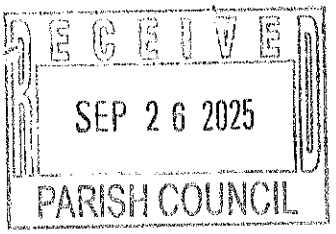
FAX COVER SHEET

TO	
COMPANY	
FAX NUMBER	19857832067
FROM	Belinda Sanchez
DATE	2025/09/26 13:40:50 PDT
RE	FW: Resending – St. Charles Appeal Documents 4 of 4

COVER MESSAGE



To: Board of Appeals
Attn: Michelle Impastato
Email: mimpastato@stcharlesgov.net

Subject: St. Charles Appeal – Supporting Documents

Dear Ms. Impastato,

Please find the attached documents related to the St. Charles Appeal for your review.

Please note that the following documents exceed fax size limits and are available upon request:

- Consent Decree, United States, et al. v. The Dow Chemical Company, et al., Civil Action No. 221-cv-114, E.D. La.
- LDEQ FGR Air Permit Application (EDMS 12642791)

Kindly confirm receipt of the documents at your earliest convenience.

If you have any questions or require further information, please feel free to contact Dow.

Thank you,

Belinda Sanchez
bzsanchez@dow.com

General Business

R-1349 (2/13) Page 1 of ___

LOUISIANA
DEPARTMENT of REVENUE

Pollution Control Equipment
Sales/Use Tax Exemption/Refund Application
Louisiana Revised Statute 47:301(10)(f)
Louisiana Department of Revenue (LDR)
Louisiana Department of Environmental Quality (DEQ)

Louisiana Department of Revenue
Office Audit Division
P.O. Box 3863
Baton Rouge, LA 70821

Received by LDR _____ Received by _____
Received by DEQ _____ Received by _____

PART 1: To be completed by applicant

Facility Name: **St. Charles Operations — Olefins 1 & 2 Plants**	LDR Sales Tax Account Number: **6033823-076DP**
Legal Name: **Union Carbide Corporation**	Refund Tax Periods: (mm/dd/yyyy to mm/dd/yyyy) _____ to _____

Physical Address of Facility	Mailing Address of Facility (if different from physical address)
Street Address: **355 Highway 3142**	Address: **P.O. Box 50**
City/State/Zip Code: **Hahnville, LA 70057**	City/State/Zip Code: **Hahnville, LA 70057**
Parish: **St. Charles**	Parish: **St. Charles**
Contact Person: **Nathan M. Peck**	Contact Person: **Nathan M. Peck**
Position: **US Tax Director**	Position: **US Tax Director**
Contact Email Address: **nmpeck@dow.com**	Contact Email Address: **nmpeck@dow.com**
Telephone Number: **(504) 715-9982**	Telephone Number: **(504) 715-9982**
Fax Number: **(979) 888-5010**	Fax Number: **(979) 888-5010**

Is this application for (choose one): ☐ Pre-Purchase Exemption ☐ Post-Purchase Refund Certification Only

Name of Project: **Olefins 1 & 2 Flare Gas Recovery Systems (FGRs) - Combined Application (EPN 11 / EPN 22B)**

Estimate the pounds of emissions per year to be reduced and/or the efficiency of the purchased equipment.	
Equipment Efficiency:	**75% recovery of normal flare flow**
Projected reduction in pounds of TRI:	**TRI reductions will occur to the extent listed substances previously flared**
Projected reduction in pounds of criteria air emissions	**NOx,CO,PM10,PM2.5,SO2:Subtotal~466,000lb/yr (conversion 1 ton=2,000 lb)**
Other (Explain):	**Reduces routine flaring consistent with permit and consent objectives**

Applicant Name: **Union Carbide Corporation** LDR Sales Tax Account Number: **6033823-076DP**

Pollution Control Equipment and Process Description

Instructions: Give a detailed description of the pollution control equipment with an explanation of the function of each component in the process. The description must include a process flow diagram which identifies the equipment location in the flow diagram. Please provide proof of a net decrease in the volume, toxicity or potential hazards of pollution and/or the citation of the federal or state environmental law or regulation which requires installation of the pollution control equipment.

Union Carbide Corporation (UCC) installed two Flare Gas Recovery Systems (FGRS) at St. Charles Operations to recover approximately 75% of the normal flow to the Olefins 1 and Olefins 2 process flares (EPN 11/EQT1020 and EPN 22B/EQT1041), thereby reducing routine flaring and associated emissions. The systems redirect flare header gas to a compressor package, followed by liquid separation and cooling. Recovered gas is routed to the plant fuel gas system for Olefins 1 & 2 furnaces or to the process quench system near the plant front end.

- The project achieves significant reductions in NOx, CO, PM, SO and VOCs (see Page 1 of this application), consistent with the facility's Part 70 Permit No. 2422-V9 (AI No. 2083) and LDEQ Authorization to Construct/Approval to Operate (see Exhibit B).

Primary Considerations:
1(a) The FGR systems are designed, constructed, and operated exclusively for pollution control by preventing combustion of recoverable hydrocarbons at the flares under normal operations.

1(b) The sole purpose of these systems is to comply with federal and state environmental regulations, specifically the EPA Consent Decree and LDEQ permit requirements mandating significant reductions in routine flaring and associated emissions.

1(c) Proof of net decrease in the volume, toxicity, and potential hazards of pollution is demonstrated by the DEQ Approval' s emissions summary (Before/After/Change) and by the FGR application's flare stream analyses and total flare emissions summaries (see Exhibits A and B).

1(d) The systems do not provide any independent economic benefit, product output, or production enhancement; all recovered gases are reused internally and any incidental fuel benefit is outweighed by the compliance-driven capital and cost to operate.

Secondary Considerations (Operational):
2(a) Under normal conditions, flare header gas is automatically routed to the FGR compressor system, followed by liquid separation and cooling, then directed to the fuel gas system or back to process quench - maintaining header pressure and minimizing routine flaring. (See Exhibit B for the compression -> separation -> cooling -> routing description.)

2(b) If recovery is unavailable (e.g., compressor trip, high header pressure, startup/shutdown, or maintenance), control logic reverts flow to the flare to preserve safe, continuous destruction capability; recovery resumes automatically when permissives return.

2(c) A defined header pressure band, compressor permissives, temperature limits, and KO drum level controls govern recovery vs. flare routing; alarms/interlocks prevent overpressure and liquid slugging while ensuring the flare's safety function is not impaired. (Exhibit A controls; Exhibit B confirms compression->separation->cooling sequence)

2(d) Suction/discharge KO vessels with automated drains prevent carryover; check and isolation valves prevent backflow and allow safe maintenance without compromising flare availability. (Exhibit A design details; Exhibit B separation step)

Attachments and Supporting Documentation:

Exhibit A: SCO Olefins FGR Application (LDEQ EDMS Document 12642791), which includes detailed process descriptions, flow diagrams, flare stream analyses, and total emissions summaries.

Exhibit B: LDEQ Authorization to Construct/Approval to Operate (AI No. 2083, Permit No. 2422-V9), which provides the official emissions reduction summary and regulatory context for the project.

Additional Notes: All primary considerations listed above are fully addressed in the attached Exhibits A and B. If any additional primary considerations are identified in the application or permit that are not explicitly covered here, they are incorporated by reference in the attached documentation.

Applicant Name: **Union Carbide Corporation** LDR Sales Tax Account Number: **6033823-076DP**

Major Equipment Components		
	Name/Type of Major Component	Description of Equipment and Use in Pollution Control Project
1	Flare Back Pressure Control System (BP-SYS-SC1)	Maintains header setpoint; routes gas to FGR or flare
2	Liquid Ring Compressors (GB-1500A/B/C)	Compress flare gas for recovery; enables downstream cooli
3	KO Drums & Liquid Separation (SC1)	Remove liquids before compression; prevent slugging and
4	Heat Exchangers (Inter/Aftercoolers) (SC1)	Cool compressed gas; maintain safe temps before routing
5	Fuel Gas & Quench Tie-ins (SC1)	Direct recovered gas to furnaces or process quench systen
6	Flare Backpressure Control (BP-SYS-SC2)	Maintains header setpoint; routes gas to FGR or flare for sa
7	FGR Compressors (SC2 train ID)	Compress flare gas for recovery; enables cooling and routi
8	KO Drums & Liquid Separation (SC2)	Remove liquids precompression; prevent slugging and prot
9	Inter/After?Coolers (SC2)	Cool compressed gas; maintain safe temps before routing.
10	Fuel Gas & Quench Tie-ins (SC2)	Direct recovered gas to furnaces or process quench.
11	Controls/Interlocks & Instrumentation (SC2)	Headerpressure band, permissives, alarms; preserves flare
12	Check/Isolation Valves (SC2)	Prevent backflow; allow maintenance without impairing flar
13	SC1/SC2 Power & Controls (FGR?Dedicated)	Motors/VFDs and MCC/power panel supplying FGR comp&a
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Attach additional sheets if necessary.

PART 2: Certification of Professional Engineer

I certify that I am familiar with the intent of Act No. 1019 of the 1991 Regular Session of the Louisiana Legislature and the rules and regulations in Title 47. I have reviewed the application and concur that all items listed are major and integral components of the pollution control device or system, as defined in the Act, and are used exclusively for pollution control. Furthermore, I certify that, either (1) a net decrease in the volume, toxicity or potential hazards of pollution will result from the installation of the device or system; or (2) installation is necessary to comply with federal or state environmental laws or regulations. This certification includes visiting the site, if applicable, and confirming that the equipment is installed properly and is meeting the efficacy for which the service is intended. I understand there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Name: Jennifer Wang	**Title: Senior Air Regulatory Expert**
Signature:	**Date:**
Louisiana Professional Engineer License Number:	

Applicant Name: **Union Carbide Corporation** LDR Sales Tax Account Number: **6033823-076DP**

PART 3: Certification of Applicant

This application must be signed by a corporate officer, board member or person having authority to bind the entity making the application. Verification of the representative's authority to sign on behalf of the entity may be required in the form of a properly executed Power of Attorney and Declaration of Representative.

Under the penalties of perjury, I declare that I am authorized to sign this application on behalf of the above named entity and, to the best of my knowledge, this application is true, correct, and complete.

Name: Nathan M. Peck	**Title: US Tax Director**
Signature: 	**Date: 09/25/2025**

Signed: 09/25/2025 10:39:18AM

PART 4: To be completed by DEQ

Acting as an authorized representative of the Secretary of the Louisiana Department of Environmental Quality, I certify that I have examined the application listed above, for the applicant _____(applicant name), and have determined that the pollution control device or system for which approval is indicated in Part 1 meets the efficacy requirement intended in Act 1019, and therefore, is eligible for the sales and use tax exemption under R.S. 47:301(10)(l). The original signed, certified application shall be submitted to the Louisiana Department of Revenue.

Name:	**Title:**
Signature:	**Date:**

PART 5: To be completed by LDR

Louisiana Department of Revenue approval

Based upon a review of the information submitted with this application, the request for ☐ **Exemption** ☐ **Refund** (choose one) is hereby approved for those items that have DEQ approval, as indicated in Part 1.

Name:	**Title:**
Signature:	**Date:**

Confidentiality: This application, including cost information, is considered a confidential document in accordance with Louisiana Revised Statute 47:1508. Information that pertains to pollution control devices and system costs will be maintained only at the Louisiana Department of Revenue.

Applicant Name: **Union Carbide Corporation** Applicant LDR Account Number: **6033823-076DP**

Project Name: _____ Refund Periods: _____

PURCHASED BY APPLICANT AND **NO** TAXES PAID TO VENDOR					State Tax Accruals	
Vendor Name	Vendor Invoice No	Delivery Date	Purchase Amount	Description	Period Tax Accrued	Tax Amount Accrued
		Page Total			Page Total	
		Total From Other Schedule A Pages			Total From Other Schedule A Pages	
		PURCHASES GRAND TOTAL			TOTAL SCHEDULE A REFUND REQUEST	

Applicant Name: **Union Carbide Corporation** Applicant LDR Account Number: **6033823-076DP**

Project Name: _____ Refund Periods: _____

PURCHASED BY APPLICANT AND TAXES PAID TO VENDOR					
Vendor Name	Vendor Invoice No.	Delivery Date	Purchase Amount	Description	4% State Tax Paid
		Page Total		Page Total	
		Total From Other Schedule B Pages		Total From Other Schedule B Pages	
		PURCHASES GRAND TOTAL		TOTAL SCHEDULE B REFUND REQUEST	

Applicant Name: **Union Carbide Corporation** Applicant LDR Account Number: **6033823-076DP**

Project Name: _____ Refund Periods: _____

PURCHASED BY CONTRACTOR(S) AND TAXES PAID TO VENDOR						
Contractor Name(s)	Vendor Name	Vendor Invoice No.	Delivery Date	Purchase Amount	Description	4% State Tax Paid
			Page Total		Page Total	
			Total From Other Schedule C Pages		Total From Other Schedule C Pages	
			PURCHASES GRAND TOTAL		TOTAL SCHEDULE C REFUND REQUEST	

Applicant Name: **Union Carbide Corporation** Applicant LDR Account Number: **6033823-076DP**

Project Name: _____ Refund Periods: _____

PURCHASED BY CONTRACTOR(S) AND **NO** TAXES PAID TO VENDOR						State Tax Accruals	
Contractor Name(s)	Vendor Name	Vendor Invoice No.	Delivery Date	Purchase Amount	Description	4% State Tax Paid	Period Tax Accrued
			Page Total		Page Total		
			Total From Other Schedule CA Pages		Total From Other Schedule CA Pages		
			PURCHASES GRAND TOTAL		TOTAL SCHEDULE CA REFUND REQUEST		

JOHN BEL EDWARDS
GOVERNOR

CHUCK CARR BROWN, PH.D.
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

AUTHORIZATION TO CONSTRUCT
APPROVAL TO OPERATE

Agency Interest (AI) No. 2083
Activity No. PER20210003

AGENCY INTEREST NAME: St. Charles Operations – Olefins 1&2 Plants
CURRENT PERMIT NO.: 2422-V9
CDS NO.: 2520-00001
COMPANY NAME: Union Carbide Corporation
PHYSICAL LOCATION:
355 Highway 3142
Hahnville, LA 70057
CONTACT:
Mr. Albert Holiday
Production Director
Union Carbide Corporation – St. Charles Operations
P.O. Box 50
Hahnville, LA 70057

DESCRIPTION: Union Carbide Corporation (UCC) requested an Authorization to Construct to begin construction of two *Flare Gas Recovery System* (FGRS) projects, which are anticipated to recover or recycle approximately 75% of the normal flow to the Olefins 1 Flare [Emission Point Number (EPN) 11, EQT1020] and Olefins 2 Flare [EPN 22B, EQT1041]. The two flares are currently authorized to operate under Part 70 Operating Permit No. 2422-V9, issued December 9, 2020, and PSD Permit No. PSD-LA-598(M-1), issued August 2, 2018. Emissions from Olefins 1 and 2 flares are permitted under FLARE CAP [Flare Cap (11 and 22B), GRP0165].

The FGRS will direct the normal flare flow to a compressor system instead of to the flares. Compression will be followed by liquid separation and cooling before the recovered flare gas is sent to either the fuel gas system for the Olefins 1 and 2 furnaces or routed back to the Olefins 1 and 2 process in the quench system near the front end of the plant. UCC anticipates a decrease in flare emissions as a result of recovering much of the gas that is normally flared.

ID NO.	DESCRIPTION	MAX OPERATING RATE OR TANK CAPACITY	OPERATING TIME
EQT1020	EPN 11 – Olefins 1 Flare	395.4 MM Btu/hr	8760 hr/yr
EQT1041	EPN 22B – Olefins 2 Flare	395.4 MM Btu/hr	8760 hr/yr

EMISSIONS SUMMARY
(Tons Per Year)

Pollutant	Before	After	Change
PM_{10}	23.27	18.73	- 4.54
$PM_{2.5}$	23.27	18.73	- 4.54
SO_2	2.11	2.05	- 0.06
NOx	251.54	129.33	- 122.21
CO	524.45	422.80	- 101.65
VOC	49.59	33.99	- 15.60

AUTHORIZATION TO CONSTRUCT
APPROVAL TO OPERATE

St. Charles Operations Site – Olefins 1&2 Plants
AI No. 2083
Union Carbide Corporation
Hahnville, St. Charles Parish, Louisiana

Construction and operation of the above referenced project are hereby approved under LAC 33:III.501.C.3 and LAC 33:III.511.

Approval of the project does not authorize the maintenance of a nuisance or a danger to public health and safety. Any appropriate permit revision reflecting the emission reduction shall be made no later than 180 days after commencement of operation and in accordance with the procedure of LAC 33:III.511.

Elliott B. Vega
Assistant Secretary
EBV: mat

4/22/11
Date