

Project 13 - Pulp and paper manufacturing

Comments:

CATEGORY	FACTOR	COMMENTS
AIR	carbon monoxide (CO)	flammable, greenhouse gas, human health, reference 1
	carbon dioxide (CO ₂)	greenhouse gas, reference 1
	chlorine (Cl) and compounds	hazardous substance, poison, toxic, aquatic life, human health, reference 3
	persistent organic pollutants (POP)	reference 4
	polychlorinated dibenzo-p-dioxins (PCDD)	carcinogenic, fauna, human health, aquatic life, soil
	dibenzofurans (PCPF)	fauna, human health, aquatic life, soil
	polychlorinated biphenyls (PCB)	carcinogens, hazardous materials, hazardous waste constituents priority toxic pollutants, aquatic life, soil, human health
	poly-aromatic hydrocarbons (PAH)	carcinogen hazardous waste, priority toxic pollutant, fauna, human health
	mercaptans	human health, odour
	non-methane volatile organic compounds (NMVOC)	volatile, greenhouse gases, human health, flora, reference 1
	oxides of nitrogen (NO _x) / N _x O	acid rain, flora, fauna, human health, photooxidants, ozone, soil
	oxides of sulphur (SO _x)	
	other hazardous substances	human health, flora, fauna, water
	particle emissions	flora, historical sites, human health, climate change
	oil vapour	soiling, staining, historical monuments, flora
	odour	human health
	noise	
vibration		
WATER	adsorbable organic halogenated compounds (AOX)	carcinogen, hazardous substance, hazardous wastes, priority toxic pollutants, human health, aquatic life, water quality
	chlorine (Cl) and compounds	hazardous substance, poison, toxic, aquatic life, human health, reference 3
	persistent organic pollutants (POP)	reference 4
	polychlorinated dibenzo-p-dioxins (PCDD)	carcinogenic, fauna, human health, aquatic life, soil
	dibenzofurans (PCPF)	fauna, human health, aquatic life, soil
	polychlorinated biphenyls (PCB)	carcinogens, hazardous materials, hazardous waste constituents priority toxic pollutants, aquatic life, soil, human health
	phenols	hazardous substance, hazardous waste, priority toxic pollutant, aquatic life, human health
	sulphates	water quality, aquatic life
	nutrients C/N/P	
	wastes / by-products	human health, aquatic life, water quality
	biochemical oxygen demand (BOD)	water quality, aquatic life
	chemical oxygen demand (COD)	
	total organic carbon (TOC)	
	dissolved oxygen	
	suspended solids	
	dissolved solids	
	total solids	
	oil products	
	other hazardous substances	
temperature	water quality, aquatic life, climate change	

CATEGORY	FACTOR	COMMENTS
	change in pH	water quality, aquatic life
	colour	
CLIMATE	changes in ambient air temperature	
	changes in surface water temperature	
	particle emissions	
	mists	
	greenhouse gases	CO ₂ , CO ₂ , nmVOC, NO _x , N _x O, SO _x
FLORA	changes in natural vegetation	emissions, project location
	disturbance of aquatic habitat	
	disturbance of plant habitat	
	disturbance of natural vegetation	
	decrease in biodiversity	
	impact of threatened species	
	changes in species population	
	changes in aquatic food web	
	changes in mammal food web	
	impact on protected areas	
FAUNA	disturbance of wildlife habitat	emissions, project location
	decrease in biodiversity	
	impact on threatened species	
	changes in species population	
	impact on threatened area	
	changes in mammal food web	
SOIL	soil acidification	heavy metals, other pollutants
	soil contamination	dioxins
	erosion	changes in natural landscape
	wastes / by-products	flora, fauna, human health
LANDSCAPE	land use changes	
	visual aspects	
	physical composition	
	impact on sensitive lands	
HISTORICAL MONUMENTS	changes to historical sites	acid rain, soiling, staining
HUMAN HEALTH & SAFETY	changes in ambient noise levels	
	changes in disease incidence	
	risk of spills	
	risk of surface water contamination	
	risk of ground water contamination	
	risk of explosions	
CULTURAL HERITAGE	cultural changes	
	land use changes	
	way of life	
SOCIO-ECONOMIC	changes to well being of life	
	changes to quality of life	
	quality of recreational facilities	
	quantity of recreational facilities	
	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