



RISK ASSESSMENT FRAMEWORK FOR WELLSITES WITH GAS MIGRATION FORM

Physical Address: 6534 Airport Road,
Fort St. John, B.C. V1J 4M6

Mailing Address: BC Energy Regulator, 6534 – 100th Ave., Fort St. John, BC, V1J 8C5
Phone: (250) 794-5200

For more information on this form, refer to Section 9.7.6 of the [Oil and Gas Activity Operations Manual](#).

Well Authorization Number: _____

Risk Assessment Report Date: _____

Risk Category	Potential Hazard Description and Risk Rationale	Risk Rating Guidance			¹ Risk Rating and Proposed Management, Monitoring, Mitigation or Further Investigation
		Low	Moderate	High	
General Public Safety	Identify potential public safety hazards within the lease area (site), including general hazards associated with infrastructure and potential confined space hazards, with consideration of the potential for unintentional or intentional public access.	No potential hazards identified	One or more potential site hazards identified AND low potential for public access to site	One or more potential site hazards identified AND reasonable potential for public access to site	
Fire or Explosion	Identify potential hazards based on shallow gas survey results with consideration of potential ignition sources.	Gas Concentrations < 100% LEL OR >100% LEL and access is restricted	Gas Concentrations > 100% LEL AND low potential for ignition source	Gas Concentrations > 100% LEL AND potential for ignition source	
Air Quality	Identify potential concerns related to air quality due to odour and H ₂ S based on field observations or gas analysis, with consideration of potential human receptors.	No odour observed AND gas does not contain H ₂ S	Odour is apparent AND members of the public are highly unlikely to be within 100 m of the site	Gas contains H ₂ S OR odour is apparent and potential exists for members of the public to be within 100 m of the site	
Groundwater	Identify potential hazards to groundwater quality based gas analysis and the shallow gas survey results, with consideration of the potential for groundwater to reach potential human receptors.	Gas is not thermogenic AND gas migration does not extend off site	Gas is thermogenic OR gas is not thermogenic and shallow gas extends off site	Gas is thermogenic AND water wells, water intakes, or licensed springs are within 600 m of the well	
Surface Water and Riparian Areas	Identify potential hazards based on the gas analysis with consideration of the potential for groundwater discharge to surface water bodies/riparian areas.	Gas is not thermogenic OR gas is thermogenic with low potential for groundwater discharge to a riparian area or surface water body	Gas is thermogenic AND there is potential for groundwater discharge to a riparian area or surface water body	Gas migration flow rates could result in the accumulation of gas at surface water bodies or riparian areas on or off site	

Updated: 20-Dec-2023

Effective: 20-Dec-2023

All submissions made to the Regulator in support of an application or a regulatory requirement that include work relating to the practice of professional engineering or professional geoscience are expected to accord with the *Professional Governance Act*, [SBC 2018], c. 47 and the Bylaws of Engineers and Geoscientists British Columbia (EGBC). This includes any requirements relating to authentication of documents.