PROPOSED AMENDMENTS TO PETROLEUM REFINING AND PETROCHEMICAL INDUSTRY STANDARDS

This draft of proposed amendments to the Petroleum Refining Industry Standard and the Petrochemical Industry Standard is intended to facilitate dialogue concerning its contents. Note that it will not become law unless it is added through an amendment to the Technical Standards publication. The content, structure, form and wording of the draft are subject to change, including change as a result of review, editing and correction.

A. Proposed amendments to replace the term API separator

1. Subsection 1 (1) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is amended by striking out the definition for "API Separator" and adding the following definitions:

"cooling water effluent" has the same meaning as in O. Reg. 537/93;

"oil-water separator" means a works in a sewage treatment system that separates free oil from sewage and consists of one or more of each of the following:

1. Influent flumes or other inlet conduits.
2. Separation bays.
3. Effluent flumes or other outlet conduits.
4. Ancillary components which may include:
    i. Forebays.
    ii. Skimmers.
    iii. Weirs.
    iv. Grit chambers.
    v. Sludge hoppers.
    vi. Bar screens;

"primary oil-water separator" means an oil-water separator that separates free oil from sewage that,

(a) has not passed through an oil-water separator upstream; and
(b) is not solely cooling water effluent, stormwater effluent, or a combination of cooling water effluent and stormwater effluent;

"separation bay" means the structure in an oil-water separator in which the separation of free oil from sewage primarily takes place. It may also be known as a separator tank, separator chamber, separator compartment, separator channel, or separator basin. In some oil-water separators, the separation bay is preceded by a forebay;

"stormwater effluent" has the same meaning as in O. Reg. 537/93;

2. The term "API separator" throughout the Petroleum Refining Industry Standard and Petrochemical Industry Standard is replaced with the term "primary oil-water separator".

3. The following section is added to Part IV of the Petroleum Refining Industry Standard and Petrochemical Industry Standard:

Application, sections 24 and 25

23.1 (1) Sections 24 and 25 do not apply to a device if it is used as a primary oil-water separator for no more than 240 hours in the preceding 12-month period.

B. Proposed amendments to address sampling and measurements required for primary oil-water separators (formerly API separators)

4. Paragraph 1 of subsection 25 (1) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is amended by striking out "July 1, 2017" and substituting "January 1, 2018".

5. Paragraph 2 of subsection 25 (1) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is struck out and the following substituted:

2. By March 31 in the year following the first full calendar year after the registered person made an election in accordance with subsection 24 (1) in respect of the primary oil-water separator, and by March 31 in each following year, the annual average emission rate of benzene from the primary oil-water separator during the previous calendar year shall be determined in accordance with subsection (3).

6. Paragraph 3 of subsection 25 (1) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is struck out and the following substituted:

3. Subject to subsection (6), on and after January 1, 2019, the primary oil-water separator shall meet at least one of the following criteria:
    i. Each separation bay of the primary oil-water separator, other than the portion of the separation bay that is occupied by a skimmer, shall be equipped with an internal or external floating roof that meets the requirements set out in subsection (5).
    ii. Benzene which would otherwise be discharged to the air from each separation bay of the primary oil-water separator, other than the portion of the separation bay that is occupied by a skimmer which is not designed to travel along the separation bay, shall be conveyed in a manner set out in section 4.

7. Subsections 25 (3) and (4) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard are struck out and the following substituted:

(3) The annual average emission rate of benzene mentioned in paragraph 2 of subsection (1) shall be determined in accordance with a plan that, in the opinion of the Director, meets the requirements set out in subsection (4) and is adequate to result in the effective determination of the emission rate.

(4) The plan mentioned in subsection (3) shall meet the following requirements:

1. The plan shall require that the annual average emission rate of benzene be calculated by taking the average of benzene emission rates calculated for each week of the calendar year based on the parameters set out in Column 1 of Table 6-25.
2. The plan shall require that each parameter set out in Column 1 of Table 6-25 is determined in accordance with the rules set out opposite the parameter in Column 2 of the Table.
3. Despite paragraph 2, the parameters set out in Column 1 of Table 6-25 may be determined each calendar month instead of each week if each annual average emission rate of benzene from the primary oil-water separator calculated with respect to the preceding two calendar years is no more than 1.0 milligram per second.
4. Despite paragraph 1, if the parameters set out in Column 1 of Table 6-25 are determined each calendar month instead of each week, the annual average emission rate of benzene shall be calculated by taking the average of benzene emission rates calculated for each calendar month of the calendar year based on the parameters set out in Column 1 of Table 6-25.

Table 6-25: Parameters and determination rules

Item	Column 1 Parameter	Column 2 Determination Rules
1.	The flow rate of sewage entering the primary oil-water separator (L/s)	i. Measure or otherwise determine at least once per week
2.	The concentration of benzene in the sewage entering the primary oil-water separator (µg/L)	i. Measure at least once per week
3.	The flow rate of sewage leaving the primary oil-water separator (L/s)	i. Measure or otherwise determine at least once per week; or ii. Assume the value of the parameter to be zero for the week
4.	The concentration of benzene in the sewage leaving the primary oil-water separator (µg/L)	i. Measure at least once per week; or ii. Assume the value of the parameter to be zero for the week

5.	The removal rate of skimmed oil waste from the primary oil-water separator (L/s)	i. Measure or otherwise determine at least once per week; ii. Assume the value of the parameter to be zero for the week; or iii. Determine, based on skimmed oil waste accumulated over more than one week, an equivalent weekly removal rate for each week in the accumulation period by dividing the volume of accumulated oil waste removed from the primary oil-water separator by the number of weeks in the accumulation period
6.	The concentration of benzene in the skimmed oil waste removed from the primary oil-water separator (µg/L)	i. Measure at least once per week; ii. Assume the value of the parameter to be zero for the week; or iii. If oil waste accumulates for more than a week, measure the concentration in the accumulated oil waste removed from the primary oil-water separator and use that concentration for each week in the accumulation period
7.	The removal rate of waste sludge from the primary oil-water separator (L/s)	i. Measure or otherwise determine at least once per week; ii. Assume the value of the parameter to be zero for the week; or iii. Determine, based on waste sludge accumulated over more than one week, an equivalent weekly removal rate for each week in the accumulation period by dividing the volume of accumulated waste sludge removed from the primary oil-water separator by the number of weeks in the accumulation period.
8.	The amount of benzene in the waste sludge removed from the primary oil-water separator (µg/g)	i. Measure at least once per week; ii. Assume the value of the parameter to be zero for the week; or

		iii. If waste sludge accumulates for more than a week, measure the concentration in the accumulated waste sludge removed from the primary oil-water separator and use that concentration for each week in the accumulation period

8. Section 25 of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is amended by adding the following subsections:

(6) Subparagraph 3 i of subsection (1) does not apply to a separation bay of a primary oil-water separator if the separation bay is equipped with a skimmer which is designed to travel along the separation bay.

(7) For the purposes of this section,

"accumulation period" means the period of time since the last time that skimmed oil waste or waste sludge was removed from the primary oil-water separator.

C. Proposed amendments to sampling and measurements required for drains and maintenance access points

9. Subsection 33 (1) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is amended by adding "Subject to subsection (6)," in the portion before paragraph 1.

10. Subsection 33 (2) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is amended by striking out "storm water" and substituting "stormwater effluent".

11. Paragraph 2 of subsection 33 (4) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is struck out and the following substituted:

2. Take one of the following actions for each drain and maintenance access point mentioned in subsection (1) in accordance with a plan that, in the opinion of the Director, would effectively determine the concentration, or highest potential concentration, of benzene in the sewage in the drain or maintenance access point:

    i. Measure the concentration of benzene in the sewage in the drain or maintenance access point.

ii. Determine the highest potential concentration of benzene in the sewage in the drain or maintenance access point by measuring the concentration of benzene in the sewage in an upstream drain or maintenance access point.

12. Subsection 33 (5) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is amended by striking out "100 parts per million by weight" and substituting "100 milligrams per litre".

13. Section 33 of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is amended by adding the following subsection:

(6) Subsection (1) does not apply with respect to a drain or maintenance access point if the Director is satisfied that the sewage in the drain or maintenance access point does not contain benzene.

14. (1) Section 33 of the Petroleum Refining Industry Standard is amended by adding the following subsection:

(7) If a change may occur at the petroleum refining facility that may affect the concentration of benzene in the sewage in a drain or maintenance access point mentioned in subsection (6), the registered person shall notify the Director and provide the following information at least three months before the change is made:

1. A description of the planned change.
2. A description of how the planned change may affect the benzene concentration in the sewage in the drain or maintenance access point.

(2) Section 33 of the Petrochemical Industry Standard is amended by adding the following subsection:

(7) If a change may occur at the petrochemical facility that may affect the concentration of benzene in the sewage in a drain or maintenance access point mentioned in subsection (6), the registered person shall notify the Director and provide the following information at least three months before the change is made:

1. A description of the planned change.
2. A description of how the planned change may affect the benzene concentration in the sewage in the drain or maintenance access point.

D. Proposed amendments so that rim seal gap inspections are required only for external floating roofs

15. Subsection 18 (1) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is amended by striking out "comply with paragraph 1 or 2" and substituting "comply with paragraph 2".

16. Subsection 27 (1) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is amended by adding "and which is equipped with an external floating roof" after "comply with subparagraph 3 i of subsection 25 (1)" in the portion before paragraph 1.

E. Proposed amendments to fix errors in subclauses 27 (2) (a) (ii) and 27 (3) (a) (ii)

17. Subclause 27 (2) (a) (ii) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is amended by striking out "was first registered to this industry standard" and substituting "is required to comply with subparagraph 3 i of subsection 25 (1)".

18. Subclause 27 (3) (a) (ii) of the Petroleum Refining Industry Standard and Petrochemical Industry Standard is amended by striking out "was first registered to this industry standard" and substituting "is required to comply with subparagraph 3 i of subsection 25 (1)".