

## Appendix A: Environmental Conditions

Range of ambient temperatures:	-5 °C to +45 °C (with temperature changes of up to 20°C per hour)
Altitude of operations:	-400 m to +800 m above MSL
Cross winds:	5 m/s with gusts of wind of 50 m/s in duration of 1s per gust of wind
Snowfall	no particular requirements
Rainfall	400-800 mm/years
Relative humidity:	10% to 90%
UV radiation	360-600 MJ/m <sup>2</sup> per year
Sunny hours per year:	3300 h

It is specifically emphasised that no performance degradation shall result from any “worst case” combination of the environmental conditions defined in this specification.

Special attention shall be paid to the local sunlight intensity and resulting heat transfer by radiation.

### D.1 Climate and Environmental Conditions

Max. Ambient temp.	45 °C (shade)
Min. Ambient temp.	Minus 5 °C
Relative humidity	10% to 90%
Altitude	- 400 m to +800 m
Sunny hours per year	3300 h
UV Radiation MJ/m <sup>2</sup> per year	360 - 600
Rainfall mm/year	400 - 800

## D.2 Dust Concentrations in the Atmosphere

	Maximum Value	Half-hour	Maximum Value	Daily	Average
NO <sub>x</sub>	1064		560		71
SO <sub>2</sub>	780		260		21
O <sub>3</sub>	312		143		84
Suspended Dust	-		350		100

Particle Size to 0.5 - 1 micron

Table D-1: Suspended Particle Matter (SPM)

Special attention shall be paid to potential contamination by chalk dust from the track-bed.

## D.3 Sea Salt Concentrations in the Atmosphere

Salt Element	Na		Cl		SO <sub>4</sub>	
Position	Season		Season		Season	
	Dry	Wet	Dry	Wet	Dry	Wet
Sea Air at Coastline	7.3	16.0	12.0	22.0	5.3	7.0
600 m from Shore	3.1	4.8	4.2	7.9	1.9	2.0
6000m from Shore	1.1	1.4	1.5	1.7	1.3	1.4

all values in micrograms per m<sup>3</sup> atmosphere

Table D-2: Salt Concentrations in the Atmosphere