

ECOLOGICAL RISK

Study geographic boundaries: Study areas are localized, in the vicinity of several hypothetical terrestrial hydrocarbon spill locations representing different regions crossed by the pipelines.

Study time boundaries: Operations phase.

Project works and activities considered in the study*: Pipeline failures during operations as a result of defects, corrosion, external forces.

Study methods: Ecological risk assessment scenarios are developed to evaluate potential long-term risks to ecological

receptors that might persist following best efforts to clean up hypothetical hydrocarbon spill scenarios.

Pipeline construction activities will generate low levels of site-specific emissions such as those from large construction equipment, exposure to chemicals from these sources will

be highly localized and short term. During routine pipeline operations, the oil and condensate pumps will be electrically driven and few fugitive emissions will occur. As a result, risks to ecological health from construction of the pipeline and routine operation of the pipeline are not assessed.

VEC	Key Issues	KIR	Baseline Results	Measurable Parameter	Potential Project Effects**	Proposed Mitigation	Residual Effects	Cumulative Effects
Ecological Risk (Terrestrial)	Pipeline failures Volume of hydrocarbon spilled Long-term residual hydrocarbons	Wildlife Vegetation Invertebrates Microbial communities		Exposure of KIRs to residual hydrocarbon, PAH, and associated trace elements following a hydrocarbon release and recovery operations.	Ecological health concerns could arise as a result of a pipeline leak and release of hydrocarbons to the environment.	Hydrocarbon releases would be responded to quickly, and responders would work to contain and recover spilled hydrocarbons.	Currently being assessed.	Currently being assessed.

*Refer to Figure 3.1 in section 3, *Project description*, for the full list of physical works and activities. **The effects of spills and malfunctions will be included in the update for the supplemental filing.