TECHNICAL REVIEW: AIR PERMIT BY RULE

Permit No.:	132678	***Company Name:***	Motiva Enterprises LLC	***APD Reviewer:***	Mr. David Reyna
Project No.:	235270	***Unit Name:***	Port Arthur Refinery	***PBR No(s).:***	106.261, 106.262

GENERAL INFORMATION			
Regulated Entity No.:	RN100209451	**Project Type:**	Permit by Rule Application
Customer Reference No.:	CN600124051	**Date Received by TCEQ:**	May 18, 2015
Account No.:	JE-0095-D	**Date Received by Reviewer:**	June 4, 2015
City/County:	Port Arthur, Jefferson County	**Physical Location:**	2555 Savannah Ave

CONTACT INFORMATION					
Responsible Official/ Primary Contact Name and Title:	Greg Lucchesi General Manager	**Phone No.:** **Fax No.:**	(409) 989-7001 (409) 989-7774	**Email:**	GREGORY.LUCCHESI@MOTIVAENT.COM
Technical Contact/ Consultant Name and Title:	Jesse Caillier Environmental Air Specialist	**Phone No.:** **Fax No.:**	(409) 989-7492 (409) 989-7108	**Email:**	JESSE.CAILLIER@MOTIVAENT.COM

GENERAL RULES CHECK	**YES**	**NO**	**COMMENTS**
Is confidential information included in the application?		X	
Is this registration certified?	X		
Is this an APWL site?		X	
Are there any upstream or downstream affects associated with this registration?		X	Jesse B. Callier, Environmental Specialist for Motiva Enterprises responded (June 8, 2015) that there are no upstream or downstream affects associated with this registration.
Is planned MSS included in the registration?		X	
Are there affected NSR or Title V authorizations for the project?	X		If yes, what is the number(s): NSR Permit No. 8804. The conditions and TRVs were reviewed this permit and showed no issues with the issuance of this PBR project.
Is each PBR > 25/250 tpy?		X	
Are PBR sitewide emissions > 25/250 tpy?		X	
Are there permit limits on using PBRs at the site?		X	
Is PSD or Nonattainment netting required?		X	The site is major but the project itself is below the significate trigger levels.
Do NSPS, NESHAP, or MACT standards apply to this registration?	X		Subpart UUU
Does NOx Cap and Trade apply to this registration?	X		
Is the facility in compliance with all other applicable rules and regulations?	X		

DESCRIBE OVERALL PROCESS AT THE SITE

The CRU4 has been continuously running the CCR Regenerator with low concentrations of oxygen (10.6%) in the chlorination zone which affects the extent of platinum dispersion. The inlet screen of the regenerator fouls over time due to dust particles and catalyst fines (typical for this process) increasing the differential pressure in the interzonal baffle between the burn and chlorination zone. The CRU4 is also running at Low Severity Low Coke, which can result in low oxygen concentration in the chlorination zone due to low air flow rate.

UOP, the unit designer, recommends 02 concentration of > 14-18 % in the chlorination zone for healthy platinum dispersion and oxy-chlorination of the catalyst. Continuous operation in low 02 concentration can cause platinum agglomeration leading to catalyst deactivation. Continuous low severity and low coke operation further expands this problem as the oxygen concentration is lower in the chlorination zone due to lower air flow rates. Moreover, as the CCR fouls the leakage rate of lower oxygen concentration gas from the burn zone to the chlorination zone also increases, further reducing the 02 concentration.

DESCRIBE PROJECT AND INVOLVED PROCESS

In order to maintain a high oxygen concentration in the chlorination zone, the facility is modifying the unit for low coke operation with a vent from the chlorination zone loop while also retaining normal coke-burning operations capabilities. The objective of this change is to improve the Regenerator operation so oxygen levels are higher during low severity operation and catalyst is protected from platinum agglomeration. This change will also allow the unit to be operated in White Burn Mode during low coke operation. As such, authorization under 30 TAC §106.261 is being requested for an increase in NOx, Sulfur Dioxide (s02) and Particulate Matter 2.5 (PM2.5). Also an increase Hydrogen Chloride, which has a limit value (L) less than 1 mg/m3 as reflected in Table 262 of 30 TAC §106.262. Therefore, authorization under 30 TAC §106.262 is being requested. Additionally, the change meets the requirements of 30 TAC §106.4.

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TECHNICAL SUMMARY - DESCRIBE HOW THE PROJECT MEETS THE RULES

PBR 106.261/262 Compliance Demonstration

- The emission point(s) associated with the facilities or changes to facilities are located at least 100 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.
- 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 opacity in any six-minute period.
- This registration is not for authorization for construction or to change a facility authorized under another section of this chapter or under standard permit.

PBR 106.261(2)

Air Contaminant	Emission Limit		Actual Emissions	
	Lb/hr	Tpy	lb/hr	tpy
NOx	6.00	10.00	0.04	0.19
SO2	6.00	10.00	0.03	0.14
PM2.5	6.00	10.00	<0.01	0.02

PBR 106.262

Air Contaminant	L	D	K	Emission Limit		Actual Emissions	
	mg/m^3	ft		lb/hr	Tpy	lb/hr	tpy
HCl	1	3000	8	0.125	5	0.01	0.02

COMMUNICATION LOG

Date	Time	Name/Company	Subject of Communication
7/2/15	10:17 am	Jesse.Caillier@motivaent.com	Additional information needed to complete review.
7/8/15	3:25 pm	Jesse.Caillier@motivaent.com	Submitted the needed information to complete review. A detailed email is attached to the permit application.
7/16/15	1:52 pm	Arely.Silva@tceq.texas.gov Chemical Section	Ms. Silva is currently reviewing Motiva for a permit amendment and found no issues with authorizing this PBR.

ESTIMATED EMISSIONS (1)

EPN / Emission Source	VOC		NOx		CO		PM_{10}		$PM_{2.5}$		SO_2		HCl	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	Tpy
SCRU4-2			0.04	0.19					<0.01	0.02	0.03	0.14	0.01	0.02
TOTAL EMISSIONS (TPY):				0.19						0.02		0.14		0.02

MAXIMUM OPERATING SCHEDULE:	Hours/Day		Days/Week		Weeks/Year		Hours/Year	8,760

Footnote: (1) The estimated emissions are for an increase to the SCRU4-2.

	TECHNICAL REVIEWER	PEER REVIEWER	FINAL REVIEWER
SIGNATURE:			
PRINTED NAME:	Mr. David Reyna	Mr. Joe Shine	Mr. Sam Short, Manager
DATE:	7/14/15	7/22/15	7/24/15