



# Discharge and Discovery Reporting Standard

## Saskatchewan Environmental Code

April 5, 2024

## A DEFINITIONS

- (1) In this Standard the following words and phrases have the following meanings:
- (a) **“Class”** means a class established by the *Transportation of Dangerous Goods Act* (Canada) and the regulations enacted pursuant to that Act;
  - (b) **“industrial waste”** means as defined in *The Environmental Management and Protection Act, 2010* and the Substance Characterization Chapter;
  - (c) **“offsite”** means not onsite;
  - (d) **“onsite”** means on and completely contained within the boundaries of the property owned or occupied by the owner of a substance;
  - (e) **“subsurface loss”** means any release below ground surface as a result of a failure of a means of containment;
  - (f) **“means of containment”** is any container and associated piping or appurtenances used to contain a substance that may cause an adverse effect.

## B REPORT

- (1) For the purpose of complying with the Discharge and Discovery Reporting Chapter of the Saskatchewan Environment Code, a report shall be made in accordance with the requirements of the Act and as set out in the Discharge and Discovery Reporting Chapter.

### Information Note

There is no obligation to report a discovery in instances where a site assessment identifies a substance of potential concern above the level set out in Table 2 of the Discharge and Discovery Reporting Standard at a site for which a report had been previously provided to the minister. If the discovery is unrelated to the original report (e.g., as a result of a discharge that occurred after the original assessment/report) then a new report as set out in 1-6 of the Discharge and Discovery Reporting Chapter is required.

There is no obligation to report the intentional, lawful and prudent use of a substance that is generally recognized as accepted, ordinary and normal. This includes fugitive emissions resulting from commissioning, operating, or decommissioning a works.

Delineation of substances of potential concern are limited to those anthropogenic substances identified, known to be present, or that may be reasonably expected to be present in soil, ground water or surface water based on past or present land use at the site.

There is no obligation to report a discovery in instances where it can be clearly demonstrated by the person responsible that an exceedance of the Table 2 level is due to naturally elevated (i.e. non-anthropogenic) background levels for the substance of potential concern. Where there is insufficient, or no, evidence of naturally elevated background levels for a substance of potential concern, a report as set out in 1-6 of the Discharge and Discovery Reporting Chapter is required.

The Discharge and Discovery Reporting Standard sets standards for the reporting of discharges and discoveries of substances and is not intended to establish a limit, standard, criteria or condition that is deemed to cause an adverse effect under section 2(2) of the Act. The user is cautioned that there may be an adverse effect at the site where there is an exceedance of the reportable concentration values if that value is applicable to the effected media, pathway, and land use as set out in the applicable table of the Saskatchewan Environmental Quality Standard. Reportable concentrations are intended as a trigger for further assessment and analysis at a potentially impacted site.

**Table 1 Discharge Reporting Quantities**

| SASKATCHEWAN - REPORTABLE QUANTITIES   |                                                              |                                                                                                                                 |                                                                                                                                        |
|----------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Substance                              | Hazard Type                                                  | ONSITE                                                                                                                          | OFFSITE                                                                                                                                |
|                                        |                                                              | Reportable Quantity<br>(in 24 hours unless otherwise noted)                                                                     | Reportable Quantity<br>(in 24 hours unless otherwise noted)                                                                            |
| Class 1                                | Explosives                                                   | Any quantity that could pose a public safety risk or 50 kilograms                                                               | Any quantity that could pose a public safety risk or 50 kilograms                                                                      |
| Class 2.1                              | Compressed Gas: Flammable                                    | Any quantity that could pose a public safety risk; 50 kilograms; or a sustained release of 10 minutes or more                   | Any quantity that could pose a public safety risk; 50 kilograms; or a sustained release of 10 minutes or more                          |
| Class 2.2                              | Compressed Gas: non-Halocarbon containing (including Oxygen) | Any quantity that could pose a public safety risk or a sustained release of 10 minutes or more                                  | Any quantity that could pose a public safety risk or a sustained release of 10 minutes or more                                         |
| Class 2.2                              | Compressed Gas: Halocarbon containing                        | Any quantity that could pose a public safety risk or 100 kilograms                                                              | Any quantity that could pose a public safety risk or 100 kilograms                                                                     |
| Class 2.3                              | Compressed Gas: Toxic                                        | Any quantity any time                                                                                                           | Any quantity any time                                                                                                                  |
| Class 3                                | Flammable Liquids                                            | 500 litres or any subsurface loss                                                                                               | 200 litres or any subsurface loss                                                                                                      |
| Class 4                                | Flammable/Reactive Solids                                    | 100 kilograms                                                                                                                   | 25 kilograms                                                                                                                           |
| Class 5.1<br>Packing Groups I and II   | Oxidizer                                                     | 50 kilograms or 50 litres                                                                                                       | 2.5 kilograms or 2.5 litres                                                                                                            |
| Class 5.1<br>Packing Group III         | Oxidizer                                                     | 100 kilograms or 100 litres                                                                                                     | 50 kilograms or 50 litres                                                                                                              |
| Class 5.2                              | Organic Peroxide                                             | 2.5 kilograms or 2.5 litres                                                                                                     | 1 kilogram or 1 litre                                                                                                                  |
| Class 6.1<br>Packing Groups I          | Acute Toxic                                                  | 2.5 kilograms or 2.5 litres                                                                                                     | 1 kilogram or 1 litre                                                                                                                  |
| Class 6.1<br>Packing Groups II and III | Acute Toxic                                                  | 10 kilograms or 10 litres                                                                                                       | 5 kilograms or 5 litres                                                                                                                |
| Class 6.2                              | Infectious                                                   | All                                                                                                                             | All                                                                                                                                    |
| Class 7                                | Radioactive                                                  | As per permit/approval conditions for the operation/facility. Where there is no permit/approval, consider discharge as offsite. | A discharge of any quantity of a Class 7 substance from a means of containment being used to store, handle or transport the substance. |
| Class 8                                | Corrosive                                                    | 10 kilograms or 10 litres                                                                                                       | 5 kilograms or 5 litres                                                                                                                |
| Class 9.1                              | Miscellaneous except PCB mixtures                            | 100 kilograms                                                                                                                   | 25 kilograms or 25 litres                                                                                                              |
| Class 9.1                              | PCB Mixtures                                                 | 50 grams net PCB content                                                                                                        | 50 grams net PCB content                                                                                                               |
| Class 9.2                              | Aquatic Toxic                                                | 1 kilogram or 1 litre                                                                                                           | 1 kilogram or 1 litre                                                                                                                  |
| Class 9.3                              | Wastes: Chronic Toxic                                        | 10 kilograms or 10 litres                                                                                                       | 5 kilograms or 5 litres                                                                                                                |

**Table 1 Discharge Reporting Quantities (cont'd)**

| <b>SASKATCHEWAN - REPORTABLE QUANTITIES</b>                                                                                                                                                                 |                    |                                                                    |                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>Substance</b>                                                                                                                                                                                            | <b>Hazard Type</b> | <b>ONSITE</b>                                                      | <b>OFFSITE</b>                                                     |
|                                                                                                                                                                                                             |                    | <b>Reportable Quantity</b><br>(in 24 hours unless otherwise noted) | <b>Reportable Quantity</b><br>(in 24 hours unless otherwise noted) |
| Plant-based oils and fuels (Not Hazard Class 3), (e.g. canola, sunflower, linseed oils, bio-diesel)                                                                                                         | Environmental      | 500 litres                                                         | 250 litres                                                         |
| Glycols (inhibited and uninhibited) (e.g. antifreeze, heat transfer fluids)                                                                                                                                 | Environmental      | 100 litres                                                         | 50 litres                                                          |
| Non-Class 3 Petroleum Substances (e.g. new and used lubricating oils, mineral oils, hydraulic fluids)                                                                                                       | Environmental      | 500 litres                                                         | 200 litres                                                         |
| Industrial Wastes                                                                                                                                                                                           | Environmental      | 1,000 kilograms or 1000 litres                                     | 500 kilograms or 500 litres                                        |
| Sewage                                                                                                                                                                                                      | Environmental      | Not applicable                                                     | 300 litres                                                         |
| <b>The following reporting quantities are for discharges of substances subject to the requirements of <i>The Oil and Gas Conservation Act</i> and <i>The Oil and Gas Conservation Regulations, 2012</i></b> |                    |                                                                    |                                                                    |
| <b>Substance</b>                                                                                                                                                                                            | <b>Hazard Type</b> | <b>ONSITE</b>                                                      | <b>OFFSITE</b>                                                     |
|                                                                                                                                                                                                             |                    | <b>Reportable Quantity</b><br>(in 24 hours unless otherwise noted) | <b>Reportable Quantity</b><br>(in 24 hours unless otherwise noted) |
| Emulsion                                                                                                                                                                                                    | Environmental      | 2,000 litres                                                       | Any quantity any time                                              |
| Refined chemicals used in or in association with the maintenance, production or operation of a well, facility, pipeline or flowline                                                                         | Environmental      | 500 litres                                                         | Any quantity any time                                              |
| oil, salt water, condensate, oil and gas waste or product                                                                                                                                                   | Environmental      | 2,000 litres                                                       | Any quantity any time                                              |
| Hydrogen sulphide                                                                                                                                                                                           | Toxic gas          | 1,000 ppm or 1 mole/Kmole                                          | 1,000 ppm or 1 mole/Kmole                                          |
| Drilling Wastes/Frac Wastes/Oil Byproducts (Oily Produced Sands)                                                                                                                                            | Environmental      | 2,000 litres                                                       | Any amount                                                         |

**TABLE 2 Reportable Concentrations**

| Substance of Potential Concern                 | Reportable Concentrations                        |                       |                         |
|------------------------------------------------|--------------------------------------------------|-----------------------|-------------------------|
|                                                | Soils<br>(mg/kg -<br>Unless otherwise indicated) | Groundwater<br>(mg/L) | Surface Water<br>(mg/L) |
| <b><i>Halogenated Aliphatics</i></b>           |                                                  |                       |                         |
| Tetrachloroethylene                            | 0.018                                            | 0.01                  | 0.01                    |
| Trichloroethylene                              | 0.00019                                          | 0.00032               | 0.005                   |
| <b><i>Herbicides and Pesticides</i></b>        |                                                  |                       |                         |
| Glyphosate                                     | 0.049                                            | 0.065                 | 0.065                   |
| Lindane                                        | 0.11                                             | 0.00001               | 0.00001                 |
| <b><i>General and Inorganic Parameters</i></b> |                                                  |                       |                         |
| Nitrate (as nitrogen)                          | -                                                | 3                     | 3                       |
| Nitrite (as nitrogen)                          | -                                                | VARa                  | VARa                    |
| pH                                             | 6 – 8.5 (paste)                                  | 6.5 – 8.5             | 6.5 - 9                 |
| <b><i>Metalloids</i></b>                       |                                                  |                       |                         |
| Boron                                          | 3.3 (mg/L saturated<br>paste extract)            | 1                     | 1                       |
| Arsenic                                        | 17                                               | 0.005                 | 0.005                   |
| <b><i>Metals</i></b>                           |                                                  |                       |                         |
| Cadmium                                        | 1.4                                              | VARa                  | VARa                    |
| Chromium, Total                                | 64                                               | 0.05                  | 0.05                    |
| Chromium, Trivalent                            | -                                                | 0.0049                | 0.0049                  |
| Chromium, Hexavalent                           | 0.4                                              | 0.001                 | 0.001                   |
| Copper                                         | 63                                               | 0.007                 | 0.007                   |
| Lead                                           | 70                                               | VARa                  | VARa                    |
| Mercury                                        | 6.6                                              | 0.000005              | 0.000005                |
| Nickel                                         | 45                                               | VARa                  | VARa                    |
| Vanadium                                       | 130                                              | -                     | -                       |
| <b><i>Petroleum Hydrocarbons</i></b>           |                                                  |                       |                         |
| Benzene                                        | 0.015                                            | 0.005                 | 0.005                   |
| Toluene                                        | 0.12                                             | 0.021                 | 0.0005                  |
| Ethylbenzene                                   | 0.073                                            | 0.0016                | 0.0016                  |
| Xylene                                         | 0.99                                             | 0.02                  | 0.02                    |
| F1                                             | 24                                               | 0.81                  | 0.150                   |
| F2                                             | 130                                              | 1.1                   | 0.110                   |
| F3                                             | 300                                              | -                     | 69.0                    |
| F4                                             | 2,800                                            | -                     | 36.4                    |
| <b><i>Polycyclic Aromatic Hydrocarbons</i></b> |                                                  |                       |                         |
| Benzo(a)pyrene                                 | VARb                                             | VARb                  | 0.000015                |

**Note:** Table 2 is a limited selection of the lowest Saskatchewan Environmental Quality Guidelines (SEQG). Additional substances and their corresponding reportable concentrations are identified as a parameter type in the SEQG.

Substances not included in Table 2 Reportable Concentrations or SEQG that are discovered to be causing or may be causing an adverse effect shall be reported to the minister in accordance with the Discharge and Discovery Reporting Chapter of the Code.

#### Abbreviations

- No Value

VARa – Variable value, dependent on other factors. See aquatic life pathway from SEQG data source: Alberta Tier 1 Soil and Groundwater Remediation Guidelines, August 2022 and associated Environmental Quality Guidelines for Alberta Surface Waters, March 2018

VARb – Variable value, dependent on other factors. See calculation of the Index of Additive Cancer Risk for Carcinogenic PAHs from SEQG data source: Alberta Tier 1 Soil and Groundwater Remediation Guidelines, August 2022