

## Project 16 - Major storage facilities for petroleum, petrochemical and chemical products

Comments: Storage facilities can exist in both above ground and below ground storage tanks. In storage tank technologies the most common problem that exists is groundwater contamination from spills or leakage. Leakage most often occurs as a result of corrosion. Several preventative measures to consider when installing storage tanks include: cathodically protecting tanks, installing double walled tanks or using fibreglass or corrosion resistant tanks. External factors contributing to corrosion consist of high water table, saline water and moist soil conditions. These factors make site selection for underground storage facilities an important consideration.

CATEGORY	FACTOR	COMMENTS
AIR	persistent organic pollutants (POPs)	minor evaporation when filling tanks, reference <a href="#">4</a>
	poly-aromatic hydrocarbons (PAH)	carcinogenic, hazardous waste, priority toxic pollutant, human health, flora, fauna, aquatic life
	non-methane volatile organic compounds (NMVOC)	greenhouse gases, volatile, flora, human health, reference <a href="#">1</a>
	other hazardous substances	human health, flora, fauna
WATER	chemical oxygen demand (COD)	water quality, aquatic life
	total organic carbon (TOC)	
	adsorbable organic halogenated compounds (AOX)	water quality, aquatic life, carcinogen, flora, fauna, human health
	oil products	water quality, aquatic life
	other hazardous substances	depends on chemical products being stored in tanks
FLORA	changes in natural vegetation	
	disturbance of plant habitat	
	disturbance of natural vegetation	
FAUNA	disturbance of wildlife habitat	
SOIL	soil contamination	
	erosion	
LANDSCAPE	land use changes	
	visual aspects	
HUMAN HEALTH & SAFETY	risk of spills	
	risk of ground water contamination	
	risk of surface water contamination	
CULTURAL HERITAGE	land use changes	
SOCIO-ECONOMIC	present use of natural resources	
	potential use of natural resources	
	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