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Ministry of the Environment, Conservation and Parks
Ministère de l'Environnement, de la Protection de la nature et des Parcs

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 6988-BH9RKA

Issue Date: November 13, 2019

Shell Canada OP Inc. and Shell Canada Limited,
as general partners for and on behalf of Shell Canada Products
150 St. Clair Pky P.O. Box 100, Station M
St. Clair, Ontario
N0N 1G0

Site Location: Sarnia Manufacturing Centre
150 St. Clair Pky
St. Clair Township, County of Lambton
N0N 1G0

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act , R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

Alterations to the existing equipment, serving the wastewater treatment plant (WWTP) at a petroleum refinery, for improving WWTP performance, reducing volatile organic compounds emissions and accommodating emerging changes in the quality of crude oil supplies, consisting of the following:

Phase 1 Upgrades (completed)

- replacement of two (2) existing dissolved air flotation units and associated scum tank, operating as open area sources (identified as source DAF)

with

two (2) new dissolved nitrogen flotation units equipped with covers and nitrogen blanketing system and associated new gravity holding tank and new scum tank, discharging to the air at a total maximum volumetric flow rate of 0.0095 cubic metre per second through a common stack (identified as source DNF_INT), having an exit diameter of 0.10 metre, extending 4.7 metres above the roof and 10.7 metres above grade;

Phase 2 Upgrades (to be completed)

- installation of one (1) new vapour recovery unit (identified as source VRU_DNF) as described below to incorporate the collection and treatment of emissions from the covered dissolved nitrogen flotation units, gravity holding tank and scum tank;

- one (1) new vapour recovery unit, consisting of two (2) activated carbon beds operating in series to provide full redundancy, each bed containing approximately 500 kilograms of activated carbon, discharging to the air at a minimum volumetric flow rate

of 0.032 cubic metre per second, through a stack (identified as source VRU_DNF), having an exit diameter of 0.08 metre, extending 10.7 metres above grade;

- optimize wash water flow rate of 2-stage electric desalter, equipped with ancillary equipment including two (2) 15 hp pumps, one (1) 75 hp pump and one (1) effluent brine cooler consisting of three (3) vertical axial fans;

- replacement of the one (1) existing oily water separator with one (1) new enclosed API separator, equipped with emissions control using one (1) new vapour recovery unit (identified as source VRU_API) as described below;

- one (1) new vapour recovery unit, consisting of two (2) activated carbon beds operating in series to provide full redundancy, each bed containing approximately 500 kilograms of activated carbon, discharging to the air at a minimum volumetric flow rate of 0.032 cubic metre per second, through a stack (identified as source VRU_API), having an exit diameter of 0.08 metre, extending 10.7 metres above grade;

all in accordance with the Application for Environmental Compliance Approval submitted by Shell Canada OP Inc. and Shell Canada Limited, as general partners for and on behalf of Shell Canada Products, dated November 26, 2018 and signed by Jodi Nypuik and all supporting information prepared by LEHDER Environmental Services Limited including the additional information provided by Rachel Jones (LEHDER) dated March 28, 2019, March 29, 2019 and October 31, 2019.

For the purpose of this environmental compliance approval, the following definitions apply:

1. "*Approval*" means this Environmental Compliance Approval, including the application and supporting documentation listed above;
2. "*Company*" means Shell Canada OP Inc. and Shell Canada Limited, as general partners for and on behalf of Shell Canada Products, that is responsible for the construction or operation of the *Facility* and includes any successors and assigns;
3. "*EPA*" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended ;
4. "*Equipment*" means the desalter and vapour recovery units described in the *Company's* application, this *Approval* and in the supporting documentation submitted with the application, to the extent approved by this *Approval*;
5. "*Exhausted*" means the capacity of the activated carbon bed to adsorb

contaminant emissions is reached, and the Vapour Recovery Units are no longer able to effectively reduce emissions;

6. "*Facility*" means the entire operation located on the property where the *Equipment* is located;
7. "*Manual*" means a document or a set of documents that provide written instructions to staff of the *Company*;
8. "*Ministry*" means the ministry of the government of Ontario responsible for the *EPA* and includes all officials, employees or other persons acting on its behalf;
9. "*Publication NPC-300*" means the Ministry Publication NPC-300, "Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300", August, 2013, as amended; and
10. "*Vapour Recovery Units*" means the vapour recovery units, described in the *Company's* application, this *Approval* and in the supporting documentation submitted with the application, to the extent approved by this *Approval*.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. OPERATION AND MAINTENANCE

1. The *Company* shall ensure that the *Equipment* is properly operated and maintained at all times. The *Company* shall:
 - a. prepare, before commencement of operation of the *Equipment*, and update as necessary, a *Manual* outlining the operating procedures and a maintenance program for the *Equipment*, including:
 - i. routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the *Equipment* suppliers;
 - ii. emergency procedures;
 - iii. procedures for any record keeping activities relating to operation and maintenance of the *Equipment*;
 - iv. the frequency of inspection and replacement of the activated carbon in the *Vapour Recovery Units*;
 - v. procedures for monitoring the performance of the *Vapour Recovery Units*; and

- vi. procedures for monitoring the operational parameters of the desalter, including the wash water flow rate;
- b. implement the recommendations of the *Manual*;
- c. ensure that the activated carbon in the *Vapour Recovery Units* is replaced before it is *Exhausted*; and
- d. retain, for a minimum of two (2) years from the date of their creation, all records on the maintenance, repair and inspection of the *Equipment*, and make these records available for review by staff of the *Ministry* upon request.

2. MONITORING

1. The Company shall monitor the operational parameters of the Vapour Recovery Units, either as specified in the Manual of the equipment manufacturer, or as deemed necessary in accordance with site operational conditions. The results of monitoring these parameters shall be recorded in a log.
2. The Company shall monitor the operational parameters of the desalter, including the wash water flow rate. The results of monitoring shall be recorded in a log.

3. NOISE

1. The *Company* shall, at all times, ensure that the noise emissions from the *Equipment* comply with the limits set out in *Ministry Publication NPC-300*.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to emphasize that the *Equipment* must be maintained and operated according to a procedure that will result in compliance with the *EPA*, the Regulations and this *Approval*.
In addition, the *Company* is required to keep records and to provide information to staff of the *Ministry* so that compliance with the *EPA*, the Regulations and this *Approval* can be verified.
2. Condition 2 is included to require the *Company* to gather accurate information on a continuous basis so that the environmental impact and subsequent compliance with the *EPA*, the Regulations and this *Approval* can be verified.
3. Condition 3 is included to provide the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of

the Facility.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 1233-9YDTQN issued on August 24, 2015.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993, the Minister of the Environment, Conservation and Parks, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Minister of the Environment, Conservation and Parks will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

- a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
- b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Minister of the Environment,
Conservation and Parks
777 Bay Street, 5th Floor
Toronto, Ontario
M7A 2J3

AND

The Director appointed for the purposes of
Part II.1 of the Environmental Protection Act
Ministry of the Environment, Conservation
and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at <https://ero.ontario.ca/>, you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 13th day of
November, 2019

Jeffrey McKerrall, P.Eng.
Director
appointed for the purposes of Part
II.1 of the *Environmental Protection
Act*

RA/
c: District Manager, MECP Sarnia
Rachel Jones, LEHDER Environmental Services Ltd.