The hydrogen gas is sent to the ammonia plant where it is purified to remove the organic components (which are recycled to the fuel gas system of the reformers), and then combined with nitrogen in a converter reactor to form ammonia. The ammonia is condensed, purified, depressurized for additional cooling, and then shipped as liquid ammonia from the ammonia refrigeration system. The methanol line contains two storage tanks with a combined storage capacity of 42,000 metric tons, a crude methanol surge tank, refined receiver plant, storage tank scrubber, and crude tank scrubber. The ammonia line consists of the ammonia unit, four combustion flares, two process heater/furnaces, process recovery units, and two refrigerated ammonia storage tanks with a combined storage capacity of 33,000 metric tons.

Section II – OBSERVATIONS

At 14:31 on February 6, 2024, we entered the Facility to conduct GMAP surveillance and to identify and observe emission sources. The NEIC GMAP vehicle was driven by Inspector Helmich, and the instruments were operated by Inspector Myers. I was present in the GMAP vehicle observing the survey. OCI Beaumont representatives Lisa Anderson and Brian Lucas were present in a lead company vehicle, guiding the GMAP vehicle. The meteorological conditions during the inspection consisted of a partly cloudy sky, winds from the north/northwest at 7 mph, temperature of 66o F, and a relative humidity of 62%. Inspectors Hoyt and Hicks followed the GMAP in a Data Acquisition in Real Time (“DART”) mobile air monitoring system equipped vehicle. Inspectors Chen and Donaldson followed the DART equipped vehicle in a support vehicle. The GMAP vehicle, followed by the DART equipped vehicle and support vehicle, drove on all available Facility roads measuring air pollutant concentrations downwind of each of the process areas, if possible. A full report from the GMAP will be issued by NEIC on a later date.

At 14:56 on February 6, 2024, the GMAP vehicle detected an ambient methane (CH₄) plume of 4.0 parts per million (“ppm”) in the truck terminal south and west of the Methanol Shore Tanks Scrubber (“MSTS”) (EPN 35M). I used an infrared optical gas imaging (“OGI”) camera to observe the Methanol Shore Tanks (TFX-33 and TFX-34) and the MSTS. Using the OGI camera, I observed the MSTS releasing a plume of hydrocarbons emanating from a vent at the top of the unit (FLIR0009) [AOC 1]. I used the OGI camera in high-definition mode and observed the MSTS releasing a predominant plume of hydrocarbons lifting to the atmosphere from the MSTS vent, and a more disbursed plume of hydrocarbons drifting parallel to the ground from the MSTS vent in a northwest to southeast direction.

Per OCI Beaumont representatives Lisa Anderson and Brian Lucas, neither the Methanol Shore Tanks nor the MSTS should have methane in the product or in the demineralized makeup water used as scrubbing water, so they should not emit methane.

The GMAP survey of the Facility ended at 15:20 on February 6, 2024. The OCI Beaumont representatives left the inspection team as we continued GMAP surveillance of other facilities at the BWIP.

At 17:10 on February 6, 2024, we returned to the OCI conference room.

After departing the Facility, I requested and received the monitored MSTS operational parameters data provided by the Facility on February 20, 2024, that covered the period from August 16, 2023, to February 14, 2024.

After departing the Facility, I reviewed the Facility’s greenhouse gas Permit Number GHGPSDTX50 issued by the Texas Commission on Environmental Quality (“TCEQ”). Neither the MSTS nor the Methanol Shore Tanks were listed as components in the Facility’s greenhouse gas permit for allowable fugitive methane (CH₄) emissions [AOC 2]. This was supported through a review of the Facility’s CAA Title V Permit Number O1645 that lists the MSTS (EPN 35M) and Methanol Shore Tanks (EPN 35) as separate fugitive emissions sources from the Methanol Plant Fugitive Equipment (EPN MET/PRC247).

Section III – AREAS OF CONCERN

Inspectors McPherson, Chen, Donaldson, Hoyt, Hicks, Helmich, and Myers conducted an inspection closing conference at OCI Beaumont LLC / OCI Beaumont at 17:15 on February 6, 2024. Inspectors McPherson and Myers summarized the facility survey and presented their emissions observations, including the following Areas of Concern (“AOC”). The facility made no claims of confidential business information regarding the videos or documents provided. The facility was informed that copies of the videos would be made available to the facility following the inspection. We departed the Facility at 18:15, February 6, 2024.

AOC 1) EPA inspectors observed hydrocarbons containing methane being emitted from the Methanol Shore Tanks Scrubber (MSTS) vent. This indicates that either the methanol product or the scrubbing water source may be contaminated with methane, and that the MSTS may be operating with poor efficiency resulting in excess emissions. 40 CFR 63.6(e)(1)(i) requires air pollution control equipment to be operated in a manner consistent with safety and good air pollution control practices for minimizing emissions. 30 TAC 116.115(b)(2)(G) states that permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations.

AOC 2) EPA inspectors reviewed the OCI Beaumont LLC Green House Gas Permit Number GHGPSDTX50 (“Permit”), approved April 24, 2018, by TCEQ. The Permit replaced Permit Number PSD-TX-1334-GHG. Neither the MSTS nor the two Methanol Shore Tanks were identified as a components of the methanol plant process fugitive equipment (EPN MET-FUG247) in the Permit. This indicates that greenhouse gas emissions, including methane, from the MSTS and/or Methanol Shore Tanks may not be accounted for in OCI Beaumont’s maximum allowable emissions rates for methane in the Permit. OCI Beaumont representatives stated during the inspection that the methane should not be part of the MSTS emissions. There may be a problem with contamination of methane in either the methanol product, or the source water for the MSTS. 40 CFR 63.6(e)(1)(i) requires air pollution control equipment to be operated in a manner consistent with safety and good air pollution control practices for minimizing emissions. 30 TAC 116.115(b)(2)(F) states that the total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit. 30 TAC 116.115(b)(2)(G) states that permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations.

Section IV – FOLLOW UP

On February 19, 2024, EPA requested additional information relating to the operational parameters monitored and logged for the Methanol Shore Tanks Scrubber (M35). This information was received on February 26, 2025

On March 20, 2024, Inspector McPherson provided electronic copies of the videos recorded during the inspection to OCI Beaumont representative Lisa Anderson.

Section V – LIST OF APPENDICES

Appendix 1 – Video Log – OGI video taken 02/06/2024.

Appendix 2 – Opening and closing conference sign-in sheets.

Appendix 3 – Greenhouse Gas Permit No. GHGPSDTX50, dated 04/25/2018, selected pages.

Appendix 4 – Federal Operating Permit No. O1645, dated 01/18/2023, selected pages.

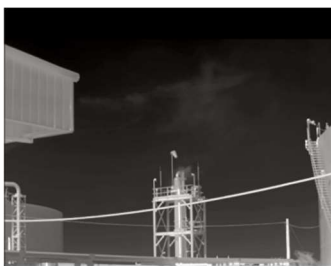
Appendix – 1 VIDEO LOG



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Video Log

Location: OCI Beaumont LLC / OCI Beaumont		
City: Nederland	County: Jefferson County	State: Texas



Video File Name: FLIR0009.mp4

Date of Video: 02/06/2024

Time of Video: 3:11 PM

Videographer: Kenneth McPherson

Web Source: <https://youtu.be/2NblGHQMduk>

Description: Methanol Shore Tanks Scrubber (EPN 35M) and Methanol Store Tanks (TFX-33 and TFX23). Visible volatile organic compound emissions observed from vent pipe at the top of of the Methanol Shore Tanks Scrubber.

Appendix – 2
OPENING AND CLOSING CONFERENCE SIGN-IN SHEETS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Opening and Closing Conference Sign-in Sheets

Location: OCI Beaumont LLC / OCI Beaumont		
City: Nederland	County: Jefferson County	State: Texas

110070071770 OCI Beaumont LLC Page 3 of 17

Opening/Pre-Inspection Meeting

Commence opening/pre-inspection meeting Time: 14:00

Name	Title	Representing	Telephone No.
Kenneth McPherson	Life Scientist	EPA R/L	214-665-6754
Exler Sawyer	EHS Specialist	Jefferson Terminal South	409-226-5509
Justin Allen	Env Engineer	EPA	214 665 2273
Ben Donaldson	Env. Eng.	EPA R/L	214 665 2476
Charles Grant	Env. Specialist	DOW	409-460-9500
Derrick Simpson	EHS Tech	Dow	337-532-6614
Daniel Hoyt	Env Eng	EPA	202 564 789
Richard Hennrich	Chemist	EPA	303-262-9149
Nathan Hicks	Physical Scientist	EPA	865-898-0343
Philip Myers	Mech. Engineer	EPA	(703) 2462-9301
Brian Lucas	HSE Manager	OCI	409.527.2574
Zach Adamson	Plant Director	OCI	319-850-3249
Lisa Anderson	Env. Specialist	OCI	409-733-1966

Conclude opening/pre-inspection meeting Time: 14:20

Initials / Date: MM / 03/06/2024



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Opening and Closing Conference Sign-in Sheets

Location: OCI Beaumont LLC / OCI Beaumont		
City: Nederland	County: Jefferson County	State: Texas

BPAGMAP2024 Facility Name/FRS OCI-Dow-Jefferson Page 11 of 77

Inspection Notes:

Closing conference DOW-OCI-Jefferson

Name	Title	Company	Email
Ben Donaldson	Env. Eng.	EPA R06	donaldson.benjamin@epa.gov
Philip Myers	Mech. Eng.	EPA	myers.philip@epa.gov
Richard Helmrich	Chemist	EPA	helmrich.richard@epa.gov
Daniel Hoyt	Env Eng	EPA	hoyt.daniel@epa.gov
Nathan Hicks	Phys. Scientist	EPA	Hicks.Nathan@EPA
Frank VanDuker	Process Eng	OCI	frank.vanduker@oci-global.co
Lisa Anderson	Env Specialist	OCI	lisa.anderson@oci-global.com
Brian Lucas	HSE Mgr.	OCI	Brian.Lucas@OCI-Global.com
Liz McIntosh	EHS Leader	Dow	Liz.mcintosh@dow.com
(phone) Ansley Godwin	Environmental Specialist	Dow	ansley.godwin@dow.com
(phone) Fran Falcon	Reg Environmental Leader	Dow	ffalcon@dow.com
John D. Fegia	Technical Advisor	Dow	jdfegia@dow.com
Derrick Singleton	EHS Tech	Dow	dsingleton@dow.com
Charles Grant	Env. Specialist	Dow	cgrant1@dow.com
Exter Sawyer	EHS Specialist	Jefferson	esawyer@jeffersonenergyco.com
GREG Killian	Operations Manager	Jefferson	RKillian@jeffersonenergyco.com
Justin Chen	Env Engineer	EPA	chenjustin@epa.gov

Initials / Date: BP, 7/6/24

Appendix – 3
GREENHOUSE GAS PERMIT NUMBER: GHGPSDTX50
Date 04/25/2018
(Select Pages)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Greenhouse Gas Permit Number: GHGPSDTX50

Location: OCI Beaumont LLC / OCI Beaumont		
City: Nederland	County: Jefferson County	State: Texas



**Texas Commission on Environmental Quality
Air Quality Permit**

A Permit Is Hereby Issued To
OCI Beaumont LLC
Authorizing the Construction and Operation of
Beaumont Plant
Located at Nederland, Jefferson County, Texas
Latitude 30° 1' 3" Longitude -94° 2' 2"

Permit: GHGPSDTX50

Issuance Date: April 25, 2018

Josephine Brannen Pennington
For the Commission

- Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)]¹
- Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120]
- Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
- Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
- Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
- Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
- Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and

Revised (10/12)

1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Greenhouse Gas Permit Number: GHGPSDTX50

Location: OCI Beaumont LLC / OCI Beaumont		
City: Nederland	County: Jefferson County	State: Texas

- operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)]¹
 9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC § 116.115(b)(2)(G)]
 10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
 11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
 12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
 13. **Emissions** from this facility must not cause or contribute to "air pollution" as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
 14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.¹

¹ Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Greenhouse Gas Permit Number: GHGPSDTX50

Location: OCI Beaumont LLC / OCI Beaumont		
City: Nederland	County: Jefferson County	State: Texas

Table 1. Emission Units

EPN	FIN	Description
STK41	RFM41	Reformer furnaces modified to have larger tube diameters
	PRFMHTR	New pre-reformer and pre-reformer heater unit
	SCRDCTBRN	New SCR unit duct burner for NOx control for all reformers and new pre-reformer heater
FL42	FL42	New reformer MSS flare (startup and shutdown) and vent from stripper tailgas tank
MET-FUG247	MET-FUG247	Methanol plant process fugitive equipment (new and existing)

I. GENERAL PERMIT CONDITIONS

A. Permit Expiration

1. As provided in 40 CFR §52.21(r), this PSD Permit shall become invalid if construction:
 - a. is not commenced (as defined in 40 CFR §52.21(b)(9)) within 18 months after the approval takes effect; or
 - b. is discontinued for a period of 18 months or more; or
 - c. is not completed within a reasonable time.
2. Pursuant to 40 CFR §52.21(r), EPA may extend the 18-month period upon a written satisfactory showing that an extension is justified.

B. Permit Notification Requirements

1. Permittee shall notify EPA Region 6 in writing and by electronic mail of the:
 - a. date construction is commenced, postmarked within 30 days of such date;
 - b. actual date of initial startup, as defined in 40 CFR §60.2, postmarked within 15 days of such date;
 - c. date upon which initial performance tests will commence, in accordance with the provisions of Special Condition VI not less than 30 days prior to such date.

C. Facility Operations

At all times, including periods of startup, shutdown, and maintenance, Permittee shall, to the extent practicable, maintain and operate the facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPA, which may include, but is not limited to, monitoring results, review of operating maintenance procedures and inspection of the facility.

D. Malfunction Reporting

1. Permittee shall notify EPA Region 6 by mail within 48 hours following the discovery of any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in GHG emissions above the allowable emission limits stated in Section II of this permit.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Greenhouse Gas Permit Number: GHGPSDTX50

Location: OCI Beaumont LLC / OCI Beaumont		
City: Nederland	County: Jefferson County	State: Texas

III. ANNUAL EMISSIONS LIMITATIONS

Table 2. Annual Emission Limits (4/18)

EPN	Description	GHG	Mass Basis TPY ¹	TPY ^{1,2,3} CO ₂ e	BACT Limits & Conditions
STK 41	Reformer furnaces, preheater, and SCR duct burner	CO ₂	1,173,573	1,178,593	1. Stack temperature to be monitored and not to exceed 422°F on an hourly basis, using SCR. Condition IV.2.k 2. Reformer net thermal efficiency 88% based on initial tests. Condition IV.2.l 3. Methanol output BACT limit of 33MMBtu (LHV)/MT on a 12 month rolling average (excluding fuel to the SCR burner)
		CH ₄	59.34		
		N ₂ O	11.87		
FL42	Reformer MSS flare	CO ₂	16,721	23,417	1. Use only for startup, shutdown, and maintenance activities, and for the stripper tails tank vent. Condition IV.3 2. Meet 40 CFR 60.18 requirements and efficiency of 99%
		CH ₄	265.82		
		N ₂ O	0.17		
MET-FUG247	Methanol plant fugitives	CO ₂	4.20 ⁵	304	Work practice standards as noted in Special Condition IV.4
		CH ₄	12.00 ⁵		
	Totals ⁴	CO ₂	1,190,298	1,202,314	
		CH ₄	337.16		
		N ₂ O	12.29		

1. Compliance with the annual emission limits (tons per year) is based on a 12-month rolling total.
2. The TPY emission limits specified in this table are not to be exceeded for this facility and include emissions from the facility during all operations and include MSS activities. This total is rounded off for estimation purposes to two significant figures.
3. Global Warming Potentials (GWP): CO₂ = 1, CH₄ = 25, N₂O = 298
4. Totals are given for informational purposes only and do not constitute emission limits.
5. Emissions updated to be consistent with the records required by 30 TAC §116.164(b).

IV. SPECIAL PERMIT CONDITIONS

A. Emission Unit Work Practice Standards, Operational Requirements, and Monitoring

1. Fuel for Reformers and Pre-reformer Heater and Flare

- a. Fuel to all combustion units identified in the permit shall use only pipeline natural gas and/or plant process fuel gas.

Appendix – 4
FEDERAL OPERATING PERMIT NUMBER: O1645
Date 01/18/2023
(Select Pages)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Federal Operating Permit Number: O1645

Location: OCI Beaumont LLC / OCI Beaumont		
City: Nederland	County: Jefferson County	State: Texas

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
OCI Beaumont LLC

AUTHORIZING THE OPERATION OF
OCI Beaumont
All Other Basic Organic Chemical Manufacturing

LOCATED AT
Jefferson County, Texas
Latitude 30° 1' 3" Longitude 94° 2' 2"
Regulated Entity Number: RN102559291

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O1645 Issuance Date: January 18, 2023

A handwritten signature in black ink, appearing to read "E. Chamallor", is written over a horizontal line.

For the Commission

Renewal- Effective Page i



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Federal Operating Permit Number: O1645

Appendix 4

Location: OCI Beaumont LLC / OCI Beaumont		
City: Nederland	County: Jefferson County	State: Texas

Major NSR Summary Table

Permit Numbers: 901 and PSDTX1334			Issuance Date: March 20, 2019				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements Special Condition/Application Information	Recordkeeping Requirements Special Condition/Application Information	Reporting Requirements Special Condition/Application Information
			lbs/hour	TPY (4)			
Methanol Plant							
STK-41	Reforming Furnaces and Pre-Reformer Fired Heater	NO _x	18.00	79.35	2, 18, 19, 20, 29	2, 18, 19, 20, 29	2, 18, 19
		NO _x (MSS)	152.00	--			
		CO	218.56	476.48			
		VOC	12.13	52.87			
		SO ₂	1.26	5.47			
		PM	16.76	73.04			
		PM ₁₀	16.76	73.04			
		PM _{2.5}	16.76	73.04			
35	Methanol East and West Shore Tanks	NH ₃	19.90	57.77	2, 9, 18, 25	2, 3, 9, 18, 25	2, 18
		VOC	7.53	7.96			

Renewal- Effective Page 72



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Federal Operating Permit Number: O1645

Location: OCI Beaumont LLC / OCI Beaumont		
City: Nederland	County: Jefferson County	State: Texas

Major NSR Summary Table

Permit Numbers: 901 and PSDTX1334					Issuance Date: March 20, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recording Requirements	Reporting Requirements
			lbs/hour	TPY (4)			
35M	Shore Tank Scrubber MSS	VOC	82.66	8.43	2, 9, 22, 23, 25	2, 9, 21, 22, 23, 25	2
FL42	Reformer Flare	NO _x	0.23	0.54	11	11	
		CO	1.48	2.63			
		VOC	4.22	3.70			
		SO ₂	0.01	0.01			
FL42M	Reformer Flare (MSS)	NO _x	591.03	4.17	11	11, 21	
		CO	5067.54	35.79			
		VOC	50.74	0.41			
45	Methanol Plant Flare	NO _x	0.06	0.28	2, 11	2, 11	2
		CO	0.27	1.16			
		VOC	0.01	0.02			
		SO ₂	0.01	0.01			

Renewal - Effective Page 73



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Permit Numbers: 901 and PSDTX1334			Issuance Date: March 20, 2019				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements Special Condition/Application Information	Recordkeeping Requirements Special Condition/Application Information	Reporting Requirements Special Condition/Application Information
			lbs/hour	TPY (4)			
MET-FUG247	Fugitives-Methanol Area (5)	VOC	1.30	5.67	2, 15	2, 15	2, 15
MEOHTRK	Methanol Truck Loading Fugitives (5)	VOC	1.78	1.08	2, 14	2, 14	2
Ammonia Plant							
FL321	Ammonia Plant Flare	NO _x	0.90	3.94	7	7	
		CO	1.85	8.09			
		VOC	0.10	0.40			
		SO ₂	0.01	0.01			
		NH ₃	2.59	11.34			

Renewal Effective Page 76