

TECHNICAL REVIEW: AIR PERMIT BY RULE

Permit No.:	79461	Company Name:	GE Oil & Gas Compression Systems, LLC	APD Reviewer:	Becky Vigil
Project No.:	282162	Unit Name:	Compression Systems Facility- Revision	PBR No(s).:	106.433, 106.103, 106.122, 106.121, 106.227, 106.183

GENERAL INFORMATION			
Regulated Entity No.:	RN104000393	Project Type:	Permit by Rule Application
Customer Reference No.:	CN604642769	Date Received by TCEQ:	February 26, 2018
City/County:	Houston, Harris County	Date Received by Reviewer:	February 28, 2018
Physical Location:	16250 Port Nw		

CONTACT INFORMATION					
Responsible Official/ Primary Contact Name and Title:	Mr. Torsten Wegner Plant Manager	Phone No.:	(713) 354-1217	Email:	TORSTEN.WEGNER@B HGE.COM
Technical Contact/ Consultant Name and Title:	Ms. Jennifer Kelley Us Air Lead	Phone No.:	(513) 502-4124	Email:	JENNIFERK.KELLEY@G E.COM

GENERAL RULES CHECK	YES	NO	COMMENTS
Is confidential information included in the application?		X	
Has the PBR fee been paid?	X		Receipt no. 582EA000282810.
Is this registration certified?	X		
Is this an APWL site?		X	
Are there any upstream or downstream affects associated with this registration?		X	
Is planned MSS included in the registration?	X		MSS is being claimed under 106.263.
Are there affected NSR or Title V authorizations for the project?		X	However, there is PBR Permit no. is 138711 which authorizes a heated parts washer under PBRs 106.183 and 106.453. When the totals of the two permits are combined the emissions are in compliance with 106.4.
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	
Do NSPS, NESHAP, or MACT standards apply to this registration?	X		MACT HHHHHH.
Does NOx Cap and Trade apply to this registration?		X	
Is the facility in compliance with all other applicable rules and regulations?	X		Company states that they will comply with Ch. 115.

DESCRIBE OVERALL PROCESS AT THE SITE
<p>GE Oil & Gas Compression Systems LLC owns and operates Compression Systems Facility, an engine assembly/overhaul facility located at 16250 Port Northwest Drive in Houston, Harris County. GE proposes to install an engine assembly cell, in addition to the current operations at the 16250 Port Northwest facility. The engine assembly line consists of raw materials, such as castings and frames, which are degreased and cleaned using equipment and processes previously authorized. Once cleaned and dried, the raw materials and other purchased subassemblies are sent to the engine assembly cell to make a new and functional engine. Once assembled the engines are tested in one of two test pads based on engine size (EPNs ENG1, ENG2). The testing is approximately four hours of setup and tear down with 4 hours maximum of testing, for a total of 8 hours a day of testing.</p> <p>Once assembly and testing has been completed, the engines are painted. Painting for all engines and various parts occurs during the workday in one paint booth (EPN PB-1). Engines are then ready for shipment to customers.</p>

DESCRIBE PROJECT AND INVOLVED PROCESS
<p>GE Oil & Gas Compression Systems, LLC has chosen to certify this project's emissions under rules 106.433 using a PI-7CERT and MSS is being claimed, not registered, under 106.263. The site is also authorized by PBRs, 106.103, 106.121, 106.122, 106.183, and 106.227. Rule compliance, calculation methodologies, emission calculations, and other supporting documentation have been provided by the company and can be found in the application. This information will be made available upon request by any regulatory agency/local program and is also available from the TCEQ Central File Room.</p> <p>The purpose of this revision is to update the existing paint operations and to add the engine testing. The site also has PBR permit, permit no. 138711.</p>

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TECHNICAL SUMMARY - DESCRIBE HOW THE PROJECT MEETS THE RULES

PBR 106.433 Surface Coating Facility Compliance Demonstration

The site is located in a nonattainment county, Harris County, and will comply with Ch. 115.

- (1) Metalizing is not being performed at this site.
- (2) Good housekeeping procedures will be practiced including:
 - (a) Spills are cleaned up immediately
 - (b) Booth and work area exhaust fans are operated during spray gun and equipment cleaning.
 - (c) All new and used coatings and solvents will be stored in closed containers. All waste coatings and solvents shall be removed from the site by an authorized disposal service or disposed of at a permitted on-site waste management facility.
- (3) No non-electric drying ovens are used.
- (4) There are no add-on controls used to reduce VOC emissions.
 - (a) The total annual VOC emission rate for all surface coating and/or stripping facilities at this site is **2.59 tpy VOC and 0.17tpy** of exempt solvents.
 - (b) The total hourly VOC emission rate for all surface coating and/or stripping facilities at this site is **5.10 lb/hr of VOCs and 0.81 lb/hr** of exempt solvents.
 - (c) The total maximum hourly emission rates of VOC and exempt solvents are greater than 0.25 lb/hr (**actual: 5.91 lb/hr**).
- (5) Opacity of visible emissions from new and existing surface coating facilities will not exceed 5.0%.
- (6) Surface coating operations are performed indoors/ in an enclosed booth.
 - (a) The proposed maximum hourly VOC emissions rate averaged over any continuous five-hour period is **3.07 lb/hr** and the proposed maximum weekly VOC emission rate is **103.70 lb/wk**.
 - (b) The minimum face velocity at the intake opening of each enclosed work area is **180 ft/min**. The stack is **73.05 feet** tall which is 1.5 X the building height.
 - (c) The type of filter used in the enclosed work area or booth is a dry filter with a **95%** particulate removal efficiency with the face velocity of **180 ft/min**.
- (7) N/A. Surface coating performed indoors/enclosed booth.
- (8) Records will be maintained at the plant site for the most recent 24 months. Records include:
 - (a) Material Safety Data Sheets for all coating materials and solvents.
 - (b) Data of daily coatings and solvent use and the actual hours of operation of each coating and stripping operation.
 - (c) A summary report for each month that represents actual hours of operation and emissions from each operation to include:
 - (i) pounds per hour
 - (ii) pounds per day
 - (iii) pounds per week
 - (iv) tons emitted from the site during the previous 12 months
 - (d) Company currently maintains a monthly report that shows examples of the method of data reduction including units, conversion factors, assumptions, and the basis of the assumptions used to estimate emissions.
- (9) A form PI-7 CERT was received to register the facility and certify the emissions.
 - The emissions were calculated on a total of 3 gal/hour and 1110 gal/year.
 - Because of the drying time required after paint application, it is not possible to perform more than one coating application per shift. Therefore, to be conservative, the maximum 5-hour average is calculated as the total emissions from one coating application divided by 5 hours (this process normally takes at least 6-8 hours).

106.263 Routine Maintenance, Start-Up and Shutdown of Facilities, and Temporary Maintenance Facilities-CLAIMED

MSS emissions being authorized is the engine's testing.

The highest hp for the engines being tested will not exceed 845 hp and the testing will operate for 340 hours/year, 4 hours/day.

COMMUNICATION LOG

Date	Time	Name/Company	Subject of Communication
3/5/2018	15:01	Mr. Domagala/ BHGE Cced: Mr. Wegner/ GE Oil & Gas Compression Systems, LLC Ms. Kelley/ GE Oil & Gas Compression Systems, LLC	Ms. Vigil emailed Mr. Domagala and requested: clarification on the painting operations operation schedule and provide a site wide 106.4 compliance demonstration for all PBRs authorized at the site- this site currently has 2 PBR permits and this project will make 3 permits.
3/8/2018	PM	Ms. Kelley/ GE Oil & Gas Compression Systems, LLC	Ms. Kelley contacted Ms. Vigil and left a voicemail with a request that Ms. Vigil contact her at her convenience.
3/9/2018	8:44 & 9:11	Ms. Kelley/ GE Oil & Gas Compression Systems, LLC	Ms. Vigil contacted Ms. Kelly. Ms. Kelley stated that this surface coating operation is to replace the surface coating operation is PBR permit no. 79461. Ms. Vigil stated that then the Company would like to do a revision to Permit no. 79461, Ms. Kelly stated yes. Ms. Vigil then asked if all other facilities and operation authorized under that permit will remain the

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			<p>same. Ms. Kelley confirmed that all other operations will remain the same.</p> <p>Ms. Kelley emailed Ms. Vigil and stated, "Thanks for the discussion today.</p> <p>To clarify, the application referenced is intended to be a revision of PBR permit # 79461 to only replace the surface coating operations of that authorization. All other representations remain the same."</p>
3/9/2018	12:36	Ms. Kelley/ GE Oil & Gas Compression Systems, LLC	Ms. Vigil emailed Ms. Kelley and stated, ". Please confirm the emission summary table below or provide an updated emission summary table. With this project the surface coating operation has been updated and the engine testing has been added so the new site wide total is 3.70 tpy."
3/12/2018	10:06	Ms. Kelley/ GE Oil & Gas Compression Systems, LLC	Ms. Kelley emailed Ms. Vigil and confirmed the emission summary table.

ESTIMATED EMISSIONS																	
EPN / Emission Source	VOC		NOx		CO		PM		PM ₁₀		PM _{2.5}		SO ₂		ES		
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	
NEW/REVISED EMISSIONS																	
PB-1/ Paint booth 1	5.10	2.59					0.33	0.12	0.33	0.12	0.33	0.12			0.81	0.17	
ENGTST1/ Engine Test Stand 1*	0.93	0.16	22.35	3.80	2.24	0.38	0.07	0.01	0.07	0.01	0.07	0.01	<0.01	<0.01	--	--	
ENGTST2/ Engine Test Stand 2*	0.93	0.16	22.35	3.80	2.24	0.38	0.07	0.01	0.07	0.01	0.07	0.01	<0.01	<0.01	--	--	
EXISTING/UNCHANGED EMISSIONS																	
HEAT1	0.01	0.01	0.03	0.13	0.03	0.11	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	--	--	
EVAP1	0.01	0.01	0.03	0.13	0.03	0.11	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	--	--	
EVAP2	0.01	0.01	0.03	0.12	0.03	0.10	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	--	--	
MART_L1	0.01	0.02	0.08	0.34	0.07	0.29	0.01	0.03	0.01	0.03	0.01	0.03	0.01	0.01	--	--	
MART_S1	0.01	0.01	0.02	0.08	0.02	0.07	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	--	--	
MART_S2	0.01	0.01	0.02	0.08	0.02	0.07	0.01	0.01	--	--	--	--	--	--	--	--	
TOTAL EMISSIONS (TPY):		2.98		8.48		1.51		0.22		0.22		0.22		0.05		0.71	
MAXIMUM OPERATING SCHEDULE :	Gallons/Hour						3			Gallons/Year			1110		Weeks/Year		50




*Engine testing emissions are being claimed under 106.263; however, is represented to demonstrate compliance with 106.4

SITE REVIEW/DISTANCE LIMIT	Y	N	Description/Outcome	Date	Reviewed by
Site Review Required?		x	A site review is not required for indoor/ enclosed painting operations.	March 5, 2018	Ms. Becky Vigil
PBR Distance Limits Met?	x				

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COMPLIANCE HISTORY					
In accordance with 30 TAC Chapter 60, a compliance history report was reviewed on: March 5, 2018					
The compliance period was from		March 5, 2012	to	March 5, 2018	
Site rating & classification? 0.00/ UNCLASSIFIED			Company rating & classification? 0.00/ UNCLASSIFIED		
If site was unsatisfactory, what action(s) occurred as a result? (i.e. changes to permit, reduced renewal period, etc.) N/A					
If the rating is 50<RATING<55, what was the outcome, if any, based on the findings in the formal report? N/A					
Is the permit recommended to be denied on the basis of compliance history or rating? No					
Has the permit changed on the basis of the compliance history or rating? No					

	TECHNICAL REVIEWER	PEER REVIEWER	FINAL REVIEWER
SIGNATURE:			
PRINTED NAME:	Ms. Becky Vigil	Ms. Britany Gilman	Mr. Samuel Short, Manager
DATE:	March 13, 2018	March 13, 2018	March 15, 2018