Release Report – Definitions for Pipeline Details Section

Incident Type

Use the following list of definitions to classify the type of incident.

GSPT Release

Low-consequence release caused by a leak at a gasket, seal, packing gland, or threaded fitting (GSPT) that can be stopped by mechanical adjustments (e.g., tightening of bolts or replacing seals) and that does not indicate a pipeline or valve integrity issue.

HDD Frac Out

Release of drilling mud during a frac out while conducting horizontal or directional drilling during a pipeline construction.

Hit

Contact damage to a pipeline or its coating during ground disturbance that does not result in the release of a substance. See the definition of "ground disturbance" in the *Pipeline Act*.

Note that the following are not considered a hit and do not need to be reported as an incident:

- minor damage to a pipeline's coating sustained during hand excavation and external cleaning
- pre-existing damage to the coating that is revealed during the unearthing of the pipeline.

Installation Leak

Release from the equipment at an auxiliary site such as a compressor, pumping station, or meter station that is listed as an installation on the pipeline licence. A release from the pipeline outside of the station perimeter valves (last valve) is considered a pipeline incident.

Integrity Test Failure

A failure that occurs during a leak or stand-up test conducted on an in-service or previously in-service pipeline to help determine if a pipeline can hold pressure. Also, use this pipe damage type when the line fails during discontinuation or abandonment activities.

Leak

The release of a substance from a pipeline that does not immediately impair the operation of the pipeline.

Non-Pipeline Release	An incident that affects the environment but is not due to a release from the pipeline (e.g., surface spill of unknown origin, silt runoff into a water body, historical underground contamination).
Pressure Test Failure	A failure during the qualification of new pipe construction, during the requalification of a repaired or previously in-service pipeline, or qualification for a maximum operating pressure increase in accordance with *CSA Z662* pressure testing requirements.
Rupture	An incident where a pipeline breaks or bursts, preventing the pipeline from operating.

Incident Cause

Use the following list of definitions to classify the direct cause of the incident.

Boring Frac Out	Release of drilling mud during frac out while conducting horizontal or directional drilling during pipeline construction. Only use with incident type "HDD Frac Out."
Construction Deficiency	A failure caused by improper construction practices. Examples include damage to the coating or pipe caused during handling or bending, improper installation of river or swamp weights, improper ditch preparation, improper backfill, inadequate support, settlement at risers or supports, improper joint alignment, and improper management of thermal expansion issues causing pipeline failure (i.e., pipeline operating temperatures were not considered in the design of the pipeline resulting in failure). Do not use for pre-existing damage or dents found that did not contribute to the failure. If failure is from corrosion due to damage during construction, record as appropriate corrosion failure.
Corrosion Internal	A failure caused predominantly by corrosion inside of the pipe, valve, fitting, flange, or inline coupler. A failure due to corrosion of threads on fittings, nipples, or plugs should go under "Valve or Fitting Failure."
Corrosion External	A failure caused primarily by corrosion on the outside of the pipe, valve, fitting, flange, or inline coupler. Also includes fretting damage. Note that corrosion can occur even on a coated pipe if the coating is damaged.

Damage By Others (Contact Damage)	Physical damage (hit, leak, or rupture) to coating or pipe caused during activities related to a ground disturbance. See definition of "contact damage" in the *Pipeline Rules*.
Earth Movement	A failure due to external forces applied to the pipeline by earth movement, either as a result of natural events or human activity. Examples are frost heaves, slope movement, flood, earthslide, subsidence, and washouts.
Historical Activities/Operations	Contamination from a previous incident or from past activities that was never recorded or never completely cleaned up
Installation Leak	Release from the equipment at an auxiliary site such as a compressor, pumping, or meter station that is listed as an installation on the pipeline licence. A release on the pipeline outside of the station perimeter valves (last valve) is considered a pipeline incident.
Mechanical Joint Failure	Either • a failure on metallic pipelines of mechanical interference joints (e.g., Thru-Kote Welded, Crimp Kote, Sure Lok, Pronto Lock, Zap-Lok, Twin Lok) or • a failure on non-metallic pipelines at mechanical couplings, including crimped metallic connections on spoolable composite pipe. Note that corrosion at metallic connections on non-metallic pipe is to be reported under the appropriate corrosion category (e.g., internal corrosion).
Mechanical Pipe Damage	A failure caused by damage from mechanical activities to pipelines, risers, or piping that is not related to a ground disturbance and that results in a release (e.g., truck running into a riser, cultivator hitting pipeline while cultivating to a depth of less than 45 centimetres).
Miscellaneous	A failure that does not fall under other defined failure causes. May include pipeline erosion from external jetting action from nearby pipeline failures, lightning strikes, vandalism, damage caused by wildlife or livestock, and plastic liner failures that result in a release to the environment through the vent.
Miscellaneous Joint Failure	A failure at a butt-fusion, electrofusion, or other fusion joint on plastic pipe; at a bonded or solvent-welded joint on PVC pipe; at a high-energy joint on aluminum pipe; or at a threaded or bonded joint on fibreglass pipe.

Non-Pipeline Release

An incident that affects the environment but is not due to a release from the pipeline (e.g., surface spill of unknown origin, silt runoff into a water body, historical underground contamination).

Only use with incident type "Non-Pipeline Release."

Operator Error

A failure caused by operator error. Includes an operator improperly closing or opening a valve, operating the pipeline with missing components, bypassing safety controls, or not following operating procedures for temperature changes or operating pressure. Does not include incidents related to ground disturbance, mechanical pipe damage, or pressure test failures. Also does not include incidents where normal operating pressure was increased to MOP or slightly below it in order to resolve a problem, such as a stuck pig, because operator error would not be the primary cause of the failure. Such incidents would fall under other failure categories (e.g., external corrosion if it reduced the wall thickness, resulting in a failure when the pressure was increased).

Overpressure Failure

A failure due to pressure beyond design limits. Situations that may result in overpressure include frozen lines, lack of overpressure control or lack of an overpressure protection device, or temperature increase in a shut-in line.

Failures as a result of reduced wall thickness due to corrosion are to be recorded as the appropriate corrosion failure. Leaks from frozen aboveground valves should be recorded as "Valve or Fitting Failure". Overpressure due to the actions of the operator falls under "Operator Error."

Pipe Body Failure

A failure that occurs in the pipe body due to material flaws or defects, or the operating environment. Examples include stress corrosion cracking, sulphide stress cracking, hydrogen-induced cracking, brittle cracks, running cracks, fatigue cracking, cyclic stress damage, laminations, separations, and degradation of non-metals.

Seam Failure

A failure due to a leak or fracture at the long-seam weld or spiral weld. Seam leaks or fractures are rarely due to corrosion but are mechanical failures of a defective manufacture weld.

If the failure is clearly due to corrosion, select the appropriate category of corrosion failure.

Unknown	A failure where the cause cannot be determined because the pipeline cannot be exposed, recovered, or examined. **Only use when the cause is truly unknown**, not when the cause is temporarily unknown. Review past incidents on that line and other lines under the licence to determine if there is a most likely failure type before selecting "Unknown."
Valve or Fitting Failure	A release associated with packing, gaskets, flanges, fittings, or pigging facility components or failures in the valve body. If solely due to corrosion, record as appropriate corrosion failure. Record corrosion failure of the threads on fittings, nipples, or plugs as a "Valve or Fitting Failure." Do not use this as the failure cause for a pressure test failure.
Weld Failure	A failure due to a fracture at a weld or in the heat-affected zone of a weld that is not caused by corrosion. Includes branch, fillet, and circumferential (girth) welds.