

# Discharge and Discovery Reporting Standard

Saskatchewan Environmental Code

October 1, 2017



Government  
of  
Saskatchewan

# Discharge and Discovery Reporting Standard

## 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

If the discharge is reported in accordance with the Ministry of Economy Petroleum and Natural Gas Division Directive PNG014, the reporting obligation under section 1-2 of the chapter is met.

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**

<b>SASKATCHEWAN - REPORTABLE QUANTITIES</b>			
<b>Substance</b>	<b>Hazard Type</b>	<b>ONSITE</b>	<b>OFFSITE</b>
		<b>Reportable Quantity (in 24 hours unless otherwise noted)</b>	<b>Reportable Quantity (in 24 hours unless otherwise noted)</b>
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 Packing Groups I and II	Oxidizer	50 kilograms or 50 litres	2.5 kilograms or 2.5 litres
Class 5.1 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 Packing Groups I	Acute Toxic	2.5 kilograms or 2.5 litres	1 kilogram or 1 litre
Class 6.1 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	10 kilograms or 10 litres	5 kilograms or 5 litres

<b>SASKATCHEWAN - REPORTABLE QUANTITIES</b>			
<b>Substance</b>	<b>Hazard Type</b>	<b>ONSITE</b>	<b>OFFSITE</b>
		<b>Reportable Quantity (in 24 hours unless otherwise noted)</b>	<b>Reportable Quantity (in 24 hours unless otherwise noted)</b>
	Toxic		
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

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

<b>SASKATCHEWAN - REPORTABLE QUANTITIES</b>			
<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 (in 24 hours unless otherwise noted)</b>	<b>Reportable Quantity (in 24 hours unless otherwise noted)</b>
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 (mg/kg - Unless otherwise indicated)	Ref	Groundwater (µg/L)	Ref	Surface Water (µg/L)	Ref
<b>Halogenated Aliphatics</b>						
Tetrachloroethylene	0.018	i	30	iv	30	iv
Trichloroethylene	0.01	ii	5	iv	5	iv
<b>Herbicides and Pesticides</b>						
Glyphosate	0.049	i	65	iii	280	iv
Lindane	0.11	i	0.01	iii	0.01	i
<b>General and Inorganic Parameters</b>						
Nitrate	-		13,000	iii	-	
Nitrite (as N)	-		60	iii	1,000	iv
pH	6 - 8	ii	6.5 - 9.0	iii	6.5 - 9	vi
<b>Metalloids</b>						
Boron	3300 µg/L (saturated paste extract)	i	500	iii	1,500	vi
Arsenic	12	ii	5	iii	5	vi
<b>Metals</b>						
Cadmium	1.4	ii	0.017	iii	5	iv
Chromium	64	ii	4.9	i	-	
Chromium, Trivalent	-		-		4.9	v
Chromium, Hexavalent	0.4	i	1	vi	1	vi
Copper	63	ii	200	iii	200	v
Lead	140	ii	10	iv	10	iv
Mercury	6.6	ii	0.026	iii	0.026	vi
Nickel	45	ii	200	iii	200	vii
Vanadium	130	ii	100	iii	100	vii
<b>Petroleum Hydrocarbons</b>						
Benzene	0.046	i	5	i	5	i
Toluene	0.12	i	21	i	0.5	i
Ethylbenzene	0.073	i	140	iv	2.4	i
Xylene	0.99	i	90	iv	30	i
F1	30	ix	810	iii	53,600	v
F2	150	ix	1,100	i	49,200	v
F3	300	ix	-		79,700	v
F4	2,800	ix	-		42,000	v
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a) pyrene	0.6	ii	0.01	iv	0.01	iv

**NOTES:**
**Abbreviations**

- No Value

**Reference:**

- (i) Value obtained from Alberta Tier 1 Soil and Groundwater Remediation Guidelines, May 2014.
- (ii) Value obtained from Canadian Soil Quality Guidelines for the Protection of Environmental and Human Health; Factsheets.
- (iii) Value obtained from FCSAP, The Federal Interim Groundwater Quality Guidelines, November 2012.
- (iv) Value obtained from Health Canada Guidelines for Canadian Drinking Water Quality Summary Table.
- (v) Value obtained from Alberta Tier 2 Soil and Groundwater Remediation Guidelines, May 2014.
- (vi) Value obtained from CCME Water Quality Guidelines for the Protection of Aquatic Life.
- (vii) Value obtain from CCME Water Quality Guidelines for the Protection of Agriculture.
- (ix) Value obtained from Canada-Wide Standards for Petroleum Hydrocarbons in Soil, January 2008.