



EMRB-2 - Tables

Table EMRB-2-1: Particle Size Constants for Unpaved Road Dust – Industrial Roads

Size Range	k (lb/VMT)	a	b
PM _{2.5}	0.15	0.9	0.45
PM ₁₀	1.5	0.9	0.45
TSP	4.9	0.7	0.45

Table EMRB-2-2: Vehicle Route Descriptions

Vehicle Route	Description	Road Segments
Ore-1	Ore haul from East Pit to Crusher	RS-1, RS-2, RS-9
Ore-2	Ore haul from West Pit to Crusher	RS-4, RS-5, RS-10
Waste-1	Waste haul from East Pit to Crusher	RS-1, RS-2, RS-7N, RS-11
Waste-2	Waste haul from West Pit to Crusher	RS-4, RS-5, RS-7S, RS-12
Ore-3	Ore haul from East Pit to Stockpile	RS-1, RS-2, RS-17, RS-8
Ore-4	Ore haul from West Pit to Stockpile	RS-4, RS-5, RS-18, RS-8

Table EMRB-2-3: Daily Pit Throughputs

Pit	Length [m]	Width [m]	Depth [m]	Estimate Pit Volume [m ³]	Fraction of Total	Daily Ore Throughput to Crusher [tonnes per day]	Daily Waste Rock Extracted [tonnes per day]	Daily Low Grade Ore Throughput to Stockpile [tonnes per day]
Total	—	—	—	186,152,186	100 %	65,000	100,000	27,400
East	744	722	96	51,807,096	28 %	18,090	27,831	7,626
West	806	1282	130	134,345,090	72 %	46,910	72,169	19,774

Table EMRB-2-4: Daily Vehicle Route Data

Parameter	Ore-1	Ore-2	Waste-1	Waste-2	Ore-3	Ore-4
Length of road segment (km)	2.95	3.99	4.66	6.24	3.75	4.39
Throughput (tonnes/day)	18,090	46,910	27,831	72,169	7,626	19,774
Number of vehicle trips per day	80	207	123	318	34	87



EMRB-2 - Tables

Table EMRB-2-5: Emission Rates for Each Vehicle Route

Route	Segment	Length [km]	Emission Rate [g/s]
Ore-1	RS-1	0.84	2.84
	RS-2	1.88	6.33
	RS-9	0.23	0.78
	Total	2.95	9.94
Ore-2	RS-4	1.11	9.71
	RS-5	2.43	21.20
	RS-10	0.45	3.96
	Total	3.99	34.87
Waste-1	RS-1	0.84	4.37
	RS-2	1.88	9.73
	RS-7N	1.66	8.62
	RS-11	0.28	1.46
	Total	4.66	24.18
Waste-2	RS-4	1.11	14.94
	RS-5	2.43	32.61
	RS-7S	1.25	16.78
	RS-12	1.46	19.59
	Total	6.24	83.92
Ore-3	RS-1	0.84	1.20
	RS-2	1.88	2.67
	RS-17	0.38	0.54
	RS-8	0.65	0.93
	Total	3.75	5.34
Ore-4	RS-4	1.11	4.09
	RS-5	2.43	8.94
	RS-18	0.20	0.74
	RS-8	0.65	2.41
	Total	4.39	16.18



EMRB-2 - Tables

Table EMRB-2-6: Emission Rates for Each Road Segment

Road Segments	Emission Rate [g/s]						
	Ore-1	Ore-2	Waste-1	Waste-2	Ore-3	Ore-4	Total
RS-1	2.84	—	4.37	—	1.20	—	8.40
RS-2	6.33	—	9.73	—	2.67	—	18.73
RS-4	—	9.71	—	14.94	—	4.09	28.74
RS-5	—	21.20	—	32.61	—	8.94	62.74
RS-7S	—	—	—	16.78	—	—	16.78
RS-7N	—	—	8.62	—	—	—	8.62
RS-8	—	—	—	—	0.93	2.41	3.34
RS-9	0.78	—	—	—	—	—	0.78
RS-10	—	3.96	—	—	—	—	3.96
RS-11	—	—	1.46	—	—	—	1.46
RS-12	—	—	—	19.59	—	—	19.59
RS-17	—	—	—	—	0.54	—	0.54
RS-18	—	—	—	—	—	0.74	0.74

Table EMRB-2-7: Modelling Emission Rates for Each Road Segment

Segment	Total Segment Emission Rate [g/s]	Road Length [m]	No. of AERMOD Sources	Emission Rate per AERMOD Source [g/s]
RS-1	8.40	842	36	0.23
RS-4	28.74	1,111	47	0.61
RS-7S	16.78	1,248	53	0.32
RS-7N	8.62	1,662	70	0.12
RS-8	3.34	654	28	0.12
RS-9	0.78	231	10	0.078
RS-10	3.96	453	19	0.21
RS-11	1.46	281	12	0.12
RS-12	19.59	1,457	61	0.32
RS-17	0.54	378	16	0.034
RS-18	0.74	202	9	0.082

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