Permit by Rule (PBR) Registration
Technical Review

Company:	National Oilwell Varco, L.P.	**Registration No.:**	106552
Nearest City:	Fort Worth	**Project No.:**	378512
County:	Tarrant	**Project Type:**	Revision
Project Reviewer:	John Ma	**Regulated Entity No.:**	RN104220991
Unit Name:	Hydra Rig National Oilwell Varco Fort Worth Facility	**Customer Reference No.:**	CN602962334
PBR No(s).:	106.433, 106.512	**Project Received Date:**	August 15, 2024
Physical Location:	1020 Everman Pkwy		

Project Overview / Process Description
National Oilwell Varco, L.P. (NOV) owns and operates the Hydra Rig Facility, which produces equipment and instruments used in conjunction with oil field-related activities in Tarrant County, Texas.

With this registration, NOV intends to update sitewide emissions under 106.433 and 106.512. NOV has presented updated emissions calculations for painting operations based on current paint product organic, solvent, and solids contents. Other processes and equipment at the site are claimed under the following: comfort heating (§106.102), soldering brazing and welding (§106.227), abrasive cleaning (§106.452), and degreasing units (§106.454).

NOV is also including emissions for the cleaning of paint guns using low VOC solvents. Paint guns are cleaned with a low VOC thinner that is run through them and into process pots. The same thinner is used to clean both the pots and guns to reduce usage. Once spent, the thinner goes into a 55 Gallon drum for proper disposal. The operation occurs within each booth.

National Oilwell Varco's Hydra Rig Facility manufactures heavy equipment for the oilfield, natural gas processing and transportation industry. On-site production operations include the cleaning and assembly of parts, welding, testing, and painting. Two stationary diesel fired engines are used at the Hydra Rig Fort Worth Facility for testing equipment prior to delivery to a client. Each engine is rated at a maximum of 300 horsepower.

Paint booths consist of Booth C and Booths 4-1, 4-2, 4-3, 4-4. During spray painting operations, any doors and windows on the booths are closed. For the painting of some large equipment, folding doors can be opened to allow the entire equipment to fit into the enclosed space with a length of 100 ft. However, when painting is occurring the larger booth is fully enclosed and filtered. Intake air for the booths can be heated by direct-fired make-up air burners. These burners and an existing curing oven are fired with natural gas. Spray guns are used to apply the coatings. Paint emissions are vented through dry fabric filters prior to discharge to the atmosphere through stacks. The filters have been demonstrated to remove 99.83% of overspray, but only 98% is claimed for calculation purposes.

Permit by Rule Requirements - 30 TAC Chapter 106

General Requirements	
Registration Fee Reference No.:	**Application fee: 707592 / 582EA000612321**
Is this registration certified?	**Yes**
Is planned MSS included in the registration?	**No**
Are there affected NSR or Title V authorizations for the project?	**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? **Sitewide emissions provided and will meet 106.4 limits.**	**Yes**
Are there permit limits on using PBRs at the site?	**No**
Is the facility in compliance with all other applicable rules and regulations?	**Yes**
Notes:	

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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)?	**Yes**
If Yes, list applicable subparts:	**NSPS IIII / MACT ZZZZ**

Permit by Rule Requirements - Compliance Demonstrations

PBR 106.433 Surface Coat Facility

Surface coating or stripping facilities, excluding vehicle repair and refinishing shops, shall meet the following conditions of this section to be permitted by rule.

(1) Metalizing will not be authorized.

(2) All facilities covered by this section at a site shall implement good housekeeping procedures to minimize fugitive emissions, including the following.

(2)(A) All spills shall be cleaned up immediately.

(2)(B) The booth or work area exhaust fans shall be operating when cleaning spray guns and other equipment.

(2)(C) All new and used coatings and solvents shall 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) Drying or curing ovens shall either be electric or meet the following conditions:

(3)(A) The maximum heat input to any oven must not exceed 40 million British thermal units per hour (Btu/hr).

(3)(B) Heat shall be provided by the combustion of **sweet natural gas**.

(4) No add-on control equipment will be used to meet the emissions limits of this section. The total uncontrolled emissions from the coating materials (as applied) and cleanup solvents will not exceed the following for all operations:

(4)(A) 25 tons per year (tpy) of volatile organic compounds (VOC) and ten tpy of exempt solvents for all surface coating and stripping operations covered by section at a site; **VOC & ES Emission Rates: 20.84tpy VOC; 6.37tpy exempt solvents**

(4)(B) 30 pounds per hour (lb/hr) of VOC and 5.0 lb/hr of exempt solvents for all surface coating and stripping operations covered by this section at a site; **VOC & ES Emission Rates: 16.83lb/hr VOC; 5.00lb/hr exempt solvents**

(4)(C) if emissions are less than 0.25 lb/hr of VOC and/or exempt solvents, a facility is exempt from the remaining requirements of this section, including paragraphs (5)-(9) of this section.

(5) Opacity of visible emissions shall not exceed 5.0%. Compliance shall be determined by the United States Environmental Protection Agency Method 9 averaged over a six-minute period.

(6) The following conditions apply to surface coating operations performed indoors, in a booth, or in an enclosed work area:

(6)(A) no more than six lb/hr of VOC emissions, averaged over any five-hour period, and 500 pounds per week per booth or enclosed work area; **VOC Emission Rates: 5.54lb/hr VOC per booth; 475.2lb/week VOC per booth**

(6)(B) minimum face velocity at the intake opening of each booth or work area is 100 feet per minute (ft/min). Emissions shall be exhausted through elevated stacks that extend at least 1.5 times the building height above ground level. All stacks shall discharge vertically; rain protection shall not restrict or obstruct vertical flow; **Face Velocity: 200ft/min**

(6)(C) for spraying operations, emissions of particulate matter must be controlled using either a water wash system or a dry filter system with a 95% removal efficiency as documented by the manufacturer. The face velocity at the filter shall not exceed 250 ft/min or that specified by the filter manufacturer, whichever is less. Filters shall be replaced whenever the pressure drop across the filter no longer meets the manufacturer's recommendation. **Removal Efficiency & Face Velocity: 98%; <225ft/min**

(7) For surface coating operations that are performed outdoors or in a non-enclosed work area, or for indoor operations that do not meet the conditions of paragraph (6) of this section, the following conditions apply.

(7)(A) No more than six lb/hr of VOC emissions, averaged over any five-hour period, and 500 pounds per week shall be emitted at any time for all operations authorized by this paragraph. **VOC Emission Rate: 4.10lb/hr VOC, 253.85lb/week VOC**

(7)(B) Coatings contain less than 0.1% by weight of chromates, lead, cadmium, selenium, strontium, or cobalt.

(7)(C) Coating operations shall be conducted at least 50 feet from the property line and at least 250 feet from any recreational area, residence, or other structure not occupied or used solely by the owner or operator of the facility or the owner of the property upon which the facility is located. Distances: **223ft (property line); 313ft (nearest receptor)**

(7)(D) site review completed and approved by Joshua Robertson, Region 4.

(8) The following records shall be maintained at the plant site for the most recent 24 months and be made immediately available to the commission or any pollution control agency with jurisdiction:

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(8)(A) material safety data sheets for all coating materials and solvents;
(8)(B) data of daily coatings and solvent use and the actual hours of operation of each coating or stripping operation;
(8)(C) a monthly report that represents actual hours of operation each day, and emissions from each operation in the following categories:
(8)(C)(i) pounds per hour;
(8)(C)(ii) pounds per day;
(8)(C)(iii) pounds per week; and
(8)(C)(iv) tons emitted from the site during the previous 12 months;
(8)(D) examples of the method of data reduction including units, conversion factors, assumptions, and the basis of the assumptions.
(9) Form PI-7 CERT submitted via STEERS.

Notes:

PBR 106.512 Stationary Engines and Turbines

Gas or liquid fuel-fired stationary internal combustion reciprocating engines or gas turbines that operate in compliance with the following conditions of this section are permitted by rule.
(1) The facility shall be registered by submitting the commission's Form PI-7, Table 29 for each proposed reciprocating engine, and Table 31 for each proposed gas turbine to the commission's Office of Permitting, Remediation, and Registration in Austin within ten days after construction begins. Engines and turbines rated less than 240 horsepower (hp) need not be registered but must meet paragraphs (5) and (6) of this section, relating to fuel and protection of air quality. Engine hp rating shall be based on the engine manufacturer's maximum continuous load rating at the lesser of the engine or driven equipment's maximum published continuous speed. A rich-burn engine is a gas-fired spark-ignited engine that is operated with an exhaust oxygen content less than 4.0% by volume. A lean-burn engine is a gas-fired spark-ignited engine that is operated with an exhaust oxygen content of 4.0% by volume, or greater. Diesel engine ratings: **261hp, 277hp**
(2) n/a; engines are rated greater than 240hp and lesser than 500hp.
(3) n/a; turbines are not being authorized.
(4) Any engine or turbine rated less than 500 hp and will not be used for temporary replacement purposes.
NOx Emission Factors: EPN PP-1: 6.00g/hp-hr, EPN PP-2: 6.00g/hp-hr
(5) Gas fuel shall be **liquid fuel**. Liquid fuel shall be petroleum distillate oil that is not a blend containing waste oils or solvents and contains less than 0.3% by weight sulfur.
Diesel Fuel Sulfur Content: 0.15gr/100 dSCF
(6) There will be no violations of any National Ambient Air Quality Standard (NAAQS) in the area of the proposed facility. Compliance with this condition shall be demonstrated by the following method:
(6)(C) the total emissions of NO_X (nitrogen oxide plus NO_2) from all existing and proposed facilities on the property do not exceed the most restrictive of the following:
(6)(C)(ii) the value (0.3125 D) tpy, where D equals the shortest distance in feet from any existing or proposed stack to the nearest property line.
100ft (property line distance); 31.25tpy (Allowable NOx rate); 2.75tpy (Actual NOx rate)
(7) n/a; engines are not used to generate electricity.

EPNs: PP-1, PP-2

Compliance History and Site Review

In accordance with 30 TAC Chapter 60, a compliance history report was reviewed on:			**August 27, 2024**
Site rating / classification:	**0.00 / High**	Company rating / classification:	**0.12 / Satisfactory**
Has any action occurred on the basis of the compliance history or rating?			**No**
Did the Regional Office provide site approval and confirm distances?			**Yes**
Reviewed by:	**Joshua Robertson, Region 4**	Date:	**8/19/2024**

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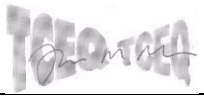
Registration No. 106552 Project No. 378512

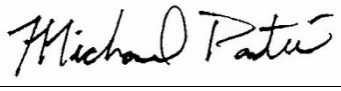
Emission Summary

EPN / Emission Source	VOC		NOx		CO		PM_{10}		$PM_{2.5}$		SO_2		Exempt Solvents		HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
New Emissions																
PP-1 / Diesel Engine 1 (1500hrs)	0.35	0.26	3.45	2.59	1.73	1.29	0.57	0.43	0.57	0.43	0.54	0.40			<0.01	<0.01
PP-2 / Diesel Engine 2 (1500hrs)	0.37	0.27	3.66	2.75	1.83	1.37	0.61	0.46	0.61	0.46	0.57	0.43			<0.01	<0.01
CO-2 / PBC Curing Oven	0.02	0.07	0.27	1.20	0.23	1.01	0.02	0.09	0.02	0.09	<0.01	0.01				
CLEAN / Paint Gun Cleaning	0.32	0.54											0.20	0.34	0.26	0.44
Updated Emissions																
PB-3 / Paint Booth 3	5.54	20.24					0.16	5.98	0.16	5.98			4.86	6.03	2.16	3.02
PB-4-1 / Paint Booth 4-1	5.54		0.36	1.56	0.30	1.31	0.19		0.19		<0.01	0.01	4.86		2.16	
PB-4-2 / Paint Booth 4-2	5.54		0.36	1.56	0.30	1.31	0.19		0.19		<0.01	0.01	4.86		2.16	
PB-4-3 / Paint Booth 4-3	5.54		0.36	1.56	0.30	1.31	0.19		0.19		<0.01	0.01	4.86		2.16	
PB-4-4 / Paint Booth 4-4	5.54		0.36	1.56	0.30	1.31	0.19		0.19		<0.01	0.01	4.86		2.16	
OUT / Outdoor Touch Up	3.05						1.97		1.97				0.75		1.19	
TOTAL EMISSIONS (TPY):		**21.38**		**12.77**		**8.91**		**6.96**		**6.96**		**0.87**		**6.37**		**3.46**

MAXIMUM OPERATING SCHEDULE:	**Hours/Day**	24	**Days/Week**	7	**Weeks/Year**	52	**Hours/Year**	8,760



August 28, 2024
Mr. John Ma Date
Permit Reviewer
Rule Registration Section



September 3, 2024
Michael Partee, Manager Date
Rule Registrations Section
Air Permits Division
Section Manager