

Appendix 3.7 Details of Dust Emission Sources for 1-hour, Daily and Annual Dust Assessment (Tier 1)

Appendix 3.7 - Details of Dust Emission Sources for 1-hour TSP Assessment (Tier 1) for all zone under excavation

KTCDA

Works Area	Sources	Parameter	Remarks	
KTCDA	Heavy construction Source ID: A-1 to A-9, B-1 to B-9, C-1 to C-5	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	100 % 91.7 % 26 days 10 hour 2.69 Mg/hectare/month of activity 2.87393E-04 g/m ² /s (unmitigated) 2.38536E-05 g/m ² /s (mitigated)	Assume 100% works area for heavy construction Water suppression 4 times a day From 8:00 to 18:00 AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion for Working Hours Source ID: A-1 to A-9, B-1 to B-9, C-1 to C-5	Percentage active area, p Mitigation efficiency Emission Factor Emission Rate	100 % 91.7 % 0.85 Mg/hectare/year 2.69533E-06 g/m ² /s (unmitigated) 2.23713E-07 g/m ² /s (mitigated)	Water suppression 4 times a day AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
	Wind Erosion for Non-Working Hours Source ID: A-1 to A-9, B-1 to B-9, C-1 to C-5	Percentage active area, p Emission Factor Emission Rate	100 % 0.85 Mg/hectare/year 2.69533E-06 g/m ² /s (unmitigated)	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100

Appendix 3.7 - Details of Dust Emission Sources for 1-hour TSP Assessment (Tier 1) for Concurrent Projects

KTCDA

Works Area	Sources	Parameter		Remarks
Concurrent Projects	Heavy construction Source ID: CP-1 to CP-11 and CP-14 to CP-32	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	100 % 91.7 % 26 days 10 hour 2.69 Mg/hectare/month of activity 2.87393E-04 g/m ² /s (unmitigated) 2.38536E-05 g/m ² /s (mitigated)	Assume 100% works area for heavy construction Water suppression 4 times a day From 8:00 to 18:00 AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion for Working Hours Source ID: CP-1 to CP-11 and CP-14 to CP-32	Percentage active area, p Mitigation efficiency Emission Factor Emission Rate	100 % 91.7 % 0.85 Mg/hectare/year 2.69533E-06 g/m ² /s (unmitigated) 2.23713E-07 g/m ² /s (mitigated)	Water suppression 4 times a day AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60)*p/100
	Wind Erosion for Non-Working Hours Source ID: CP-1 to CP-11 and CP-14 to	Percentage active area, p Emission Factor Emission Rate	100 % 0.85 Mg/hectare/year 2.69533E-06 g/m ² /s (unmitigated)	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60)*p/100

Appendix 3.7 - Details of Dust Emission Sources for 1-hour RSP Assessment (Tier 1) for all zone under excavation

KTCDA

Works Area	Sources	Parameter	Remarks	
KTCDA	Heavy construction Source ID: A-1 to A-9, B-1 to B-9, C-1 to C-5	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor for TSP % content of RSP Emission Factor for RSP Emission Rate for RSP	100 % 91.7 % 26 days 10 hour 2.69 Mg/hectare/month of activity 30 % of TSP 0.81 Mg/hectare/month of activity 8.62179E-05 g/m ² /s (unmitigated) 7.15609E-06 g/m ² /s (mitigated)	Assume 100% works area for heavy construction Water suppression 4 times a day From 8:00 to 18:00 AP42, Section 13.2.3.3 = $2.69 \cdot 0.3 \cdot 1000000 / (10000 \cdot d \cdot h \cdot 60 \cdot 60) \cdot p / 100$
	Wind Erosion for Working Hours Source ID: A-1 to A-9, B-1 to B-9, C-1 to C-5	Percentage active area, p Mitigation efficiency Emission Factor for TSP % content of RSP Emission Factor for RSP Emission Rate for RSP	100 % 91.7 % 0.85 Mg/hectare/year 30 % of TSP 0.26 Mg/hectare/year 8.086E-07 g/m ² /s (unmitigated) 6.71138E-08 g/m ² /s (mitigated)	Water suppression 4 times a day AP42, Table 11.9-4 = $0.85 \cdot 0.3 \cdot 1000000 / (10000 \cdot 365 \cdot 24 \cdot 60 \cdot 60) \cdot p / 100$
	Wind Erosion for Non- Working Hours Source ID: A-1 to A-9, B-1 to B-9, C-1 to C-5	Percentage active area, p Emission Factor for TSP % content of RSP Emission Factor for RSP Emission Rate	100 % 0.85 Mg/hectare/year 30 % of TSP 0.26 Mg/hectare/year 8.086E-07 g/m ² /s (unmitigated)	AP42, Table 11.9-4 = $0.85 \cdot 0.3 \cdot 1000000 / (10000 \cdot 365 \cdot 24 \cdot 60 \cdot 60) \cdot p / 100$

Appendix 3.7 - Details of Dust Emission Sources for 1-hour RSP Assessment (Tier 1) for Concurrent Projects

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Works Area	Sources	Parameter	Remarks	
Concurrent Projects	Heavy construction Source ID: CP-1 to CP-11 and CP-14 to CP-32	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor for TSP % content of RSP Emission Factor for RSP Emission Rate	100 % 91.7 % 26 days 10 hour 2.69 Mg/hectare/month of activity 30 % of TSP 0.81 Mg/hectare/month of activity 8.62179E-05 g/m ² /s (unmitigated) 7.15609E-06 g/m ² /s (mitigated)	Assume 100% works area for heavy construction Water suppression 4 times a day From 8:00 to 18:00 AP42, Section 13.2.3.3 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion for Working Hours Source ID: CP-1 to CP-11 and CP-14 to CP-32	Percentage active area, p Mitigation efficiency Emission Factor for TSP % content of RSP Emission Factor for RSP Emission Rate	100 % 91.7 % 0.85 Mg/hectare/year 30 % of TSP 0.26 Mg/hectare/year 8.086E-07 g/m ² /s (unmitigated) 6.71138E-08 g/m ² /s (mitigated)	Water suppression 4 times a day AP42, Table 11.9-4 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
	Wind Erosion for Non-Working Hours Source ID: CP-1 to CP-11 and CP-14 to CP-32	Percentage active area, p Emission Factor for TSP % content of RSP Emission Factor for RSP Emission Rate	100 % 0.85 Mg/hectare/year 30 % of TSP 0.26 Mg/hectare/year 8.086E-07 g/m ² /s (unmitigated)	AP42, Table 11.9-4 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100

Appendix 3.7 - Details of Dust Emission Sources for 1-hour FSP Assessment (Tier 1) for all zone under excavation

KTCDA

Works Area	Sources	Parameter	Remarks	
KTCDA	Heavy construction Source ID: A-1 to A-9, B-1 to B-9, C-1 to C-5	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor for TSP % content of FSP Emission Factor for FSP Emission Rate for FSP	100 % 91.7 % 26 days 10 hour 2.69 Mg/hectare/month of activity 3 % of TSP 0.08 Mg/hectare/month of activity 8.62179E-06 g/m ² /s (unmitigated) 7.15609E-07 g/m ² /s (mitigated)	Assume 100% works area for heavy construction Water suppression 4 times a day From 8:00 to 18:00 AP42, Section 13.2.3.3 = $2.69 \times 0.03 \times 1000000 / (10000 \times d \times h \times 60 \times 60) \times p / 100$
	Wind Erosion for Working Hours Source ID: A-1 to A-9, B-1 to B-9, C-1 to C-5	Percentage active area, p Mitigation efficiency Emission Factor for TSP % content of FSP Emission Factor for FSP Emission Rate for FSP	100 % 91.7 % 0.85 Mg/hectare/year 3 % of TSP 0.03 Mg/hectare/year 8.086E-08 g/m ² /s (unmitigated) 6.71138E-09 g/m ² /s (mitigated)	Water suppression 4 times a day AP42, Table 11.9-4 = $0.85 \times 0.03 \times 1000000 / (10000 \times 365 \times 24 \times 60 \times 60) \times p / 100$
	Wind Erosion for Non- Working Hours Source ID: A-1 to A-9, B-1 to B-9, C-1 to C-5	Percentage active area, p Emission Factor for TSP % content of FSP Emission Factor for FSP Emission Rate	100 % 0.85 Mg/hectare/year 3 % of TSP 0.03 Mg/hectare/year 8.086E-08 g/m ² /s (unmitigated)	AP42, Table 11.9-4 = $0.85 \times 0.03 \times 1000000 / (10000 \times 365 \times 24 \times 60 \times 60) \times p / 100$

Appendix 3.7 - Details of Dust Emission Sources for 1-hour FSP Assessment (Tier 1) for Concurrent Projects

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Works Area	Sources	Parameter	Remarks	
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	Wind Erosion for Non-Working Hours Source ID: CP-1 to CP-11 and CP-14 to CP-32	Percentage active area, p Emission Factor for TSP % content of FSP Emission Factor for FSP Emission Rate	100 % 0.85 Mg/hectare/year 3 % of TSP 0.03 Mg/hectare/year 8.086E-08 g/m ² /s (unmitigated)	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100