

## Project 8 - Large diameter oil and gas pipelines

Comments: When planning the pipeline route plan in such a way that there is the greatest distance possible from populated areas. Ensure that there is sufficient monitoring facilities to test for leaks, in populated areas an odorant can be added to the gas. Most common cause for accidents occurs as a result of corrosion, operator error; pipe defect, weld defect of relief equipment.

CATEGORY	FACTOR	COMMENTS
AIR	CO	greenhouse gas, reference <a href="#">1</a>
	hydrocarbons	
	methane (CH <sub>4</sub> )	greenhouse gas, volatile, reference <a href="#">1</a>
	nitrous oxides (NO <sub>x</sub> ) / N <sub>x</sub> O	acid rain, flora, fauna, human health, water quality, reference <a href="#">1</a>
	non-methane volatile organic compounds (NMVOC)	volatile, greenhouse gases, human health, reference <a href="#">1</a>
	odour	human health, safety
WATER	toxic substances	water quality, aquatic life
	oil products	
	stream crossings	soil erosion, aquatic life
	groundwater contamination	
FLORA	disturbance in natural vegetation	construction and pipeline clearance
	impact on protected areas	
	disturbance of plant habitat	route clearance
FAUNA	disturbance of wildlife habitat	absence of natural vegetation along pipeline route
	migratory changes - mammals	
	disturbance of aquatic habitat	stream crossings
SOIL	soil contamination	leaks
	erosion	construction, stream crossings
LANDSCAPE	land use changes	
	visual aspects	
	physical composition	
	impact on sensitive lands	
HISTORICAL MONUMENTS	archaeological changes	
	palaeontological changes	
HUMAN HEALTH & SAFETY	risk of spills	
	risk of surface water contamination	
	risk of ground water contamination	
	risk of explosions	
	pressure monitoring system	detect leaks, problem in line
	route selection	distance to populated areas, density/population control
CULTURAL HERITAGE	land use changes	
SOCIO-ECONOMIC	changes to well being of life	
	changes to quality of life	
	employment opportunity	
	economic development - transboundary	

References

1. Proceedings of the EMEP Workshop on Emission Inventory Techniques, Regensburg, Germany, 2-5 July, 1991, EMEP/CCC-Report 1/91
2. Economic Commission for Europe Convention of Long-range Transboundary Air Pollution, Task Force on Heavy Metal Emissions, June 1994
3. Economic Commission for Europe, Convention on the Transboundary Effects of Industrial Accidents
4. Economic Commission for Europe, State of Knowledge Report of the UN ECE Task Force on Persistent Organic Pollutants
5. Recommendations to ECE Governments on the Prevention of Water Pollution from Hazardous Substances