#### Appendix 5.2.7 - Details of Dust Emission Sources for Daily FSP Assessment (Tier 1) at Year 2015 Third Runway Work Areas Works Area Sources Parameter Submarine pipeline 100.0 % Percentage active area, p Assume % works area for heavy construction Mitigation efficiency Q1: 91.7 % Water suppression 12 times a day Submarine cable No. of working days per month, d 30 days Q3: S1, S2, S3 No. of working hours per day, h 24 hour AP42. Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Emission Factor (0.03) 0.0807 Mg/hectare/month of activity Q4: S1, S2, S3 =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) mission Rate 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion Source ID: (as above) 100 % Percentage active area, p 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 8.086E-08 g/m<sup>2</sup>/s Emission Rate =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 Percentage active area, p 100.0 % Concurrent project) Heavy const Source ID: Assume % works area for heavy construction Water suppression 12 times a day NCD works Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Sources Final Report No. of working days per month, d 30 days Q3: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, TRD2, TCPN-1, TCPN-2, TCPN-3, No. of working hours per day, h 24 hour 04: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to 0.0807 Mg/hectare/month of activity EGC4, EGC5, EGC6, EGC7 Emission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 $3.11343E-06 \text{ g/m}^2/\text{s}$ (unmitigated) $2.58414E-07 \text{ g/m}^2/\text{s}$ (mitigated) **Emission Rate** =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 Wind Erosion Source ID: (as above) Percentage active area, p 100.0 % AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) 0.0255 Mg/hectare/year Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 8.086E-08 g/m<sup>2</sup>/s =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 Emission Rate (Concurrent project) Heavy construction Source ID: Percentage active area, p 100.0 % Assume % works area for heavy construction Water suppression 12 times a day ITT works (area Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust ources) Sources Final Report Q1: SCCP1, AES6, AES13, AES14, AES15, EM1, EM2, EGC3-1, EGC3-2, ITT1 No. of working days per month, d No. of working hours per day, h Q2; SCCP1, AES6, AES13, AES14, AES15, EM1, EM2, EGC3-1, EGC3-2, ITT1 30 days Q3: SCCP1, AES6, AES13, AES14, AES15, EM1, EM2, EGC3-1, EGC3-2, ITT1 24 hour Q4: EM1, EM2, ITT1 AP42, Section 13.2.3.3 0.0807 Mg/hectare/month of activity Thompson G. Pace, USEPA. Examination of the Multiplier Used to mission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 2.58414E-07 g/m²/s (mitigated) Wind Eros Percentage active area, p 100.0 % ource ID: (as above) AP42, Table 11.9-4 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 8.086E-08 g/m<sup>2</sup>/s mission Rate =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 100.00 % (Concurrent project) Heavy construction Source ID: Percentage active area, p Assume % works area for heavy construction Water suppression 12 times a day ITT works (line Q1: SCRE1, SCRE2, SCRE3, SCRE4, SCRE5, SCRE6, SCRE7, SCRE8, SCRE9, SCRE10, AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10, AES11, AES12 O2: SCRE1, SCRE2, SCRE2, SCRE4, SCRE4, SCRE7, SCRE6, SCRE9, SCRE5, SCRE6, SCRE7, SCRE6, SCRE9, SCRE9, SCRE7, SCRE5, SC Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % ources) Sources Final Report Roadworks - at No. of working days per month, d 30 days Q3; SCRE1, SCRE2, SCRE3, SCRE4, SCRE5, SCRE6, SCRE7, SCRE8, SCRE9 SCRE10, AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10, AES11, AES12 No. of working hours per day, h 24 hour AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to 0.0807 Mg/hectare/month of activity Emission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Assume road width equals 12m, therefore multiply emission rate Emission Rate 3.73611E-05 g/m²/s (unmitigated) =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 \* 12 3.10097E-06 g/m²/s (mitigated) Wind Erosion Percentage active area, p 100.00 % ource ID: (as above) Thompson G. Pace, USEPA. Examination of the Multiplier Used t Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Emission Factor (0.03) 0.0255 Mg/hectare/year =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 8.086E-08 g/m<sup>2</sup>/s Concurrent project) Percentage active area, p 100.0 % Assume 100% works area for heavy construction Source ID Q1: BCF-A, BCF-B, BCF-C1, BCF-C2, BCF-C3, BCF-C4 Q2: BCF-A, BCF-B, BCF-C1, BCF-C2, BCF-C3, BCF-C4 Mitigation efficiency 87.5 % Extracted from HKBCF EIA Boundary Crossing Extracted from HKBCF EIA No. of working days per month, d 26 days Q3: BCF-A, BCF-B, BCF-C1, BCF-C2, BCF-C3, BCF-C4 No. of working hours per day, h 12 hour Extracted from HKBCF EIA Q4: BCF-A, BCF-B, BCF-C1, BCF-C2, BCF-C3, BCF-C4 AP42, Section 13.2.3.3 Emission Factor (0.03) 0.0807 Mg/hectare/month of activity Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 7.18483E-06 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 8.98104E-07 g/m²/s (mitigated) Wind Erosion Source ID: (as above) 100 % Percentage active area, p Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) 0.0255 Mg/hectare/year Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 **Emission Rate** 8.086E-08 g/m<sup>2</sup>/s 0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 100.0 % Percentage active area, p Concurrent project) Heavy construction Source ID: Assume 100% works area for heavy construction Hona Kona Link O1: LR-2, LR-3, LR-4, LR-5, LR-6, LR-7, LR-8, LR-9, LR-10, LR-11, LR-12, LR-13, LR-14 Mitigation efficiency 87.5 % Extracted from HKI R FIA Road (HKLR) Extracted from HKLR EIA No. of working days per month, d 26 days No. of working hours per day, h 12 hour Extracted from HKLR EIA AP42, Section 13.2.3.3 Emission Factor (0.03) Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 0.0807 Mg/hectare/month of activity 7.18483E-06 g/m²/s (unmitigated) 8.98104E-07 g/m²/s (mitigated) Emission Rate =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 Wind Erosion Source ID: (as above) Percentage active area, p AP42. Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) 0.0255 Mg/hectare/year Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** 8.086E-08 g/m<sup>2</sup>/s

#### Third Runway Work Areas Works Area Sources Parameter Remarks Third Runway Land Heavy construction Percentage active area, p 100.0 % Source ID: Formation Assume % works area for heavy construction For 24hrs activities: Water suppression 12 times a day Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Q1: Sources Final Report Q2: No. of working days per month, d 30 days Q3: No. of working hours per day, h 24 hour Q4: 1\_03-1, 1\_03-2, 1\_08A-1, 1\_08A-2, 1\_08B-1, 1\_08B-2, 2\_04-1, 2\_04 AP42, Section 13.2.3.3 2, 2\_06-1, 2\_06-2, 2\_06-3 Emission Factor (0.03) 0.0807 Mg/hectare/month of activity Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69\*0.03\*1000000/(10000\*30\*h\*60\*60)\*p/100 **Emission Rate** 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 8.086E-08 g/m<sup>2</sup>/s =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** leavy construction 100.0 % Submarine pipeline Percentage active area, p Assume % works area for heavy construction Source ID: Q1: S1, S2, S3 Mitigation efficiency 91.7 % Water suppression 12 times a day Submarine cable Q2: S1, S2, S3 No. of working days per month, d 30 days Q3: S1, S2, S3 No. of working hours per day, h 24 hour AP42. Section 13.2.3.3 Emission Factor (0.03) 0.0807 Mg/hectare/month of activity Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100 % Source ID: (as above) AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) 0.0255 Mg/hectare/year Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 **Emission Rate** 8.086E-08 g/m<sup>2</sup>/s =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 (Concurrent project) leavy construction Percentage active area, p 100.0 % Assume % works area for heavy construction Source ID: Water suppression 12 times a day Q1: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3 NCD works Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust , EGC3-2, EGC4, EGC5, EGC6, EGC7 Sources Final Report Q2: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, No. of working days per month, d 30 days EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7 Q3: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7 24 hour No. of working hours per day, h Q4: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, AP42, Section 13.2.3.3 NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1 EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) 0.0807 Mg/hectare/month of activity Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 Emission Rate 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42. Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) 0.0255 Mg/hectare/year Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 **Emission Rate** 8.086E-08 g/m<sup>2</sup>/s =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 (Concurrent project) Heavy construction Percentage active area, p 100.0 % Assume % works area for heavy construction Source ID: ITT works (area Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % sources) Q1: AES6, EM1, EM2, ITT1 Sources Final Report Q2: AES6 EM1 EM2 ITT1 No. of working days per month, d 30 days Q3: AES6, EM1, EM2, ITT1 No. of working hours per day, h 24 hour Q4: AES6, EM1, EM2, ITT1 AP42. Section 13.2.3.3 ion Factor (0.03) 0.0807 Mg/hectare/month of activity Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Frasion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 Emission Factor (0.03) 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 **Emission Rate** 8.086E-08 g/m<sup>2</sup>/s =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100

Appendix 5.2.7 - Details of Dust Emission Sources for Daily FSP Assessment (Tier 1) at Year 2016

	etails of Dust Emission Sources for Daily FSP Assessme	· · · · · · · · · · · · · · · · · · ·		
(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
ITT works (line sources)	Q1: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10, AES11, AES12	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
Roadworks - at grade	Q2: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10,	No. of working days per month, d	30 days	Sources rillal nepolt
•	AES11, AES12 Q3: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10,	No. of working hours per day, h	24 hour	
	AES11, AES12 Q4: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10,	ivo. or working nours per day, n	24 HOUI	1840 0 11 12 2 2 2
	AES11, AES12	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.73611E-05 g/m²/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m.
			3.10097E-06 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100 * 12
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Source ID. (as above)	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10. April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
T2 Expansion - Advanced Works	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
(Temporary Car Parks NCD and		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
Temporary Road Diversion)	Q1: TRD1, TRD3, TRD4, TRD5, TRD6 Q2: TRD1, TRD5, TRD6 Q3: TRD1, TRD5, TRD6	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
I	Q4:	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Rate	3.11343E-06 g/m²/s (unmitigated)	Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Engine		2.58414E-07 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
		Emission Factor (0.03)	0.0255 Mg/hectare/year	Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume 100% works area for heavy construction
Boundary Crossing	Q1: BCF-C4 Q2: BCF-C4	Mitigation efficiency	87.5 %	Extracted from HKBCF EIA Extracted from HKBCF EIA
Facilities (BCF)	Q2: BCF-C4 Q3: BCF-C4	No. of working days per month, d No. of working hours per day, h	26 days 12 hour	Extracted from HKBCF EIA Extracted from HKBCF EIA
	Q4: BCF-C4	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	7.18483E-06 g/m²/s (unmitigated) 8.98104E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Other airport	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction
facilities related works	Source ID:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: ABT1-1 Q2: ABT1-1	No. of working days per month, d	30 days	Sources Final Report
	Q3: ABT1-1	No. of working days per month, d	24 hour	
	Q4: ABT1-1	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Rate	8.086E-08 g/m²/s	Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Roadworks	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
corresponding to Other airport facilities related		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
works	Q1: ABT1-2, ABT1-3 Q2: ABT1-2, ABT1-3			Sources Final Report
	Q3: ABT1-2, ABT1-3	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4: ABT1-2, ABT1-3	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.73611E-05 g/m²/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m.
			3.10097E-06 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100 * 12
	Wind Erosion	Percentage active area, p	100.0 %	
	Source ID: (as above)	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Rate	8.086E-08 g/m²/s	Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
ļ		EIIIISSIUII Male	0.000E-00 g/III /3	=0.05 0.05 1000000/(10000 505 24 00 00) p/100

## Appendix 5.2.7 - Details of Dust Emission Sources for Daily FSP Assessment (Tier 1) at Year 2017

Heavy construction Source ID: For 24hrs activities: C1: 1_01, 1_03-1, 1_03-2, 1_04, 1_07-1, 1_07-2, 1_08A-1, 1_08A-2, 1_08B-1, 1_08B-2, 1_09-1, 1_09-2, 2_03B, 2_04-1, 2_04-2, 2_05B-1,	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Q1: 1_01, 1_03-1, 1_03-2, 1_04, 1_07-1, 1_07-2, 1_08A-1, 1_08A-2,		İ	•
2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07B, 2_08, 2_09-1, 2_09-2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
Q2: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_07-1, 1_07-2, 1_08A-1, 1_08A-2, 1_08B-1, 1_08B-2, 1_09-1, 1_09-2, 2_03B, 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-1, 2_09-2, 3_01A-1, 3_01A-2, 3_01A-3	No. of working days per month, d	30 days	
Q3: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_07-1, 1_07-2, 1_08A-1, 1_08A-2, 1_08B-1, 1_08B-2, 2_03B, 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 3_01A-1, 3_01A-2, 3_01A-3	No. of working hours per day, h	24 hour	
Q4: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_07-1, 1_07-2, 1_08A-1, 1_08A-2, 2_03B, 2_05A, 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
	Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*30*h*60*60)*p/100
For night-time activities:	Percentage active area, p	100.0 %	
	Mitigation efficiency	91.7 %	
	No. of working days per month, d	30 days	
G3: 1_09-1, 1_09-2, 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 2_09-2	No. of working hours per day, h	12 (night) hour	
Q4: 1_09-1, 1_09-2, 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 2_09-2, 3_02A-1, 3_02A-2, 3_02A-3	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier User to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
	Emission Rate	6.22685E-06 g/m²/s (unmitigated) 5.16829E-07 g/m²/s (mitigated)	2005 =2.69*0.03*1000000/(10000*30*h*60*60)*p/100
Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier User to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
	Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Wind Erosion Source ID:	Percentage active area, p	20.0 %	Based on scheme design of definition for sand fill materials consisting of coarse materials with size not exceeding 37.5mm
Q1:			and fines content not exceeding 20% AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used
	Emission ractor (0.00)	0.0233 Wig/Hectale/yeal	to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
Q2: Q3:	Emission Rate	1.6172E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Source ID:			Water suppression 12 times a day
Q1: 4_04, 4_05-1	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
Q2: 4_04, 4_05-1 Q3: 4_04, 4_05-1	No. of working days per month, d	30 days 24 hour	·
Q4: 4_04, 4_05-1	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
	Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
	Emission Factor (0.03)	0.0255 Mg/hectare/year	Thompson G. Pace, USEPA. Examination of the Multiplier User to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
	Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
01: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7	No. of working days per month, d	30 days	
03: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7  Q4: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2,	No. of working hours per day, h	24 hour	AP42. Section 13.2.3.3
NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	Thompson G. Pace, USEPA. Examination of the Multiplier User to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
	Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
	Emission Factor (0.03)	0.0255 Mg/hectare/year	Thompson G. Pace, USEPA. Examination of the Multiplier User to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
	Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
	1. 2 .058-2 .2 .074-1 .2 .078-2 .2 .078 .2 .08 .2 .09-1 .2 .09-2 .3 .014-1 .3 .014-2 .3 .014-3  Q3 .1 .01. 1 .02-1 .1 .02-2 .1 .03-1 .1 .03-2 .1 .04 .1 .05 .1 .07-1 .1 .07-2 .1 .084-2 .1 .084-2 .1 .088-2 .2 .038 .2 .058-1 .2 .058-2 .2 .074-1 .2 .074-2 .2 .078 .2	1. 2. 088.2. 2074.1. 2. 074-2. 2078. 2. 08. 2. 091-2. 09-2. 3. 074  On 1. 08.1. 1. 08.1. 1. 08.2. 1. 08.1. 1. 08.1. 1. 08.1. 1. 071. 1. 072  2. 074-1. 2. 074-2. 2. 078. 2. 08.1. 2. 081-2. 0. 1. 08.1. 2. 079-1. 1. 072  2. 074-1. 2. 074-2. 2. 078. 2. 08.2. 081-1. 0. 1. 08.1. 2. 079-1. 1. 072  2. 074-2. 2. 078. 2. 08.2. 081-2. 081-2. 081-2. 0. 081	1

Appendix 5.2.7 - De	etails of Dust Emission Sources for Daily FSP Assessm	ent (Tier 1) at Year 2017		
(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
ITT works (area sources)	Q1: AES6	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	·
	Q4:	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.11343E-06 g/m²/s (unmitigated)	2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion	Daniel de la constante de la c	2.58414E-07 g/m²/s (mitigated)	
	Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Factor (0.03)	0.0255 Mg/hectare/year	to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
ITT works (line sources)	Q1: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10, AES11, AES12	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
Roadworks - at grade	Q2: Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4:	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.73611E-05 g/m²/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m. =2.69*0.03*1000000/(10000*d*h*60*60)*p/100 * 12
			3.10097E-06 g/m²/s (mitigated)	=2.99 0.03 10000000 (10000 0 11 00 00) [5/100 12
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	AP42. Table 11.9-4
		Emission Factor (0.03)	0.0255 Mg/hectare/year	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
South Cargo	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
Roadworks - at grade		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2: CA1, CA2 Q3: CA1, CA2	No. of working days per month, d	30 days	Sources Final Report
	Q4: CA1, CA2	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Assume road width equals 12m, therefore multiply emission rate
		Emission Rate	3.73611E-05 g/m²/s (unmitigated)	by 12m. =2.69*0.03*1000000/(10000*d*h*60*60)*p/100 * 12
	Wind Erosion		3.10097E-06 g/m²/s (mitigated)	
	Source ID: (as above)	Percentage active area, p	100.00 %	AP42, Table 11.9-4
		Emission Factor (0.03)	0.0255 Mg/hectare/year	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
South Cargo Roadworks -	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
viaduct	Q1:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: CA3, CA4, CA5, CA6, CA7, CA8 Q3: CA3, CA4, CA5, CA6, CA7, CA8	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources I mai report
	Q4: CA3, CA4, CA5, CA6, CA7, CA8	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.89178E-06 g/m²/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)
			3.23018E-07 g/m²/s (mitigated)	'=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	NO THE AND A
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*1000000/(10000*365*24*60*60)*p/100
Roadworks Road 6	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction
viaduct (Concept F, Option 3)	Source ID:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	O1: Q2: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working days per month, d	30 days	Sources Final Report
	RF32, RF33, RF34, RF35, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31,	No. of working hours per day, h	24 hour	
	RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.89178E-06 g/m²/s (unmitigated)	2005 Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile
			3.23018E-07 g/m²/s (mitigated)	width + 50% extra for works) '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
		1		

Appendix 5.2.7 - Do	etails of Dust Emission Sources for Daily FSP Assessme	ent (Tier 1) at Year 2017		
New APM Interchange Station	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
(AIS)	Q1: Q2:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q3: AIS1, AIS2 Q4:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	ADAO Castian 12 0 2 2
	···	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above) Q1:	Percentage active area, p	100.00 %	
	ui:	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
BHS and APM tunnel	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
	Q1:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: Q3: BAT1, BAT2, NAB3, NAB4	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	·
	Q4: BAT1, BAT2, NAB3, NAB4	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above) Q1:	Percentage active area, p	100.00 %	
	u:	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
T2 Expansion Area	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2: Q3: T2E-1, T2E-2, T2E-3, BHS1, BHS2, NAB1, NAB2, SAB, NAD1	No. of working days per month, d	30 days	Sources Final Report
	Q4: T2E-1, T2E-2, T2E-3, AIS1, BIS2, BHS1, BHS2, NAB1, NAB2, SAB, NAD1, EVA1, EVA2, EVA3, EVA4, EVA5, EVA6, EVA7, EVA8, EVA9	No. of working hours per day, h  Emission Factor (0.03)	24 hour  0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Rate	3.11343E-06 g/m²/s (unmitigated)	to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion	Percentage active area, p	2.58414E-07 g/m²/s (mitigated)	
	Source ID: (as above)			AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Factor (0.03)	0.0255 Mg/hectare/year	to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
T2 Expansion - Emergency	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Vehicular Access (EVA)		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2: Q3: EVA1, EVA2, EVA3, EVA4, EVA5, EVA6, EVA7, EVA8, EVA9	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4:	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Other airport	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction
facilities related works	Source ID:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: ABT1-1 Q2: ABT1-1	No. of working days per month, d	30 days	Sources Final Report
	Q3: ABT1-1 Q4: ABT1-1	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Factor (0.03) Emission Rate	0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated)	to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion		2.58414E-07 g/m²/s (mitigated)	
	Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
		Emission Factor (0.03)	0.0255 Mg/hectare/year	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Roadworks corresponding to Other airport	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction Water suppression 12 times a day
facilities related works	Q1: ABT1-2, ABT1-3	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: ABT1-2, ABT1-3 Q3: ABT1-2, ABT1-3 Q4: ABT1-2, ABT1-3	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	AP42, Section 13.2.3.3
		Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.73611E-05 g/m²/s (unmitigated) 3.10097E-06 g/m²/s (mitigated)	2005 Assume road width equals 12m, therefore multiply emission rate
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100

## Appendix 5.2.7 - Details of Dust Emission Sources for Daily FSP Assessment (Tier 1) at Year 2018

Third Runway Wor	k Areas			
Works Area Third Runway Land	Sources Heavy construction	Percentage active area, p	Parameter 100.0 %	Remarks
Formation	Source ID: For 24hrs activities:			Assume % works area for heavy construction
	Q1: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1, 1_06-2, 1_08B-2, 2_02B-1, 2_02B-2, 2_03A, 2_05A, 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: 1_02-1, 1_02-2, 1_05, 1_06-1, 1_06-2, 2_02B-1, 2_02B-2, 2_03A, 2_05A, 2_08, 3_02B	No. of working days per month, d	30 days	
	Q3: 1_06-1, 1_06-2, 2_01, 2_02B-1, 2_02B-2, 2_03A, 2_03B, 2_05A, 2_05B-1, 2_05B-2	No. of working hours per day, h	24 hour	
	Q4: 2_01, 2_02A, 2_02B-1, 2_02B-2, 2_03A, 2_03B, 2_05B-1, 2_05B-2	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	2005 =2.69*0.03*1000000/(10000*30*h*60*60)*p/100
	For night-time activities:  Q1: 1 09-1, 1 09-2, 2 04-1, 2 04-2, 2 06-1, 2 06-2, 2 06-3, 2 09-1,	Percentage active area, p	100.0 %	
	2_09-2, 3_02Ā-1, 3_02Ā-2, 3_02Ā-3	Mitigation efficiency	91.7 %	
	O2: 1_09-1, 1_09-2, 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 2_09-2, 3_01A-1, 3_01A-2, 3_01A-3, 3_02A-1, 3_02A-2, 3_02A-3	No. of working days per month, d	30 days	
	Q3: 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 2_09-2, 3_01A-1, 3_01A-2, 3_01A-3, 3_02A-1, 3_02A-2, 3_02A-3	No. of working hours per day, h	12 (night) hour	
	Q4: 1_09-1, 1_09-2, 2_09-1, 2_09-2, 3_02A-1, 3_02A-2, 3_02A-3	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	6.22685E-06 g/m²/s (unmitigated) 5.16829E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*30*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Third Runway	Wind Erosion Source ID:			Based on scheme design of definition for sand fill materials
Wind Erosion (only)	Q1: 1_07-2, 1_08A-2, 2_03B, 2_07B, 2_08, 3_01A-1, 3_01A-2, 3_01A	Percentage active area, p	20.0 %	consisting of coarse materials with size not exceeding 37.5mm and fines content not exceeding 20% AP42, Table 11.9-4
		Emission Factor (0.03)	0.0255 Mg/hectare/year	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
	Q2: 1_01, 1_03-1, 1_03-2, 1_04, 2_03B, 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B Q3: 1_09-1, 1_09-2, 2_08, 3_02B Q4: 2_04-1, 2_04-2, 2_05A, 2_06-1, 2_06-2, 2_06-3, 2_08, 3_02B	Emission Rate	1.6172E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Third Runway Other Construction Works/Facilities on		Percentage active area, p	100.0 %	Assume % works area for heavy construction Water suppression 12 times a day
newly formed land	Q1: 1_07-1, 1_08A-1, 1_08B-1, 4_04, 4_05-1	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: 1_07-1, 1_07-2, 1_08A-1, 1_08A-2, 1_08B-1, 1_08B-2, 4_04, 4_05 1 Q3: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_07-1, 1_07-	No. of working days per month, d	30 days	
	2, 1_08A-1, 1_08A-2, 1_08B-1, 1_08B-2, 2_07A-1, 2_07A-2, 2_07B, 4_04, 4_05-1 Q4: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1, 1_06-1	No. of working hours per day, h	24 hour	AD40 Continue 42.0.0.0
	(44: 1-01, 1-02-1, 1-02-2, 1-03-1, 1-03-2, 1-04, 1-03, 1-06-1, 1-05-2, 1-07-1, 1-07-2, 1-084, 1, 1-084-2, 1-088-1, 1-088-2, 2-07A-1, 2-07A-2, 2-07B, 3-01A-1, 3-01A-2, 3-01A-3, 4-04, 4-05-1	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
		Emission Factor (0.03)	0.0255 Mg/hectare/year	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
NCD works	Q1: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2,	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	EGC3-1, EGC3-2 Q2: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2	No. of working days per month, d	30 days	Sources Final Report
	O3: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2 Q4: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2,	No. of working hours per day, h	24 hour	AP42 Section 12 0 2 2
	Q4: NoD2-1, NoD2-2, NoD2-3, TRD3, TRD4, SCGP1, EGC1, EGC2, EGC3-1, EGC3-2	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	ADVO Table 44.0 4
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
	1		<u> </u>	1

Appendix 5.2.7 - De	etails of Dust Emission Sources for Daily FSP Assessm	nent (Tier 1) at Year 2018		
Midfield development (MD)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
. 2. Sopmon (MD)	Q1: MD	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: MD Q3: MD	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4: MD	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.11343E-06 g/m²/s (unmitigated)	2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion		2.58414E-07 g/m²/s (mitigated)	
	Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
		Emission Factor (0.03)	0.0255 Mg/hectare/year	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
South Cargo Roadworks - at	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
grade	Q1: CA1, CA2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: CA1, CA2 Q3: CA1, CA2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	School I ma risport
	Q4: CA1, CA2	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.73611E-05 g/m²/s (unmitigated)	2005 Assume road width equals 12m, therefore multiply emission rate by 12m.
			3.10097E-06 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100 * 12
	Wind Erosion	Porcontago activo area n	100.00 %	
	Source ID: (as above)	Percentage active area, p		AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Factor (0.03)	0.0255 Mg/hectare/year	to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
South Cargo Roadworks -	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction Water suppression 12 times a day
viaduct	Q1: CA3, CA4, CA5, CA6, CA7, CA8	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: CA3, CA4, CA5, CA6, CA7, CA8 Q3: CA3, CA4, CA5, CA6, CA7, CA8	No. of working days per month, d	30 days 24 hour	Sources i mai ricport
	Q4: CA3, CA4, CA5, CA6, CA7, CA8	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.89178E-06 g/m²/s (unmitigated)	2005 Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)
			3.23018E-07 g/m²/s (mitigated)	'=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*1000000/(10000*365*24*60*60)*p/100
Roadworks Road 6 viaduct (Concept F,	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Option 3)	O1: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working days per month, d	30 days	
	Q3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31,	No. of working hours per day, h	24 hour	
	RF32, RF33, RF34, RF35, RF36, RF37 Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21,			AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used
	RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Assume 30m spacing between road piers (base:5mx 5m),
		Emission Rate	3.89178E-06 g/m²/s (unmitigated)	therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)
			3.23018E-07 g/m²/s (mitigated)	'=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	ADMOTE LA LA CALL
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
New APM	Heavy construction	Percentage active area, p	100.00 %	Accume % works area for books construction
Interchange Station (AIS)	Course ID:	Mitigation efficiency	91.7 %	Assume % works area for heavy construction  Water suppression 12 times a day  Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2: AIS1, AIS2, EVA6, EVA7, EVA8	No. of working days per month, d	30 days	Sources Final Report
	Q3: AIS1, AIS2, EVA6, EVA7, EVA8 Q4: AIS1, AIS2, EVA6, EVA7, EVA8	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Factor (0.03)  Emission Rate	0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated)	to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
			2.58414E-07 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above) Q1:	Percentage active area, p	100.00 %	AP42. Table 11.9-4
		Emission Factor (0.03)	0.0255 Mg/hectare/year	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
		, ,		to Estimate PM2.5 Fugitive Dust Emissions from PM10, 2005

Appendix 5.2.7 - De	etalis of Dust Elilission Sources for Daily 1 SF Assessi	ment (Her I) at Year 2016		
Baggage Hall - Baggage Handling	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
System (BHS)	01:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: BHS1, BHS2, EVA9 Q3: BHS1, BHS2, EVA9	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources I mai report
	Q4: BHS1, BHS2, EVA9	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.11343E-06 g/m²/s (unmitigated)	2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion	Deventore estive avec a	2.58414E-07 g/m²/s (mitigated)	
	Source ID: (as above) Q1:	Percentage active area, p	100.00 %	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Factor (0.03)	0.0255 Mg/hectare/year	to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
New APM Depot (NAD)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction Water suppression 12 times a day
	Q1: NAD1, NAD2	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: NAD1, NAD2 Q3: NAD1, NAD2 Q4: NAD1, NAD2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	AP42, Section 13.2.3.3
		Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: NAD1, NAD2	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used
		Emission Rate	8.086E-08 g/m²/s	to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
			· ·	
BHS and APM tunnel	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction Water suppression 12 times a day
	Q1: BAT1, BAT2, NAB3, NAB4 Q2: BAT1, BAT2, NAB3, NAB4	Mitigation efficiency  No. of working days per month, d	91.7 % 30 days	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q3: BAT1, BAT2, NAB3, NAB4 Q4: BAT1, BAT2, NAB3, NAB4	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3
		Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: BAT1, BAT2, NAB3, NAB4	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
		Emission Rate	8.086E-08 g/m²/s	2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
T2 Expansion Area	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction
T2 Expansion Area	Heavy construction Source ID:	Percentage active area, p  Mitigation efficiency	100.0 % 91.7 %	Assume % works area for heavy construction  Water suppression 12 times a day  Equation (3-2) in the USEPA's Control of Open Fugitive Dust
T2 Expansion Area	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3	Mitigation efficiency  No. of working days per month, d	91.7 % 30 days	Water suppression 12 times a day
T2 Expansion Area	Source ID: Q1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h	91.7 % 30 days 24 hour	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used
T2 Expansion Area	Source ID:  Q1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3:	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h  Emission Factor (0.03)	91.7 % 30 days 24 hour  0.0807 Mg/hectare/month of activity	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
T2 Expansion Area	Source ID:  Q1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h	91.7 % 30 days 24 hour	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
T2 Expansion Area	Source ID:  Q1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3:	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h  Emission Factor (0.03)	91.7 % 30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated)	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
T2 Expansion Area	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h  Emission Factor (0.03)  Emission Rate	91.7 % 30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
T2 Expansion Area	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h  Emission Factor (0.03)  Emission Rate  Percentage active area, p	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used
T2 Expansion - Car	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)	Mitigation efficiency  No. of working days per month, d No. of working hours per day, h  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
T2 Expansion - Car Park North (North	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID: Q1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3:	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Rate	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
T2 Expansion - Car Park North (North	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  O1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Factor (0.03)  Emission Factor (0.03)  Mitigation efficiency  No. of working days per month, d	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 % 30 days	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used
T2 Expansion - Car Park North (North	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID: Q1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3:	Mitigation efficiency  No. of working days per month, d No. of working hours per day, h  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d No. of working hours per day, h	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated)	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3
T2 Expansion - Car Park North (North	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  O1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3: Q4:  Wind Erosion	Mitigation efficiency  No. of working days per month, d No. of working hours per day, h  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d No. of working hours per day, h  Emission Factor (0.03)  Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
T2 Expansion - Car Park North (North	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  Q1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3: Q4:	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Factor (0.03) Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated) 100.0 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
T2 Expansion - Car Park North (North	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  O1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3: Q4:  Wind Erosion	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Factor (0.03) Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated) 100.0 %  0.0255 Mg/hectare/year	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
T2 Expansion - Car Park North (North	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  O1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3: Q4:  Wind Erosion	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Factor (0.03) Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated) 100.0 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
T2 Expansion - Car Park North (North Annex Building)  T2 Expansion - Lounge Limo (South	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  O1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3: Q4:  Wind Erosion Source ID: (as above)	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Factor (0.03) Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated) 100.0 %  0.0255 Mg/hectare/year	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction
T2 Expansion - Car Park North (North Annex Building)	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  O1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3: Q4:  Wind Erosion Source ID: (as above)	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Factor (0.03) Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated) 100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
T2 Expansion - Car Park North (North Annex Building)  T2 Expansion - Lounge Limo (South	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction O1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3: Q4:  Wind Erosion Source ID:  O4:  Heavy construction Source ID:  Wind Erosion Source ID: (as above)	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*d5*24*60*60)*p/100  ASsume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
T2 Expansion - Car Park North (North Annex Building)  T2 Expansion - Lounge Limo (South	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction O1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3: Q4:  Wind Erosion Source ID:  O1: NAB1, NAB2 Q3: Q4:	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated) 100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 % 30 days	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April
T2 Expansion - Car Park North (North Annex Building)  T2 Expansion - Lounge Limo (South	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction O1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3: Q4:  Wind Erosion Source ID:  O1: NAB1, NAB2 Q3: Q4:	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Factor (0.03) Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03)  Emission Factor (0.03)  Emission Factor (0.03)  Emission Factor (0.03)  Emission Factor (0.03)  Emission Factor (0.03)  Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*d*h*60*60)*p/100  ASsume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used
T2 Expansion - Car Park North (North Annex Building)  T2 Expansion - Lounge Limo (South	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction O1: NAB1, NAB2, BHS1 Q2: NAB1, NAB2 Q3: Q4:  Wind Erosion Source ID:  O1: NAB1, NAB2 Q3: Q4:	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Factor (0.03) Emission Factor (0.03) Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working days per month, d No. of working days per day, h Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated)	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
T2 Expansion - Car Park North (North Annex Building)  T2 Expansion - Lounge Limo (South	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 O2: T2E-3 O3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID: O1: NAB1, NAB2, BHS1 O2: NAB1, NAB2 O3: O4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID: (as above)	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Rate  Percentage active area, p Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03)	91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 % 30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (unmitigated)	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*d55*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
T2 Expansion - Car Park North (North Annex Building)  T2 Expansion - Lounge Limo (South	Source ID:  O1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 O2: T2E-3 O3: Q4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID: O1: NAB1, NAB2, BHS1 O2: NAB1, NAB2 O3: O4:  Wind Erosion Source ID: (as above)  Heavy construction Source ID: (as above)	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03) Emission Rate  Percentage active area, p  Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.03)	91.7 % 30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 % 30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.0 %  91.7 % 30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (unmitigated)	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  ASsume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100

#### Third Runway Work Areas Sources Works Area Parameter Remarks leavy construction Third Runway Land Percentage active area, p 100.0 % Source ID: Formation Assume % works area for heavy construction For 24hrs activities: Q1: 2\_01, 2\_02A Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Sources Final Report Q2: 2\_01, 2\_02A, 2\_05A No. of working days per month, d 30 days Q3: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_05A No. of working hours per day, h 24 hour Q4: 2\_02B-1, 2\_02B-2, 2\_03A AP42, Section 13.2.3.3 Emission Factor (0.03) 0.0807 Mg/hectare/month of activity Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 **Emission Rate** 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.03\*1000000/(10000\*30\*h\*60\*60)\*p/100 2.58414E-07 g/m<sup>2</sup>/s (mitigated) For night-time activities: Percentage active area, p 100.0 % Q1: 1\_09-1, 1\_09-2, 2\_06-1, 2\_06-2, 2\_06-3, 3\_02A-1, 3\_02A-2, 3\_02A-5 Mitigation efficiency 91.7 % Q2: 1\_09-2, 2\_04-1, 2\_04-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_09-1, 3\_02A-1, No. of working days per month, d 30 days Q3: 2\_04-1, 2\_04-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_09-1, 3\_02A-1, 3\_02A-2, No. of working hours per day, h 12 (night) hour Q4: 2\_09-1 AP42, Section 13.2.3.3 Emission Factor (0.03) 0.0807 Mg/hectare/month of activity Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69\*0.03\*1000000/(10000\*30\*h\*60\*60)\*p/100 **Emission Rate** 6.22685E-06 g/m<sup>2</sup>/s (unmitigated) 5.16829E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 Emission Factor (0.03) 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 8.086E-08 g/m<sup>2</sup>/s =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** Third Runway Based on scheme design of definition for sand fill materials Source ID: Wind Erosion (only) Percentage active area, p 20.0 % consisting of coarse materials with size not exceeding 37.5mm and fines content not exceeding 20% Q1: 2\_02B-1, 2\_03A, 2\_03B, 2\_04-1, 2\_04-2, 2\_05A, 2\_05B-1, 2\_05B-AP42, Table 11.9-4 2, 2 08, 2 09-1, 2 09-2, 3 02B 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 Q2: 2\_02B-1, 2\_03A, 2\_03B, 2\_05B-1, 2\_05B-2, 3\_02B 1.6172E-08 g/m<sup>2</sup>/s **Emission Rate** Q3: 1\_09-2, 3\_02B Q4: 3\_02A-1, 3\_02A-2, 3\_02A-3, 3\_02B Third Runway Other 100.0 % Percentage active area, p Heavy construction Assume % works area for heavy construction Construction Water suppression 12 times a day Works/Facilities on Q1: 1\_01, 1\_02-1, 1\_02-2, 1\_03-1, 1\_03-2, 1\_04, 1\_05, 1\_06-1, 1\_06-2, Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % newly formed land 1\_07-1, 1\_08A-1, 1\_08B-1, 2\_02B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-, 3\_01A-2, 4\_04 Sources Final Report Q2: 1\_01, 1\_02-1, 1\_02-2, 1\_03-1, 1\_03-2, 1\_04, 1\_05, 1\_06-1, 1\_06-2, 1\_09-1, 2\_02B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08, 2\_09-2, 4\_04 No. of working days per month, d 30 days Q3: 1\_01, 1\_02-1, 1\_02-2, 1\_03-1, 1\_03-2, 1\_04, 1\_05, 1\_06-1, 1\_06-2, 1\_09-1, 2\_03B, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08, 2\_09-2, 4\_04 No. of working hours per day, h 24 hour Q4: 1 09-1, 1 09-2, 2 01, 2 02A, 2 03B, 2 04-1, 2 04-2, 2 05A, 2 05B AP42, Section 13.2.3.3 1, 2\_05B-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08, Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) 0.0807 Mg/hectare/month of activity 2 09-2.4 04 Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Emission Rate 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 Emission Factor (0.03) 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 $8.086E-08 g/m^2/s$ **Emission Rate** Percentage active area, p 100.0 % Midfield Heavy construction Assume % works area for heavy construction development (MD) Source ID: Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Q1: MD Sources Final Report Q2: MD No. of working days per month, d 30 days Q3: MD No. of working hours per day, h 24 hour Q4: MD AP42 Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to 0.0807 Mg/hectare/month of activity Emission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 Emission Factor (0.03) 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005

**Emission Rate** 

 $8.086E-08\ g/m^2/s$ 

=0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100

Appendix 5.2.7 - Details of Dust Emission Sources for Daily FSP Assessment (Tier 1) at Year 2019

Appendix 5.2.7 - De	etails of Dust Emission Sources for Daily FSP Assessmen	nt (Tier 1) at Year 2019		
South Cargo	Heavy construction	Percentage active area, p	100.00 %	1
Roadworks - at grade	Source ID:	Mitigation efficiency	91.7 %	Assume % works area for heavy construction  Water suppression 12 times a day  Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: CA1, CA2 Q2: CA1, CA2	No. of working days per month, d	30 days	Sources Final Report
	Q3: CA1, CA2	No. of working hours per day, h	24 hour	
	Q4: CA1, CA2	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.73611E-05 g/m²/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m.
		Emission rate	3.10097E-06 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100 * 12
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
South Cargo Roadworks - viaduct	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction Water suppression 12 times a day
	Q1: CA3, CA4, CA5, CA6, CA7, CA8 Q2: CA3, CA4, CA5, CA6, CA7, CA8	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q3: CA3, CA4, CA5, CA6, CA7, CA8	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4: CA3, CA4, CA5, CA6, CA7, CA8	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.89178E-06 g/m²/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
			3.23018E-07 g/m²/s (mitigated)	=2.09 0.03 1000000/(10000 30 11 00 00) p/100 (3/30) 7.3
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
Roadworks Road 6 -	Heavy construction	Percentage active area, p	100.0 %	Assume O/ works are for heavy assets attack
viaduct (Concept F, Option 3)	Source ID: O1: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36	Mitigation efficiency	91.7 %	Assume % works area for heavy construction  Water suppression 12 times a day  Equation (3-2) in the USEPA's Control of Open Fugitive Dust  Sources Final Report
	Q2: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working days per month, d	30 days	
	Q3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23,		O4 hour	
	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34,	No. of working hours per day, h	24 hour	
			0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34,			Thompson G. Pace, USEPA. Examination of the Multiplier Used to
	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34,	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile
	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34,	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity 3.89178E-06 g/m²/s (unmitigated)	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)
	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor (0.03) Emission Rate	0.0807 Mg/hectare/month of activity 3.89178E-06 g/m²/s (unmitigated) 3.23018E-07 g/m²/s (mitigated)	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)
	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor (0.03)  Emission Rate  Percentage active area, p	0.0807 Mg/hectare/month of activity  3.89178E-06 g/m²/s (unmitigated)  3.23018E-07 g/m²/s (mitigated)  100.0 %	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5  AP42, Table 11.9-4  Thompson G. Pace, USEPA. Examination of the Multiplier Used to
Now APM	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37 Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Wind Erosion Source ID: (as above)	Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Rate	0.0807 Mg/hectare/month of activity  3.89178E-06 g/m²/s (unmitigated)  3.23018E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5  AP42, Table 11.9-4  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
New APM Interchange Station (AIS)	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)	0.0807 Mg/hectare/month of activity  3.89178E-06 g/m²/s (unmitigated)  3.23018E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5  AP42, Table 11.9-4  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
Interchange Station	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  Q1: AIS1, AIS2, EVA6, EVA7, EVA8  Q2:	Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d	0.0807 Mg/hectare/month of activity  3.89178E-06 g/m²/s (unmitigated)  3.23018E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.00 %  91.7 %  30 days	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5   AP42, Table 11.9-4  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction  Water suppression 12 times a day
Interchange Station	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  Q1: AIS1, AIS2, EVA6, EVA7, EVA8	Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d No. of working hours per day, h	0.0807 Mg/hectare/month of activity  3.89178E-06 g/m²/s (unmitigated)  3.23018E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.00 %  91.7 %  30 days 24 hour	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5   AP42, Table 11.9-4  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction  Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3
Interchange Station	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  Q1: AIS1, AIS2, EVA6, EVA7, EVA8  Q2: Q3:	Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d	0.0807 Mg/hectare/month of activity  3.89178E-06 g/m²/s (unmitigated)  3.23018E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.00 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated)	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works) '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
Interchange Station	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  Q1: AIS1, AIS2, EVA6, EVA7, EVA8  Q2:  Q3:  Q4:	Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d No. of working hours per day, h  Emission Factor (0.03)	0.0807 Mg/hectare/month of activity  3.89178E-06 g/m²/s (unmitigated)  3.23018E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.00 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5   AP42, Table 11.9-4  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction  Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
Interchange Station	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  Q1: AIS1, AIS2, EVA6, EVA7, EVA8  Q2: Q3:	Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d No. of working hours per day, h  Emission Factor (0.03)	0.0807 Mg/hectare/month of activity  3.89178E-06 g/m²/s (unmitigated)  3.23018E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.00 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated)	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works) '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5  AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =2.69*0.03*1000000/(10000*d*h*60*60)*p/100
Interchange Station	RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Wind Erosion Source ID: (as above)  Heavy construction Source ID:  Q1: AIS1, AIS2, EVA6, EVA7, EVA8  Q2: Q3: Q4:  Wind Erosion Source ID: (as above)	Emission Factor (0.03)  Emission Rate  Percentage active area, p  Emission Factor (0.03)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d No. of working hours per day, h  Emission Factor (0.03)  Emission Rate	0.0807 Mg/hectare/month of activity  3.89178E-06 g/m²/s (unmitigated)  3.23018E-07 g/m²/s (mitigated)  100.0 %  0.0255 Mg/hectare/year  8.086E-08 g/m²/s  100.00 %  91.7 %  30 days 24 hour  0.0807 Mg/hectare/month of activity  3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5   AP42, Table 11.9-4  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005  =0.85*0.03*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction  Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005

laggage Hall -	Heavy construction	Percentage active area, p	100.00 %	Assume % works area for heavy construction
laggage Handling system (BHS)	Source ID: O1: BHS1, BHS2, EVA9	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: Q3: Q4: BHS1, BHS2, EVA9	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	G4. B101, B102, EVA	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Usec Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2008
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: BHS1, BHS2, EVA9	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier User Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
w APM Depot AD)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
	Q1: NAD1, NAD2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: NAD1, NAD2 Q3: NAD1, NAD2 Q4: NAD2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	G-1.1VAU2	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Use Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above) Q1: NAD1, NAD2	Percentage active area, p	100.00 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Use Estimate PM2.5 Fugitive Dust Emissions from PM10, April 20
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
IS and APM	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
	Q1: BAT1, BAT2, NAB3, NAB4	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: BAT1, BAT2, NAB3, NAB4 Q3: BAT1, BAT2, NAB3, NAB4 Q4: BAT1	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
		Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Use Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: BAT1, BAT2, NAB3, NAB4	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Use Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Expansion Area	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Q1:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4: AIS1, AIS2, NAB1, NAB2, NAB3, NAB4, BAT2, NAD1, EVA6, EVA7, EVA8	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Use Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Use Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100

#### Appendix 5.2.7 - Details of Dust Emission Sources for Daily FSP Assessment (Tier 1) at Year 2020 Third Runway Work Areas Works Area Sources Parameter Remarks Third Runway Land Heavy construction Percentage active area, p 100.0 % Source ID: For 24hrs activ ormation Assume % works area for heavy construction Water suppression 12 times a day Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report Q2: No. of working days per month, d 30 days Q3: No. of working hours per day, h 24 hour AP42, Section 13.2.3.3 0.0807 Mg/hectare/month of activity Thompson G. Pace, USEPA. Examination of the Multiplier Used Emission Factor (0.03) to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.03\*1000000/(10000\*30\*h\*60\*60)\*p/100 **Emission Rate** 2.58414E-07 g/m<sup>2</sup>/s (mitigated) For night-time activities: Percentage active area, p 100.0 % 91.7 % Mitigation efficiency Q2: 3\_02A-1, 3\_02A-2, 3\_02A-3 No. of working days per month, d 30 days Q3: 3\_02A-1, 3\_02A-2, 3\_02A-3 12 (night) hour No. of working hours per day, h AP42. Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used Emission Factor (0.03) 0.0807 Mg/hectare/month of activity to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 **Emission Rate** 6.22685E-06 g/m²/s (unmitigated) =2.69\*0.03\*1000000/(10000\*30\*h\*60\*60)\*p/100 5.16829E-07 g/m²/s (mitigated) Vind Erosion ource ID: (as above) 100.0 % Percentage active area, p AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Emission Factor (0.03) 0.0255 Mg/hectare/year =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** $8.086E-08\ g/m^2/s$ Third Runway Wind Erosio Based on scheme design of definition for sand fill materials ource ID: Wind Erosion (only) Percentage active area, p 20.0 % consisting of coarse materials with size not exceeding 37.5mm and fines content not exceeding 20% Q1: 2\_09-1, 3\_02A-1, 3\_02A-2, 3\_02A-3, 3\_02B AP42, Table 11.9-4 Emission Factor (0.03) 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Q2:2 09-1,3 02B Emission Rate 1.6172E-08 g/m<sup>2</sup>/s =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 Q3: 2 09-1, 3 02B Q4: 3\_02A-1, 3\_02B Third Runway Other 100.0 % Heavy construction Percentage active area, p Assume % works area for heavy construction ource ID: Construction Water suppression 12 times a day Works/Facilities on Q1: 1\_09-1, 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_07A-1, 2\_07A-2, 2\_07B, 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust newly formed land Mitigation efficiency Sources Final Report 08, 2 09-2 22:1\_09-1, 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_07A-1, 2\_07A-2, 2\_07B, No. of working days per month, d 30 days 08, 2 09-2 Q3: 1\_09-1, 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08, 2\_09-2 No. of working hours per day, h 24 hour Q4: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_09-1, 3\_02A-2, 3\_02A-3 AP42, Section 13.2.3.3

0.0807 Mg/hectare/month of activity

3.11343E-06 g/m<sup>2</sup>/s (unmitigated)

0.0255 Mg/hectare/year

2.58414E-07 g/m<sup>2</sup>/s (mitigated)

100.0 %

 $8.086E-08 \text{ g/m}^2/\text{s}$ 

100.0 %

91.7 %

30 days

24 hour

3.11343E-06 g/m<sup>2</sup>/s (unmitigated)

0.0255 Mg/hectare/year

2.58414E-07 g/m<sup>2</sup>/s (mitigated)

100.0 %

8.086E-08 g/m<sup>2</sup>/s

0.0807 Mg/hectare/month of activity

Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005

Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005

Equation (3-2) in the USEPA's Control of Open Fugitive Dust

Thompson G. Pace, USEPA. Examination of the Multiplier Used

Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200

to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005

=2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100

=0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100

Assume % works area for heavy construction

=2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100

=0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100

Water suppression 12 times a day

Sources Final Report

AP42, Section 13.2.3.3

AP42, Table 11.9-4

Emission Factor (0.03)

Percentage active area, p

Emission Factor (0.03)

Percentage active area, p

No. of working days per month, d

No. of working hours per day, h

Mitigation efficiency

Emission Factor (0.03)

Percentage active area, p

Emission Factor (0.03)

**Emission Rate** 

Emission Rate

Emission Rate

**Emission Rate** 

Wind Erosion

Midfield

development (MD)

Source ID: (as above)

Heavy construction

ource ID: (as above)

ource ID:

Q1: MD

Q3: MD

Q4: MD

Nestern Support	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction
rea Emergency access Road flyover)	Source ID:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
,	Q1: WSA1, WSA2, WSA3, WSA4 Q2: WSA1, WSA2, WSA3, WSA4 Q3: WSA1, WSA2, WSA3, WSA4	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4: WSA1, WSA2, WSA3, WSA4	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 20
		Emission Rate	3.89178E-06 g/m²/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pi width + 50% extra for works)
			3.23018E-07 g/m²/s (mitigated)	'=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 20
		Emission Rate	8.086E-08 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
Vestern Support	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Area Emergency Access Road at grade)	Source ID: Q1: WSA5	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: WSA5 Q3: WSA5	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources I mai neport
	Q4: WSA5	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 20
		Emission Rate	3.73611E-05 g/m²/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m. =2.69*0.03*1000000/(10000*d*h*60*60)*p/100 * 12
			3.10097E-06 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 20
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
New APM nterchange Station	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction Water suppression 12 times a day
(AIS)	Q1: AIS1, AIS2, EVA6, EVA7, EVA8	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: AlS1, AlS2, EVA6, EVA7, EVA8 Q3: Q4:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Courses i mai rieport
	u4:	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Usec to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 20
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: AIS1, AIS2, EVA6, EVA7, EVA8	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 20
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Baggage Hall - Baggage Handling	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
System (BHS)	Q1: BHS1, BHS2, EVA9	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: BHS1, BHS2, EVA9 Q3: Q4:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
		Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Usec to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 20
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: BHS1, BHS2, EVA9	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 20
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100

New APM Depot	Heavy construction	Percentage active area, p	100.00 %	Assume % works area for heavy construction
(NAD)	Source ID:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: NAD2 Q2: NAD1, NAD2 Q3: NAD1, NAD2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4:	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above) Q1: NAD2	Percentage active area, p	100.00 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
HS and APM	Heavy construction	Percentage active area, p	100.00 %	Accume 0/ works area for began construction
innel	Source ID:	Mitigation efficiency	91.7 %	Assume % works area for heavy construction  Water suppression 12 times a day  Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: BAT1 Q2: BAT1, BAT2, NAB3, NAB4 Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4:	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above) Q1: BAT1	Percentage active area, p	100.00 %	
	41.5.11	Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
2 Expansion Area	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Q1: NAB1, NAB2, NAB3, NAB4, BAT2, NAD1	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: NAB1, NAB2 Q3: Q4:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Courses I mai rioport
	U4.	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	3.11343E-06 g/m²/s (unmitigated) 2.58414E-07 g/m²/s (mitigated)	=2.69*0.03*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 200
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100

#### Third Runway Work Areas Works Area Remarks Third Runway Land Heavy construction Percentage active area, p Source ID: Formation Assume % works area for heavy construction For 24hrs activities: Water suppression 12 times a day Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report No. of working days per month, d 30 days Q3: No. of working hours per day, h 24 hour Q4: 3\_01B-1, 3\_01B-2 AP42, Section 13.2.3.3 Emission Factor (0.03) 0.0807 Mg/hectare/month of activity Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 **Emission Rate** 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.03\*1000000/(10000\*30\*h\*60\*60)\*p/100 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion 100.0 % Percentage active area, p Source ID: (as above) Emission Factor (0.03) 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** $8.086E-08 g/m^2/s$ Based on scheme design of definition for sand fill materials Third Runway Source ID: Wind Erosion (only) 20.0 % consisting of coarse materials with size not exceeding 37.5mm Percentage active area, p and fines content not exceeding 20% Q1:3 02A-1,3 02B AP42, Table 11.9-4 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Q2: 3\_02A-1, 3\_02B =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** 1.6172E-08 g/m<sup>2</sup>/s Q3: 3\_02A-1, 3\_02B Q4: 3 02A-1, 3 02B Third Runway Other 100.0 % Heavy construction Percentage active area, p Assume % works area for heavy construction Construction Water suppression 12 times a day Works/Facilities on Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Q1: 2 01, 2 02A, 2 02B-1, 2 02B-2, 2 03A, 2\_03B, 2\_05A, 2\_05B-1, newly formed land 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_09-1, 3\_02A-2, 3\_02A-3 Sources Final Report Q2: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-1, 3\_01A-2, 3\_01A-3, 4\_01-No. of working days per month, d 30 days , 4\_01-2, 4\_01-3, 4\_05-1 Q3: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1 2 05B-2, 2 07A-1, 2 07A-2, 2 07B, 3 01A-1, 3 01A-2, 3 01A-3, 3 01B-No. of working hours per day, h , 3 01B-2, 4 01-1, 4 01-2, 4 01-3, 4 05-1 24 hour Q4: 2 01, 2 02A, 2 02B-1, 2 02B-2, 2 03A, 2 03B, 2 05A, 2 05B-1. AP42, Section 13.2.3.3 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-1, 3\_01A-2, 3\_01A-3, 4\_01-Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) 0.0807 Mg/hectare/month of activity , 4\_01-2, 4\_01-3, 4\_03-1, 4\_03-2, 4\_05-1 Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 2.58414E-07 g/m²/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) 0.0255 Mg/hectare/year Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 $8.086E-08 g/m^2/s$ =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** Airside tunnels (AT) Heavy construction Percentage active area, p 100.0 % Assume % works area for heavy construction Source ID: Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Sources Final Report Q2: AT1, AT3 No. of working days per month, d 30 days Q3: AT1, AT3 No. of working hours per day, h 24 hour Q4: AT1, AT2, AT3 AP42. Section 13.2.3.3 0.0807 Mg/hectare/month of activity Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 **Emission Rate** 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 Emission Factor (0.03) 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 8.086E-08 g/m<sup>2</sup>/s **Emission Rate** Heavy construction Percentage active area, p 100.0 % Assume % works area for heavy construction Source ID: development (MD) Water suppression 12 times a day Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Q1: MD Sources Final Report Q2: MD No. of working days per month, d 30 days Q3: MD No. of working hours per day, h Q4: MD AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to 0.0807 Mg/hectare/month of activity Emission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 **Emission Rate** 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion Source ID: (as above) 100.0 % Percentage active area, p AP42, Table 11.9-4 Emission Factor (0.03) 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 **Emission Rate** =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 $8.086E-08 g/m^2/s$

Appendix 5.2.7 - Details of Dust Emission Sources for Daily FSP Assessment (Tier 1) at Year 2021

South Cargo	Heavy construction	Dercentage estive erec n	100.00.9/	I
Roadworks - at rade	Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction Water suppression 12 times a day
	Q1:	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: Q3: CA1, CA2 Q4: CA1, CA2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	G. O.1, O.2	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.73611E-05 g/m²/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m. =2.69*0.03*1000000/(10000*d*h*60*60)*p/100 * 12
			3.10097E-06 g/m²/s (mitigated)	-2.03 0.03 1000000 (10000 d 11 00 00) p/100 12
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
outh Cargo	Heavy construction	Percentage active area, p	100.0 %	
Roadworks - viaduct	Source ID:	Mitigation efficiency	91.7 %	Assume % works area for heavy construction  Water suppression 12 times a day  Equation (3-2) in the USEPA's Control of Open Fugitive Dust
		No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
Q4: CA3, CA4, CA5, CA6, CA7, CA8	Q4: CA3, CA4, CA5, CA6, CA7, CA8	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3  Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.89178E-06 g/m²/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pill width + 50% extra for work)
			3.23018E-07 g/m²/s (mitigated)	'=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
oadworks Road 6 -	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
aduct (Concept F, option 3)	Q1:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2:	No. of working days per month, d	30 days	Sources i mai rieport
	Q3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working hours per day, h	24 hour	
	Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor (0.03)	0.0807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	3.89178E-06 g/m²/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pil width + 50% extra for works)  '=2.69*0.03*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
			3.23018E-07 g/m²/s (mitigated)	2.55 5.55 1.555555, (15555 55 11 55 56) privat (5/50) 7.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.03)	0.0255 Mg/hectare/year	AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005
		Emission Rate	8.086E-08 g/m²/s	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100

#### Appendix 5.2.6 - Details of Dust Emission Sources for Daily FSP Assessment (Tier 1) at Year 2022 Third Runway Work Areas Sources Works Area Parameter Remarks Third Runway Land leavy construction Percentage active area, p Source ID: Formation Assume % works area for heavy construction For 24hrs activities: Q1: 3\_02B Water suppression 12 times a day Mitigation efficiency Equation (3-2) in the USEPA's Control of Open Fugitive Dust 91.7 % Sources Final Report No. of working days per month, d 30 days Q3: No. of working hours per day, h 24 hour Q4: 3\_02B AP42, Section 13.2.3.3 Emission Factor (0.03) 0.0807 Mg/hectare/month of activity Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) **Emission Rate** =2.69\*0.03\*1000000/(10000\*30\*h\*60\*60)\*p/100 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 Thompson G. Pace, USEPA. Examination of the Multiplier Used to Emission Factor (0.03) 0.0255 Mg/hectare/year Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 **Emission Rate** $8.086E-08 g/m^2/s$ =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 Third Runway Based on scheme design of definition for sand fill materials Source ID: Wind Erosion (only) Percentage active area, p 20.0 % consisting of coarse materials with size not exceeding 37.5mm and fines content not exceeding 20% Q1:3 02A-1 AP42, Table 11.9-4 Emission Factor (0.03) 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 Q2: 3\_02A-1 **Emission Rate** 1.6172E-08 g/m<sup>2</sup>/s =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 Q3: 3\_02B Third Runway Other Percentage active area. p 100.0 % Heavy construction Assume % works area for heavy construction Source ID: Construction Water suppression 12 times a day Q1: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, Works/Facilities on Equation (3-2) in the USEPA's Control of Open Fugitive Dust 91.7 % 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-1, 3\_01A-2, 3\_01A-3, 4\_01-Mitigation efficiency newly formed land , 4\_01-2, 4\_01-3, 4\_03-1, 4\_03-2, 4\_05-1 Sources Final Report Q2: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-3, 3\_02B, 4\_03-1, 4\_03-2, No. of working days per month, d 30 days Q3: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, No. of working hours per day, h 24 hour 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_02A-1, 4\_05-1 Q4: 2\_01, 2\_02A, 2\_02B-1, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 4\_05-1 AP42. Section 13.2.3.3 Thompson G. Pace, USEPA. Examination of the Multiplier Used to 0.0807 Mg/hectare/month of activity Emission Factor (0.03) Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 Emission Factor (0.03) 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 =0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** $8.086E-08\ g/m^2/s$ Heavy construction Airside tunnels (AT) Percentage active area, p 100.0 % Assume % works area for heavy construction Source ID: Water suppression 12 times a day Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Q1: AT1, AT2, AT3 Sources Final Report Q2: AT2, AT3 No. of working days per month, d 30 days No. of working hours per day, h 24 hour Q4: AT3 AP42, Section 13.2.3.3 Emission Factor (0.03) Thompson G. Pace, USEPA. Examination of the Multiplier Used to 0.0807 Mg/hectare/month of activity Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005 3.11343E-06 g/m<sup>2</sup>/s (unmitigated) **Emission Rate** =2.69\*0.03\*1000000/(10000\*d\*h\*60\*60)\*p/100 2.58414E-07 g/m<sup>2</sup>/s (mitigated) Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 Emission Factor (0.03) 0.0255 Mg/hectare/year Thompson G. Pace, USEPA. Examination of the Multiplier Used to

8.086E-08 g/m<sup>2</sup>/s

**Emission Rate** 

Estimate PM2.5 Fugitive Dust Emissions from PM10, April 2005

=0.85\*0.03\*1000000/(10000\*365\*24\*60\*60)\*p/100

Description Barging Point	Sources Unloading of spoils to barge	Parameter  Particle size multiplier, k	0.053	Emission Rate	Remarks For FSP, AP-42, section 13.2.4, 11/06 ed.
Jarymy FUIII	Source ID: TBP1-6	Moisture content, M		%	Assume as the same as Express Rail Link and Extracted from SP
		Mean wind speed, U		m/s	License of XRL (Appendix C). HKOAMO 2012 annual average wind speed
		Emission Factor, E	6.66E-05		E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
		No. of operation hour  Maximum handling capcity for each barging point		hr Mg/day	26 days per month From engineer
		Emission height		kg/hr (Asphalt)	Assume 12 working hours (7:00 - 19:00) per day
		Mitigation efficiency		%	Installation of flexible curtain and shelter with water spray at dischar point
Concrete	Paved haul road outside concrete batching plant -	Emission Rate Particle size multiplier, k		g/s (mitigated) g/VKT	AP-42. Section 13.2.1. Table 13.2.1-1. 01/11 ed.
Concrete Batching Plant	For <b>Laden</b> Vehicle	Road surface silt loading, sL Average truck weight, W	12	g/vK1 g/m2 tons	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Asphalt Tipper, engineering estimate
	Source ID:	Average truck weight, W	28.3	tons	Full loading of Asphalt Tipper, engineering estimate
	WAB-HR1 to WAB-HR13 WAB-P4-HR1 to WAB-P4-HR10	Emission height	0.5	m	Assumed that vehicle will lift dust from the road surface and dispers
	WC-HR1 to WC-HR13	FSP emission factor, E			from 0.5m height E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
	WC-P4-HR1 to WC-P4-HR10		44	g/VKT	Asphalt Tipper
	EAB-HR1 to EAB-HR4	No. of truck trips per day		trips/hr	From engineer, Asphalt Tipper Lorries in Asphalt Plant
	EAC-HR1 to EAC-HR4 EC-HR1 to EC-HR14	No. of operation hour		trips/hr hr	From Enginner, Asphalt Tipper Lorries in Concrete Batching Plant
	EC-P2-HR1 to EC-P2-HR7	% of dust suppression	97.5	%	Assume as the same as Express Rail Link and Extracted from SP License of XRL (Appendix C).
		Emission Rate	2.90E-05	g/m/s (mitigated)	Asphalt Tipper Lorries in Asphalt Plant
				g/m/s (mitigated)	Asphalt Tipper Lorries in Concrete Batching Plant
Concrete	Paved haul road outside concrete batching plant -	Particle size multiplier, k	0.15	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
Batching Plant	For <b>Unladen</b> Vehicle	Road surface sit loading, sL Average truck weight, W	12	g/m2 tons	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Empty loading of Asphalt Tipper, engineering estimate
	Source ID: WAB-HR1 to WAB-HR13	Emission height	0.5		Assumed that vehicle will lift dust from the road surface and dispers
	WAB-P4-HR1 to WAB-P4-HR10		0.5		from 0.5m height
	WC-HR1 to WC-HR13	FSP emission factor, E	12	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.) Asphalt Tipper
	WC-P4-HR1 to WC-P4-HR10				
	EAB-HR1 to EAB-HR4	No. of truck trips per day	140	trips/hr trips/hr	From engineer, Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper Lorries in Concrete Batching Plant
	EAC-HR1 to EAC-HR4 EC-HR1 to EC-HR14	No. of operation hour % of dust suppression	12 97.5	hr %	Assume as the same as Express Rail Link and Extracted from SP
	EC-P2-HR1 to EC-P2-HR7				License of XRL (Appendix C).
		Emission Rate	2.6E-06	g/m/s (mitigated)	Asphalt Tipper Lorries in Asphalt Plant
Concrete	Unloading aggregate	Consumption Rate (Western + Eastern)	1.20E-05	g/m/s (mitigated) Mg/h (Asphalt)	Asphalt Tipper Lorries in Concrete Batching Plant From engineer: Asphalt: 300 ton/hr = 150 ton/hr x 2 plants
Batching Plant (Unloading of raw	Source ID: (EP9)	Consumption Rate (Western only)	2000	Mg/h (Concrete) Mg/h (Asphalt)	From engineer: Concrete: 2000 ton/hr = 500 ton/hr x4 plants From engineer: Asphalt: 150 ton/hr
materials)	WAB-EP9, WAB-P4-EP9, WC-EP9, WC-P4-EP9	Particle size multiplier, k	500 0.053	Mg/h (Concrete)	From engineer: Concrete: 500 ton/hr For FSP, AP-42, section 13.2.4, 11/06 ed.
	EAB-EP9, WC-P4-EP9	Moisture content, M		%	Assume as the same as Express Rail Link and Extracted from SP License of XRL (Appendix C).
	EC-EP9, EC-2-EP9, EC-3-EP9,	Mean wind speed, U		m/s	HKOAMO 2012 annual average wind speed
	EC-P2-EP9	Emission Factor, E	2.40E-04		E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.48	kg/hr (Asphalt - Westen + Eastern) kg/hr (Concrete - Western +Eastern)	
			0.12	kg/hr (Asphalt - Westen only) kg/hr (Concrete - Western only)	
		Mitigation efficiency	99	%	Assume as the same as Express Rail Link and Extracted from SP License of XRL (Appendix C).
		No. of operation hour Emission height	12 4	hr m	
		Emission Rate (Western + Eastern) - Period 2 to 4	1.00E-04	g/s (mitigated) (Asphalt)	For each plant (150 ton/hr) Period 2 to 4: 150 ton/hr x 2 plants
			3.34E-04	g/s (mitigated) (Concrete)	For each plant (500ton/hr)
			0.042 04	gro (magatod) (conorcio)	Period 2: 500ton/hr x 2 plants Period 3&4: 500ton/hr x 4 plants
		Emission Rate (Western only) - Period 1	1 00E-04	g/s (mitigated) (Asphalt)	For 150 ton/hr only
Camarata	Carall Compatitions Material Siles		3.34E-04	g/s (mitigated) (Concrete)	For 500 ton/hr only
Concrete Batching Plant	Small Cementitious Material Silos Source ID: (EP5-EP8)	Density	2.24	Mg/m3	For Concrete & Asphalt density Refer to this web
(Cement / PFA Silos)	WAB-EP5 to EP8, WAB-P4-EP5 to EP8,				"http://www.aqua-calc.com/page/density-table/substance/concrete-and-blank-asphalt"
	WC-EP5 to EP8, WC-P4-EP5 to EP8	FSP emission factor (0.14)	7	mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable Means for Cement Works (Concrete Batching Plant), EPD
	EAB-EP5 to EP8, EC-EP5 to EP8, EC-2-EP5 to EP8, EC-3-EP5 to EP8,	Dust exhaust flow rate for each mixer (Total 4 sources)	60	tons/hr (Asphalt)	Assume volume displacement by loading material
	EC-P2-EP5 to EP8			tons/hr (Concrete) m3/hr (Asphalt)	For concrete & Asphalt density: 2.24 tons/m3
		No. of operation hour	535.7	m3/hr (Concrete) hr	, , , , , , , , , , , , , , , , , , , ,
		No. of small cement silos	4		Assume as the same as Express Rail Link and Extracted from SP License of XRL (Appendix C).
		Emission height	21 or 22	m	EP5: 21m, EP6-EP8: 22m Assume as the same as Express Rail Link and Extracted from SP
		Emission Pate (Total 4 courses)	E 04E 05	a/c (mitigated) (Acade)	License of XRL (Appendix C).
		Emission Rate (Total 4 sources)	1.04E-03	g/s (mitigated) (Asphalt) g/s (mitigated) (Concrete)	
		Emission Rate (Each source)	2.60E-04	g/s (mitigated) (Asphalt) g/s (mitigated) (Concrete)	
	PFA weight Hopper Source ID: (EP3-EP4)	Emission Factor (without mitigation)	2.60E-03		Weight hopper loading (uncontrolled), AP-42, section 11.12-4, Tabl 11.12-1, 6/06 ed.
	WAB-EP3 to EP4, WAB-P4-EP3 to EP4,	Density	2.24	Mg/m3	For Concrete & Asphalt density Refer to this web
	WC-EP3 to EP4, WC-P4-EP3 to EP4				"http://www.aqua-calc.com/page/density-table/substance/concrete- and-blank-asphalt"
	EAB-EP3 to EP4, EC-EP3 to EP4, EC-2-EP3 to EP4, EC-3-EP3 to EP4,	Emission factor Production rate (Total 2 sources)	5.82E-03 25	kg/m3 m3/hr (Asphalt)	From engineer
	EC-P2-EP3 to EP4	Mitigation efficiency	429	m3/hr (Concrete) %	Total enclosure and fabric filter
		Emission height Emission Rate (Total 2 sources)	13	m g/s (mitigated) (Asphalt)	
Concreto	Mixer Source ID: (EP1-EP2)		6.94E-03	g/s (mitigated) (Concrete)	For Concrete & Asphalt density
Concrete Batching Plant	,	Density	2.24	Mg/m3	For Concrete & Asphalt density Refer to this web
(Mixing Tower)	WAB-EP1 to EP2, WAB-P4-EP1 to EP2, WC-EP1 to EP2, WC-P4-EP1 to EP2	FOR anticipal (C. 40.44)			"http://www.aqua-calc.com/page/density-table/substance/concrete- and-blank-asphalt"
	EAB-EP1 to EP2,	FSP emission factor (0.14)	7	mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable Means for Cement Works (Concrete Batching Plant), EPD
	EC-EP1 to EP2, EC-2-EP1 to EP2, EC-3-EP1 to EP2, EC-P2-EP1 to EP2	Dust exhaust flow rate for each mixer (Total 2 sources)		tons/hr (Asphalt)	Assume volume displacement by loading material
			1200	tons/hr (Concrete) m3/hr (Asphalt)	For concrete & Asphalt density: 2.24 tons/m3
		No. of operation hour	535.7	m3/hr (Concrete) hr	
				1	1
		No. of small cement silos Emission height	2	m	

Compared and Com	Darging Forms, C	crushing Plant, Concrete and Asphalt Batching Plants	, C&D Stockpile and other Stockpiles (FSP)			
SEARCH MAN CONTROL OF THE CONTROL OF						
March	Asphalt batching	Source ID:	Percentage open stockpile area, p	20	0)%	material should be sprayed with water immediately prior to any loading
March   Marc	plant in western location					
Page		WABA2, WABA2-P4				
March   Marc						
March   Marc						
## 100 Part   100 Part				5,250	m3/month (Aggregate)	From engineer
March			Maximum hourly output, op	1.1	1 m3/hr (Asphalt)	26 days per month, 12 working hours per day
Part						Assume capacity of dump truck is $6m^3$ and 15 tops
Amount of the property of th			Average 6 Alexa Alexa had been alexa distribution of the control o	42.1	Mg/hr (Aggregate)	Assume capacity of dump truck is one and 13 tons
Content Print General Content Conten						
Property of the Company of the Com			Emission Rate (Asphalt stockpile)	2.12177E-07	7 g/m²/s (unmitigated)	
Martine			Emission Rate (Aggregate stockpile)	3.53766E-07	7 g/m²/s (unmitigated)	
Production   Pro			Percentage open stockpile area, p	100	% (unmitigated)	
Total Content		Source ID: As above		0.0255	Mg/hectare/year	AP42, Section 11.9.4
March   Marc			Emission Rate			=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Act	Milled Meterial	Material handling and storage piles	Persontago anon staskaila area n			90% stackailing area is sovered by important about and all dusty
Commerced   Comm	Crushed	Source ID:	Регсептаде орен Stockpile area, р	20	76	material should be sprayed with water immediately prior to any loading
### Comparison   Aggregate and Sub-base	WAR1, WAR1-P4	Particle size multiplier, k	0.053	3		
Package   Pack	Stockpile in	WCAS1, WCAS1-P4			- 1	
April   Apri	Western reduction	WSS1, WSS1-P4				
Administration of Calcada Ce  Admini				422	2 m3/month (Milled Material)	From engineer
Martin Procy catalog Co.						
Supplied the second of the common of the com			Maximum hourly output, op	1.4	1 m3/hr (Milled Material)	
Table   March   Table   Marc				52.2	2 m3/hr (Sub-base stockpile)	
Marco   Part March Control organ 2   100				121.6	Mg/hr (Crushed Aggregate)	Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
Make of the Control Agricultural Section of Agricultur			Area of the Milled Material stockpile A	130.4	Mg/hr (Sub-base stockpile)	
Personner time year of the Court of Agricultural Court of Agricu			Area of the Crushed Aggregate stockpile, A	5,822	2 m <sup>2</sup> (Crushed Aggregate)	
Establish Rat (Carrier Agricultum)  Establish Rat (Carrier Agricultum)  Establish Rat (Carrier Agricultum)  Freedrich Rat (Carrier Agricul			• •	6,209 2.24376E-07	m²(Sub-base stockpile) 7 g/m²/s (unmitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60)
Emption Plant of Comment of Comme			, , , , , , , , , , , , , , , , , , ,	4.48752E-08	g/m²/s (mitigated)	
Note of the second content of the second c				7.72983E-08	g/m²/s (mitigated)	
Secret D As 2009  Secret D As			` '	7.76891E-08	g/m²/s (mitigated)	
Unicipate intention (DS) Secretary (Secretary (Secretar			Percentage open stockpile area, p			80% stockpiling area is covered by impervious sheets
Total form   Total				0.0255	Mg/hectare/year	AP42, Section 11.9.4
Apace of terminal part			Ellission hate			=0.65 0.05 1000000/(10000 365 24 60 60) p/100
County   C	Stockpile within	Material handling and storage piles	Percentage open stockpile area, p	20	0 %	80% stockpiling area is covered by impervious sheets and all dusty
Particle 20x multiples   Particle 20x multip						material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.
Angel Process of Control   Control Plance   Control Pla	location					k (particle size < 30μm)
Materium hourly output, up 1  Anna of im Agryania associate. A few of the Agry						
Model with plants of the Apphal educing in American Segment (Apphal educing in American Segment (Appha			Emission Factor, E	6.65864E-05	5 kg/Mg	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4]
Major   Majo			Monthly output	67	7 m3/month (Asphalt)	
Ace of the Against society, A Ace of the Ace of the Against society, A Ace of the				1,050	m3/month (Aggregate)	From engineer
Anse of the Agricult stockpic A. Bellison Faster (F.O.) Finden			Maximum hourly output, op	0.2	2 m3/hr (Asphalt)	26 days per month, 12 working hours per day
According to Application   According to Applic						Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
Area of the Camera coolspile. A mission Patter for Agregated bedoeline. A mission Patter for Agregated bedoeline. A mission Patter for Agregated bedoeline. A mission Patter for Months of Agregated bedoeline. B				8.4	Mg/hr (Aggregate)	Assume capacity of dump truck is one and 13 tons
Emission Rate (Applies tescelaris)  Emission Rate (Applies tescelaris)  Emission Rate (Applies tescelaris)  Survice Or As above  Emission Factor (0.02)  Emission Factor (0.02						
Emission Table (Aggregate)			Emission Rate (Asphalt stockpile)	6.46124E-08	g/m²/s (unmitigated)	
Virid or oncoor   Surve D. As above   Percentage open stockpile area, p			Emission Rate (Aggregate stockpile)	2.77069E-07	7 g/m²/s (unmitigated)	
Emission Factor (0.03) Emission (1.2 EACA) Emi			Percentage open stockpile area, p	100	% (unmitigated)	
Emission Rate  Emission Rate  1.0.0000 (impligated)  1.0.7750 of priving (immigrated)  1.0.7750 of priving (immigrated)  Antifod backing Scorron D:  Antifod backing Scoro		Source ID: As above	Emission Factor (0.03)			
Size-Cycle within Control of Search (202)  For contrage open stockpile area, p.  Parcicle Size multiplier, k. Michaire content. M. Mich				8.086E-08	g/m²/s (unmitigated)	
Aireful bashing Source ID.  ACCT, E.CAC1  Analos size mitholise is eastern location  Acctive content, M.  Average wind seed, U.  Emission Factor, E.  Morthly output.  Assay of the Comment stockpile, A.  Assay of the Comment stockpile, A.  Assay of the Comment stockpile, E.  Emission Factor, I.C.  Assay of the Comment stockpile, A.  Assay of the Comment stockpile, E.  Emission Factor, I.C.  Assay of the Comment stockpile, A.  Assay of the Comment stockpile, E.  Emission Factor, I.C.  Assay of the Comment stockpile, A.  Assay of the Comment stockpile, E.  Emission Factor, I.C.  Emission	0. 1					
Particle stor multiplier is Mostave contest. M Average wind speed, U Mostave contest. M Average wind speed U Mostave contest. M Average wind speed U Mostave contest. M Average the Appropriate stockpile. A Average of the Appropriate stockpile average contest. M Average wind speed U Mostave contest. M Average wind spee	Airfield batching	Source ID:	Percentage open stockpile area, p	20	J %	material should be sprayed with water immediately prior to any loading
Mosture content, M. Average wird speed, U.   4, 9 m/s		EACC1, EACA1	Particle size multiplier, k	0.053	3	
Emission Factor, E Mortifly output  Maximum hourly output, op  Maximum hourly output, op  Maximum hourly output, op  Area of the Cement stockpile, A Area of the Aggregate stockpile, A Area of the Aggregate stockpile, A Emission Rate (Aggregate stockpile, A Area of the Aggregate stockpile, A Area of the Aggregate stockpile, A Area of the Aggregate stockpile, A Emission Rate (Aggregate stockpile)  Wind erosion  Source ID: As above  Wind erosion  Percentage open stockpile area, p Emission Rate  Emission Factor (D.03)  Wind erosion  Percentage open stockpile area, p Emission Factor (D.03)  Emission Fact			Moisture content, M	5	5 %	Assume worst case scenario
Maximum hourly output, op  Maximum hourly output, op  Area of the Cement stockpile, A Area of the Aggregate stockpile, A Emission Rate (Cement) Emission Rate (Cement) Assume capacity of dump truck is 6m² and 15 tons  Assume capacity of dump truck is 6m² and 15 tons  Maximum hourly output, op  Area of the Aggregate stockpile, A Emission Rate (Aggregate stockpile) Emission Rate (Aggregate) Emission Rate (Aggregat						
Maximum hourly output, op  4.3 moth** (Coment) 4.3 moth** (Aggregate) 2.0 3 Mg/hr (Coment) 1.0 4 Assume capacity of dump truck is 6m² and 15 tons 1.0 4 Assume capacity of dump truck is 6m² and 15 tons 1.0 4 Assume capacity of dump truck is 6m² and 15 tons 1.0 4 Assume capacity of dump truck is 6m² and 15 tons 1.0 5 Mg/hr (Aggregate) 1.0 5 M						
Maximum hourly output, op  Area of the Gement stockpile, A Area of the Aggregate stockpile, A Emission Rate (Aggregate stockpile) Emission Rate (Aggregate stockpile, A Emission Rate (Aggregate stockpile) Emission Rate (Aggregate stockpile, A Area of the Aggregate stockpile, A Area of the Agg					, ,	
Area of the Cement stockpile, A Area of the Cement stockpile, A Area of the Agregate stockpile, A Emission Rate (Ement stockpile, A Emission Rate (Ement stockpile)   Area of the Agregate stockpile (Emission Rate (Ement stockpile)   Brission Rate (Ement stockpile) (Emission Rate (Ement stockpile) (Emission Rate (Ement stockpile) (Emission Rate (Emissi			Maximum housty output on		, 35 5 ,	
Area of the Cament stockpile, A Area of the Aggregate stockpile, A Area of the Aggregate stockpile of Emission Rate (Cament) Source ID: As above  Wind erosion Source ID: As above  Wind erosion Source ID: As above  Wind erosion Source ID: As above  Emission Rate (Cament) Source ID: As above  Emission Rate  Emission Rate  Emission Rate  Emission Rate  Percentage open stockpile area, p Emission Rate  Emission Rate  Emission Rate  Emission Rate  Percentage open stockpile area, p Emission Rate  Emission Rate  Emission Rate  Percentage open stockpile area, p Emission Rate  Emission Rate  Percentage open stockpile area, p Emission Rate  Emission Rate  Percentage open stockpile area, p Emission Rate  Percentage open stockpile area, p Eccl 2, ECG1 3, ECG1-P2  Particle size multiplier, k Average wind speed, U As miss  Emission Factor, E Average wind speed, U As miss  Area of the Cament stockpile, A Area of the Aggregate stockpile, A Emission Rate  Emission Rate (Cament) Area of the Cament stockpile, A Area of the Aggregate stockpile, A Emission Rate (Cament)  Area of the Cament stockpile, A Area of the Aggregate stockpile, A Emission Rate (Aggregate stockpile)  Emission Rate (Aggregate stockpile			ινιαλιπαιπ πουτιγ συτρυτ, σρ	44.3	m3/hr (Aggregate)	
Area of the Cement stockplie, A Area of the Cement stockplie, A Emission Rate (Cement actockplie)  Area of the Aggregate stockplie, A Emission Rate (Cement actockplie)  Emission Rate (Aggregate stockplie)  Emission Rate (Aggregate)  Ender Displace (Aggregate)  Avana of the Aggregate stockplie)  Area of the Aggregate stockplie area, p  Maximum hourly output, op  Maximum hourly output, op  Emission Rate (Aggregate)  Area of the Aggregate stockplie)  Emission Rate (Aggregate)  Emission Rate (Aggregate)  Emission Rate (Aggregate)  Emission Rate (Aggregate)  Area of the Aggregate stockplie)  Emission Rate (Aggregate)  Emission Rate (				110.8	Mg/hr (Aggregate)	Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
Emission Rate (Cement stockpile)			• •	1,163	m² (Cement)	
Emission Rate (Aggregate stockpile)  Brission Rate (Aggregate stockpile)  Wind erosion Source ID: As above  Emission Factor (0.03) Emission Rate  Percentage open stockpile area, p Source ID: Sou				3.23687E-07	7 g/m²/s (unmitigated)	
Wind erosion Source ID: As above  Percentage open stockpile area, p Source ID: As above  Raterial handling and storage piles Source ID: As above  Percentage open stockpile area, p Emission Factor (0.03) Emi			Emission Rate (Aggregate stockpile)	3.84457E-07	7 g/m²/s (unmitigated)	Initigated Emission Hate'=E*1000*op/(A*60*60)*p/100
Source ID: As above  Emission Factor (0.03) Emission Factor (0.03) Emission Factor (0.03) Emission Rate  Material handling and storage piles Source ID:  Source ID:  ECA1_2. ECA1_3, ECA1-P2  ECA1_2. ECA1_3, ECA1-P2  Emission Factor, E Maximum hourly output, op  Area of the Cement stockpile, A Area of the Aggregate stockpile)  Emission Rate (Aggregate stockpile)  Wind erosion  Source ID:  Emission Factor (0.03) Emission Rate  20 % (mittigated) 1.6172E-08   qm²/% (unmitigated) 1.6172E-08		Wind erosion		7.68914E-08	g/m²/s (mitigated)	
Emission Rate  Emission Rate  8.086E-08 g/m³/s (mitigated)  1.6172E-08 g/m³/s (mitigated)  -0.85°0.03*1000000/(10000°385°24'60'60)°p'100  80% stockpling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. Record of the dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. Record of the dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. Record of the dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material sh				20	% (mitigated)	
Stockpile within Concrete Batching Plant in eastern location  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2 ECA1_2, ECA1_3, ECA1-P2  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2 ECA1_3, ECA1-P2  Moisture content, M Average wind speed, U Assume vorst case scenarion HKCAMC 2012 annual average wind speed Ek-k*0.0016*[(U/2.2)*1.3/(M/2)*1.4] From engineer From				8.086E-08	g/m²/s (unmitigated)	
Concrete Batching Plant in eastern location agreement ocation beatern location lo				1.6172E-08	g/m²/s (mitigated)	
Batching Plant in eastern location  ECG1_2, ECG1_3, ECG1-P2  Particle size multiplier, k Moisture content, M Average wind speed, U  Emission Factor, E Monthly output, op  Maximum hourly output, op  Area of the Cement stockpile, A Area of the Aggregate stockpile, A Area of the Aggregate stockpile, A Emission Rate (Aggregate stockpile)  Emission Rate (Aggregate stockpile)  Emission Rate (Aggregate stockpile)  Emission Rate (Onus)  Emission Rate (Onus)  Emission Factor (0.03)  Emissio			Percentage open stockpile area, p	20	0 %	
ECA1_2, ECA1_3, ECA1-P2	Batching Plant in		Porticle size multiplier I	0.055		or transfer operation so as to keep the dusty material wet.
Emission Factor, E Monthly output  Emission Factor, E Monthly output  Maximum hourly output, op  Maximum hourly output  Maximum hourly output  Maximum hourly output  Maximum hourly ou		ECA1_2, ECA1_3, ECA1-P2	Moisture content, M	5	5 %	Assume worst case scenario
Monthly output			Average wind speed, U			HKOAMO 2012 annual average wind speed
Maximum hourly output, op   138.7 m3/hr (Cement)   26 days per month, 12 working hours per day   7.54.7 m3/hr (Cement)   26 days per month, 12 working hours per day   26 days per month, 12 working hours per day   26 days per month, 12 working hours per day   26 days per month, 12 working hours per day   3.368.8 Mg/hr (Aggregate)   3.46.7 Mg/hr (Aggregate)   4.520 m3/hr (Gement)   4.520						
Maximum hourly output, op   138.7   554.7   m3/hr (Cement)   26 days per month, 12 working hours per day   554.7   m3/hr (Aggregate)   346.7   Mg/hr (Aggregate)   346.7   Mg/hr (Aggregate)   346.7   Mg/hr (Aggregate)   4 rea of the Cement stockpile, A   3.944   Mg/hr (Aggregate)   4 rea of the Aggregate stockpile, A   3.944   Mg/hr (Aggregate)   4 rea of the Aggregate stockpile, A   4 rea of the Aggregate stockpile, A   4 rea of the Aggregate stockpile   1.62605E-06   g/m²/s (unmitigated)   9/m²/s (mitigated)   9/m²/s (mitigat			Monthly output		, , ,	
Signature   Sign			Maximum hourly output, op	138.7	m3/hr (Cement)	
Area of the Cement stockpile, A   3,944   m2 (Cement)   Mg/(Irr (Aggregate)   3,944   m2 (Cement)   Mg/(Irr (Aggregate)   Mg/(Irr				554.7	m3/hr (Aggregate)	
Area of the Aggregate stockpile, A Emission Rate (Cement stockpile)  Emission Rate (Aggregate stockpile)  Emission Rate (Aggregate stockpile)  Emission Rate (Aggregate stockpile)  Wind erosion  Source ID: As above  Area of the Aggregate stockpile, A Emission Rate (Cement stockpile)  Emission Rate (Aggregate stockpile)  Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.03)  Emission Rate  Emission Rate  Berission Rate  14,520  M2/Aggregate)  Unmitigated)  Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100  Mitigated Emission Rate'=E*1000*op/(A*			Aron of the Compant at a limit.	1386.8	Mg/hr (Aggregate)	resource capacity of dump muck is one and 10 tons
Emission Rate (Cement stockpile)			Area of the Aggregate stockpile, A	14,520	m2(Aggregate)	
Emission Rate (Aggregate stockpile)			Emission Rate (Cement stockpile)	1.62605E-06	g/m²/s (unmitigated)	
Wind erosion Percentage open stockpile area, p 100 % (unmitigated) Source ID: As above 20 % (mitigated) 80% stockpiling area is covered by impervious sheets Emission Factor (0.03) 0.0255 Mg/hectare/year AP42, Section 11.9.4 Emission Rate 8.086E-08 g/m³/s (unmitigated) =0.85*0.03*1000000/(10000*365*24*60*60)*p/100			Emission Rate (Aggregate stockpile)	1.7666E-06	g/m²/s (unmitigated)	- 3-12-2-11-13-2-2-1000 ορητίου σου μητου
Emission Factor (0.03) 0.0255 Mg/hecTare/year AP42, Section 11.9.4 Emission Rate 8.086E-08 g/m²/s (unmitigated) = 0.85*0.03*1000000/(10000*365*24*60*60)*p/100			Percentage open stockpile area, p	100	% (unmitigated)	
Emission Rate 8.086E-08 g/m²/s (unmitigated) =0.85*0.03*1000000/(10000*365*24*60*60)*p/100		Source ID: As above	Emission Factor (0.03)			
1.6172E-06 g/III-/s (IIIIIgaled)				8.086E-08	g/m²/s (unmitigated)	
				1.01/2E-08	grin /3 (initigateu)	

	_		1		
Description  Crushed Aggregate Stockpile in	Sources  Material handling and storage piles Source ID: ECA2, ECA2-P2	Parameter Percentage open stockpile area, p	20	Emission Rate	Remarks  80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.
eastern location	EGAZ, EGAZ-FZ	Particle size multiplier, k Moisture content, M Average wind speed, U	-	% m/s	of italistic operation so as to keep the dusty material wet.  k (particle size < 30µm)  Assume worst case scenario  HKOAMO 2012 annual average wind speed
		Emission Factor, E Monthly output	6.65864E-05 4,364	kg/Mg m3/month	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
		Maximum hourly output, op		m3/hr Mg/hr	26 days per month, 12 working hours per day Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
	Windowsia	Area of the stockpile, A Emission Rate	3.46531E-07 6.93062E-08	g/m²/s (unmitigated) g/m²/s (mitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Wind erosion Source ID: As above	Percentage open stockpile area, p Emission Factor (0.03) Emission Rate	20 0.0255 8.086E-08	% (unmitigated) % (mitigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated)	80% stockpilling area is covered by impervious sheets AP42, Section 11.9.4 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
	Material handling and storage piles Source ID: CD1	Percentage open stockpile area, p	20	%	80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.
		Particle size multiplier, k Moisture content, M Average wind speed, U	0.053 5 4.9		k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed
		Emission Factor, E Monthly output	6.65864E-05 1,167	kg/Mg m3/month	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
		Maximum hourly output, op	7.5	m3/hr Mg/hr	26 days per month, 12 working hours per day Density of C&D material: 2Mg/m3 (from engineer)
		Area of the stockpile, A Emission Rate		m2 g/m²/s (unmitigated) g/m²/s (mitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Wind erosion Source ID: As above	Percentage open stockpile area, p Emission Factor (0.03)	100 20	% (unmitigated) % (mitigated) Mg/hectare/year	80% stockpiling area is covered by impervious sheets AP42, Section 11.9.4
		Emission Rate	8.086E-08	g/m²/s (unmitigated) g/m²/s (mitigated)	=0.85*0.03*1000000/(10000*365*24*60*60)*p/100
C&D Stockpile at midfield	Material handling and storage piles Source ID: CD2, CD3	Percentage open stockpile area, p	20	%	80% stockpilling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.
	GD2, GD3	Particle size multiplier, k Moisture content, M Average wind speed, U	0.053 5 4.9		Assume worst case scenario  HKOAMO 2012 annual average wind speed
		Emission Factor, E Monthly output	6.65864E-05 33,222	kg/Mg m3/month	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
		Maximum hourly output, op	213.0	m3/hr Mg/hr	26 days per month, 12 working hours per day Density of C&D material: 2Mg/m3 (from engineer)
	No. 1	Area of the stockpile, A Emission Rate	9.72595E-08	g/m²/s (unmitigated) g/m²/s (mitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Wind erosion Source ID: As above	Percentage open stockpile area, p Emission Factor (0.03) Emission Rate	20 0.0255 8.086E-08	% (unmitigated) % (mitigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated)	80% stockpilling area is covered by impervious sheets AP42, Section 11.9.4 =0.85*0.03*1000000/(10000*365*24*60*60)*p/100
Crushing Plant	Screening Source ID: CP1, CP2	FSP emission factor (0.03)	1.5	mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable
		Density of rock	1760	Kg/m3	Means for Mineral Works (Stone Crushing Plants), EPD Assume the same as approved EIA South East New Territories (SENT) Landfill Extension (EIA-143/2007) Annex A2
		Maximum handling capcity  No. of operation hour		Mg/hr	From engineer
Crushing Plant	Tertiary Crushing	Emission height Emission Rate	15	m g/s (mitigated)	
Grusning Flant	Source ID: CP1, CP2	FSP emission factor (0.03)  Density of rock		mg/m3 Kg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable Means for Mineral Works (Stone Crushing Plants), EPD Assume the same as approved EIA South East New Territories (SENT) Landfill Extension (EIA-143/2007) Annex A2
		Maximum handling capcity	700	Mg/hr	From engineer
		No. of operation hour Emission height Emission Rate	15	hr m g/s (mitigated)	
Crushing Plant	Paved haul road outside crushing plant - For <b>Laden</b> Vehicle	Particle size multiplier, k Road surface silt loading, sL Average truck weight, W	0.15 12	g/VKT g/m2 tons	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of truck, assume the same as Asphalt Tipper, engineering
	Source ID: WAB-HR1 to WAB-HR13				estimate
	WC-HR1 to WC-HR13	Emission height  FSP emission factor, E		ilm  g/VKT	Assumed that vehicle will lift dust from the road surface and disperse from 0.5m height E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.) Truck
		No. of truck trips per day		trips/hr	From engineer: 700Mg/hr * (1/(6m3/veh)) * (1/1760 kg/m3) * 1000
		No. of operation hour % of dust suppression	12 97.5	hr %	Assume density = 1760kg/m3, truck loading = 6m3/veh Assume as the same as Express Rail Link and Extracted from SP License of XRL (Appendix C).
Crushing Plant	Paved haul road outside crushing plant -	Emission Rate  Particle size multiplier, k		g/m/s (mitigated)	Truck for crushing plant  AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
Siddining Fidil	For <b>Unladen</b> Vehicle Source ID:	Road surface silt loading, sL Average truck weight, W	12	g/m2 tons	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Empty loading of truck, assume the same as Asphalt Tipper, engineering estimate
	WAB-HR1 to WAB-HR13 WC-HR1 to WC-HR13	Emission height FSP emission factor, E		m g⁄VKT	Assumed that vehicle will lift dust from the road surface and disperse from 0.5m height E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.) Truck
		No. of truck trips per day	66	trips/hr	From engineer: 700Mg/hr * (1/(6m3/veh)) * (1/1760 kg/m3) * 1000 Assume density = 1760kg/m3, truck loading = 6m3/veh
		No. of operation hour % of dust suppression	12 97.5	hr %	Assume as the same as Express Rail Link and Extracted from SP License of XRL (Appendix C).
		Emission Rate	5.7E-06	g/m/s (mitigated)	Truck for crushing plant

### Floating Concrete Batching Plant

Description	Sources	Parameter		Emission Rate	Remarks
loating Concrete	Unloading aggregate	Consumption Rate	39.6	Mg/h (Concrete)	From engineer: Concrete: 39.6 ton/hr = 1900 ton / (2 days * 24 h)
Batching Plant	Source ID:	Aggregate tank capacity	1900	tons	From engineer
Unloading of raw naterials)	F-EP1	Refill frequency	2	days	From engineer
naterials)		Particle size multiplier, k	0.053	1	For FSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M		%	Assume as the same as land-based CBP
		Mean wind speed, U		m/s	HKOAMO 2012 annual average wind speed
		Emission Factor, E	2.40E-04	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
					(A1 -42, 3661011 10.2.4, 11/00 6d.)
			0.01	kg/hr (Concrete)	
		Mitigation efficiency	99	%	Fully covered and handling with water spraying system (From engine
		No. of operation hours Emission height		hr m	Assume worst case From engineer
		Linission neight	10		1 form engineer
		Emission Rate		g/s (mitigated) (Concrete)	
Floating Concrete Batching Plant		Density	2.24	Mg/m3	For Concrete density, refer to this website
(Cement / PFA /	Source ID:				"http://www.aqua-calc.com/page/density-table/substance/concrete-c- and-blank-asphalt"
CSF Silos)	F-EP2	FSP emission factor (0.14)	7	mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable
					Means for Cement Works (Concrete Batching Plant), EPD
		Cement silo capacity (Each silo)	110	tons	From engineer
		Refill frequency		days	From engineer From engineer
		Dust exhaust flow rate (Total 4 silos)	7.33	tons/hr (Concrete)	From engineer: 7.33 ton/hr = 4 silos * (110 ton / (2.5 days * 24 h))
			3.3	m3/hr (Concrete)	For concrete density: 2.24 tons/m3
		No. of operation hours	24	hr	Assume worst case
		No. of small cement silos	4		From engineer
		Emission height		m	From engineer
		Emission Rate (Total 4 silos)	6.37E-06	g/s (mitigated) (Concrete)	
	PFA Silos	Density	2.24	Mg/m3	For Concrete density, refer to this website
	Source ID:				"http://www.aqua-calc.com/page/density-table/substance/concrete-cond- and-blank-asphalt"
	F-EP3	FSP emission factor (0.14)	7	mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable
		, ,			Means for Cement Works (Concrete Batching Plant), EPD
		DEA cile conscitu (Feeb cile)	0.0	ltana	From anninaer
		PFA silo capacity (Each silo) Refill frequency		tons days	From engineer From engineer
		Dust exhaust flow rate (Total 2 silos)		tons/hr (Concrete)	From engineer: 3.75 ton/hr = 2 silos * (90 ton / (2 days * 24 h))
			1.7	m3/hr (Concrete)	For concrete density: 2.24 tons/m3
		No. of operation hours	24	hr	Assume worst case
		No. of PFA silos	2		From engineer
		Emission height		m	From engineer
		Emission Rate (Total 2 silos)	3.26E-06	g/s (mitigated) (Concrete)	
	CSF Silos	Density	2.24	Mg/m3	For Concrete density, refer to this website
	Source ID:				"http://www.aqua-calc.com/page/density-table/substance/concrete-c and-blank-asphalt"
	F-EP4	FSP emission factor (0.14)	7	mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable
		` '			Means for Cement Works (Concrete Batching Plant), EPD
		CSE sile capacity (Each sile)	20	tons	From anginear
		CSF silo capacity (Each silo) Refill frequency		days	From engineer From engineer
		Dust exhaust flow rate (Total 2 silos)	0.50	tons/hr (Concrete)	From engineer: 0.5 ton/hr = 2 silos * (30 ton / (5 days * 24 h))
			0.2	m3/hr (Concrete)	For concrete density: 2.24 tons/m3
		No. of operation hours	24	hr	Assume worst case
		No. of CSF silos	24		From engineer
		Emission height		) m	From engineer
		Emission Rate (Total 2 silos)	4.34E-07	g/s (mitigated) (Concrete)	
Floating Concrete		Density	2.24	Mg/m3	For Concrete density, refer to this website
Batching Plant (Mixing Tower)	Source ID:				"http://www.aqua-calc.com/page/density-table/substance/concrete-c and-blank-asphalt"
	F-EP5	FSP emission factor (0.14)	7	mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable
					Means for Cement Works (Concrete Batching Plant), EPD
		Dust exhaust flow rate (Total 2 mixers)	5en	tons/hr (Concrete)	From engineer: 280 ton/hr * 2 mixers
		Dast oxidast now rate (Total 2 mixers)	300	Tons, iii (oonoroto)	
			250.0	m3/hr (Concrete)	For concrete density: 2.24 tons/m3
		No. of operation hours	24	hr	Assume worst case
	İ		24		From engineer
		No. of mixers		-	i rom engineer
		No. of mixers Emission height Emission Rate (Total 2 mixers)	17	m g/s (mitigated) (Concrete)	From engineer

	[Q4: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3 1, EGC3-2, EGC4, EGC5, EGC6, EGC7	Emission Factor (0.3) Emission Rate	0.807 Mg/hectare/month of activity  3.113E-05 g/m²/s (unmitigated)  2.584E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p Emission Factor (0.3) Emission Rate	100.0 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)  ITT works (area	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction Water suppression 12 times a day
sources)	Q1: SCCP1, AES6, AES13, AES14, AES15, EM1, EM2, EGC3-1, EGC3-2, ITT1 Q2: SCCP1, AES6, AES13, AES14, AES15, EM1, EM2, EGC3-1, EGC3-2, ITT1	Mitigation efficiency  No. of working days per month, d	91.7 % 30 days	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q3: SCCP1, AES6, AES13, AES14, AES15, EM1, EM2, EGC3-1, EGC3-2, ITT1	No. of working hours per day, h	24 hour	
	Q4: EM1, EM2, ITT1	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
ITT works (line sources) Roadworks - at grade	Q1: SCRE1, SCRE2, SCRE3, SCRE4, SCRE5, SCRE6, SCRE7, SCRE8, SCRE9, SCRE10, AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9,	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
Trodomonto di grado	Q2: SCRE1, SCRE2, SCRE3, SCRE4, SCRE5, SCRE6, SCRE7, SCRE8, SCRE9, SCRE10, AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10, AES11, AES12	No. of working days per month, d	30 days	
	O3: SCRE1, SCRE2, SCRE3, SCRE4, SCRE5, SCRE6, SCRE7, SCRE8, SCRE9, SCRE10, AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES11, AES12  O4:	No. of working hours per day, h	24 hour	AD40 Coation 10 0 0
	Cris.	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.736E-04 g/m/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m. =2.69*0.3*1000000/(10000*d*h*60*60)*p/100 * 12
	Wind Erosion		3.101E-05 g/m/s (mitigated)	
	Source ID: (as above)	Percentage active area, p  Emission Factor (0.3)	100.00 %	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	0.255 Mg/hectare/year 8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume 100% works area for heavy construction
Boundary Crossing Facilities (BCF)	Q1: BGF-A, BGF-B, BGF-C1, BGF-C2, BGF-C3, BGF-C4 Q2: BGF-A, BGF-B, BGF-C1, BGF-C2, BGF-C3, BGF-C4 Q3: BGF-A, BGF-B, BGF-C1, BGF-C2, BGF-C3, BGF-C4	Mitigation efficiency No. of working days per month, d No. of working hours per day, h	87.5 % 26 days 12 hour	Extracted from HKBCF EIA Extracted from HKBCF EIA Extracted from HKBCF EIA
	Q4: BCF-A, BCF-B, BCF-C1, BCF-C2, BCF-C3, BCF-C4	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	7.185E-05 g/m²/s (unmitigated) 8.981E-06 g/m²/s (mitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)	Heavy construction Source ID: Q1: LR-2, LR-3, LR-4, LR-5, LR-6, LR-7, LR-8, LR-9, LR-10, LR-11, LR-12, LR-	Percentage active area, p	100.0 %	Assume 100% works area for heavy construction
Hong Kong Link Road (HKLR)	13, LR-14 Q2: Q3:	Mitigation efficiency  No. of working days per month, d	87.5 % 26 days	Extracted from HKLR EIA  Extracted from HKLR EIA
	Q4:	No. of working hours per day, h Emission Factor (0.3)	12 hour  0.807 Mg/hectare/month of activity	Extracted from HKLR EIA AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	7.185E-05 g/m²/s (unmitigated) 8.981E-06 g/m²/s (mitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	ADVO T-ble 44 0 4
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m <sup>2</sup> /s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
		<b>-</b> Pa	age 1 of 19	•

#### Appendix 5.2.7 Details of Dust Emission Sources for Daily RSP Assessment (Tier 1) at Year 2016 Third Runway Work Areas Parameter Works Area Sources Remarks Third Runway Land Heavy construction Percentage active area, p 100 % Source ID: For 24hrs activities: Formation Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Q1: Sources Final Report Q2: No. of working days per month, d 30 days Q3: No. of working hours per day, h 24 hour Q4: 1\_03-1, 1\_03-2, 1\_08A-1, 1\_08A-2, 1\_08B-1, 1\_08B-2, 2\_04-1, 2\_04-2, 2\_06-1, 2\_06-2, 2\_06-3 AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69\*\*0.3\*1000000/(10000\*30\*h\*60\*60)\*p/100 0.807 Mg/hectare/month of activity Emission Factor (0.3) Emission Rate $3.113E-05 \text{ g/m}^2\text{/s} \text{ (unmitigated)}$ 2.584E-06 g/m²/s (mitigated) Wind Erosion Source ID: (as above) 100 % Percentage active area, p AP42, Table 11.9-4 Emission Factor (0.3) 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** $8.086E-07\ g/m^2/s$ Heavy construction Source ID: Submarine pipeline Percentage active area, p 100 % Assume % works area for heavy construction Q1: S1, S2, S3 Mitigation efficiency 91.7 % Water suppression 12 times a day Submarine cable No. of working days per month, d No. of working hours per day, h Q2: S1, S2, S3 30 days Q3: S1, S2, S3 24 hour AP42, Section 13.2.3.3 Emission Factor (0.3) 0.807 Mg/hectare/month of activity USEPA document Estimating Particulate Matter Emissions from Q4: Construction Operations, 1999 3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated) Emission Rate =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 Wind Erosion Source ID: (as above) Percentage active area, p 100 % AP42, Table 11.9-4 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) Construction Operations, 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 8.086E-07 g/m<sup>2</sup>/s **Emission Rate**

(Concurrent project)	Heavy construction	Percentage active area, p	100 %	Assume % works area for heavy construction
NCD works	Source ID:  Q1: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7	No. of working days per month, d	30 days	·
	Q3: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7	No. of working hours per day, h	24 hour	
	Q4: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	100 7 11 44 0 4
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Concurrent project)	Heavy construction	Percentage active area, p	100 %	Assume % works area for heavy construction
TT works (area sources)	Source ID:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
ources)	Q1: AES6, EM1, EM2, ITT1 Q2: AES6, EM1, EM2, ITT1 Q3: AES6, EM1, EM2, ITT1	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4: AES6, EM1, EM2, ITT1	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100 %	Assume % works area for heavy construction
TT works (line sources) Roadworks - at grade	Q1: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10, AES11, AES12	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
iodawonko ai grade	Q2: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10, AES11, AES12 Q3: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10, AES11,	No. of working days per month, d	30 days	
	AES12 Q4: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10, AES11,	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3
	AES12	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.736E-04 g/m/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m. =2.69*0.3*1000000/(10000*d*h*60*60)*p/100 * 12
			3.101E-05 g/m/s (mitigated)	17 112 1121111 (10000 d 00 00, p; 100 112
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m <sup>2</sup> /s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100

Appendix 5.2.7 Deta	ails of Dust Emission Sources for Daily RSP Assessment (	Tier 1) at Year 2016		
T2 Expansion -	Heavy construction	Percentage active area, p	100 %	Assume % works area for heavy construction
Advanced Works (Temporary Car Parks at NCD,	Source ID:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
Temporary Road Diversion)	Q1: TRD1, TRD3, TRD4, TRD5, TRD6 Q2: TRD1, TRD5, TRD6 Q3: TRD1, TRD5, TRD6	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4:	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	AD40 Table 44.0.4
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100 %	Assume 100% works area for heavy construction
Boundary Crossing	Q1: BCF-C4 Q2: BCF-C4	Mitigation efficiency	87.5 %	Extracted from HKBCF EIA
Facilities (BCF)	Q3: BCF-C4 Q4: BCF-C4	No. of working days per month, d No. of working hours per day, h	26 days 12 hour	Extracted from HKBCF EIA Extracted from HKBCF EIA
	N. 501 707	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	7.185E-05 g/m²/s (unmitigated) 8.981E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Other airport facilities	Heavy construction	Percentage active area, p	100 %	Accume 9/ works area for heavy construction
related works	Source ID:			Assume % works area for heavy construction  Water suppression 12 times a day
	Q1: ABT1-1 Q2: ABT1-1	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q3: ABT1-1 Q4: ABT1-1	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	AD42 Castion 12.2.2.2
	Q4. AD11*1	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Roadworks corresponding to	Heavy construction Source ID:	Percentage active area, p	100 %	Assume % works area for heavy construction
Other airport facilities related works	Q1: ABT1-2, ABT1-3	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: ABT1-2, ABT1-3 Q3: ABT1-2, ABT1-3	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4: ABT1-2, ABT1-3	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.736E-04 g/m²/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m. =2.69*0.3*1000000/(10000*d*h*60*60)*p/100 * 12
			3.101E-05 g/m²/s (mitigated)	2.55 5.6 1000005/(1000 0 ii 00 00) prioo 12
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100

#### Third Runway Work Areas Parameter Works Area Sources Remarks Third Runway Land Heavy construction 100 % Percentage active area, p Formation Assume % works area for heavy construction Q1: 1\_01, 1\_03-1, 1\_03-2, 1\_04, 1\_07-1, 1\_07-2, 1\_08A-1, 1\_08A-2, 1\_08B-1, 1\_08B-2, 1\_09-1, 1\_09-2, 2\_03B, 2\_04-1, 2\_04-2, 2\_05B-1, 2\_05B-2, 2\_06-1, Water suppression 12 times a day Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust 2\_06-2, 2\_06-3, 2\_07B, 2\_08, 2\_09-1, 2\_09-2 Sources Final Report Q2: 1\_01, 1\_02-1, 1\_02-2, 1\_03-1, 1\_03-2, 1\_04, 1\_07-1, 1\_07-2, 1\_08A-1, 1\_08A-2, 1\_08B-1, 1\_08B-2, 1\_09-1, 1\_09-2, 2\_03B, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08, 2\_09-1, 2\_09-2, 3\_01A-1, 3\_01A-2, 3\_01A-3 30 days No. of working days per month, d Q3: 1\_01, 1\_02-1, 1\_02-2, 1\_03-1, 1\_03-2, 1\_04, 1\_05, 1\_07-1, 1\_07-2, 1\_08A-1, 1\_08A-2, 1\_08B-1, 1\_08B-2, 2\_03B, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07Ā-2, 2\_07B, 2\_08, 3\_01A-1, 3\_01A-2, 3\_01A-3 24 hour No. of working hours per day, h Q4: 1\_01, 1\_02-1, 1\_02-2, 1\_03-1, 1\_03-2, 1\_04, 1\_05, 1\_07-1, 1\_07-2, 1\_08A-1, 1\_08A-2, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08 AP42, Section 13.2.3.3 0.807 Mg/hectare/month of activity Emission Factor (0.3) USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69\*0.3\*1000000/(10000\*30\*h\*60\*60)\*p/100 Emission Rate 3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m<sup>2</sup>/s (mitigated) ercentage active area, p 100 Mitigation efficiency 91.7 % Q2: 2 04-1, 2 04-2, 2 06-1, 2 06-2, 2 06-3 No. of working days per month, d 30 days Q3: 1\_09-1, 1\_09-2, 2\_04-1, 2\_04-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_09-1, 2\_09-2 No. of working hours per day, h 12 (night) hour Q4: 1\_09-1, 1\_09-2, 2\_04-1, 2\_04-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_09-1, 2\_09-2, 3\_02A-1, 3\_02A-2, 3\_02A-3 AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.807 Mg/hectare/month of activity Construction Operations, 1999 **Emission Rate** 6.227E-05 g/m²/s (unmitigated) =2.69\*0.3\*1000000/(10000\*30\*h\*60\*60)\*p/100 5.168E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Source ID: (as above) Percentage active area, p 100 % AP42, Table 11.9-4 Emission Factor (0.3) 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 8.086E-07 g/m<sup>2</sup>/s **Emission Rate** Third Runway Wind Erosion Based on scheme design of definition for sand fill materials Source ID: 20.0 % consisting of coarse materials with size not exceeding 37.5mm and Percentage active area, p fines content not exceeding 20% Wind Erosion (only) Ω1: AP42, Table 11.9-4 0.255 Mg/hectare/year Emission Factor (0.3) USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 1.617E-07 g/m<sup>2</sup>/s Emission Rate Q4: 1\_08B-1, 1\_08B-2, 3\_01A-1, 3\_01A-2, 3\_01A-3 Third Runway Othe Heavy construction Percentage active area, p 100 % Assume % works area for heavy construction Source ID Construction Water suppression 12 times a day Works/Facilities on Equation (3-2) in the USEPA's Control of Open Fugitive Dust 91.7 % Mitigation efficiency newly formed land Sources Final Report Q1: 4\_04, 4\_05-1 Q2: 4\_04, 4\_05-1 No. of working days per month, d 30 days No. of working hours per day, h Q3: 4\_04, 4\_05-1 Q4: 4 04, 4 05-1 AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.807 Mg/hectare/month of activity Construction Operations, 1999 =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 Emission Rate 3.113E-05 g/m<sup>2</sup>/s (unmitigated) 2.584E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100 % Source ID: (as above) AP42, Table 11.9-4 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) Construction Operations, 1999 Emission Rate 8.086E-07 g/m<sup>2</sup>/s =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 Heavy construction Source ID: (Concurrent project) Percentage active area, p 100 % Assume % works area for heavy construction NCD works Water suppression 12 times a day Q1: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency EGC3-2, EGC4, EGC5, EGC6, EGC7 Q2: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1 Sources Final Report No. of working days per month, d 30 days EGC3-2, EGC4, EGC5, EGC6, EGC7 Q3: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1 EGC3-2, EGC4, EGC5, EGC6, EGC7 No. of working hours per day, h 24 hour Q4: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1 EGC3-2, EGC4, EGC5, EGC6, EGC7 AP42, Section 13.2.3.3 0.807 Mg/hectare/month of activity USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) Construction Operations, 1999 Emission Rate $3.113E-05~g/m^2/s$ (unmitigated) =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 2.584E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Source ID: (as above) Percentage active area, p 100 % AP42, Table 11.9-4 Emission Factor (0.3) 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 8.086E-07 g/m<sup>2</sup>/s Emission Rate 100 % (Concurrent project) Percentage active area, p Assume % works area for heavy construction Source ID: Water suppression 12 times a day ITT works (area 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency sources) Q1: AES6 Sources Final Report No. of working days per month, d 30 days Q3: No. of working hours per day, h 24 hour AP42, Section 13.2.3.3 0.807 Mg/hectare/month of activity USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) Construction Operations, 1999 =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 Emission Rate 3.113E-05 g/m<sup>2</sup>/s (unmitigated) 2.584E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100 % ource ID: (as above) AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.255 Mg/hectare/year Construction Operations, 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 Emission Rate 8.086E-07 g/m<sup>2</sup>/s

Appendix 5.2.7 Details of Dust Emission Sources for Daily RSP Assessment (Tier 1) at Year 2017

Appendix 5.2.7 Deta	ills of Dust Emission Sources for Daily RSP Assessment (Tier 1)	at Year 2017		
(Concurrent project)	Heavy construction	Percentage active area, p	100 %	Assume % works area for heavy construction
ITT works (line	Source ID:	May 12 27 1	0.77	Water suppression 12 times a day
sources) Roadworks - at grade	Q1: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10, AES11, AES12	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4:	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.736E-04 g/m/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m.
			3.101E-05 g/m/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100 * 12
	Wind Erosion	Percentage active area, p	100 %	
	Source ID: (as above)			AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
South Cargo	Heavy construction	Percentage active area, p	100 %	Assume % works area for heavy construction
Roadworks - at grade	Source ID:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2: CA1, CA2	No. of working days per month, d	30 days	Sources Final Report
	Q3: CA1, CA2 Q4: CA1, CA2	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3
	G. O.I., O.E	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 Assume road width equals 12m, therefore multiply emission rate by
		Emission Rate	3.736E-04 g/m/s (unmitigated)	12m. =2.69*0.3*100000/(10000*d*h*60*60)*p/100 * 12
			3.101E-05 g/m/s (mitigated)	=2.09 0.3 1000000/(10000 d ii 00 00) p/100 12
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	
	Sec. 15. (ac acc. 15)	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
		Linission riate	0.000E-07 g/iii/s	-0.83 0.8 1000000/(10000 303 24 00 00) p/100
South Cargo Roadworks - viaduct	Heavy construction Source ID:	Percentage active area, p	100 %	Assume % works area for heavy construction
		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2: CA3, CA4, CA5, CA6, CA7, CA8	No. of working days per month, d	30 days	Sources Final Report
	Q3: CA3, CA4, CA5, CA6, CA7, CA8 Q4: CA3, CA4, CA5, CA6, CA7, CA8	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3
		Emission Factor (0.3)	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 Assume 30m spacing between road piers (base:5mx 5m), therefore
		Emission Rate	3.892E-05 g/m/s (unmitigated)	total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*0.3*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
			3.230E-06 g/m/s (mitigated)	=2.69 0.5 1000000/(10000 50 II 60 60) p/100 (5/50) 7.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Roadworks Road 6 - viaduct (Concept F,	Heavy construction Source ID:	Percentage active area, p	100 %	Assume % works area for heavy construction
Option 3)		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF34, RF34, RF35, RF36, RF37	No. of working days per month, d	30 days	Sources Final Report
	O3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF34, RF35, RF36, RF37	No. of working hours per day, h	24 hour	
	Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF34, RF35, RF36, RF37	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
				Construction Operations, 1999 Assume 30m spacing between road piers (base:5mx 5m), therefore
		Emission Rate	3.892E-05 g/m/s (unmitigated)	total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)
			3.230E-06 g/m/s (mitigated)	'=2.69*0.3*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Poto	9 096E 07 alm2la	,
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
	1		1	ı

Appendix 5.2.7 Deta	ails of Dust Emission Sources for Daily RSP Assessment (Tier 1	) at Year 2017		
New APM Interchange Station	Heavy construction Source ID:	Percentage active area, p	100 %	Assume % works area for heavy construction
(AIS)	Ot.	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2: Q3: AlS1, AlS2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4:	No. of working nours per day, n  Emission Factor (0.3)	24 nour  0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	3.113E-05 g/m²/s (unmitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
			2.584E-06 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	ADVO Table 44 0 4
	Q1:	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
BHS and APM	Heavy construction	Percentage active area, p	100 %	Assume 9/ works area for beauty construction
tunnel	Source ID:			Assume % works area for heavy construction Water suppression 12 times a day
	Q1: Q2:	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q3: BAT1, BAT2, NAB3, NAB4 Q4: BAT1, BAT2, NAB3, NAB4	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	AP42. Section 13.2.3.3
		Emission Factor (0.3)	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion	Percentage active area, p	100 %	
	Source ID: (as above) Q1:	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Factor (0.3)	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(100000*365*24*60*60)*p/100
T2 Expansion Area	Heavy construction Source ID:	Percentage active area, p	100 %	Assume % works area for heavy construction
	Ot	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2: Q3: T2E-1, T2E-2, T2E-3, BHS1, BHS2, NAB1, NAB2, SAB, NAD1	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS1, BHS2, NAB1, NAB2, SAB, NAD1, EVA1, EVA2, EVA3, EVA4, EVA5, EVA6, EVA7, EVA8, EVA9	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	3.113E-05 g/m²/s (unmitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind France		2.584E-06 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	AP42. Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
T2 Expansion -	Heavy construction	Percentage active area, p	100 %	
Emergency Vehicular Access	Source ID:			Assume % works area for heavy construction Water suppression 12 times a day
(EVA)	Q1:	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: Q3: EVA1, EVA2, EVA3, EVA4, EVA5, EVA6, EVA7, EVA8, EVA9 Q4:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	AD40 Section 49.0.0.0
		Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion	Percentage active area	100 %	+
	Source ID: (as above)	Percentage active area, p		AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Other airport facilities related works	Heavy construction Source ID:	Percentage active area, p	100 %	Assume % works area for heavy construction
		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: ABT1-1 Q2: ABT1-1 Q3: ABT1-1	No. of working days per month, d	30 days	Sources Final Report
	Q4: ABT1-1	No. of working hours per day, h  Emission Factor (0.3)	24 hour  0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
ü				
		Emission Rate	3.113E-05 g/m²/s (unmitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
		, ,		
	Wind Erosion Source ID: (as above)	, ,	3.113E-05 g/m²/s (unmitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
		Emission Rate	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate  Percentage active area, p	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated) 100 %	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4
Roadworks	Source ID: (as above)  Heavy construction	Emission Rate  Percentage active area, p  Emission Factor (0.3)	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated) 100 % 0.255 Mg/hectare/year	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
corresponding to Other airport facilities	Source ID: (as above)  Heavy construction Source ID:	Emission Rate  Percentage active area, p  Emission Factor (0.3)  Emission Rate  Percentage active area, p	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated) 100 % 0.255 Mg/hectare/year 8.086E-07 g/m²/s	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day
corresponding to	Source ID: (as above)  Heavy construction Source ID:  Q1: ABT1-2, ABT1-3	Emission Rate  Percentage active area, p  Emission Factor (0.3)  Emission Rate  Percentage active area, p  Mitigation efficiency	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated) 100 % 0.255 Mg/hectare/year 8.086E-07 g/m²/s 100 % 91.7 %	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction
corresponding to Other airport facilities	Source ID: (as above)  Heavy construction Source ID:  Q1: ABT1-2, ABT1-3 Q2: ABT1-2, ABT1-3 Q3: ABT1-2, ABT1-3	Emission Rate  Percentage active area, p  Emission Factor (0.3)  Emission Rate  Percentage active area, p	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated) 100 % 0.255 Mg/hectare/year 8.086E-07 g/m²/s	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
corresponding to Other airport facilities	Source ID: (as above)  Heavy construction Source ID:  Q1: ABT1-2, ABT1-3 Q2: ABT1-2, ABT1-3	Emission Rate  Percentage active area, p  Emission Factor (0.3)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)  100 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s  100 %  91.7 %  30 days	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
corresponding to Other airport facilities	Source ID: (as above)  Heavy construction Source ID:  Q1: ABT1-2, ABT1-3 Q2: ABT1-2, ABT1-3 Q3: ABT1-2, ABT1-3	Emission Rate  Percentage active area, p  Emission Factor (0.3)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d No. of working hours per day, h	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)  100 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s  100 %  91.7 %  30 days 24 hour  0.807 Mg/hectare/month of activity  3.736E-04 g/m²/s (unmitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3
corresponding to Other airport facilities	Source ID: (as above)  Heavy construction Source ID:  Q1: ABT1-2, ABT1-3 Q2: ABT1-2, ABT1-3 Q3: ABT1-2, ABT1-3 Q4: ABT1-2, ABT1-3	Emission Rate  Percentage active area, p  Emission Factor (0.3)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d No. of working hours per day, h  Emission Factor (0.3)  Emission Rate	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)  100 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s  100 %  91.7 %  30 days 24 hour  0.807 Mg/hectare/month of activity  3.736E-04 g/m²/s (unmitigated) 3.101E-05 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
corresponding to Other airport facilities	Heavy construction Source ID:  Q1: ABT1-2, ABT1-3 Q2: ABT1-2, ABT1-3 Q3: ABT1-2, ABT1-3 Q4: ABT1-2, ABT1-3	Emission Rate  Percentage active area, p  Emission Factor (0.3)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d No. of working hours per day, h  Emission Factor (0.3)  Emission Rate  Percentage active area, p	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)  100 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s  100 %  91.7 %  30 days 24 hour  0.807 Mg/hectare/month of activity  3.736E-04 g/m²/s (unmitigated) 3.101E-05 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 Assume road width equals 12m, therefore multiply emission rate by
corresponding to Other airport facilities	Source ID: (as above)  Heavy construction Source ID:  Q1: ABT1-2, ABT1-3 Q2: ABT1-2, ABT1-3 Q3: ABT1-2, ABT1-3 Q4: ABT1-2, ABT1-3	Emission Rate  Percentage active area, p  Emission Factor (0.3)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d No. of working hours per day, h  Emission Factor (0.3)  Emission Rate  Percentage active area, p  Emission Factor (0.3)	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)  100 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s  100 %  91.7 %  30 days 24 hour  0.807 Mg/hectare/month of activity  3.736E-04 g/m²/s (unmitigated) 3.101E-05 g/m²/s (mitigated)  100 %  0.255 Mg/hectare/year	aP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 Assume road width equals 12m, therefore multiply emission rate by  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
corresponding to Other airport facilities	Source ID: (as above)  Heavy construction Source ID:  Q1: ABT1-2, ABT1-3 Q2: ABT1-2, ABT1-3 Q3: ABT1-2, ABT1-3 Q4: ABT1-2, ABT1-3	Emission Rate  Percentage active area, p  Emission Factor (0.3)  Emission Rate  Percentage active area, p  Mitigation efficiency  No. of working days per month, d No. of working hours per day, h  Emission Factor (0.3)  Emission Rate  Percentage active area, p	3.113E-05 g/m²/s (unmitigated) 2.584E-06 g/m²/s (mitigated)  100 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s  100 %  91.7 %  30 days 24 hour  0.807 Mg/hectare/month of activity  3.736E-04 g/m²/s (unmitigated) 3.101E-05 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 Assume road width equals 12m, therefore multiply emission rate by  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from

### Appendix 5.2.7 Details of Dust Emission Sources for Daily RSP Assessment (Tier 1) at Year 2018

Third Runway Work	k Areas			
Works Area Third Runway Land	Sources Heavy construction	Percentage active area in	Parameter 100.0 %	Remarks
Formation	Source ID: For 24hrs activities:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Q1:1_01,1_02-1,1_02-2,1_03-1,1_03-2,1_04,1_05,1_06-1,1_06-2, 1_08B-2,2_02B-1,2_02B-2,2_03A,2_05A,2_05B-1,2_05B-2,2_07A-1, 2_07A-2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: 1_02-1, 1_02-2, 1_05, 1_06-1, 1_06-2, 2_02B-1, 2_02B-2, 2_03A, 2_05A, 2_08, 3_02B	No. of working days per month, d	30 days	
	Q3: 1_06-1, 1_06-2, 2_01, 2_02B-1, 2_02B-2, 2_03A, 2_03B, 2_05A, 2_05B-1, 2_05B-2	No. of working hours per day, h	24 hour	
	Q4: 2_01, 2_02A, 2_02B-1, 2_02B-2, 2_03A, 2_03B, 2_05B-1, 2_05B-2	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69**0.3*1000000/(10000*30*h*60*60)*p/100
	For night-time activities:	Percentage active area, p	100.0 %	
	Q1: 1_09-1, 1_09-2, 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 2_09-2, 3_02A-1, 3_02A-2, 3_02A-3  Q2: 1_09-1, 1_09-2, 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1,	Mitigation efficiency	91.7 %	
	2_09-2, 3_01A-1, 3_01A-2, 3_01A-3, 3_02A-1, 3_02A-2, 3_02A-3	No. of working days per month, d	30 days	
	Q3: 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 2_09-2, 3_01A-1, 3_01A-2, 3_01A-3, 3_02A-1, 3_02A-2, 3_02A-3	No. of working hours per day, h	12 (night) hour	
	Q4: 1_09-1, 1_09-2, 2_09-1, 2_09-2, 3_02A-1, 3_02A-2, 3_02A-3	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	6.22685E-05 g/m²/s (unmitigated) 5.16829E-06 g/m²/s (mitigated)	Construction Operations, 1999 =2.69**0.3*1000000/(10000*30*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Third Runway	Wind Erosion Source ID:	Percentage active area, p	20.0 %	Based on scheme design of definition for sand fill materials consisting of coarse materials with size not exceeding 37.5mm and
Wind Erosion (only)	Q1: 1_07-2, 1_08A-2, 2_03B, 2_07B, 2_08, 3_01A-1, 3_01A-2, 3_01A-3	Emission Factor (0.3)	0.255 Mg/hectare/year	fines content not exceeding 20% AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
	Q2: 1_01, 1_03-1, 1_03-2, 1_04, 2_03B, 2_05B-1, 2_05B-2, 2_07A-1,	, ,		Construction Operations, 1999
	2_07A-2, 2_07B Q3: 1_09-1, 1_09-2, 2_08, 3_02B Q4: 2_04-1, 2_04-2, 2_05A, 2_06-1, 2_06-2, 2_06-3, 2_08, 3_02B	Emission Rate	1.6172E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Third Runway Other	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Construction Works/Facilities on newly formed land	044 074 4 000 4 4 000 4 4 04 4 05 4	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2:1_07-1, 1_08A-1, 1_08B-1, 4_04, 4_05-1 Q2:1_07-1, 1_07-2, 1_08A-1, 1_08A-2, 1_08B-1, 1_08B-2, 4_04, 4_05-1	No. of working days per month, d	30 days	Sources Final Report
	Q3: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_07-1, 1_07-2, 1_08A-1, 1_08A-2, 1_08B-1, 1_08B-2, 2_07A-1, 2_07A-2, 2_07B, 4_04, 4_05-1	No. of working hours per day, h	24 hour	
	Q4:1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1, 1_06-2, 1_07-1, 1_07-2, 1_08A-1, 1_08A-2, 1_08B-1, 1_08B-2, 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 3_01A-3, 4_04, 4_05-1	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
NCD works	Q1: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2 Q3: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2,	No. of working days per month, d	30 days	
	GS: NCD2-1, NCD2-2, NCD2-3, 1RD3, 1RD4, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2 Q4: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2,	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3
	EGC3-1, EGC3-2	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100

Appendix 5.2.7 Deta	ills of Dust Emission Sources for Daily RSP Assessment	(Tier 1) at Year 2018		
(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
ITT works (area sources)		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2: Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4:	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AD40 T-1-1-44 0.4
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Midfield development (MD)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Q1: MD	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: MD Q3: MD	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	osarsos i mai risport
	Q4: MD	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AD40 T-bl- 44 0 4
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
South Cargo Roadworks - at grade	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
au at grade	Q1: CA1, CA2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: CA1, CA2 Q3: CA1, CA2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	·
	Q4: CA1, CA2	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 Assume road width cause 12m therefore multiply emission rate by
		Emission Rate	0.000373611 g/m²/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m. =2.69*0.3*1000000/(10000*d*h*60*60)*p/100 * 12
			3.10097E-05 g/m²/s (mitigated)	2.55 5.5 1555555/(15555 t 11 55 55) p/100 12
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	AP42. Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
South Cargo Roadworks - viaduct	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Q1: CA3, CA4, CA5, CA6, CA7, CA8	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: CA3, CA4, CA5, CA6, CA7, CA8 Q3: CA3, CA4, CA5, CA6, CA7, CA8	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	·
	Q4: CA3, CA4, CA5, CA6, CA7, CA8	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.89178E-05 g/m²/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)
			3.23018E-06 g/m²/s (mitigated)	'=2.69*0.3*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100

Appendix 5.2.7 Deta	ails of Dust Emission Sources for Daily RSP Assessment (	Tier 1) at Year 2018		
Roadworks Road 6 -	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
viaduct (Concept F, Option 3)	Q1: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working days per month, d	30 days	
	Q3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working hours per day, h	24 hour	
	Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.89178E-05 g/m²/s (unmitigated) 3.23018E-06 g/m²/s (mitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*0.3*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
	Wind Erosion			
	Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
New APM Interchange Station (AIS)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction Water suppression 12 times a day
	Q1:	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: AIS1, AIS2, EVA6, EVA7, EVA8 Q3: AIS1, AIS2, EVA6, EVA7, EVA8	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4: AIS1, AIS2, EVA6, EVA7, EVA8	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1:	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Baggage Hall -	Heavy construction	Percentage active area, p	100.00 %	Assume % works area for heavy construction
Baggage Handling System (BHS)	Source ID:		21-21	Water suppression 12 times a day
	Q1: Q2: BHS1, BHS2, EVA9	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q3: BHS1, BHS2, EVA9 Q4: BHS1, BHS2, EVA9	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	AP42, Section 13.2.3.3
		Emission Factor (0.3)	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1:	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
New APM Depot (NAD)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: NAD1, NAD2 Q2: NAD1, NAD2 Q3: NAD1, NAD2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4: NAD1, NAD2	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	3.11343E-05 g/m²/s (unmitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
			2.58414E-06 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above) Q1: NAD1, NAD2	Percentage active area, p	100.00 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
BHS and APM	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
tunnel		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: BAT1, BAT2, NAB3, NAB4 Q2: BAT1, BAT2, NAB3, NAB4	No. of working days per month, d	30 days	Sources Final Report
	Q3: BAT1, BAT2, NAB3, NAB4 Q4: BAT1, BAT2, NAB3, NAB4	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3
		Emission Factor (0.3)	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
	Wind Freeing	Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above) Q1: BAT1, BAT2, NAB3, NAB4	Percentage active area, p	100.00 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100

72 Expansion Area	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Source ID:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2 Q2: T2E-3 Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final Report
	Q4:	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AD40 Table 14 0 4
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
72 Expansion - Car Park North (North	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Annex Building)	Q1: NAB1, NAB2, BHS1	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: NAB1, NAB2 Q3: Q4:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	LU4.	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
T2 Expansion - Lounge Limo (South Annex Building)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Q1: SAB	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: SAB Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4:	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m <sup>2</sup> /s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100

## Appendix 5.2.7 Details of Dust Emission Sources for Daily RSP Assessment (Tier 1) at Year 2019

Third Runway Work Areas							
Works Area	Sources		Parameter	Remarks			
Third Runway Land	Heavy construction	Percentage active area, p	100.0 %				
Formation	Source ID: For 24hrs activities:	,,,		Assume % works area for heavy construction			
	Q1: 2_01, 2_02A	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report			
	Q2: 2_01, 2_02A, 2_05A	No. of working days per month, d	30 days				
	Q3: 2_01, 2_02A, 2_02B-1, 2_02B-2, 2_03A, 2_05A	No. of working hours per day, h	24 hour				
	Q4: 2_02B-1, 2_02B-2, 2_03A	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999			
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69**0.3*1000000/(10000*30*h*60*60)*p/100			
	For night-time activities:	Percentage active area, p	100.0 %				
	Q1: 1_09-1, 1_09-2, 2_06-1, 2_06-2, 2_06-3, 3_02A-1, 3_02A-2, 3_02A-3	Mitigation efficiency	91.7 %				
	Q2: 1_09-2, 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 3_02A-1, 3_02A-2, 3_02A-3	No. of working days per month, d	30 days				
	Q3: 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 3_02A-1, 3_02A-2, 3_02A-3	No. of working hours per day, h	12 (night) hour				
	Q4: 2_09-1	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999			
		Emission Rate	6.22685E-05 g/m²/s (unmitigated) 5.16829E-06 g/m²/s (mitigated)	=2.69**0.3*1000000/(10000*30*h*60*60)*p/100			
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	ADAO Table 44 O 4			
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999			
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100			
Third Runway Wind Erosion (only)	Wind Erosion Source ID:	Percentage active area, p	20.0 %	Based on scheme design of definition for sand fill materials consisting of coarse materials with size not exceeding 37.5mm and fines content not exceeding 20%			
	Q1: 2_02B-1, 2_03A, 2_03B, 2_04-1, 2_04-2, 2_05A, 2_05B-1, 2_05B-2, 2_08, 2_09-1, 2_09-2, 3_02B	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from			
	Q2: 2_02B-1, 2_03A, 2_03B, 2_05B-1, 2_05B-2, 3_02B Q3: 1_09-2, 3_02B Q4: 3_02A-1, 3_02A-2, 3_02A-3, 3_02B	Emission Rate	1.6172E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100			
Third Runway Other	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction			
Construction Works/Facilities on newly formed land	Q1: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1, 1_06-2, 1_07-1, 1_08A-1, 1_08B-1, 2_02B-2, 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report			
	Q2: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1, 1_06-2, 1_09-1, 2_02B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1, 1_06-2,	No. of working days per month, d	30 days				
	1_09-1, 2_03B, 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04	No. of working hours per day, h	24 hour				
	Q4: 1_09-1, 1_09-2, 2_01, 2_02A, 2_03B, 2_04-1, 2_04-2, 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999			
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100			
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4			
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999			
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100			
L				1			

Appendix 5.2.7 Details of Dust Emission Sources for Daily RSP Assessment (Tier 1) at Year 2019							
Midfield	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction			
development (MD)	Q1: MD	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report			
	Q2: MD Q3: MD	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	i mai report			
	Q4: MD	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from			
		Emission Rate	3.11343E-05 g/m²/s (unmitigated)	Construction Operations, 1999 =2.69*0.3*100000/(10000*d*h*60*60)*p/100			
			2.58414E-06 g/m²/s (mitigated)				
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4			
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999			
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100			
South Cargo	Heavy construction	Percentage active area, p	100.00 %	Assume % works area for heavy construction			
Roadworks - at grade	Source ID:	A.C. 17 (6)	04.7.07	Water suppression 12 times a day			
	01: CA1, CA2 Q2: CA1, CA2	Mitigation efficiency  No. of working days per month, d	91.7 % 30 days	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report			
	Q3: CA1, CA2 Q4: CA1, CA2	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3			
		Emission Factor (0.3)	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 Assume road width equals 12m, therefore multiply emission rate by			
		Emission Rate	0.000373611 g/m²/s (unmitigated)	12m. =2.69*0.3*1000000/(10000*d*h*60*60)*p/100 * 12			
			3.10097E-05 g/m²/s (mitigated)	` ''			
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	ADVO T. I.I. AV O. A			
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from			
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100			
South Cargo	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction			
Roadworks - viaduct	Source ID:			Water suppression 12 times a day			
	Q1: CA3, CA4, CA5, CA6, CA7, CA8 Q2: CA3, CA4, CA5, CA6, CA7, CA8	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report			
	Q3: CA3, CA4, CA5, CA6, CA7, CA8 Q4: CA3, CA4, CA5, CA6, CA7, CA8	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	AP42, Section 13.2.3.3			
		Emission Factor (0.3)	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 Assume 30m spacing between road piers (base:5mx 5m), therefore			
		Emission Rate	3.89178E-05 g/m²/s (unmitigated)	total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)			
			3.23018E-06 g/m²/s (mitigated)	'=2.69*0.3*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5			
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	ADVO T. I.I. AV O. A			
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999			
		Emission Rate	8.086E-07 g/m <sup>2</sup> /s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100			
Roadworks Road 6	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction			
viaduct (Concept F, Option 3)	Source ID: Q1: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12,			Water suppression 12 times a day			
	RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report			
	O2: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF6, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working days per month, d	30 days				
	Q3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working hours per day, h	24 hour				
	O4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999			
		Emission Rate	3.89178E-05 g/m²/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)			
			3.23018E-06 g/m²/s (mitigated)	'=2.69*0.3*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5			
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %				
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from			
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100			
New APM	Heavy construction	Percentage active area, p	100.00 %	1			
Interchange Station (AIS)	Source ID:			Assume % works area for heavy construction Water suppression 12 times a day			
,	Q1: AIS1, AIS2, EVA6, EVA7, EVA8 Q2:	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report			
	Q2: Q3: Q4:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	AP42, Section 13.2.3.3			
		Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999			
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100			
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %				
	Q1: AIS1, AIS2, EVA6, EVA7, EVA8	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from			
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100			

Appendix 5.2.7 Det	ails of Dust Emission Sources for Daily RSP Assessment (T	ier 1) at Year 2019		
Baggage Hall -	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
Baggage Handling System (BHS)		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources
	Q1: BHS1, BHS2, EVA9 Q2: Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Final Report
	Q4: BHS1, BHS2, EVA9	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above) Q1: BHS1, BHS2, EVA9	Percentage active area, p	100.00 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
New APM Depot (NAD)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
	Q1: NAD1, NAD2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: NAD1, NAD2 Q3: NAD1, NAD2 Q4: NAD2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	ARIO Cartina 40.000
	ue. Ivnue	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: NAD1, NAD2	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
BHS and APM	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
tunnel	Q1: BAT1, BAT2, NAB3, NAB4	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: BAT1, BAT2, NAB3, NAB4 Q3: BAT1, BAT2, NAB3, NAB4	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	· .
	Q4: BAT1	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: BAT1, BAT2, NAB3, NAB4	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
T2 Expansion Area	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Q1:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	i ilia report
	Q4: AIS1, AIS2, NAB1, NAB2, NAB3, NAB4, BAT2, NAD1, EVA6, EVA7, EVA8	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100

## Third Runway Work Areas Parameter Works Area Sources Remarks Third Runway Land Heavy construction 100.0 % Percentage active area, p Formation Assume % works area for heavy construction For 24hrs activities Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Q2: No. of working days per month, d 30 days Q3: No. of working hours per day, h 24 hour Q4 AP42. Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.807 Mg/hectare/month of activity Construction Operations, 1999 Emission Rate $3.11343E-05~g/m^2/s$ (unmitigated) =2.69\*\*0.3\*1000000/(10000\*30\*h\*60\*60)\*p/100 2.58414E-06 g/m<sup>2</sup>/s (mitigated) For night-time activi Percentage active area, p 100.0 % 91.7 % Mitigation efficiency Q2: 3\_02A-1, 3\_02A-2, 3\_02A-3 No. of working days per month, d 30 days Q3: 3\_02A-1, 3\_02A-2, 3\_02A-3 No. of working hours per day, h 12 (night) hour AP42, Section 13.2.3.3 Emission Factor (0.3) 0.807 Mg/hectare/month of activity USEPA document Estimating Particulate Matter Emissions from Construction Operations 1999 =2.69\*\*0.3\*1000000/(10000\*30\*h\*60\*60)\*p/100 **Emission Rate** 6.22685E-05 g/m<sup>2</sup>/s (unmitigated) 5.16829E-06 g/m²/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42. Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.255 Mg/hectare/year Construction Operations, 1999 Emission Rate 8.086E-07 g/m<sup>2</sup>/s =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 Based on scheme design of definition for sand fill materials consisting of coarse materials with size not exceeding 37.5mm and Third Runway Source ID: Percentage active area, p 20.0 % Wind Erosion (only) fines content not exceeding 20% Q1: 2\_09-1, 3\_02A-1, 3\_02A-2, 3\_02A-3, 3\_02B AP42, Table 11.9-4 Emission Factor (0.3) 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 Q2: 2\_09-1, 3\_02B 1.6172E-07 g/m<sup>2</sup>/s =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 Emission Rate Q3: 2\_09-1, 3\_02B Q4: 3\_02A-1, 3\_02B Third Runway Other 100.0 % Heavy construction Percentage active area, p Assume % works area for heavy construction Source ID: Construction Water suppression 12 times a day Works/Facilities on Q1: 1\_09-1, 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08, 2\_09-2 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency newly formed land Q2: 1 09-1, 2 01, 2 02A, 2 02B-1, 2 02B-2, 2 03A, 2 03B, 2 05A, 2 05B-1, 2\_05B-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08, 2\_09-2 No. of working days per month, d 30 days Q3: 1\_09-1, 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08, 2\_09-2 No. of working hours per day, h 24 hour Q4: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07Ā-1, 2\_07A-2, 2\_07B, 2\_09-1, 3\_02A-2, 3\_02A-3 AP42, Section 13.2.3.3 Emission Factor (0.3) 0.807 Mg/hectare/month of activity USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 Emission Rate 3.11343E-05 g/m<sup>2</sup>/s (unmitigated) 2.58414E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion 100.0 % Percentage active area, p AP42, Table 11.9-4 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) Construction Operations, 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 Emission Rate 8.086E-07 g/m<sup>2</sup>/s Midfield development Heavy construction Percentage active area, p 100.0 % Assume % works area for heavy construction Source ID (MD) Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust 91.7 % Mitigation efficiency Sources Final Report Q1: MD Q2: MD No. of working days per month, d 30 days Q3: MD No. of working hours per day, h 24 hour Q4: MD AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.807 Mg/hectare/month of activity Construction Operations, 1999 3.11343E-05 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 Emission Rate 2.58414E-06 g/m<sup>2</sup>/s (mitigated) 100.0 % Percentage active area, p Source ID: (as above) AP42, Table 11.9-4 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) Construction Operations, 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** 8.086E-07 g/m<sup>2</sup>/s Heavy construction Source ID: 100.0 % Western Support Percentage active area, p Assume % works area for heavy construction Area Emergency Water suppression 12 times a day Access Road Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust (flyover) Q1: WSA1, WSA2, WSA3, WSA4 Sources Final Report Q2: WSA1, WSA2, WSA3, WSA4 No. of working days per month, d 30 days No. of working hours per day, h Q4: WSA1, WSA2, WSA3, WSA4 AP42, Section 13.2.3.3 Emission Factor (0.3) 0.807 Mg/hectare/month of activity USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is Emission Rate 3.89178E-05 g/m<sup>2</sup>/s (unmitigated) approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works) '=2.69\*0.3\*1000000/(10000\*30\*h\*60\*60)\*p/100 \* (5/30) \* 7.5 3.23018E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 0.255 Mg/hectare/year Emission Factor (0.3) =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 Emission Rate 8.086E-07 g/m<sup>2</sup>/s

Appendix 5.2.7 Details of Dust Emission Sources for Daily RSP Assessment (Tier 1) at Year 2020

Western Support	Heavy construction	Percentage active area, p	100.0 %	A
Western Support Area Emergency Access Road (at grade)	Source ID:	Percentage active area, p  Mitigation efficiency	91.7 %	Assume % works area for heavy construction  Water suppression 12 times a day  Equation (3-2) in the USEPA's Control of Open Fugitive Dust
at grade)	Q1: WSA5 Q2: WSA5	No. of working days per month, d	30 days	Sources Final Report
	Q3: WSA5 Q4: WSA5	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3
		Emission Factor (0.3)	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	3.73611E-04 g/m <sup>2</sup> /s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m. =2.69*0.3*1000000/(10000*d*h*60*60)*p/100 * 12
			3.10097E-05 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AD40 T-11, 44.0.4
		Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
ew APM Iterchange Station	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
AIS)		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: AIS1, AIS2, EVA6, EVA7, EVA8 Q2: AIS1, AIS2, EVA6, EVA7, EVA8	No. of working days per month, d	30 days	Sources Final Report
	Q3: Q4:	No. of working hours per day, h	24 hour	AP42, Section 13.2.3.3
		Emission Factor (0.3) Emission Rate	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above) Q1: AIS1, AIS2, EVA6, EVA7, EVA8	Percentage active area, p	100.00 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Baggage Hall - Baggage Handling	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
System (BHS)		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: BHS1, BHS2, EVA9 Q2: BHS1, BHS2, EVA9	No. of working days per month, d	30 days	Sources Final Report
	Q3: Q4:	No. of working hours per day, h  Emission Factor (0.3)	24 hour  0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	3.11343E-05 g/m²/s (unmitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
		Emission rate	2.58414E-06 g/m²/s (mitigated)	-2.55 6.6 1000000/(10000 d 11 00 00) p/100
	Wind Erosion Source ID: (as above) Q1: BHS1, BHS2, EVA9	Percentage active area, p	100.00 %	AP42, Table 11.9-4
		Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
		Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
lew APM Depot NAD)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
	Q1: NAD2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: NAD1, NAD2 Q3: NAD1, NAD2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources i mai neport
	Q4:	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion	Percentage active area, p	100.00 %	
	Source ID: (as above) Q1: NAD2	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from
		Emission Rate	8.086E-07 g/m²/s	Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100
		Linission ride	0.000E 07 g/m/3	-0.55 0.5 1000000/(10000 005 24 00 00) p/100
HS and APM unnel	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
	Q1: BAT1	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: BAT1, BAT2, NAB3, NAB4	No. of working days per month, d	30 days 24 hour	- 33.333
	Q3:			
		No. of working hours per day, h		AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
	Q3:		0.807 Mg/hectare/month of activity  3.11343E-05 g/m²/s (unmitigated)  2.58414E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Q3:	No. of working hours per day, h Emission Factor (0.3)	0.807 Mg/hectare/month of activity 3.11343E-05 g/m²/s (unmitigated)	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
	Q3: Q4: Wind Erosion	No. of working hours per day, h Emission Factor (0.3) Emission Rate	0.807 Mg/hectare/month of activity 3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
	Q3: Q4: Wind Erosion Source ID: (as above)	No. of working hours per day, h  Emission Factor (0.3)  Emission Rate  Percentage active area, p	0.807 Mg/hectare/month of activity 3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated) 100.00 %	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
2 Expansion Area	Q3: Q4:  Wind Erosion Source ID: (as above) Q1: BAT1  Heavy construction	No. of working hours per day, h Emission Factor (0.3) Emission Rate  Percentage active area, p Emission Factor (0.3)	0.807 Mg/hectare/month of activity 3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)  100.00 %  0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
2 Expansion Area	Q3: Q4: Wind Erosion Source ID: (as above) Q1: BAT1	No. of working hours per day, h Emission Factor (0.3) Emission Rate  Percentage active area, p Emission Factor (0.3) Emission Rate  Percentage active area, p	0.807 Mg/hectare/month of activity 3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)  100.00 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day
2 Expansion Area	Q3: Q4:  Wind Erosion Source ID: (as above) Q1: BAT1  Heavy construction	No. of working hours per day, h Emission Factor (0.3) Emission Rate  Percentage active area, p Emission Factor (0.3) Emission Rate  Percentage active area, p Mitigation efficiency	0.807 Mg/hectare/month of activity 3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)  100.00 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s  100.0 %  91.7 %	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction
2 Expansion Area	Q3: Q4:  Wind Erosion Source ID: (as above) Q1: BAT1  Heavy construction Source ID:  Q1: NAB1, NAB2, NAB3, NAB4, BAT2, NAD1	No. of working hours per day, h Emission Factor (0.3) Emission Rate  Percentage active area, p Emission Factor (0.3) Emission Rate  Percentage active area, p	0.807 Mg/hectare/month of activity 3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)  100.00 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
2 Expansion Area	Q3: Q4:  Wind Erosion Source ID: (as above) Q1: BAT1  Heavy construction Source ID: Q1: NAB1, NAB2, NAB3, NAB4, BAT2, NAD1 Q2: NAB1, NAB2 Q3:	No. of working hours per day, h Emission Factor (0.3) Emission Rate  Percentage active area, p Emission Factor (0.3) Emission Rate  Percentage active area, p  Mitigation efficiency No. of working days per month, d	0.807 Mg/hectare/month of activity  3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)  100.00 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s  100.0 %  91.7 %  30 days	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
2 Expansion Area	Q3: Q4:  Wind Erosion Source ID: (as above) Q1: BAT1  Heavy construction Source ID: Q1: NAB1, NAB2, NAB3, NAB4, BAT2, NAD1 Q2: NAB1, NAB2 Q3:	No. of working hours per day, h Emission Factor (0.3) Emission Rate  Percentage active area, p Emission Factor (0.3) Emission Rate  Percentage active area, p  Mitigation efficiency No. of working days per month, d No. of working hours per day, h	0.807 Mg/hectare/month of activity 3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)  100.00 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s  100.0 %  91.7 %  30 days 24 hour	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from
2 Expansion Area	Q3: Q4:  Wind Erosion Source ID: (as above) Q1: BAT1  Heavy construction Source ID: Q1: NAB1, NAB2, NAB3, NAB4, BAT2, NAD1 Q2: NAB1, NAB2 Q3:	No. of working hours per day, h Emission Factor (0.3) Emission Rate  Percentage active area, p Emission Factor (0.3) Emission Rate  Percentage active area, p  Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.3)	0.807 Mg/hectare/month of activity  3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)  100.00 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.807 Mg/hectare/month of activity  3.11343E-05 g/m²/s (unmitigated)	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100
<sup>*</sup> 2 Expansion Area	Q3: Q4:  Wind Erosion Source ID: (as above) Q1: BAT1  Heavy construction Source ID:  Q1: NAB1, NAB2, NAB3, NAB4, BAT2, NAD1 Q2: NAB1, NAB2 Q3: Q4:	No. of working hours per day, h Emission Factor (0.3) Emission Rate  Percentage active area, p Emission Factor (0.3) Emission Rate  Percentage active area, p  Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor (0.3) Emission Factor (0.3)	0.807 Mg/hectare/month of activity  3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)  100.00 %  0.255 Mg/hectare/year  8.086E-07 g/m²/s  100.0 %  91.7 %  30 days 24 hour  0.807 Mg/hectare/month of activity  3.11343E-05 g/m²/s (unmitigated) 2.58414E-06 g/m²/s (mitigated)	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69*0.3*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =0.85*0.3*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999

## Third Runway Work Areas Parameter Works Area Sources Remarks Heavy construction Third Runway Land 100.0 % Percentage active area, p Formation Assume % works area for heavy construction For 24hrs activities Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Q2: No. of working days per month, d 30 days Q3: No. of working hours per day, h 24 hour Q4: 3\_01B-1, 3\_01B-2 AP42. Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.807 Mg/hectare/month of activity Construction Operations, 1999 Emission Rate $3.11343E-05~g/m^2/s$ (unmitigated) =2.69\*\*0.3\*1000000/(10000\*30\*h\*60\*60)\*p/100 2.58414E-06 g/m<sup>2</sup>/s (mitigated) Wind Eros 100.0 % Percentage active area, p Source ID: (as above) AP42, Table 11.9-4 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) Construction Operations, 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 Emission Rate 8.086E-07 g/m<sup>2</sup>/s Wind Erosion Source ID: Based on scheme design of definition for sand fill materials Third Runway Percentage active area, p 20.0 % consisting of coarse materials with size not exceeding 37.5mm and Wind Erosion (only) fines content not exceeding 20% Q1: 3\_02A-1, 3\_02B AP42, Table 11.9-4 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) Construction Operations, 1999 Q2:3 02A-1,3 02B Emission Rate 1.6172E-07 g/m<sup>2</sup>/s =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 Q3:3 02A-1,3 02B Q4: 3\_02A-1, 3\_02B Heavy construction Third Runway Other Percentage active area, p 100.0 % Assume % works area for heavy construction Source ID: Construction Water suppression 12 times a day Works/Facilities on 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency Q1: 2 01, 2 02A, 2 02B-1, 2 02B-2, 2 03A, 2 03B, 2 05A, 2 05B-1, 2 05B-2, newly formed land 2 07A-1, 2 07A-2, 2 07B, 2 09-1, 3 02A-2, 3 02A-3 Q2: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, Sources Final Report 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-1, 3\_01A-2, 3\_01A-3, 4\_01-1, 4\_01-2, 4\_01-3, No. of working days per month, d 30 days No. of working hours per day, h 24 hour Q4: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-1, 3\_01A-2, 3\_01A-3, 4\_01-1, 4\_01-2, 4\_01-3, AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.807 Mg/hectare/month of activity 4\_03-1, 4\_03-2, 4\_05-1 Construction Operations, 1999 =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 Emission Rate 3.11343E-05 g/m<sup>2</sup>/s (unmitigated) 2.58414E-06 g/m²/s (mitigated) Wind Erosion Source ID: (as above) 100.0 % Percentage active area, p AP42, Table 11.9-4 Emission Factor (0.3) 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Construction Operations 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 Emission Rate 8.086E-07 g/m<sup>2</sup>/s Airside tunnels (AT) Heavy construction Percentage active area, p 100.0 % Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust 91.7 % Mitigation efficiency Sources Final Report Q2: AT1, AT3 No. of working days per month, d 30 days Q3: AT1, AT3 No. of working hours per day, h 24 hour Q4: AT1, AT2, AT3 AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from 0.807 Mg/hectare/month of activity Emission Factor (0.3) Construction Operations, 1999 Emission Rate 3.11343E-05 g/m²/s (unmitigated) =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 2.58414E-06 g/m<sup>2</sup>/s (mitigated) 100.0 % Percentage active area, p Source ID: (as above) AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.255 Mg/hectare/year Construction Operations, 1999 **Emission Rate** 8.086E-07 g/m<sup>2</sup>/s =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 Midfield development Heavy construction (MD) Percentage active area, p 100.0 % Assume % works area for heavy construction (MD) Water suppression 12 times a day Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Q1: MD Sources Final Report Q2: MD No. of working days per month, d 30 days Q3: MD No. of working hours per day, h 24 hour Q4: MD AP42, Section 13.2.3.3 Emission Factor (0.3) 0.807 Mg/hectare/month of activity USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 3.11343E-05 g/m<sup>2</sup>/s (unmitigated) 2.58414E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.255 Mg/hectare/year Construction Operations, 1999 Emission Rate 8.086E-07 g/m<sup>2</sup>/s =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 South Cargo 100.00 % Percentage active area, p Assume % works area for heavy construction Roadworks - at grade Source ID: Water suppression 12 times a day Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report No. of working days per month, d 30 days Q3: CA1, CA2 No. of working hours per day, h 24 hour Q4: CA1, CA2 AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.807 Mg/hectare/month of activity Construction Operations, 1999 Assume road width equals 12m, therefore multiply emission rate by **Emission Rate** 0.000373611 g/m<sup>2</sup>/s (unmitigated) 12m. =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 \* 12 3.10097E-05 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.00 % Source ID: (as above) AP42, Table 11.9-4 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) Construction Operations, 1999 Emission Rate 8.086E-07 g/m<sup>2</sup>/s =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100

Appendix 5.2.7 Details of Dust Emission Sources for Daily RSP Assessment (Tier 1) at Year 2021

Source ID:	Percentage active area, p	100.0 %	
			Assume % works area for heavy construction
Q1:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
Q2: Q3: CA3, CA4, CA5, CA6, CA7, CA8 Q4: CA3, CA4, CA5, CA6, CA7, CA8	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	AP42. Section 13.2.3.3
	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
	Emission Rate	3.89178E-05 g/m <sup>2</sup> /s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*0.3*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
		3.23018E-06 g/m²/s (mitigated)	
Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AP42, Table 11.9-4
	Emission Factor (0.3)	0.255 Mg/hectare/year	USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
	Emission Rate	8.086E-07 g/m <sup>2</sup> /s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Q1: Q2:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	No. of working days per month, d	30 days	Sources Final neport
RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working hours per day, h	24 hour	
Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor (0.3)	0.807 Mg/hectare/month of activity	AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
	Emission Rate	3.89178E-05 g/m²/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)
		3.23018E-06 g/m²/s (mitigated)	'=2.69*0.3*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	AD40 Table 11 0 4
	Emission Factor (0.3)	0.255 Mg/hectare/year	AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999
	Emission Rate	8.086E-07 g/m²/s	=0.85*0.3*1000000/(10000*365*24*60*60)*p/100
	Wind Erosion Source ID: (as above)  Heavy construction Source ID: (as above)  Q1: Q2: Q3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Wind Erosion	O4: CA3, CA4, CA5, CA6, CA7, CA8  Emission Factor (0.3)  Emission Rate  Wind Erosion Source ID: (as above)  Percentage active area, p Emission Factor (0.3)  Emission Factor (0.3)  Emission Factor (0.3)  Emission Factor (0.3)  Emission Factor (0.3)  Emission Factor (0.3)  Emission Factor (0.3)  Emission Factor (0.3)  Mitigation efficiency  No. of working days per month, d O3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  O4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  Emission Factor (0.3)  Emission Factor (0.3)  Emission Factor (0.3)	Emission Factor (0.3)   0.807 Mg/hectare/month of activity

## Appendix 5.2.7 Details of Dust Emission Sources for Daily RSP Assessment (Tier 1) at Year 2022 Third Runway Work Areas Parameter Works Area Sources Remarks Third Runway Land Heavy construction 100.0 % Percentage active area, p Formation Assume % works area for heavy construction For 24hrs activities Q1:3\_02B Water suppression 12 times a day 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency Sources Final Report Q2: No. of working days per month, d 30 days Q3: No. of working hours per day, h 24 hour Q4: 3\_02B AP42. Section 13.2.3.3 0.807 Mg/hectare/month of activity USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) Construction Operations, 1999 Emission Rate $3.11343E-05\ g/m^2/s\ (unmitigated)$ =2.69\*\*0.3\*1000000/(10000\*30\*h\*60\*60)\*p/100 2.58414E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosi 100.0 % Percentage active area, p Source ID: (as above) AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.255 Mg/hectare/year Construction Operations, 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 8.086E-07 g/m<sup>2</sup>/s **Emission Rate** Wind Erosion Source ID: Based on scheme design of definition for sand fill materials Third Runway Percentage active area, p 20.0 % consisting of coarse materials with size not exceeding 37.5mm and Wind Erosion (only) fines content not exceeding 20% Q1:3\_02A-1 AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.255 Mg/hectare/year Construction Operations, 1999 Q2:3 02A-1 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** 1.6172E-07 g/m<sup>2</sup>/s Q3: 3\_02B Third Runway Other Heavy construction Percentage active area, p 100.0 % Assume % works area for heavy construction Construction Source ID: Water suppression 12 times a day Q1: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-1, 3\_01A-2, 3\_01A-3, 4\_01-1, 4\_01-2, 4\_01-3, Works/Facilities on Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust newly formed land 4\_03-1, 4\_03-2, 4\_05-1 Q2: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-3, 3\_02B, 4\_03-1, 4\_03-2, 4\_05-1 Sources Final Report No. of working days per month, d 30 days Q3; 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07Ā-1, 2\_07A-2, 2\_07B, 3\_02A-1, 4\_05-1 Q4; 2\_01, 2\_02A, 2\_02B-1, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 4\_05-1 No. of working hours per day, h 24 hour AP42, Section 13.2.3.3 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.807 Mg/hectare/month of activity Construction Operations, 1999 Emission Rate 3.11343E-05 g/m<sup>2</sup>/s (unmitigated) =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 2.58414E-06 g/m²/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) AP42, Table 11.9-4 USEPA document Estimating Particulate Matter Emissions from Emission Factor (0.3) 0.255 Mg/hectare/year Construction Operations, 1999 =0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** $8.086E-07\ g/m^2/s$ Airside tunnels (AT) Heavy construction Source ID: Percentage active area, p 100.0 % Assume % works area for heavy construction Water suppression 12 times a day Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Q1: AT1, AT2, AT3 Q2: AT2, AT3 Sources Final Report No. of working days per month, d 30 days Q3: AT3 No. of working hours per day, h 24 hour Q4: AT3 AP42, Section 13.2.3.3 Emission Factor (0.3) 0.807 Mg/hectare/month of activity USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999 $\begin{array}{l} 3.11343\text{E-05 g/m}^2\text{/s (unmitigated)} \\ 2.58414\text{E-06 g/m}^2\text{/s (mitigated)} \end{array}$ =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** Wind Erosion Source ID: (as above) 100.0 % Percentage active area, p AP42, Table 11.9-4 Emission Factor (0.3) 0.255 Mg/hectare/year USEPA document Estimating Particulate Matter Emissions from Construction Operations, 1999

8.086E-07 g/m<sup>2</sup>/s

Emission Rate

=0.85\*0.3\*1000000/(10000\*365\*24\*60\*60)\*p/100

Barging Point	Sources Unloading of spoils to barge	Parameter  Particle size multiplier, k	0.35	Emission Rate	Remarks For RSP, AP-42, section 13.2.4, 11/06 ed.
barging Point	Source ID: TBP1-6	Moisture content, M	0.35		Assume as the same as Express Rail Link and Extracted from SP
		Mean wind speed, U		m/s	License of XRL (Appendix C). HKOAMO 2012 annual average wind speed
		Emission Factor, E	4.40E-04	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
		No. of operation hour  Maximum handling capcity for each barging point		hr Mg/day	26 days per month From engineer
			1.72E+00	kg/hr (Asphalt)	Assume 12 working hours (7:00 - 19:00) per day
		Emission height Mitigation efficiency		5 m ) %	Installation of flexible curtain and shelter with water spray at disch
		Emission Rate	4.78E-02	g/s (mitigated)	point
Concrete Batching Plant	Paved haul road outside concrete batching plant -	Particle size multiplier, k Road surface silt loading, sL		2 g/VKT 2 g/m2	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
g · ·	For <b>Laden</b> Vehicle Source ID:	Average truck weight, W		B tons	Full loading of Asphalt Tipper, engineering estimate
	WAB-HR1 to WAB-HR13	Furiarian hainta	0.5		A second discharge in the second discount in
	WAB-P4-HR1 to WAB-P4-HR10	Emission height	0.5	5 (1)	Assumed that vehicle will lift dust from the road surface and dispersion 0.5m height
	WC-HR1 to WC-HR13 WC-P4-HR1 to WC-P4-HR10	RSP emission factor, E	180	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.) Asphalt Tipper
	EAB-HR1 to EAB-HR4				
	EAC-HR1 to EAC-HR4	No. of truck trips per day		s trips/hr ) trips/hr	From engineer, Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper Lorries in Concrete Batching Plant
	EC-HR1 to EC-HR14 EC-P2-HR1 to EC-P2-HR7	No. of operation hour % of dust suppression		hr hr	Assume as the same as Express Rail Link and Extracted from SF
	2-1111 10 20-1 2-11117	76 Of dust suppression	97.0	7 / 6	License of XRL (Appendix C).
		Emission Rate		g/m/s (mitigated)	Asphalt Tipper Lorries in Asphalt Plant
			1.75E-04	g/m/s (mitigated)	Asphalt Tipper Lorries in Concrete Batching Plant
oncrete	Paved haul road outside concrete batching plant -	Particle size multiplier, k	0.62	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
atching Plant	For <b>Unladen</b> Vehicle	Road surface silt loading, sL Average truck weight, W	12	g/m2 tons	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Empty loading of Asphalt Tipper, engineering estimate
	Source ID: WAB-HR1 to WAB-HR13	Emission height		m m	Assumed that vehicle will lift dust from the road surface and dispe
	WAB-P4-HR1 to WAB-P4-HR10		0.8		from 0.5m height
	WC-HR1 to WC-HR13	RSP emission factor, E	51	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.) Asphalt Tipper
	WC-P4-HR1 to WC-P4-HR10				
	EAB-HR1 to EAB-HR4	No. of truck trips per day		trips/hr trips/hr	From engineer, Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper Lorries in Concrete Batching Plan
	EAC-HR1 to EAC-HR4 EC-HR1 to EC-HR14	No. of operation hour % of dust suppression		hr	Assume as the same as Express Rail Link and Extracted from SF
	EC-HR1 to EC-HR14 EC-P2-HR1 to EC-P2-HR7	νο οι ααστ σαρφισσοποιτ	97.5	7.70	License of XRL (Appendix C).
		Emission Rate		g/m/s (mitigated) g/m/s (mitigated)	Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Concrete Batching Plant
oncrete atching Plant	Unloading aggregate Source ID: (EP9)	Consumption Rate (Western + Eastern)	300	Mg/h (Asphalt) Mg/h (Concrete)	From engineer: Asphalt: 300 ton/hr = 150 ton/hr x 2 plants From engineer: Concrete: 2000 ton/hr = 500 ton/hr x4 plants
Unloading of raw	, ,	Consumption Rate (Western only)	150	Mg/h (Asphalt)	From engineer: Asphalt: 150 ton/hr
naterials)	WAB-EP9, WAB-P4-EP9, WC-EP9, WC-P4-EP9	Particle size multiplier, k	0.35		From engineer: Concrete: 500 ton/hr For RSP, AP-42, section 13.2.4, 11/06 ed.
	EAB-EP9,	Moisture content, M	2	2 %	Assume as the same as Express Rail Link and Extracted from SF License of XRL (Appendix C).
	EC-EP9, EC-2-EP9, EC-3-EP9, EC-P2-EP9	Mean wind speed, U Emission Factor, E	4.9 1.59E-03	m/s kg/Mg	HKOAMO 2012 annual average wind speed E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4)
		,		kg/hr (Asphalt - Westen + Eastern)	(AP-42, section 13.2.4, 11/06 ed.)
			3.17	kg/hr (Concrete - Western +Eastern) kg/hr (Asphalt - Western only)	
			0.79	kg/hr (Concrete - Western only)	
		Mitigation efficiency		9	Assume as the same as Express Rail Link and Extracted from SP License of XRL (Appendix C).
		No. of operation hour Emission height	4	lhr Im	
		Emission Rate (Western + Eastern) - Period 2 to 4	6.61E-04	g/s (mitigated) (Asphalt)	For each plant (150 ton/hr) Period 2 to 4: 150 ton/hr x 2 plants
			2.20E-03	g/s (mitigated) (Concrete)	For each plant (500ton/hr)
			2.202 00	gro (magatou) (conorcie)	Period 2: 500ton/hr x 2 plants
			0.045.0		Period 3&4: 500ton/hr x 4 plants
		Emission Rate (Western only) - Period 1	2.20E-03	g/s (mitigated) (Asphalt) g/s (mitigated) (Concrete)	For 150 ton/hr only For 500 ton/hr only
Concrete Satching Plant	Small Cementitious Material Silos Source ID: (EP5-EP8)	Density	2.24	Mg/m3	For Concrete & Asphalt density Refer to this web
Cement / PFA Silos)	WAB-EP5 to EP8, WAB-P4-EP5 to EP8,				"http://www.aqua-calc.com/page/density-table/substance/concret and-blank-asphalt"
,	WC-EP5 to EP8, WC-P4-EP5 to EP8	RSP emission factor (0.37)	18.5	mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Pratica Means for Cement Works (Concrete Batching Plant), EPD
	EAB-EP5 to EP8,	Dust ovhought flow sets for each minus (T. ).		tone/br (Acades)	, , , , , , , , , , , , , , , , , , ,
	EC-EP5 to EP8, EC-2-EP5 to EP8, EC-3-EP5 to EP8, EC-P2-EP5 to EP8	Dust exhaust flow rate for each mixer (Total 4 sources)	1200	tons/hr (Asphalt) tons/hr (Concrete)	Assume volume displacement by loading material
			535.7	m3/hr (Asphalt) m3/hr (Concrete)	For concrete & Asphalt density: 2.24 tons/m3
		No. of operation hour No. of small cement silos	12	hr L	Assume as the same as Express Rail Link and Extracted from SF
		Emission height	21 or 22	l m	License of XRL (Appendix C). EP5: 21m, EP6-EP8: 22m
			2.0122		Assume as the same as Express Rail Link and Extracted from SF License of XRL (Appendix C).
		Emission Rate (Total 4 sources)		g/s (mitigated) (Asphalt)	Election of ATE (Appendix O).
		Emission Rate (Each source)	3.44E-05	g/s (mitigated) (Concrete) g/s (mitigated) (Asphalt)	
	PFA weight Hopper	Emission Factor (without mitigation)		g/s (mitigated) (Concrete)	Weight hopper loading (uncontrolled), AP-42, section 11.12-4, Ta
	Source ID: (EP3-EP4)	Density		Mg/m3	11.12-1, 6/06 ed. For Concrete & Asphalt density
	WAB-EP3 to EP4, WAB-P4-EP3 to EP4, WC-EP3 to EP4, WC-P4-EP3 to EP4				Refer to this web "http://www.aqua-calc.com/page/density-table/substance/concret
	EAB-EP3 to EP4.	PSP emission feater	F 00F 65	lka/m²	and-blank-asphalt"
	EC-EP3 to EP4, EC-2-EP3 to EP4, EC-3-EP3 to EP4,	RSP emission factor Production rate (Total 2 sources)		m3/hr (Asphalt)	From engineer
	EC-P2-EP3 to EP4	Mitigation efficiency	99	m3/hr (Concrete) %	Total enclosure and fabric filter
		Emission height Emission Rate (Total 2 sources)		m g/s (mitigated) (Asphalt)	
oncrete	Mixer Source ID: (EP1-EP2)	Density	6.94E-03	g/s (mitigated) (Concrete) Mg/m3	For Concrete & Asphalt density
atching Plant	,	Soliety	2.22	, mg/mo	Refer to this web
Mixing Tower)	WAB-EP1 to EP2, WAB-P4-EP1 to EP2, WC-EP1 to EP2, WC-P4-EP1 to EP2				"http://www.aqua-calc.com/page/density-table/substance/concret and-blank-asphalt"
	EAB-EP1 to EP2,	RSP emission factor (0.37)	18.5	i mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Pratica Means for Cement Works (Concrete Batching Plant), EPD
	EC-EP1 to EP2, EC-2-EP1 to EP2, EC-3-EP1 to EP2, EC-P2-EP1 to EP2	Dust exhaust flow rate for each mixer (Total 2 sources)	er	tons/hr (Asphalt)	Assume volume displacement by loading material
		(13/4/ 2 304/003)	1200	tons/hr (Concrete) B m3/hr (Asphalt)	For concrete & Asphalt density: 2.24 tons/m3
		No. of countries !	535.7	m3/hr (Concrete)	ι οι concrete α περιτατί density. 2.24 (OTIS/ITIS
		No. of operation hour No. of small cement silos	2	l hr	
		Emission height	I 13	3 m	
		Emission Rate (Total 2 sources)		g/s (mitigated) (Asphalt)	

Stockpile within	Material handling and storage piles	Percentage open stockpile area, p	20	%	80% stockpiling area is covered by impervious sheets and all dusty
sphalt batching ant in western	Source ID: WABA1, WABA1-P4				material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.
cation	WABA2. WABA2-P4	Particle size multiplier, k Moisture content, M	0.35	0/	k (particle size < 30µm) Assume worst case scenario
	WADAZ, WADAZ-F4	Average wind speed, U	4.9	m/s	HKOAMO 2012 annual average wind speed
		Emission Factor, E	0.000439721		E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4]
		Monthly output	335	m3/month (Asphalt)	From engineer
			5,250	m3/month (Aggregate)	From engineer
		Maximum hourly output, op		m3/hr (Asphalt)	26 days per month, 12 working hours per day
			2.7	m3/hr (Aggregate) Mg/hr (Asphalt)	Assume capacity of dump truck is 6m³ and 15 tons
		Area of the Asphalt stockpile, A	234	Mg/hr (Aggregate) m <sup>2</sup> (Asphalt)	
		Area of the Aggregate stockpile, A Emission Rate (Asphalt stockpile)		m <sup>2</sup> (Aggregate) g/m <sup>2</sup> /s (unmitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60)
			2.80234E-07	g/m²/s (mitigated)	Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
		Emission Rate (Aggregate stockpile)		g/m²/s (unmitigated) g/m²/s (mitigated)	
	Wind erosion Source ID: As above	Percentage open stockpile area, p		% (unmitigated) % (mitigated)	80% stockpiling area is covered by impervious sheets
	554.55 12.716 42515	Emission Factor (0.3)	0.255	Mg/hectare/year	AP42, Section 11.9.4
		Emission Rate		g/m²/s (unmitigated) g/m²/s (mitigated)	=0.3*0.85*1000000/(10000*365*24*60*60)*p/100
illed Material,	Material handling and storage piles	Percentage open stockpile area, p	20	%	80% stockpiling area is covered by impervious sheets and all dusty
rushed ggregate and	Source ID: WAR1, WAR1-P4				material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.
ub-base		Particle size multiplier, k	0.35		k (particle size < 30μm)
tockpile in estern location	WCAS1, WCAS1-P4	Moisture content, M Average wind speed, U	4.9	m/s	Assume worst case scenario HKOAMO 2012 annual average wind speed
	WSS1, WSS1-P4	Emission Factor, E	0.000439721	ka/Ma	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4]
		Monthly output	422	m3/month (Milled Material)	From engineer
			16,275	m3/month (Crushed Aggregate) m3/month (Sub-base stockpile)	From engineer From engineer
		Maximum hourly output, op	1.4 48.7	m3/hr (Milled Material) m3/hr (Crushed Aggregate)	26 days per month, 12 working hours per day
			52.2	m3/hr (Sub-base stockpile) Mg/hr (Milled Material)	Assume as a site of discontinuity is 0003 and 45 to 000
			121.6	Mg/hr (Crushed Aggregate)	Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
		Area of the Milled Material stockpile, A		Mg/hr (Sub-base stockpile) m² (Milled Material)	
		Area of the Crushed Aggregate stockpile, A	5,822	m <sup>2</sup> (Crushed Aggregate)	
		Area of the Sub-base stockpile, A Emission Rate (Milled Material stockpile)	1.48173E-06	m <sup>2</sup> (Sub-base stockpile) g/m <sup>2</sup> /s (unmitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60)
		Emission Rate (Crushed Aggregate stockpile)	2.96346E-07	g/m²/s (mitigated) g/m²/s (unmitigated)	Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
			5.10461E-07	g/m²/s (mitigated)	
		Emission Rate (Sub-base stockpile)		g/m²/s (unmitigated) g/m²/s (mitigated)	
	Wind erosion Source ID: As above	Percentage open stockpile area, p		% (unmitigated) % (mitigated)	80% stockpiling area is covered by impervious sheets
	000.00 12.710 02010	Emission Factor (0.3)	0.255	Mg/hectare/year	AP42, Section 11.9.4
		Emission Rate		g/m²/s (unmitigated) g/m²/s (mitigated)	=0.3*0.85*1000000/(10000*365*24*60*60)*p/100
tockpile within	Material handling and storage piles	Percentage open stockpile area, p	20	%	80% stockpiling area is covered by impervious sheets and all dusty
sphalt batching lant in eastern	Source ID: EABA1, EABA2				material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.
cation		Particle size multiplier, k	0.35		k (particle size < 30μm)
		Moisture content, M Average wind speed, U		% m/s	Assume worst case scenario HKOAMO 2012 annual average wind speed
		Emission Factor, E	0.000439721	ka/Ma	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4]
		Monthly output		m3/month (Asphalt)	From engineer
			1,050	m3/month (Aggregate)	From engineer
		Maximum hourly output, op	0.2	m3/hr (Asphalt)	26 days per month, 12 working hours per day
			3.4	m3/hr (Aggregate) Mg/hr (Asphalt)	A
			8.4	Mg/hr (Aggregate)	Assume capacity of dump truck is 6m³ and 15 tons
		Area of the Asphalt stockpile, A  Area of the Aggregate stockpile, A		m <sup>2</sup> (Asphalt) m <sup>2</sup> (Aggregate)	
		Emission Rate (Asphalt stockpile)	4.26685E-07	g/m²/s (unmitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60)
		Emission Rate (Aggregate stockpile)		g/m²/s (mitigated) g/m²/s (unmitigated)	Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Wind erosion	Percentage open stockpile area, p		g/m²/s (mitigated) % (unmitigated)	
	Source ID: As above		20	% (mitigated)	80% stockpilling area is covered by impervious sheets
		Emission Factor (0.3) Emission Rate	8.086E-07	Mg/hectare/year g/m²/s (unmitigated)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100
			1.6172E-07	g/m²/s (mitigated)	
tockpile within irfield batching	Material handling and storage piles Source ID:	Percentage open stockpile area, p	20	%	80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading
lant in eastern	EACC1, EACA1				or transfer operation so as to keep the dusty material wet.
cation		Particle size multiplier, k Moisture content, M	0.35 5	%	k (particle size < 30µm) Assume worst case scenario
		Average wind speed, U	4.9	m/s	HKOAMO 2012 annual average wind speed
		Emission Factor, E	0.000439721		E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4]
		Monthly output	2,540	m3/month (Cement)	From engineer
			13,824	m3/month (Aggregate)	From engineer
		Maximum hourly output, op		m3/hr (Cement)	26 days per month, 12 working hours per day
			20.3	m3/hr (Aggregate) Mg/hr (Cement)	Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
		Area of the Cement stockpile, A		Mg/hr (Aggregate) m <sup>2</sup> (Cement)	
	ì	Area of the Aggregate stockpile, A	5,329	m <sup>2</sup> (Aggregate)	Hamiltoned Facinity Date States (1997)
			」 2 13755F-06	g/m²/s (unmitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
		Emission Rate (Cement stockpile)	4.27511E-07		
		Emission Rate (Cement stockpile)  Emission Rate (Aggregate stockpile)	4.27511E-07 2.53887E-06	g/m²/s (unmitigated)	
	Wind erosion		4.27511E-07 2.53887E-06 5.07773E-07 100	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated)	90% stockeller avania saveral turina
	Wind erosion Source ID: As above	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (mitigated) % (mitigated) Mg/hectare/year	80% stockpiling area is covered by impervious sheets AP42, Section 11.9.4
		Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (mitigated)	
tocknile within	Source ID: As above	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07 1.6172E-07	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (initigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (unmitigated)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100
oncrete	Source ID: As above  Material handling and storage piles Source ID:	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07 1.6172E-07	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (mitigated) Mg/hectare/year g/m²/s (unmitigated)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading
oncrete atching Plant in	Source ID: As above  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07 1.6172E-07	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (initigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated) %	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100 80% stockpiling area is covered by impervious sheets and all dusty
oncrete atching Plant in	Source ID: As above  Material handling and storage piles Source ID:	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k  Moisture content, M	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07 1.6172E-07	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (mitigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated) %	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario
oncrete atching Plant in	Source ID: As above  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k  Moisture content, M  Average wind speed, U	4.27511E-07 2.53887E-06 5.07773E-07 100 0.255 8.086E-07 1.6172E-07 20 0.35 5 4.9	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (initigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated) % %	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpilling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed
oncrete atching Plant in	Source ID: As above  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k  Moisture content, M	4.27511E-07 2.53887E-06 5.07773E-07 100 0.255 8.086E-07 1.6172E-07 20 0.35 5 4.9	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (initigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated) % %	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.  k (particle size < 30µm) Assume worst case scenario
oncrete atching Plant in	Source ID: As above  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k  Moisture content, M  Average wind speed, U  Emission Factor, E	4.27511E-07 2.53887E-06 5.07773E-07 100 0.255 8.086E-07 1.6172E-07 20 0.35 5 4.9 0.000439721 43,270	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (unitigated) % (mitigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated) % % kg/Mg m3/month (Cement)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed  E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
oncrete atching Plant in	Source ID: As above  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k  Moisture content, M  Average wind speed, U  Emission Factor, E	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07 1.6172E-07 20 0.355 4.9 0.000439721 43,270 173,079 138.7	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (unitigated) % (mitigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated)  %  %  m/s kg/Mg m3/month (Cement)  m3/month (Aggregate) m3/hr (Cement)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed  E=k*0.0016*[(U/2.2)*1.3/(M/2)*1.4]
stockpile within Concrete Jatching Plant in astern location	Source ID: As above  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k  Moisture content, M  Average wind speed, U  Emission Factor, E  Monthly output	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07 1.6172E-07 20  0.35 5 4.9  0.000439721 43,270 173,079 138.7 554.7	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (unitigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated)  %  % kg/Mg m3/month (Cement) m3/month (Aggregate)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed  E=k*0.0016*[(U/2.2)*1.3/(M/2)*1.4] From engineer From engineer 26 days per month, 12 working hours per day
oncrete atching Plant in	Source ID: As above  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k  Moisture content, M  Average wind speed, U  Emission Factor, E  Monthly output  Maximum hourly output, op	4.27511E-07 2.53887ZE-06 5.07773E-07 100 0.255 8.086E-07 1.6172E-07 20 0.35 5 4.9 0.000439721 43,270 173,079 138.7 554.7 346.7	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (unitigated) % (mitigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated)  %  %  kg/Mg m3/month (Cement) m3/hr (Aggregate) m3/hr (Aggregate) Mg/hr (Cement) Mg/hr (Aggregate)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpilling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed  E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
oncrete atching Plant in	Source ID: As above  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k  Moisture content, M  Average wind speed, U  Emission Factor, E  Monthly output  Maximum hourly output, op  Area of the Cement stockpile, A  Area of the Aggregate stockpile, A	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07 1.6172E-07 20  0.35 5 4.9 0.000439721 43,270 173,079 138.7 554.7 346.7 1386.8 3,3,444 14,520	g/m²/s (unmitigated) g/m²/s (mitigated) 9% (unmitigated) % (unitigated) % (mitigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated) 9%  % m/s kg/Mg m3/month (Cement) m3/mr (Cement) m3/hr (Aggregate) Mg/hr (Aggregate) Mg/hr (Aggregate) Mg/hr (Aggregate) m2 (Cement) m2 (Aggregate) m2 (Cement) m2 (Aggregate)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpilling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed  E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer From engineer 26 days per month, 12 working hours per day  Assume capacity of dump truck is 6m³ and 15 tons
oncrete atching Plant in	Source ID: As above  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k  Moisture content, M  Average wind speed, U  Emission Factor, E  Monthly output  Maximum hourly output, op  Area of the Cement stockpile, A	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07 1.6172E-07 20  0.35 5 4.9  0.000439721 43,270 173,079 138.7 554.7 346.7 1386.8 3,944 14,520 1.0738E-05	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (unmitigated) % (mitigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated)  %  % m/s kg/Mg m3/month (Cement) m3/mr (Cement) m3/hr (Aggregate) Mg/hr (Cement) Mg/hr (Cement) Mg/hr (Aggregate) m2 (Cement)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed  E=k*0.0016*[(U/2.2)*1.3/(M/2)*1.4] From engineer From engineer 26 days per month, 12 working hours per day
oncrete atching Plant in	Source ID: As above  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k  Moisture content, M  Average wind speed, U  Emission Factor, E  Monthly output  Maximum hourly output, op  Area of the Cement stockpile, A  Area of the Aggregate stockpile, A	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07 1.6172E-07 20  0.355 4.9  0.000439721 43,270 173,079 138.7 554.7 346.7 1386.8 3,944 14,520 1.0738E-05 2.14761E-06 1.16662E-05	g/m²/s (unmitigated) g/m²/s (mitigated) 9% (unmitigated) 9% (unmitigated) 9% (mitigated) Mg/hectare/year g/m²/s (unmitigated) 9/m²/s (mitigated) 9/m²/s (mitigated) 9/m²/s (mitigated) 9/m²/s (mitigated) 9/m³/s (mitigated) 1/m³/s (Gement) 1/m³/hr (Aggregate) 1/m³/hr (Aggregate) 1/m²/s (gregate) 1/m²/s (unmitigated) 1/m²/s (unmitigated) 1/m²/s (unmitigated) 1/m²/s (unmitigated) 1/m²/s (unmitigated) 1/m²/s (unmitigated)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpilling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed  E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer From engineer 26 days per month, 12 working hours per day  Assume capacity of dump truck is 6m³ and 15 tons  Unmitigated Emission Rate=E*1000*op/(A*60*60)
oncrete atching Plant in	Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2 ECA1_2, ECA1_3, ECA1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3)  Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k  Moisture content, M  Average wind speed, U  Emission Factor, E  Monthly output  Maximum hourly output, op  Area of the Cement stockpile, A  Area of the Aggregate stockpile, A  Emission Rate (Cement stockpile)	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07 1.6172E-07 20  0.35 5 4.9  0.000439721 43,270 173,079 138.7 554.7 1386.8 3,944 14,520 1.0738E-05 2.14761E-06 1.16662E-05 2.33324E-06	g/m²/s (unmitigated) g/m²/s (mitigated) % (unmitigated) % (unmitigated) % (mitigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated)  %  m/s kg/Mg m3/month (Cement) m3/month (Aggregate) m3/hr (Cement) m3/hr (Aggregate) m4/hr (Aggregate) m2 (Cement) m2 (Aggregate) m2 (Cement) m2 (Aggregate) g/m²/s (unmitigated) g/m²/s (mitigated) g/m²/s (mitigated) % (unmitigated) % (unmitigated)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpilling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed  E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer From engineer 26 days per month, 12 working hours per day  Assume capacity of dump truck is 6m³ and 15 tons  Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
oncrete atching Plant in	Source ID: As above  Material handling and storage piles Source ID: ECC1_2, ECC1_3, ECC1-P2 ECA1_2, ECA1_3, ECA1-P2	Emission Rate (Aggregate stockpile)  Percentage open stockpile area, p  Emission Factor (0.3) Emission Rate  Percentage open stockpile area, p  Particle size multiplier, k Moisture content, M Average wind speed, U  Emission Factor, E Monthly output  Maximum hourly output, op  Area of the Cement stockpile, A Area of the Aggregate stockpile, A Emission Rate (Aggregate stockpile)	4.27511E-07 2.53887E-06 5.07773E-07 100 20 0.255 8.086E-07 1.6172E-07 20  0.355 4.9  0.000439721 43,270 173,079 138.7 554.7 346.7 1386.8 3,944 14,520 1.0738E-05 2.14761E-06 1.16662E-05 2.33324E-06	g/m²/s (unmitigated) g/m²/s (mitigated) 9/ (unmitigated) % (unmitigated) % (mitigated) Mg/hectare/year g/m²/s (unmitigated) g/m²/s (mitigated) 9/ % m/s kg/Mg m3/month (Cement) m3/hr (Cement) m3/hr (Aggregate) Mg/hr (Aggregate) Mg/hr (Aggregate) Mg/hr (Aggregate) m2 (Cement) m2 (Aggregate) g/m²/s (unmitigated) g/m²/s (unmitigated) g/m²/s (unmitigated) g/m²/s (unmitigated) g/m²/s (unmitigated)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100  80% stockpilling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed  E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer From engineer 26 days per month, 12 working hours per day  Assume capacity of dump truck is 6m³ and 15 tons  Unmitigated Emission Rate=E*1000*op/(A*60*60)

Description	Sources	Parameter	Emission Rate	Remarks
Crushed Aggregate	Material handling and storage piles Source ID:	Percentage open stockpile area, p	20 %	80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading
Stockpile in eastern location	ECA2, ECA2-P2	Particle size multiplier, k Moisture content, M	0.35	or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario
		Average wind speed, U	4.9 m/s	HKOAMO 2012 annual average wind speed
		Emission Factor, E Monthly output	0.000439721 kg/Mg 4,364 m3/month	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
		Maximum hourly output, op  Area of the stockpile, A	14.0 m3/hr 35.0 Mg/hr 1,866 m2	26 days per month, 12 working hours per day Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
		Emission Rate	2.28841E-06 g/m²/s (unmitigated) 4.57683E-07 g/m²/s (mitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Wind erosion Source ID: As above	Percentage open stockpile area, p	100 % (unmitigated) 20 % (mitigated)	80% stockpiling area is covered by impervious sheets
		Emission Factor (0.3) Emission Rate	0.255 Mg/hectare/year 8.086E-07 g/m²/s (unmitigated) 1.6172E-07 g/m²/s (mitigated)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100
C&D Stockpile near seawall	Material handling and storage piles Source ID: CD1	Percentage open stockpile area, p	20 %	80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.
		Particle size multiplier, k Moisture content, M Average wind speed, U	0.35 5 % 4.9 m/s	k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed
		Emission Factor, E Monthly output	0.000439721 kg/Mg 1,167 m3/month	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
		Maximum hourly output, op	3.7 m3/hr 7.5 Mg/hr	26 days per month, 12 working hours per day Density of C&D material: 2Mg/m3 (from engineer)
		Area of the stockpile, A Emission Rate	3,900 m2 2.34225E-07 g/m²/s (unmitigated) 4.68449E-08 g/m²/s (mitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate=E*1000*op/(A*60*60)*p/100
	Wind erosion Source ID: As above	Percentage open stockpile area, p	100 % (unmitigated) 20 % (mitigated)	80% stockpiling area is covered by impervious sheets
	Source ID. As above	Emission Factor (0.3) Emission Rate	0.255 Mg/hectare/year 8.086E-07 g/m²/s (unmitigated) 1.6172E-07 g/m²/s (mitigated)	AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100
C&D Stockpile at midfield	Material handling and storage piles Source ID: CD2, CD3	Percentage open stockpile area, p	20 %	80% stockpilling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.
	002, 000	Particle size multiplier, k Moisture content, M Average wind speed, U	0.35 5 % 4.9 m/s	k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed
		Emission Factor, E Monthly output	0.000439721 kg/Mg 33,222 m3/month	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
		Maximum hourly output, op	106.5 m3/hr	26 days per month, 12 working hours per day
		Area of the stockpile, A Emission Rate	213.0 Mg/hr 8,100 m2 3.2114E-06 g/m²/s (unmitigated)	Density of C&D material: 2Mg/m3 (from engineer) Unmitigated Emission Rate=E*1000*op/(A*60*60)
	Wind erosion	Percentage open stockpile area, p	6.42279E-07 g/m²/s (mitigated) 100 % (unmitigated)	Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Source ID: As above	Emission Factor (0.3) Emission Rate	20 % (mitigated) 0.255 Mg/hectare/year 8.086E-07 g/m²/s (unmitigated) 1.6172E-07 g/m²/s (mitigated)	80% stockpiling area is covered by impervious sheets AP42, Section 11.9.4 =0.3*0.85*1000000/(10000*365*24*60*60)*p/100
Crushing Plant	Screening Source ID: CP1, CP2	RSP emission factor (0.3)	15 mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable Means for Mineral Works (Stone Crushing Plants), EPD
		Density of rock	1760 Kg/m3	Assume the same as approved EIA South East New Territories (SENT) Landfill Extension (EIA-143/2007) Annex A2
		Maximum handling capcity	700 Mg/hr	From engineer
		No. of operation hour Emission height Emission Rate	12 hr 15 m 1.66E-03 g/s (mitigated)	
Crushing Plant	Tertiary Crushing Source ID: CP1, CP2	RSP emission factor (0.3)	15 mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable
		Density of rock	1760 Kg/m3	Means for Mineral Works (Stone Crushing Plants), EPD Assume the same as approved EIA South East New Territories (SENT) Landfill Extension (EIA-143/2007) Annex A2
		Maximum handling capcity	700 Mg/hr	From engineer
		No. of operation hour Emission height	12 hr 15 m	
Crushing Plant	Paved haul road outside crushing plant -	Emission Rate Particle size multiplier, k Road surface silt loading, sL	1.66E-03 g/s (mitigated) 0.62 g/VKT 12 g/m2	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For <b>Laden</b> Vehicle Source ID:	Average truck weight, W	28.3 tons	Full loading of truck, assume the same as Asphalt Tipper, engineering estimate
	WAB-HR1 to WAB-HR13 WC-HR1 to WC-HR13	Emission height	0.5 m	Assumed that vehicle will lift dust from the road surface and disperse
		RSP emission factor, E	180 g/VKT	from 0.5m height E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.) Truck
		No. of truck trips per day	66 trips/hr	From engineer: 700Mg/hr * (1/(6m3/veh)) * (1/1760 kg/m3) * 1000
		No. of operation hour % of dust suppression	12 hr 97.5 %	Assume density = 1760kg/m3, truck loading = 6m3/veh  Assume as the same as Express Rail Link and Extracted from SP
		Emission Rate	8.29E-05 g/m/s (mitigated)	License of XRL (Appendix C).  Truck for crushing plant
Crushing Plant	Paved haul road outside crushing plant -	Particle size multiplier, k	0.62 g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
	For <b>Unladen</b> Vehicle Source ID:	Road surface silt loading, sL Average truck weight, W	12 g/m2 8.24 tons	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Empty loading of truck, assume the same as Asphalt Tipper, engineerin estimate
	WAB-HR1 to WAB-HR13 WC-HR1 to WC-HR13	Emission height	0.5 m	Assumed that vehicle will lift dust from the road surface and disperse from 0.5m height
	WOTHER TO WOTHERS	RSP emission factor, E	51 g/VKT	Trom 0.5m neight E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.) Truck
		No. of truck trips per day	66 trips/hr	From engineer: 700Mg/hr* (1/(6m3/veh)) * (1/1760 kg/m3) * 1000
		No. of operation hour	12 hr	Assume density = 1760kg/m3, truck loading = 6m3/veh
		% of dust suppression	97.5 %	Assume as the same as Express Rail Link and Extracted from SP License of XRL (Appendix C).
		Emission Rate	2.4E-05 g/m/s (mitigated)	Truck for crushing plant
L	I.			

## Floating Concrete Batching Plant

Description	Sources	Parameter	Emission Rate	Remarks
loating Concrete	Unloading aggregate	Consumption Rate	39.6 Mg/h (Concrete)	From engineer: Concrete: 39.6 ton/hr = 1900 ton / (2 days * 24 h)
Batching Plant	Source ID:	Aggregate tank capacity	1900 tons	From engineer
Jnloading of raw		Refill frequency	2 days	From engineer
naterials)	F-EP1	Particle size multiplier, k	0.35	For RSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2 %	Assume as the same as land-based CBP
		Mean wind speed, U	4.9 m/s	HKOAMO 2012 annual average wind speed
		Emission Factor, E	1.59E-03 kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4)
				(AP-42, section 13.2.4, 11/06 ed.)
			O OC Isa/law (Compareto)	
			0.06 kg/hr (Concrete)	
		Mitigation efficiency	99 %	Fully covered and handling with water spraying system (From engineer)
		No. of operation hours	24 hr	Assume want assa
		Emission height	10 m	Assume worst case From engineer
		Z.mosion noight		Tom ongmost
		Emission Rate	1.74E-04 g/s (mitigated) (Concrete)	
loating Concrete		Density	2.24 Mg/m3	For Concrete density, refer to this website
atching Plant Cement / PFA /	Source ID:			"http://www.aqua-calc.com/page/density-table/substance/concrete-coma and-blank-asphalt"
	F-EP2	RSP emission factor (0.37)	18.5 mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable
,		(* * * * * * * * * * * * * * * * * * *		Means for Cement Works (Concrete Batching Plant), EPD
		Cement silo capacity (Each silo) Refill frequency	110 tons 2.5 days	From engineer From engineer
		Dust exhaust flow rate (Total 4 silos)	7.33 tons/hr (Concrete)	From engineer From engineer: 7.33 ton/hr = 4 silos * (110 ton / (2.5 days * 24 h))
		and contained the contained (contained)	3.3 m3/hr (Concrete)	For concrete density: 2.24 tons/m3
		No. of operation hours No. of small cement silos	24 hr	Assume worst case
		Emission height	10 m	From engineer From engineer
		Emission Rate (Total 4 silos)	1.68E-05 g/s (mitigated) (Concrete)	Tom engineer
		, ,		
	DEA Oiles	Dth.	0.04 Maylor 0	For Community describe surface to the second side
	PFA Silos Source ID:	Density	2.24 Mg/m3	For Concrete density, refer to this website "http://www.aqua-calc.com/page/density-table/substance/concrete-coma
	Cource ID.			and-blank-asphalt"
	F-EP3	RSP emission factor (0.37)	18.5 mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable
				Means for Cement Works (Concrete Batching Plant), EPD
		PFA silo capacity (Each silo)	90 tons	From engineer
		Refill frequency	2 days	From engineer
		Dust exhaust flow rate (Total 2 silos)	3.75 tons/hr (Concrete)	From engineer: 3.75 ton/hr = 2 silos * (90 ton / (2 days * 24 h))
			1.7 m3/hr (Concrete)	For concrete density: 2.24 tons/m3
		No. of anarotion bours	04/6-	Accume wavet acco
		No. of operation hours No. of PFA silos	24 hr 2	Assume worst case From engineer
		Emission height	10 m	From engineer
		Emission Rate (Total 2 silos)	8.60E-06 g/s (mitigated) (Concrete)	
	CSF Silos	Density	2.24 Mg/m3	For Concrete density, refer to this website
	Source ID:	Benoity	L.E.F. Mg/mo	"http://www.aqua-calc.com/page/density-table/substance/concrete-coma
				and-blank-asphalt"
	F-EP4	RSP emission factor (0.37)	18.5 mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable
				Means for Cement Works (Concrete Batching Plant), EPD
		CSF silo capacity (Each silo)	30 tons	From engineer
		Refill frequency	5 days	From engineer
		Dust exhaust flow rate (Total 2 silos)	0.50 tons/hr (Concrete)	From engineer: 0.5 ton/hr = 2 silos * (30 ton / (5 days * 24 h))
			0.2 m3/hr (Concrete)	For concrete density: 2.24 tons/m3
		No. of operation hours	24 hr	Assume worst case
		No. of CSF silos	2	From engineer
		Emission height	10 m	From engineer
		Emission Rate (Total 2 silos)	1.15E-06 g/s (mitigated) (Concrete)	
Floating Concrete	Mixer	Density	2.24 Mg/m3	For Concrete density, refer to this website
Batching Plant	Source ID:			"http://www.aqua-calc.com/page/density-table/substance/concrete-coma
Mixing Tower)	E EDE	DSB emission factor (0.27)	19 F mg/m2	and-blank-asphalt"
	F-EP5	RSP emission factor (0.37)	18.5 mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable Means for Cement Works (Concrete Batching Plant), EPD
		Dust exhaust flow rate (Total 2 mixers)	560 tons/hr (Concrete)	From engineer: 280 ton/hr * 2 mixers
			050 0 0/5 (0	For consists density 0.04 to 20
		•	250.0 m3/hr (Concrete)	For concrete density: 2.24 tons/m3
		No. of operation hours	24 hr	Assume worst case
		No. of operation hours No. of mixers	24 hr 2	Assume worst case From engineer

Appendix 5.2.7 - Details of Dust Emission Sources for 1-hour TSP Assessment (Tier 1) at Year 2015				
Third Runway Work	k Areas			
Works Area	Sources		Parameter	Remarks
Submarine pipeline	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Submarine cable		Mitigation efficiency	91.7 %	Water suppression 12 times a day
	Q3: S1, S2, S3	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
		Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
		Zimodon nato	8.614E-06 g/m²/s (mitigated)	-2.50 1000000 a 11 00 00) pi 100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	
	, ,	Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)	Heavy construction	Percentage active area, p	100.0 %	A
NCD works	Source ID:	, and a state of the state of t		Assume % works area for heavy construction Water suppression 12 times a day
NOD WORKS	Q1:	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2:	No. of working days per month, d	30 days	Sources I mai rieport
	1, 10FN-2, 10FN-3, EGC4, EGC5, EGC6, EGC7	No. of working hours per day, h	24 hour	
	Q4: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
	EGC6, EGC7			
		Emission Rate	1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion			
	Source ID: (as above)	Percentage active area, p	100.0 %	AD40 Table 11.0.4
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
ITT works (area sources)	Q1: SCCP1, AES6, AES13, AES14, AES15, EM1, EM2, EGC3-	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
Sources)	1, EGC3-2, ITT1			Sources Final Report
	1, EGC3-2, ITT1	No. of working days per month, d	30 days	
	1, EGC3-2, ITT1	No. of working hours per day, h Emission Factor	24 hour	AP42, Section 13.2.3.3
		Emission Pate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			8.614E-06 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
(Concurrent project)	Heavy construction	Percentage active area, p	100.00 %	Assume % works area for heavy construction
ITT works (line	Source ID: Q1: SCRE1, SCRE2, SCRE3, SCRE4, SCRE5, SCRE6, SCRE7,			Water suppression 12 times a day
sources)		Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
Roadworks - at grade	Q2: SCRE1, SCRE2, SCRE3, SCRE4, SCRE5, SCRE6, SCRE7,	No. of working days per month, d	30 days	Courses I ma report
	AES7, AES8, AES9, AES10, AES11, AES12  Q3: SCRE1, SCRE2, SCRE3, SCRE4, SCRE5, SCRE6, SCRE7,	No. of working days per month, d	30 days	
		No. of working hours per day, h	24 hour	
		Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.245E-03 g/m/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m.
			1.034E-04 g/m/s (mitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100 * 12
	Wind Erosion			
	Source ID: (as above)	Percentage active area, p Emission Factor	100.00 %	AD42 Toble 11.0.4
		Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
(	Source ID:	Percentage active area, p	100.0 %	Assume 100% works area for heavy construction
Douridary Crossing		Mitigation efficiency No. of working days per month, d	87.5 % 26 days	Extracted from HKBCF EIA Extracted from HKBCF EIA
Facilities (BCF)	Q3: BCF-A, BCF-B, BCF-C1, BCF-C2, BCF-C3, BCF-C4	No. of working hours per day, h	12 hour	Extracted from HKBCF EIA
		Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 2.395E-04 g/m²/s (unmitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
			2.994E-05 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	
		Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
		Emission Rate	2.695E-06 g/m²/s	=0.00 1000000/(10000 300 24°00°00)°p/100
(Concurrent project)	Heavy construction	Percentage active area, p	100.0 %	Assume 100% works area for heavy construction
Hong Kong Link	Source ID: Q1: LR-2, LR-3, LR-4, LR-5, LR-6, LR-7, LR-8, LR-9, LR-10, LR-	Mitigation efficiency		Extracted from HKLR EIA
Bood (HKLB)	11, Ln-12, Ln-13, Ln-14	No. of working days per month, d	87.5 % 26 days	Extracted from HKLR EIA  Extracted from HKLR EIA
	Q3:	No. of working hours per day, h	12 hour	Extracted from HKLR EIA
		Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 2.395E-04 g/m²/s (unmitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
			2.994E-05 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100 %	
	, ,	Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
· ·	İ			

#### Third Runway Work Areas Works Area Sources Parameter Remarks leavy construction Third Runway Land Percentage active area, p 100.0 % Source ID: Formation Assume % works area for heavy construction For 24hrs activities: Water suppression 12 times a day Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Q1: Sources Final Report Q2: No. of working days per month, d 30 days Q3: No. of working hours per day, h 24 hour Q4: 1\_03-1, 1\_03-2, 1\_08A-1, 1\_08A-2, 1\_08B-1, 1\_08B-2, 2\_04 Emission Factor 2.69 Mg/hectare/month of activity AP42. Section 13.2.3.3 1, 2\_04-2, 2\_06-1, 2\_06-2, 2\_06-3 1.038E-04 g/m<sup>2</sup>/s (unmitigated) =2.69\*1000000/(10000\*30\*h\*60\*60)\*p/100 **Emission Rate** 8.614E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) 0.85 Mg/hectare/year AP42. Table 11.9-4 Emission Factor =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** 2.695E-06 g/m<sup>2</sup>/s Heavy construction Source ID: Percentage active area, p 100.0 % Submarine pipeline Assume % works area for heavy construction Q1: S1, S2, S3 Water suppression 12 times a day Mitigation efficiency 91.7 % Submarine cable Q2: S1, S2, S3 No. of working days per month, d 30 days Q3: S1, S2, S3 No. of working hours per day, h 24 hour **Emission Factor** 2.69 Mg/hectare/month of activity AP42, Section 13.2.3.3 Emission Rate 1.038E-04 g/m²/s (unmitigated) =2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100 8.614E-06 g/m<sup>2</sup>/s (mitigated) Percentage active area, p 100 % Source ID: (as above) 0.85 Mg/hectare/year AP42 Table 11.9-4 **Emission Factor** Emission Rate 2.695E-06 g/m<sup>2</sup>/s =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 100.0 % (Concurrent project) Heavy construction Percentage active area, p Assume % works area for heavy construction Source ID: Water suppression 12 times a day NCD works O1: NCD1-1 NCD1-2 NCD1-3 NCD1-4 NCD1-5 NCD2-1 NCD2-2, NCD2-3, TRD2, TCPN-1, TCPN-2, TCPN-3, SCCP1 Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7 Sources Final Report Q2: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN No. of working days per month, d 30 days 3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7 Q3: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-No. of working hours per day, h 24 hour 3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7 Q4: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-**Emission Factor** AP42, Section 13.2.3.3 2.69 Mg/hectare/month of activity 3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7 Emission Rate 1.038E-04 g/m<sup>2</sup>/s (unmitigated) =2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100 8.614E-06 g/m<sup>2</sup>/s (mitigated) 100.0 % Percentage active area, p Source ID: (as above) Emission Factor 0.85 Mg/hectare/year AP42. Table 11.9-4 Emission Rate 2.695E-06 g/m<sup>2</sup>/s =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 (Concurrent project) Heavy construction 100.0 % Percentage active area, p Assume % works area for heavy construction Source ID: Water suppression 12 times a day ITT works (area Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % sources) Q1: AES6, EM1, EM2, ITT1 Sources Final Report Q2: AES6, EM1, EM2, ITT1 No. of working days per month, d 30 days Q3: AES6, EM1, EM2, ITT1 No. of working hours per day, h 24 hour Q4: AES6, EM1, EM2, ITT1 **Emission Factor** 2.69 Mg/hectare/month of activity AP42, Section 13.2.3.3 **Emission Rate** 1.038E-04 g/m<sup>2</sup>/s (unmitigated) =2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100 8.614E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) **Emission Factor** 0.85 Mg/hectare/year AP42, Table 11.9-4 Emission Rate 2.695E-06 g/m<sup>2</sup>/s =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 100.00 % (Concurrent project) Heavy construction Percentage active area, p Assume % works area for heavy construction Water suppression 12 times a day ITT works (line Q1: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust sources) AES10, AES11, AES12 Sources Final Report Roadworks - at Q2: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, grade No. of working days per month, d 30 days AES10, AES11, AES12 Q3: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, No. of working hours per day, h 24 hour AES10, AES11, AES12 Q4: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, **Emission Factor** AP42. Section 13.2.3.3 2.69 Mg/hectare/month of activity AES10, AES11, AES12 Assume road width equals 12m, therefore multiply emission rate 1.245E-03 g/m/s (unmitigated) **Emission Rate** =2.69\*0.3\*1000000/(10000\*d\*h\*60\*60)\*p/100 \* 12 1.034E-04 g/m/s (mitigated) Percentage active area, p Source ID: (as above) Emission Factor 0.85 Mg/hectare/year AP42, Table 11.9-4 **Emission Rate** $2.695E-06\ g/m^2/s$ =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 Percentage active area. p 100.0 % T2 Expansion Assume % works area for heavy construction Source ID: Advanced Works Water suppression 12 times a day Temporary Car Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Parks at NCD, Q1: TRD1, TRD3, TRD4, TRD5, TRD6 Sources Final Report Temporary Road Q2: TRD1, TRD5, TRD6 No. of working days per month, d 30 days Diversion) Q3: TRD1, TRD5, TRD6 No. of working hours per day, h 24 hour 2.69 Mg/hectare/month of activity AP42, Section 13.2.3.3 **Emission Factor** =2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion 100.0 % Percentage active area, p Source ID: (as above) 0.85 Mg/hectare/year AP42, Table 11.9-4 **Emission Factor** $2.695E-06\ g/m^2/s$ =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 Emission Rate

Appendix 5.2.7 - Details of Dust Emission Sources for 1-hour TSP Assessment (Tier 1) at Year 2016

(Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume 100% works area for heavy construction
Boundary Crossing Facilities (BCF)	Q1: BCF-C4 Q2: BCF-C4 Q3: BCF-C4 Q4: BCF-C4	Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	87.5 % 26 days 12 hour 2.69 Mg/hectare/month of activity 2.395E-04 g/m²/s (unmitigated) 2.994E-05 g/m²/s (mitigated)	Extracted from HKBCF EIA Extracted from HKBCF EIA Extracted from HKBCF EIA Extracted from HKBCF EIA AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p Emission Factor Emission Rate	100 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
Other airport	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
facilities related works	Q1: ABT1-1 Q2: ABT1-1 Q3: ABT1-1 Q4: ABT1-1	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h  Emission Factor  Emission Rate	91.7 %  30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated)	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dus Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p Emission Factor Emission Rate	8.614E-06 g/m²/s (mitigated) 100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
Roadworks	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Source ID:  Q1: ABT1-2, ABT1-3  Q2: ABT1-2, ABT1-3  Q3: ABT1-2, ABT1-3  Q4: ABT1-2, ABT1-3	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h  Emission Factor  Emission Rate	91.7 %  30 days 24 hour 2.69 Mg/hectare/month of activity  1.245E-03 g/m²/s (unmitigated)  1.034E-04 g/m²/s (mitigated)	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dus Sources Final Report  AP42, Section 13.2.3.3 Assume road width equals 12m, therefore multiply emission by 12m. =2.69*1000000/(10000*d*h*60*60)*p/100 * 12
	Wind Erosion Source ID: (as above)	Percentage active area, p Emission Factor Emission Rate	100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100

## Appendix 5.2.7 - Details of Dust Emission Sources for 1-hour TSP Assessment (Tier 1) at Year 2017 Third Runway Work Areas Works Area Sources Parameter Remarks Heavy construction Source ID: Third Runway Land Percentage active area, p 100.0 % Formation Assume % works area for heavy construction For 24hrs activities: Q1: 1\_01, 1\_03-1, 1\_03-2, 1\_04, 1\_07-1, 1\_07-2, 1\_08A-1, 1\_08A-2 1\_08B-1, 1\_08B-2, 1\_09-1, 1\_09-2, 2\_03B, 2\_04-1, 2\_04-2, 2\_05B-Water suppression 12 times a day 1, 2\_05B-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_07B, 2\_08, 2\_09-1, 2\_09-2 Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Sources Final Report Q2: 1\_01, 1\_02-1, 1\_02-2, 1\_03-1, 1\_03-2, 1\_04, 1\_07-1, 1\_07-2, Q2: 1\_01, 1\_02-1, 1\_02-2, 1\_03-1, 1\_03-2, 1\_0-4, 1\_07-1, 1\_07-2, 1\_08-1, 1\_08A-2, 1\_08B-1, 1\_08B-2, 1\_09-1, 1\_09-2, 2\_03B, 1\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08, 2\_09-1, 2\_09-2, No. of working days per month, d 30 days 3\_01A-1, 3\_01A-2, 3\_01A-3 Q3: 1\_01, 1\_02-1, 1\_02-2, 1\_03-1, 1\_03-2, 1\_04, 1\_05, 1\_07-1, 03: 1\_01, 1\_02=1, 1\_08=2, 1\_00=1, 1\_080=2, 2\_03B, 2\_05B=1, 1\_07=2, 1\_08A=1, 1\_08A=2, 1\_08B=1, 1\_08B=2, 2\_03B, 2\_05B=1, 1\_05B=2, 2\_07A=1, 2\_07A=2, 2\_07B, 2\_08, 3\_01A=1, 3\_01A=2, 3\_01A No. of working hours per day, h 24 hour Q4: 1\_01, 1\_02-1, 1\_02-2, 1\_03-1, 1\_03-2, 1\_04, 1\_05, 1\_07-1, 1\_07-2, 1\_08A-1, 1\_08A-2, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, AP42, Section 13.2.3.3 Emission Factor 2.69 Mg/hectare/month of activity 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08 =2.69\*1000000/(10000\*30\*h\*60\*60)\*p/100 **Emission Rate** $1.038E-04~g/m^2/s$ (unmitigated) 8.614E-06 g/m²/s (mitigated) For night-time activities: Percentage active area, p 100.0 % 91.7 % Mitigation efficiency Q2: 2 04-1, 2 04-2, 2 06-1, 2 06-2, 2 06-3 No. of working days per month, d 30 days Q3: 1\_09-1, 1\_09-2, 2\_04-1, 2\_04-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_09-1, 2 09-2 No. of working hours per day, h 12 (night) hour Q4: 1\_09-1, 1\_09-2, 2\_04-1, 2\_04-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_09-**Emission Factor** 2.69 Mg/hectare/month of activity AP42, Section 13.2.3.3 1, 2\_09-2, 3\_02A-1, 3\_02A-2, 3\_02A-3 Emission Rate 2.076E-04 g/m<sup>2</sup>/s (unmitigated) =2.69\*1000000/(10000\*30\*h\*60\*60)\*p/100 1.723E-05 g/m<sup>2</sup>/s (mitigated) Wind Erosion 100.0 % Percentage active area, p Source ID: (as above) 0.85 Mg/hectare/year **Emission Factor** AP42, Table 11.9-4 =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** $2.695E-06\ g/m^2/s$

20.0 %

5.391E-07 g/m<sup>2</sup>/s

100.0 %

91.7 %

100.0 %

2.695E-06 g/m<sup>2</sup>/s

30 days

24 hour

1.038E-04 g/m<sup>2</sup>/s (unmitigated)

0.85 Mg/hectare/year

8.614E-06 g/m<sup>2</sup>/s (mitigated)

2.69 Mg/hectare/month of activity

0.85 Mg/hectare/year

Percentage active area, p

Percentage active area, p

No. of working days per month, d

No. of working hours per day, h

Percentage active area, p

Mitigation efficiency

Emission Factor

Emission Rate

Emission Factor

mission Rate

**Emission Factor** 

**Emission Rate** 

Based on scheme design of definition for sand fill materials

Equation (3-2) in the USEPA's Control of Open Fugitive Dust

fines content not exceeding 20%

Water suppression 12 times a day

=0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100

Assume % works area for heavy construction

=2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100

=0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100

AP42 Table 11 9-4

Sources Final Report

AP42, Section 13.2.3.3

AP42, Table 11.9-4

consisting of coarse materials with size not exceeding 37.5mm and

Wind Erosion Source ID:

Heavy construction

Q1: 4\_04, 4\_05-1

Q2: 4 04, 4 05-1

Q3: 4 04, 4 05-1

Q4: 4\_04, 4\_05-1

Wind Erosion

Source ID: (as above)

Source ID:

Q4: 1\_08B-1, 1\_08B-2, 3\_01A-1, 3\_01A-2, 3\_01A-3

Q1:

Q2:

Q3:

Third Runway

Wind Erosion (only)

Third Runway Other

Works/Facilities on

newly formed land

Construction

Concurrent project)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
CD works	Q1: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2-	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2- 2. NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3.	No. of working days per month, d	30 days	
	Q3: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2- 2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7	No. of working hours per day, h	24 hour	
	Q4: NCD1-1, NCD1-2, NCD1-3, NCD1-4, NCD1-5, NCD2-1, NCD2- 2, NCD2-3, TRD2, TRD3, TRD4, TCPN-1, TCPN-2, TCPN-3, SCCP1, EGC1, EGC2, EGC3-1, EGC3-2, EGC4, EGC5, EGC6, EGC7	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
oncurrent project)	Heavy construction	Percentage active area, p	100.0 %	
,	Source ID:	r crocmage active area, p	100.0 %	Assume % works area for heavy construction
works (area urces)	Q1: AES6	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: Q3: Q4:	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p Emission Factor Emission Rate	100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100

Appendix 5.2.7 - De	ails of Dust Emission Sources for 1-hour TSP Asses	sment (Tier 1) at Year 2017		
(Concurrent project)	Heavy construction	Percentage active area, p	100.00 %	Appump 9/ words factors
ITT works (line	Source ID:  Q1: AES1, AES2, AES3, AES4, AES5, AES7, AES8, AES9, AES10,	71	91.7 %	Assume % works area for heavy construction  Water suppression 12 times a day  Equation (3-2) in the USEPA's Control of Open Fugitive Dust
Roadworks - at	AES11, AES12			Sources Final Report
grade		No. of working days per month, d No. of working hours per day, h Emission Factor	30 days 24 hour 2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.245E-03 g/m/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m.
			1.034E-04 g/m/s (mitigated)	=2.69*0.3*1000000/(10000*d*h*60*60)*p/100 * 12
	Mr. d F. veiro		1.034E-04 g/III/S (IIIIIgateu)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
		Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
South Cargo	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
Roadworks - at grade		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1:	-		Sources Final Report
	Q3: CA1, CA2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4: CA1, CA2	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Assume road width equals 12m, therefore multiply emission rate by
		Emission Rate	1.245E-03 g/m/s (unmitigated)	12m. =2.69*1000000/(10000*d*h*60*60)*p/100 * 12
			1.034E-04 g/m/s (mitigated)	-2.03 1000000/(10000 d ii 00 00) p/100 12
	Wind Erosion	Percentage active area, p	100.00 %	
	Source ID: (as above)	Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
South Cargo Roadworks - viaduct	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2: CA3, CA4, CA5, CA6, CA7, CA8	No. of working days per month, d	30 days	Sources Final Report
	Q3: CA3, CA4, CA5, CA6, CA7, CA8	No. of working hours per day, h	24 hour	AD40 Continue 40 0 0 0
	Q4: CA3, CA4, CA5, CA6, CA7, CA8	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Assume 30m spacing between road piers (base:5mx 5m), therefore
		Emission Rate	1.297E-04 g/m/s (unmitigated)	total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width +
			o o. g,o (aaga.co)	50% extra for works) '=2.69*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
			1.077E-05 g/m/s (mitigated)	=2.09 1000000(10000 30 ii 00 00) p/100 (3/30) 7.3
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
	(,	Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
Roadworks Road 6 - viaduct (Concept F,	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Option 3)		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11,			Sources Final Report
	RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working days per month, d	30 days	
	Q3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21,			
	RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working hours per day, h	24 hour	
	Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21,			
	RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
				Assume 30m spacing between road piers (base:5mx 5m), therefore
		Emission Rate	1.297E-04 g/m/s (unmitigated)	total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width +
				50% extra for works) '=2.69*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
			1.077E-05 g/m/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
	'		30 g /0	1 3.55 3.55 3.55 3.50 E. 60 60) privo
New APM	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
Interchange Station (AIS)		Mitigation officions:	01 7 9/	Water suppression 12 times a day
	Q1:	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q3: AIS1, AIS2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4:	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
			8.614E-06 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1:	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
		Liniosion Hale	2.000E-00 y/117/5	-5.55 1555550/(15555 555 24 50 50) β/100
BHS and APM tunnel	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
Carriot		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2:	No. of working days per month, d	30 days	Sources Final Report
	Q3: BAT1, BAT2, NAB3, NAB4	No. of working hours per day, h	24 hour	AP//2 Section 13.2.3.3
	5, 5, 14.60, 14.67	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
			8.614E-06 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1:	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
			30 g /0	3.55 3.55 3.55 3.50 E. 60 60) pri 100
	l l			<u> </u>

2 Expansion Area	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Source ID:			Water suppression 12 times a day
	01.	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2:	No. of working days per month, d	30 days	Sources Final Report
	Q3: T2E-1, T2E-2, T2E-3, BHS1, BHS2, NAB1, NAB2, SAB, NAD1	No. of working hours per day, h	24 hour	
	Q4: T2E-1, T2E-2, T2E-3, AlS1, AlS2, BHS1, BHS2, NAB1, NAB2,			
	SAB, NAD1, EVA1, EVA2, EVA3, EVA4, EVA5, EVA6, EVA7, EVA8, EVA9	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
2 Expansion -	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
mergency ehicular Access EVA)		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2:	No. of working days per month, d	30 days	Sources Final Report
	Q3: EVA1, EVA2, EVA3, EVA4, EVA5, EVA6, EVA7, EVA8, EVA9	No. of working hours per day, h	24 hour	
	Q4:	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
ther airport	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction
cilities related orks	Source ID:  Q1: ABT1-1	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: ABT1-1	No. of working days per month, d	30 days	Courses I mai report
	Q3: ABT1-1 Q4: ABT1-1	No. of working hours per day, h	24 hour	AD40 Costion 10.0.0.0
	GA. AUT I	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
oadworks	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
orresponding to ther airport cilities related		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
orks	Q1: ABT1-2, ABT1-3 Q2: ABT1-2, ABT1-3	No. of working days per month, d	30 days	Sources Final Report
	Q3: ABT1-2, ABT1-3	No. of working days per month, d	24 hour	
	Q4: ABT1-2, ABT1-3	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.245E-03 g/m²/s (unmitigated) 1.034E-04 g/m²/s (mitigated)	AP42, Section 13.2.3.3 Assume road width equals 12m, therefore multiply emission rate
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100

# Appendix 5.2.7 - Details of Dust Emission Sources for 1-hour TSP Assessment (Tier 1) at Year 2018

# Third Runway Work Areas

Waste Ass	0000000	Parameter		Remarks	
Works Area Third Runway Land	Sources Heavy construction	Percentage active area, p	100.0 %	Hemarks	
Formation	Source ID: For 24hrs activities:	,		Assume % works area for heavy construction	
	Q1: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1, 1_06-2, 1_08B-2, 2_02B-1, 2_02B-2, 2_03A, 2_05A, 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report	
	Q2: 1_02-1, 1_02-2, 1_05, 1_06-1, 1_06-2, 2_02B-1, 2_02B-2, 2_03A, 2_05A, 2_08, 3_02B	No. of working days per month, d	30 days		
	Q3: 1_06-1, 1_06-2, 2_01, 2_02B-1, 2_02B-2, 2_03A, 2_03B, 2_05A, 2_05B-1, 2_05B-2	No. of working hours per day, h	24 hour		
	Q4: 2_01, 2_02A, 2_02B-1, 2_02B-2, 2_03A, 2_03B, 2_05B-1, 2_05B-2	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*30*h*60*60)*p/100	
	For night-time activities:	Percentage active area, p	100.0 %		
	Q1: 1_09-1, 1_09-2, 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 2_09-2, 3_02A-1, 3_02A-2, 3_02A-3	Mitigation efficiency	91.7 %		
	Q2: 1_09-1, 1_09-2, 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 2_09-2, 3_01A-1, 3_01A-2, 3_01A-3, 3_02A-1, 3_02A-2, 3_02A-3	No. of working days per month, d	30 days		
	Q3: 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 2_09-2, 3_01A-1, 3_01A-2, 3_01A-3, 3_02A-1, 3_02A-2, 3_02A-3	No. of working hours per day, h	12 (night) hour		
	Q4: 1_09-1, 1_09-2, 2_09-1, 2_09-2, 3_02A-1, 3_02A-2, 3_02A-3	Emission Factor	O CO Mar/leastons/resortle of activity	ADAO Castier 10 0 0 0	
		Emission Rate	2.69 Mg/hectare/month of activity 2.076E-04 g/m²/s (unmitigated) 1.723E-05 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*30*h*60*60)*p/100	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %		
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100	
Third Runway	Wind Erosion Source ID:			Based on scheme design of definition for sand fill materials	
Wind Erosion (only)	C4.1.07.0.1.000.0.00D.0.07D.0.00.0.040.1.0.040.0.0.040	Percentage active area, p	20.0 %	consisting of coarse materials with size not exceeding 37.5mm and fines content not exceeding 20%	
	3 Q2: 1_01, 1_03-1, 1_03-2, 1_04, 2_03B, 2_05B-1, 2_05B-2, 2_07A-1,	Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4	
	2_07A-2, 2_07B Q3: 1_09-1, 1_09-2, 2_08, 3_02B Q4: 2_04-1, 2_04-2, 2_05A, 2_06-1, 2_06-2, 2_06-3, 2_08, 3_02B	Emission Rate	5.391E-07 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100	
Third Runway Other Construction	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction	
Works/Facilities on newly formed land	Q1: 1_07-1, 1_08A-1, 1_08B-1, 4_04, 4_05-1	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report	
	Q2: 1_07-1, 1_07-2, 1_08A-1, 1_08A-2, 1_08B-1, 1_08B-2, 4_04, 4_05-1	No. of working days per month, d	30 days		
	Q3: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_07-1, 1_07-2, 1_08A-1, 1_08A-2, 1_08B-1, 1_08B-2, 2_07A-1, 2_07A-2, 2_07B, 4_04, 4_05-1	No. of working hours per day, h	24 hour		
	Q4: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1, 1_06-2, 1_07-1, 1_07-2, 1_08A-1, 1_08A-2, 1_08B-1, 1_08B-2, 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 3_01A-3, 4_04, 4_05-1	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3	
		Emission Rate	1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %		
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100	
(Concurrent project)	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction	
NCD works	Source ID:  Q1: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2,	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust	
	EGC3-1, EGC3-2 Q2: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2,			Sources Final Report	
	EGC3-1, EGC3-2 Q3: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2,	No. of working days per month, d	30 days		
	EGC3-1, EGC3-2 Q4: NCD2-1, NCD2-2, NCD2-3, TRD3, TRD4, SCCP1, EGC1, EGC2,	No. of working hours per day, h	24 hour		
	EGC3-1, EGC3-2	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %		
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100	
Midfield development (MD)	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction	
	Q1: MD	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report	
		No. of working days per month, d No. of working hours per day, h	30 days 24 hour		
	Q4: MD	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100	
	Wind Erosion	Percentage active area, p	100.0 %		
	Source ID: (as above)	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100	
			,		

Appendix 5.2.7 - Det	ails of Dust Emission Sources for 1-hour TSP Assess	ment (Tier 1) at Year 2018		
South Cargo	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
Roadworks - at grade		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: CA1, CA2 Q2: CA1, CA2	No. of working days per month, d	30 days	Sources Final Report
	Q3: CA1, CA2 Q4: CA1, CA2	No. of working hours per day, h	24 hour	AP42 Section 12.2.2.2
	GT. OAI, OAE	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Assume road width equals 12m, therefore multiply emission rate by
		Emission Rate	1.245E-03 g/m/s (unmitigated)	12m. =2.69*1000000/(10000*d*h*60*60)*p/100 * 12
			1.034E-04 g/m/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	l
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
South Cargo Roadworks - viaduct	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Troduvorks viadabi	04 040 044 045 040 047 040	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: CA3, CA4, CA5, CA6, CA7, CA8 Q2: CA3, CA4, CA5, CA6, CA7, CA8	No. of working days per month, d	30 days	Sources Final Report
	Q3: CA3, CA4, CA5, CA6, CA7, CA8 Q4: CA3, CA4, CA5, CA6, CA7, CA8	No. of working hours per day, h Emission Factor	24 hour 2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3 Assume 30m spacing between road piers (base:5mx 5m), therefore
		Emission Rate	1.297E-04 g/m/s (unmitigated)	total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
			1.077E-05 g/m/s (mitigated)	2.00 1000000 (10000 00 H 00 00) μ/100 (0/00) 1.0
	Wind Erosion Source ID: (as above)	Percentage active area, p Emission Factor Emission Rate	100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
Roadworks Road 6 -	Heavy construction	Percentage active area, p	100.0 %	Assume % works area for heavy construction
viaduct (Concept F, Option 3)	Source ID:  Q1: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working days per month, d	30 days	
	Q3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working hours per day, h	24 hour	
	O4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.297E-04 g/m/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
			1.077E-05 g/m/s (mitigated)	-2.00 1000000/(10000 30 11 00 00) p/100 " (5/30) " /.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
New APM	Heavy construction	Percentage active area, p	100.00 %	Assume % works area for heavy construction
Interchange Station (AIS)	Source ID:	Arranta m	24.7.04	Water suppression 12 times a day
	Q1:	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: AIS1, AIS2, EVA6, EVA7, EVA8 Q3: AIS1, AIS2, EVA6, EVA7, EVA8	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4: AIS1, AIS2, EVA6, EVA7, EVA8	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion	Parasata "		
	Value Llosoni Source ID: (as above) Q1:	Percentage active area, p Emission Factor Emission Rate	100.00 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
Baggage Hall - Baggage Handling	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
System (BHS)	Q1:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: BHS1, BHS2, EVA9	No. of working days per month, d	30 days	Sources i mai report
	Q3: BHS1, BHS2, EVA9 Q4: BHS1, BHS2, EVA9	No. of working hours per day, h Emission Factor Emission Rate	24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1:	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
New APM Depot	Heavy construction	Percentage active area, p	100.00 %	Assume % works area for heavy construction
(NAD)	Source ID:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: NAD1, NAD2 Q2: NAD1, NAD2			Sources Final Report
	Q3: NAD1, NAD2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4: NAD1, NAD2	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: NAD1, NAD2	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
				5.55 .555556/(15555 556 E4 65 65) prilot
	I			

IS and APM	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
nnel	Q1: BAT1, BAT2, NAB3, NAB4	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: BAT1, BAT2, NAB3, NAB4	No. of working days per month, d	30 days	Sources i mai rieport
	Q3: BAT1, BAT2, NAB3, NAB4	No. of working hours per day, h	24 hour	
	Q4: BAT1, BAT2, NAB3, NAB4	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: BAT1, BAT2, NAB3, NAB4	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
2 Expansion Area	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Q1: T2E-1, T2E-2, T2E-3, AIS1, AIS2, BHS2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: T2E-3	No. of working days per month, d	30 days	
	Q3:	No. of working hours per day, h	24 hour	
	Q4:	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
2 Expansion - Car	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
ark North (North nnex Building)		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dus
	Q1: NAB1, NAB2, BHS1	ivinagation omoronoy	51 /S	Sources Final Report
	Q2: NAB1, NAB2	No. of working days per month, d	30 days	
	Q3: Q4:	No. of working hours per day, h Emission Factor Emission Rate	24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
2 Expansion -	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
ounge Limo (South nnex Building)		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q1: SAB Q2: SAB	No. of working days per month, d	30 days	Sources Final neport
	Q3:	No. of working hours per day, h	24 hour	
	Q4:	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100

# Appendix 5.2.7 - Details of Dust Emission Sources for 1-hour TSP Assessment (Tier 1) at Year 2019 Third Runway Work Areas Works Area Sources Parameter Remarks

Third Bunway Land	Sources		Parameter	Remarks
Formation	Heavy construction Source ID: For 24hrs activities:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
	Q1: 2_01, 2_02A	New or the second	017.0	Water suppression 12 times a day
	Q2: 2_01, 2_02A, 2_05A	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q3: 2_01, 2_02A, 2_02B-1, 2_02B-2, 2_03A, 2_05A	No. of working days per month, d	30 days	
	Q4: 2 02B-1, 2 02B-2, 2 03A	No. of working hours per day, h Emission Factor	24 hour 2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
	Emission Rate		1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	=2.69*1000000/(10000*30*h*60*60)*p/100
	For night-time activities:	Percentage active area, p	100.0 %	
	Q1: 1_09-1, 1_09-2, 2_06-1, 2_06-2, 2_06-3, 3_02A-1, 3_02A-2, 3_02A-3	Mitigation efficiency	91.7 %	
	Q2: 1_09-2, 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 3_02A-1, 3_02A-2, 3_02A-3	No. of working days per month, d	30 days	
	Q3: 2_04-1, 2_04-2, 2_06-1, 2_06-2, 2_06-3, 2_09-1, 3_02A-1, 3_02A-2, 3_02A-3	No. of working hours per day, h	12 (night) hour	
	Q4: 2_09-1	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 2.076E-04 g/m²/s (unmitigated) 1.723E-05 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*30*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p Emission Factor	100.0 % 0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
Third Runway  Wind Erosion (only)	Wind Erosion Source ID:	Percentage active area, p	20.0 %	Based on scheme design of definition for sand fill materials consisting of coarse materials with size not exceeding 37.5mm and fines content not exceeding 20%
=. 001011 (UIIIY)	Q1: 2_02B-1, 2_03A, 2_03B, 2_04-1, 2_04-2, 2_05A, 2_05B-1, 2_05B-2, 2_08, 2_09-1, 2_09-2, 3_02B	Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
	Q2: 2_02B-1, 2_03A, 2_03B, 2_05B-1, 2_05B-2, 3_02B Q3: 1_09-2, 3_02B Q4: 3_02A-1, 3_02A-2, 3_02A-3, 3_02B	Emission Rate	5.391E-07 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
Third Runway Other Construction	r Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Works/Facilities on newly formed land	1_06-2, 1_07-1, 1_08A-1, 1_08B-1, 2_02B-2, 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	O2: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1, 1_06-2, 1_09-1, 2_02B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04	No. of working days per month, d	30 days	
		No. of working hours per day, h	24 hour	
	Q4: 1_09-1, 1_09-2, 2_01, 2_02A, 2_03B, 2_04-1, 2_04-2, 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p Emission Factor Emission Rate	100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
Third Runway Other Construction	r Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Works/Facilities on newly formed land	Q1: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1,	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
(PART 1)	1_06-2, 1_07-1, 1_08A-1, 1_08B-1, 2_02B-2 Q2: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1, 1_06-2, 1_09-1, 2_02B-2	No. of working days per month, d	30 days	Sources Final neport
	Q3: 1_01, 1_02-1, 1_02-2, 1_03-1, 1_03-2, 1_04, 1_05, 1_06-1, 1_06-2, 1_09-1, 2_03B	No. of working hours per day, h	24 hour	
	Q4: 1_09-1, 1_09-2, 2_01, 2_02A, 2_03B, 2_04-1, 2_04-2	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	ADAS Table 44.0.4
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
Third Runway Other		Percentage active area, p	100.0 %	Assume % works area for heavy construction
Construction	r Heavy construction Source ID:			
Works/Facilities on	r Heavy construction Source ID:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
Works/Facilities on newly formed land	Source ID: Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04	Mitigation efficiency		Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
Works/Facilities on newly formed land	Source ID:	Mitigation efficiency  No. of working days per month, d  No. of working hours per day, h	91.7 % 30 days 24 hour	Equation (3-2) in the USEPA's Control of Open Fugitive Dust
Works/Facilities on newly formed land	Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2,	No. of working days per month, d	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated)	Equation (3-2) in the USEPA's Control of Open Fugitive Dust
Works/Facilities on newly formed land	O1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Wind Erosion	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3
Works/Facilities on newly formed land	Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04	No. of working days per month, d No. of working hours per day, h Emission Factor	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated)	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3
Works/Facilities on newly formed land (PART 2)	O1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Wind Erosion	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated) 100.0 % 0.85 Mg/hectare/year	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
Construction Works/Facilities on newly formed land (PART 2)  Midfield development (MD)	O1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Wind Erosion Source ID: (as above)	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
Works/Facilities on newly formed land (PART 2)	Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Wind Erosion Source ID: (as above)  Heavy construction Source ID:  Q1: MD Q2: MD	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 %  91.7 % 30 days	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day
Works/Facilities on newly formed land (PART 2)	Gurce ID:  Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04  Wind Erosion Source ID: (as above)	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate  Percentage active area, p Mitigation efficiency	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 %  91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
Works/Facilities on newly formed land (PART 2)	Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04  Wind Erosion Source ID: (as above)  Heavy construction Source ID: Q1: MD Q2: MD Q3: MD	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 %  91.7 % 30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated)	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3
Works/Facilities on newly formed land (PART 2)	C1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 C2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 C3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 C4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Wind Erosion Source ID: (as above)  Heavy construction Source ID: (2: MD C2: MD C3: MD C3: MD C4: MD Wind Erosion Wind Erosion Wind Erosion Source ID: (3: MD C4: MD C4: MD	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Factor Emission Rate	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 %  91.7 % 30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3
Works/Facilities on newly formed land (PART 2)  Midfield development (MD)	C1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 C2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 C3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 C4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Wind Erosion Source ID: (as above)  Heavy construction Source ID: (2: MD C2: MD C3: MD C3: MD C4: MD Wind Erosion Wind Erosion Wind Erosion Source ID: (3: MD C4: MD C4: MD	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 %  91.7 % 30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
Works/Facilities on newly formed land (PART 2)  Midfield development (MD)  South Cargo Roadworks - at	Source ID:  Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04  Wind Erosion Source ID: (as above)  Heavy construction Q1: MD Q2: MD Q3: MD Q4: MD  Wind Erosion Source ID: (as above)	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 %  91.7 %  30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
Works/Facilities on newly formed land (PART 2)  Midfield development (MD)  South Cargo Roadworks - at	Source ID:  Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04  Wind Erosion Source ID:  Q1: MD Q2: MD Q3: MD Q4: MD Wind Erosion Source ID: (as above)  Heavy construction Source ID: (as above)	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 %  91.7 % 30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (intigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.00 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.00 % 91.7 % 30 days	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day
Works/Facilities on newly formed land (PART 2)	Source ID:  Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04  Wind Erosion Source ID:  Q1: MD Q2: MD Q3: MD Q4: MD  Wind Erosion Source ID: (as above)  Heavy construction Source ID: (as above)	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Factor Emission Rate  Percentage active area, p  Mitigation efficiency	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 %  91.7 % 30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 % 91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
Works/Facilities on newly formed land (PART 2)  Midfield development (MD)  South Cargo Roadworks - at	Source ID:  Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04  Wind Erosion Source ID: (as above)  Heavy construction Source ID: (as above)  Wind Erosion Source ID: (as above)  Heavy construction Source ID: (as above)	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate  Percentage active area, p  Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Fercentage active area, p  Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 %  91.7 % 30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (initigated) 8.614E-06 g/m²/s (initigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.00 %  91.7 % 30 days 24 hour 2.69 Mg/hectare/month of activity 2.69 Mg/hectare/month of activity	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3  =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4  =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3  =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4  =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3  Assume road width equals 12m, therefore multiply emission ra
Works/Facilities on newly formed land (PART 2)  Midfield development (MD)  South Cargo Roadworks - at	Source ID:  Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04  Wind Erosion Source ID: (as above)  Heavy construction Source ID: (as above)  Wind Erosion Source ID: (as above)  Heavy construction Source ID: (as above)	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Rate  Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 %  91.7 % 30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (intigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.00 % 91.7 % 30 days 24 hour	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
Works/Facilities on newly formed land (PART 2)  Midfield development (MD)  South Cargo Roadworks - at	Source ID:  Q1: 2_07A-1, 2_07A-2, 2_07B, 3_01A-1, 3_01A-2, 4_04 Q2: 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q3: 2_05B-1, 2_05B-2, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04 Q4: 2_05A, 2_05B-1, 2_05B-2, 2_06-1, 2_06-2, 2_06-3, 2_07A-1, 2_07A-2, 2_07B, 2_08, 2_09-2, 4_04  Wind Erosion Source ID: (as above)  Heavy construction Source ID: (as above)  Wind Erosion Source ID: (as above)  Heavy construction Source ID: (as above)	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate  Percentage active area, p Emission Factor Emission Rate  Percentage active area, p  Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Emission Factor Fercentage active area, p  Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor	30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.0 %  91.7 % 30 days 24 hour 2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (initigated)  100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s  100.00 % 91.7 % 30 days 24 hour 2.69 Mg/hectare/month of activity 1.245E-03 g/m/s (unmitigated)	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100  AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100  Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report  AP42, Section 13.2.3.3 Assume road width equals 12m, therefore multiply emission raby 12m.

ppendix 5.2.7 - Details of Dust Emission Sources for 1-hour TSP Assessment (Tier 1) at Year 2019					

Appendix 5.2.7 - De	etails of Dust Emission Sources for 1-hour TSP Asset	ssment (Tier 1) at Year 2019		
South Cargo	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Roadworks - viaduct		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: CA3, CA4, CA5, CA6, CA7, CA8 Q2: CA3, CA4, CA5, CA6, CA7, CA8	No. of working days per month, d	30 days	Sources Final Report
	Q3: CA3, CA4, CA5, CA6, CA7, CA8 Q4: CA3, CA4, CA5, CA6, CA7, CA8	No. of working hours per day, h Emission Factor	24 hour 2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
				Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the
		Emission Rate	1.297E-04 g/m/s (unmitigated)	road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)
			1.077E-05 g/m/s (mitigated)	'=2.69*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
	, ,	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
				οιο τουσοκίζουσο στο στο στο μεταποίουσο στο στο στο στο στο στο στο στο στο σ
Roadworks Road 6 - viaduct (Concept F,	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Option 3)	O1: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37  O2: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11,	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF34, RF34, RF35, RF36, RF37  Q3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11,	No. of working days per month, d	30 days	
	RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF34, RF34, RF35, RF36, RF37, RF8, RF9, RF10, RF11, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11,	No. of working hours per day, h	24 hour	
	RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.297E-04 g/m/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
			1.077E-05 g/m/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p Emission Factor Emission Rate	100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
New APM	Heavy construction	Percentage active area, p	100.00 %	Assume % works area for heavy construction
Interchange Station (AIS)	Source ID:	Main and a second	04.7.0/	Water suppression 12 times a day
	Q1: AIS1, AIS2, EVA6, EVA7, EVA8 Q2:	Mitigation efficiency  No. of working days per month, d	91.7 % 30 days	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q3: Q4:	No. of working days per month, d No. of working hours per day, h Emission Factor	24 hour 2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: AIS1, AIS2, EVA6, EVA7, EVA8	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
Baggage Hall - Baggage Handling	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction Water suppression 12 times a day
System (BHS)	Q1: BHS1, BHS2, EVA9	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Socioso I mai Topori
	C4: BHS1, BHS2, EVA9	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: BHS1, BHS2, EVA9	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
New APM Depot (NAD)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
	Q1: NAD1, NAD2	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: NAD1, NAD2 Q3: NAD1, NAD2	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	Sources Final nepolt
	Q4: NAD2	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: NAD1, NAD2	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
BHS and APM tunnel	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction Water suppression 12 times a day
	Q1: BAT1, BAT2, NAB3, NAB4	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: Bat1, Bat2, NaB3, NaB4 Q3: Bat1, Bat2, NaB3, NaB4	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	·
	Q4: BAT1	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: BAT1, BAT2, NAB3, NAB4	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
T2 Expansion Area	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: Q2:	No. of working days per month, d	30 days	Sources Final Report
	Q3: Q4: AIS1, AIS2, NAB1, NAB2, NAB3, NAB4, BAT2, NAD1, EVA6, EVA7, EVA8	No. of working hours per day, h Emission Factor	24 hour 2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p Emission Factor	100.0 %  0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Factor Emission Rate	0.85 Mg/nectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100

## Appendix 5.2.7 - Details of Dust Emission Sources for 1-hour TSP Assessment (Tier 1) at Year 2020 Third Runway Work Areas Works Area Sources Parameter Remarks Third Runway Land 100.0 % eavy construct Percentage active area, p ormation Assume % works area for heavy construction or 24hrs activities: Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Sources Final Report No. of working days per month, d 30 days No. of working hours per day, h 24 hour Emission Factor 2.69 Mg/hectare/month of activity AP42, Section 13.2.3.3 Emission Rate 1.038E-04 g/m²/s (unmitigated) =2.69\*1000000/(10000\*30\*h\*60\*60)\*p/100 8.614E-06 g/m²/s (mitigated) For night-time activities: Percentage active area, p 100.0 % Mitigation efficiency 91.7 % Q2: 3\_02A-1, 3\_02A-2, 3\_02A-3 No. of working days per month, d 30 days Q3: 3\_02A-1, 3\_02A-2, 3\_02A-3 12 (night) hour No. of working hours per day, h AP42, Section 13.2.3.3 2.69 Mg/hectare/month of activity **Emission Factor** Emission Rate 2.076E-04 g/m<sup>2</sup>/s (unmitigated) =2.69\*1000000/(10000\*30\*h\*60\*60)\*p/100 1.723E-05 g/m²/s (mitigated) Wind Erosion Source ID: (as above) 100.0 % Percentage active area, p Emission Factor 0.85 Mg/hectare/year AP42, Table 11.9-4 Emission Rate 2.695E-06 g/m<sup>2</sup>/s =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 Based on scheme design of definition for sand fill materials Third Runway 20.0 % Percentage active area, p consisting of coarse materials with size not exceeding 37.5mm and Wind Erosion (only) nes content not exceeding 20% Q1: 2\_09-1, 3\_02A-1, 3\_02A-2, 3\_02A-3, 3\_02B Emission Factor 0.85 Mg/hectare/year AP42, Table 11.9-4 Q2: 2\_09-1, 3\_02B =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** 5.391E-07 g/m<sup>2</sup>/s Q4: 3\_02A-1, 3\_02B Heavy construction Source ID: Percentage active area, p Third Runway Other 100.0 % Assume % works area for heavy construction Construction Water suppression 12 times a day Q1: 1\_09-1, 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_06-1, 2\_06-2, 2\_06-3, 2\_07A-1, 2\_07A-2, 2\_07B, Works/Facilities on Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % newly formed land Sources Final Report 2 08, 2 09-2 No. of working days per month, d 30 days 2 08, 2 09-2 Q3: 1\_09-1, 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_08, 2\_09-2 No. of working hours per day, h 24 hour Q4: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_09-1, 3\_02A-2, 3\_02A-3 Emission Factor 2.69 Mg/hectare/month of activity AP42, Section 13.2.3.3 1.038E-04 g/m<sup>2</sup>/s (unmitigated) =2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 8.614E-06 g/m²/s (mitigated) Wind Erosion Percentage active area, p 100.0 % ource ID: (as above) 0.85 Mg/hectare/year AP42, Table 11.9-4 Emission Factor 2.695E-06 g/m<sup>2</sup>/s =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** Midfield development Heavy construction Source ID: Percentage active area, p 100.0 % Assume % works area for heavy construction (MD) Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report Mitigation efficiency 91.7 % Q1: MD Q2: MD No. of working days per month, d 30 days Q3: MD No. of working hours per day, h 24 hour AP42, Section 13.2.3.3 Q4: MD **Emission Factor** 2.69 Mg/hectare/month of activity

1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)

0.85 Mg/hectare/year

100.0 %

2.695E-06 g/m<sup>2</sup>/s

Emission Rate

Emission Factor

**Emission Rate** 

Percentage active area, p

Wind Erosion

ource ID: (as above)

=2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100

=0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100

AP42, Table 11.9-4

Appendix 5.2.7 - De	tails of Dust Emission Sources for 1-hour TS	P Assessment (Tier 1) at Year 2020		
Western Support	Heavy construction	Percentage active area, p	100.0 %	Accume 9/, works area for beautioned:
Area Emergency Access Road (flyover)	Source ID:	Mitigation efficiency	91.7 %	Assume % works area for heavy construction  Water suppression 12 times a day  Equation (3-2) in the USEPA's Control of Open Fugitive Dust
(llyover)	Q1: WSA1, WSA2, WSA3, WSA4 Q2: WSA1, WSA2, WSA3, WSA4		20 days	Sources Final Report
	Q3: WSA1, WSA2, WSA3, WSA4	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4: WSA1, WSA2, WSA3, WSA4	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.297E-04 g/m/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width +
			1.077E-05 g/m/s (mitigated)	50% extra for works) '=2.69*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5
	Wind Erosion		g (	
	Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
Western Support Area Emergency	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
Access Road (at grade)		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
(4. 9. 4.2)	Q1: WSA5 Q2: WSA5	No. of working days per month, d	30 days	Sources Final Report
	Q3: WSA5 Q4: WSA5	No. of working hours per day, h Emission Factor	24 hour 2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.245E-03 g/m²/s (unmitigated)	Assume road width equals 12m, therefore multiply emission rate by 12m.
				=2.69*1000000/(10000*d*h*60*60)*p/100 * 12
	Wind Erosion		1.034E-04 g/m²/s (mitigated)	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %	
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
New APM	Heavy construction	Percentage active area, p	100.00 %	Assume % works area for heavy construction
Interchange Station (AIS)	Source ID:			Assume % works area for heavy construction  Water suppression 12 times a day
-/	Q1: AIS1, AIS2, EVA6, EVA7, EVA8	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: AIS1, AIS2, EVA6, EVA7, EVA8	No. of working days per month, d	30 days	SSS1000 Final Hoport
	Q3: Q4:	No. of working hours per day, h Emission Factor	24 hour 2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: AIS1, AIS2, EVA6, EVA7, EVA8	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
			-	
Baggage Hall - Baggage Handling System (BHS)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction Water suppression 12 times a day
(3.13)	Q1: BHS1, BHS2, EVA9	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: BHS1, BHS2, EVA9 Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	·
	Q4:	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion			
	Cource ID: (as above) Q1: BHS1, BHS2, EVA9	Percentage active area, p Emission Factor Emission Rate	100.00 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
			Č	-0.50 1000000 (10000 000 E1 00 00) p.100
New APM Depot (NAD)	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: NAD2 Q2: NAD1, NAD2	No. of working days per month, d	30 days	Sources Final Report
	Q3: NAD1, NAD2 Q4:	No. of working hours per day, h Emission Factor	24 hour 2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.00 %	
	Q1: NAD2	Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
BHS and APM	Heavy construction Source ID:	Percentage active area, p	100.00 %	Assume % works area for heavy construction
tunnel		Mildian at the second second	04.7.07	Water suppression 12 times a day
	Q1: BAT1	Mitigation efficiency	91.7 %	Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report
	Q2: BAT1, BAT2, NAB3, NAB4 Q3:	No. of working days per month, d No. of working hours per day, h	30 days 24 hour	
	Q4:	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion	Doroontono estivo		
	Source ID: (as above) Q1: BAT1	Percentage active area, p Emission Factor	100.00 % 0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
T2 Expansion Area	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction
		Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust
	Q1: NAB1, NAB2, NAB3, NAB4, BAT2, NAD1 Q2: NAB1, NAB2	No. of working days per month, d	30 days	Sources Final Report
	Q3:	No. of working hours per day, h	24 hour	
	Q4:	Emission Factor Emission Rate	2.69 Mg/hectare/month of activity 1.038E-04 g/m²/s (unmitigated) 8.614E-06 g/m²/s (mitigated)	AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion	Percentage active area, p	100.0 %	
	Source ID: (as above)	Emission Factor	0.85 Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.695E-06 g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
	]			

## Third Runway Work Areas Works Area Sources Parameter Remarks leavy construction Third Runway Land Percentage active area, p Source ID: Formation Assume % works area for heavy construction For 24hrs activities: Q1: Water suppression 12 times a day Mitigation efficiency Equation (3-2) in the USEPA's Control of Open Fugitive Dust 91.7 % Sources Final Report Q2: No. of working days per month, d 30 days Q3: 24 hour No. of working hours per day, h Q4: 3\_01B-1, 3\_01B-2 2.69 Mg/hectare/month of activity **Emission Factor** AP42, Section 13.2.3.3 =2.69\*1000000/(10000\*30\*h\*60\*60)\*p/100 1.038E-04 g/m<sup>2</sup>/s (unmitigated) **Emission Rate** 8.614E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) **Emission Factor** 0.85 Mg/hectare/year AP42, Table 11.9-4 2.695E-06 g/m<sup>2</sup>/s **Emission Rate** =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 Based on scheme design of definition for sand fill materials Third Runway Wind Erosion Source ID: Percentage active area, p 20.0 % consisting of coarse materials with size not exceeding 37.5mm Wind Erosion (only) and fines content not exceeding 20% Q1: 3\_02A-1, 3\_02B 0.85 Mg/hectare/year AP42, Table 11.9-4 **Emission Factor** Q2: 3\_02A-1, 3\_02B =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** $5.391E-07 \text{ g/m}^2/\text{s}$ Q3: 3\_02A-1, 3\_02B Q4: 3\_02A-1, 3\_02B Heavy construction Third Runway Other 100.0 % Percentage active area, p Assume % works area for heavy construction Construction Water suppression 12 times a day Works/Facilities on 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Q1: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B- Mitigation efficiency newly formed land 1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 2\_09-1, 3\_02A-2, 3\_02A-3 Sources Final Report Q2: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B 1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-1, 3\_01A-2, 3\_01A- No. of working days per month, d 30 days 3, 4\_01-1, 4\_01-2, 4\_01-3, 4\_05-1 Q3: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B 1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-1, 3\_01A-2, 3\_01A-3, 3\_01B-1, 3\_01B-2, 4\_01-1, 4\_01-2, 4\_01-3, 4\_05-1 No. of working hours per day, h 24 hour Q4: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B 1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-1, 3\_01A-2, 3\_01A-3, 4\_01-1, 4\_01-2, 4\_01-3, 4\_03-1, 4\_03-2, 4\_05-1 AP42, Section 13.2.3.3 **Emission Factor** 2.69 Mg/hectare/month of activity 1.038E-04 g/m<sup>2</sup>/s (unmitigated) =2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 8.614E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion 100.0 % Percentage active area, p Source ID: (as above) **Emission Factor** 0.85 Mg/hectare/year AP42, Table 11.9-4 Emission Rate 2.695E-06 g/m<sup>2</sup>/s =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 Airside tunnels (AT) Heavy construction 100.0 % Percentage active area, p Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Sources Final Report Q2: AT1, AT3 No. of working days per month, d 30 days Q3: AT1, AT3 No. of working hours per day, h 24 hour Q4: AT1, AT2, AT3 **Emission Factor** 2.69 Mg/hectare/month of activity AP42, Section 13.2.3.3 **Emission Rate** 1.038E-04 g/m²/s (unmitigated) =2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100 8.614E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) **Fmission Factor** 0.85 Mg/hectare/year AP42, Table 11.9-4 =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** 2.695E-06 g/m<sup>2</sup>/s leavy construction 100.0 % Midfield Percentage active area, p Assume % works area for heavy construction Source ID: development (MD) Water suppression 12 times a day Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Q1: MD Sources Final Report Q2: MD No. of working days per month, d 30 days Q3: MD No. of working hours per day, h 24 hour Emission Factor Q4: MD 2.69 Mg/hectare/month of activity AP42, Section 13.2.3.3 **Emission Rate** 1.038E-04 g/m<sup>2</sup>/s (unmitigated) =2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100 8.614E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) **Emission Factor** 0.85 Mg/hectare/year AP42, Table 11.9-4 =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 **Emission Rate** 2.695E-06 g/m<sup>2</sup>/s South Cargo Heavy construction Source ID: Percentage active area, p 100.00 % Assume % works area for heavy construction Roadworks - at Water suppression 12 times a day Mitigation efficiency 91./ % equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report No. of working days per month, d 30 days Q3: CA1, CA2 No. of working hours per day, h 24 hour Q4: CA1, CA2 **Emission Factor** 2.69 Mg/hectare/month of activity AP42, Section 13.2.3.3 Assume road width equals 12m, therefore multiply emission rate **Emission Rate** 1.245E-03 g/m/s (unmitigated) =2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100 \* 12 1.034E-04 g/m/s (mitigated) Wind Erosion Percentage active area, p 100.00 % Source ID: (as above) **Emission Factor** 0.85 Mg/hectare/year AP42, Table 11.9-4 **Emission Rate** $2.695E-06\ g/m^2/s$ =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100

Appendix 5.2.7 - Details of Dust Emission Sources for 1-hour TSP Assessment (Tier 1) at Year 2021

South Cargo	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction	
Roadworks - viaduct	Q1:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report	
	Q2: Q3: CA3, CA4, CA5, CA6, CA7, CA8 Q4: CA3, CA4, CA5, CA6, CA7, CA8	No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	30 days 24 hour 2.69 Mg/hectare/month of activity  1.297E-04 g/m/s (unmitigated)	AP42, Section 13.2.3.3  Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)  '=2.69*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5	
			1.077E-05 g/m/s (mitigated)	=2.09 1000000/(10000 30 11 00 00) \$7100 (3/30) 7.3	
	Wind Erosion Source ID: (as above)	Percentage active area, p Emission Factor Emission Rate	100.0 % 0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100	
Roadworks Road 6 -	Heavy construction Source ID:	Percentage active area, p	100.0 %	Assume % works area for heavy construction	
viaduct (Concept F, Option 3)	Q1:	Mitigation efficiency	91.7 %	Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report	
	Q2:	No. of working days per month, d	30 days		
	Q3: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	No. of working hours per day, h	24 hour		
	Q4: RF1, RF2, RF3, RF4, RF5, RF6, RF7, RF8, RF9, RF10, RF11, RF12, RF13, RF14, RF15, RF16, RF17, RF18, RF19, RF20, RF21, RF22, RF23, RF24, RF25, RF26, RF27, RF28, RF29, RF30, RF31, RF32, RF33, RF34, RF35, RF36, RF37	Emission Factor	2.69 Mg/hectare/month of activity	AP42, Section 13.2.3.3	
		Emission Rate	1.297E-04 g/m/s (unmitigated)	Assume 30m spacing between road piers (base:5mx 5m), therefore total active area equals 5m divided by 30m. Since the road is approximated to a line, assume width of 7.5m (i.e. 5m pile width + 50% extra for works)	
			1.077E-05 g/m/s (mitigated)	'=2.69*1000000/(10000*30*h*60*60)*p/100 * (5/30) * 7.5	
	Wind Erosion Source ID: (as above)	Percentage active area, p	100.0 %		
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.695E-06 g/m²/s	AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100	

#### Third Runway Work Areas Parameter Works Area Sources Remarks Third Runway Land leavy construction Percentage active area, p 100.0 % Source ID: Formation Assume % works area for heavy construction For 24hrs activities: Water suppression 12 times a day Q1: 3\_02B Mitigation efficiency 91.7 % Equation (3-2) in the USEPA's Control of Open Fugitive Dust Sources Final Report Q2: No. of working days per month, d 30 days Q3: No. of working hours per day, h 24 hour Q4: 3\_02B 2.69 Mg/hectare/month of activity **Emission Factor** AP42, Section 13.2.3.3 1.038E-04 g/m²/s (unmitigated) =2.69\*1000000/(10000\*30\*h\*60\*60)\*p/100 **Emission Rate** 8.614E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) **Emission Factor** 0.85 Mg/hectare/year AP42, Table 11.9-4 =0.85\*100000/(10000\*365\*24\*60\*60)\*p/100 2.695E-06 g/m<sup>2</sup>/s **Emission Rate** Wind Erosion Based on scheme design of definition for sand fill materials Third Runway Source ID: 20.0 % Percentage active area, p consisting of coarse materials with size not exceeding 37.5mm Wind Erosion (only) and fines content not exceeding 20% Q1: 3\_02A-1 **Emission Factor** 0.85 Mg/hectare/year AP42, Table 11.9-4 Q2: 3\_02A-1 Emission Rate 5.391E-07 g/m<sup>2</sup>/s =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 Q3: 3\_02B Third Runway Other Heavy construction 100.0 % Percentage active area, p Assume % works area for heavy construction Source ID: Construction Works/Facilities on Water suppression 12 times a day Q1: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, Equation (3-2) in the USEPA's Control of Open Fugitive Dust 91.7 % newly formed land Mitigation efficiency 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-1, 3\_01A-2, 3\_01A-3, 4\_01-1, 4\_01-2, 4\_01-3, 4\_03-1, 4\_03-2, 4\_05-1 Sources Final Report Q2: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_01A-3, 3\_02B, 30 days No. of working days per month, d 4\_03-1, 4\_03-2, 4\_05-1 Q3: 2\_01, 2\_02A, 2\_02B-1, 2\_02B-2, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, 2\_05B-2, 2\_07A-1, 2\_07A-2, 2\_07B, 3\_02A-1, 4\_05-1 No. of working hours per day, h 24 hour Q4: 2\_01, 2\_02A, 2\_02B-1, 2\_03A, 2\_03B, 2\_05A, 2\_05B-1, AP42 Section 13.2.3.3 **Emission Factor** 2.69 Mg/hectare/month of activity 2 05B-2, 4 05-1 1.038E-04 g/m²/s (unmitigated) =2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 8.614E-06 g/m<sup>2</sup>/s (mitigated) Wind Erosion 100.0 % Percentage active area, p Source ID: (as above) **Emission Factor** 0.85 Mg/hectare/year AP42, Table 11.9-4 =0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100 2.695E-06 g/m<sup>2</sup>/s **Emission Rate** Percentage active area, p 100.0 % Airside tunnels (AT) leavy constru Assume % works area for heavy construction Water suppression 12 times a day Equation (3-2) in the USEPA's Control of Open Fugitive Dust Mitigation efficiency 91.7 % Q1: AT1, AT2, AT3 Sources Final Report Q2: AT2, AT3 No. of working days per month, d 30 days No. of working hours per day, h Q3: AT3 24 hour Q4: AT3 2.69 Mg/hectare/month of activity **Emission Factor** AP42, Section 13.2.3.3 1.038E-04 g/m²/s (unmitigated) =2.69\*1000000/(10000\*d\*h\*60\*60)\*p/100 **Emission Rate** 8.614E-06 g/m²/s (mitigated) Wind Erosion Percentage active area, p 100.0 % Source ID: (as above) 0.85 Mg/hectare/year **Emission Factor** AP42, Table 11.9-4

2.695E-06 g/m<sup>2</sup>/s

=0.85\*1000000/(10000\*365\*24\*60\*60)\*p/100

Emission Rate

Appendix 5.2.7 - Details of Dust Emission Sources for 1-hour TSP Assessment (Tier 1) at Year 2022

## Barging Points, Crushing Plant, Concrete and Asphalt Batching Plants, C&D Stockpile and other Stockpiles

Mean wind speed, U Emission Factor, E Brission Balt Brission efficiency Bris	Description	Sources	Parameter		Emission Rate	Remarks
Source ID. TBP1-6  Mosture content, M  Assume as the same as Expenses Rall Link and Estracted if April 1997  Assume as the same as Expenses Rall Link and Estracted if Locroso ASTE, (Appendix ASTE, (Appendix ASTE, (Appendix ASTE)) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE (Appendix ASTE)) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE) and ASTE (Appendix ASTE (APPENDIX ASTE)) and ASTE (APPENDIX ASTE (APPENDIX ASTE (APPENDIX ASTE)) and ASTE (APPENDIX	Barging Point	Unloading of spoils to barge	Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
Mean wind speed, U Emission Factor, E  No. of operation flour Maximum handling capity for each barging point Emission height Milopation efficiency  Peed hauf road outside concrete batching plant  Peed hauf road outside con	0 0			5	%	Assume as the same as Express Rail Link and Extracted from SP
Mean wind speed, U Emission Factor, E No. of operation hour Maximum harding capity for each barging point Emission height Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission flator, E Emission height EMAR-PHIT to MAR-PHIT EMAR-PHIT to MAR-PHIT EMAR-PHIT to MAR-PHIT EMAR-PHIT to EC-PHIT  For Indiaden Vehicle Emission height EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMAR-PHIT EMAR-PHIT to EMA			,			
Emission Factor, E No. of operation hour Benefit No. of operation hour Benefit No. of operation hour Benefit No. of operation hour Benefit No. of operation hour Benefit No. of operation hour Benefit No. of operation hour Benefit No. of operation hour Benefit No. of operation hour Benefit No. of operation hour Benefit No. of operation hour Benefit No. of operation hour Benefit No. of operation hour Benefit Benefit No. of truck tips per day No. of truck tips			Mean wind speed II	49	m/s	
No. of operation hour Maximum handing expoly for each barging point Emission height Emission height Emission height Emission height Emission height Emission height Emission height Emission height Emission height Emission height Emission height Emission height Emission height Emission height Emission height Emission height Emission height Emission Rate  1 10 EU 18; millisglated)  AP 42, Section 13.2.1, Table 13.2.1.3 (1711 ed.						
No. of operation hour Maximum handling reportly for each barging point and maximum handling reportly for each barging point and maximum handling reportly for each barging point and point of the point			Lillission ractor, L	9.30∟-04	kg/ivig	
Maximum handling capcity for each barging point			No. of anarotion have	10	la u	
Emission height Mitigation efficiency Mitigation efficiency Emission height Mitigation efficiency Emission height Mitigation efficiency Emission height Mitigation efficiency Emission height Mitigation efficiency Emission height Mitigation efficiency Emission height Mitigation efficiency Emission height Mitigation efficiency Emission height Mitigation efficiency Mitigation						
Emission helghit Miligation efficiency 90 % installation of flexible curtain and shelter with water spray a power statching Plant For Laden Vehicle Source ID: MAP-41 Section 13.2.1, Table 13.2.1-1, DIV11 ed. Average truck weight, W 23.3 from For Laden Vehicle Source ID: WAR-HR10 WG-P4-HR10 WG-P4-			Maximum handling capcity for each barging point			
Miligation efficiency Emission Rate  Concrete Activity Plant For Lader Vehicle Sure ID: WAR-P4-HR1 to WAR-P4-HR10  EAC-HR1 to EC-P2-HR7  Paved haul road outside concrete batching plant  Emission height  Emission height  Emission height  Emission height  EMA-P4-HR1 to WAR-P4-HR10  EAC-HR1 to EC-P2-HR7  Paved haul road outside concrete batching plant  Emission height  EMA-P4-P4-P4-P4-P4-P4-P4-P4-P4-P4-P4-P4-P4-						Assume 12 working hours (7:00 - 19:00) per day
Einssion Rate Paved haul road outside concrete batching plant - Particle size multiplier, k Source ID: WASHR1 to WASHR13 WASHR1 to WASHR13 WCP4-RR1 to WCP4-RR10 EAS-HR1 to EAC-HR1 EC-P2-RR1 to EC-P2-RR1 WC-P4-RR10 WC-P4-						
Emission Rate Pawd haul road outside concrete batching plant - For Laden Vehicle Source ID WASHR13 WARP-4HR10 WARPH101 EAR-HR1 to WARP-4HR10 EAR-HR1 to WARP-4HR10 EAR-HR1 to WARP-4HR10 EAR-HR1 to WARP-4HR10 EAR-HR1 to EAR-HR4 EAR-HR1 to EAR-HR4 EC-P2-HR1 to EC-P2-HR7  Pawd haul road outside concrete batching plant - For Laden Vehicle Source ID WARP-4HR10 WC-HR13 WC-P4-HR10 to WARP-4HR10 EAR-HR1 to WARP-4HR10 EAR-HR1 to EAR-HR4 EAR-HR1 to EAR-HR4 EC-P2-HR1 to EC-P2-HR7  Pawd haul road outside concrete batching plant - For Laden Vehicle Source ID WARP-4HR10 WC-HR13 WC-P4-HR10 to WARP-4HR10 EAR-HR10 EAR-HR4 EAR-HR10 EAR-HR4 EAR-HR10 EAR-HR4 EAR-HR10 EAR-HR4 EC-P2-HR10 EC-P2-HR7  Pawd haul road outside concrete batching plant - For Laden Vehicle Source ID WARP-4HR10 EAR-HR10 EAR-HR4 EC-P2-HR10 EC-P2-HR7  Particle size multiplier, k Road surface and recommendation for the starting plant in the property of the property of the property o			Mitigation efficiency	90	%	Installation of flexible curtain and shelter with water spray at discharge
Paved haur road outside concrete batching plant for Laden Vehicle Source ID: WASHR13 WASHR13 WASHR13 WASHR14 to WASHR13 WCP4HR1 to WASHR14 EACHR1 to EACHR4 ECP2HR1 to ECP2HR7  Paved haur road outside concrete batching plant for dust suppression factor, E  Paved haur road outside concrete batching plant for United Source ID: WASHR13 WCP4HR10 to WASHR13 WCP4HR10 EASHR14 EACHR1 to EACHR4 ECP2HR1 to ECP2HR7  Paved haur road outside concrete batching plant for United Source ID: WCP4HR10 to WCP4HR10  EASHR16 to EACHR4 ECP2HR1 to ECP2HR17  EMBORATE AND ASHR16 to EACHR4 ECP2HR1 to ECP2HR17  EMBORATE ASHR16 to EACHR4 EACHR16 to EACHR4 ECP2HR1 to ECP2HR17  EMBORATE ASHR16 to EACHR4 ECP2HR16 to ECP2HR17  EMBORATE ASHR16 to EACHR4 ECP2HR17 to ECP2HR17  EMBORATE ASHR16 to EACHR4 ECP2HR16 to ECP2HR17  EMBORATE ASHR16 to EACHR4 ECP2HR17 to ECP2HR17  EMBORATE ASHR16 to EACHR4 ECP2HR16 to ECP2HR17  EMBORATE ASHR16 to EACHR4 ECP2HR16 to ECP2HR17  EMBORATE ASHR16 to EACHR4 ECP2HR16 to ECP2HR17  EMBORATE ASHR16 to EACHR4 ECP2HR16  to EACHR4 ECP2HR176 to EACHR4 ECP2HR176 to EACHR4 ECP2HR176 to EACHR4 ECP2HR176 to EACHR4 ECP2HR176 to EACHR4 EACHR16 to EACHR4 EACHR16 to EACHR4 EACHR16 to EACHR4 EACHR16 to EACHR4 EACHR16 to EACHR4 EACHR16 to EACHR4 EACHR176 to EACHR4 EACHR176 to EACHR4 EACHR176 to EACHR4 EACHR						point
Read surface sitt loading, st. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Ap-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Ap-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Ap-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Assumed that symble will lift dust from the road surface an tom 0.5m height.  WC-P4-HR1 to WC-P4-HR10  EAB-HR1 to EAB-HR4  EAC-HR1 to EAC-HR4  EC-P2-HR1 to EC-P2-HR7  No. of poeration hour % of dust suppression Pate latching Plant Pate latching Plant Port Life Source ID: WC-P4-HR10  Emission Rate  Pared haul road outside concrete batching plant Port Life Source ID: WC-P4-HR10  EAB-HR1 to EAB-HR4  EC-P2-HR1 to EC-P2-HR10  Emission Rate  Pared haul road outside concrete batching plant Port Life Source ID: WC-P4-HR10  WC-P4-HR10 WC-P4-HR10  Emission Rate  Pared haul road outside concrete batching plant Port Life Source ID: WC-P4-HR10  WC-P4-HR10 WC-P4-HR10  WC-P4-HR10 WC-P4-HR10  EAB-HR1 to WAB-P4-HR10  WC-P4-HR10 WC-P4-HR10  WC-P4-HR10 WC-P4-HR10  WC-P4-HR10 WC-P4-HR10  WC-P4-HR10 EAD-HR4  EAC-HR1 to EAD-HR4  EAC-HR1 to EAD-HR4  EAC-HR1 to EAD-HR4  EAC-HR1 to EAD-HR4  EAC-HR1 to EAC-HR4  EAC-HR1 to E			Emission Rate	1.01E-01	g/s (mitigated)	
Read surface sitt loading, st. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Ap-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Ap-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Ap-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Assumed that symble will lift dust from the road surface an tom 0.5m height.  WC-P4-HR1 to WC-P4-HR10  EAB-HR1 to EAB-HR4  EAC-HR1 to EAC-HR4  EC-P2-HR1 to EC-P2-HR7  No. of poeration hour % of dust suppression Pate latching Plant Pate latching Plant Port Life Source ID: WC-P4-HR10  Emission Rate  Pared haul road outside concrete batching plant Port Life Source ID: WC-P4-HR10  EAB-HR1 to EAB-HR4  EC-P2-HR1 to EC-P2-HR10  Emission Rate  Pared haul road outside concrete batching plant Port Life Source ID: WC-P4-HR10  WC-P4-HR10 WC-P4-HR10  Emission Rate  Pared haul road outside concrete batching plant Port Life Source ID: WC-P4-HR10  WC-P4-HR10 WC-P4-HR10  WC-P4-HR10 WC-P4-HR10  EAB-HR1 to WAB-P4-HR10  WC-P4-HR10 WC-P4-HR10  WC-P4-HR10 WC-P4-HR10  WC-P4-HR10 WC-P4-HR10  WC-P4-HR10 EAD-HR4  EAC-HR1 to EAD-HR4  EAC-HR1 to EAD-HR4  EAC-HR1 to EAD-HR4  EAC-HR1 to EAD-HR4  EAC-HR1 to EAC-HR4  EAC-HR1 to E	Concrete	Paved haul road outside concrete batching plant -	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
For Lader Vehicle Source ID: WASHR1 to WAS P4HR10 to WAS P4HR10 WC-P4HR10 WC-P4HR10 EASHR1 to WAS P4HR10 WC-P4HR10 WC-P4HR10 EASHR1 to EAC-HR4 EC-HR1 to EC-P2-HR10 EMail road outside concrete batching plant Emission Rate EMail loading, sl. Assumed that vehicle will lift dust from the road surface an from 0.5m height Existing Plant EC-P2-HR10 to EC-P2-HR10 EMail road outside concrete batching plant Emission Rate EXECUTE: WASHR10 EMAIL ROAD RASHR10 EMISSION RASHR10 RASHR10 EMAIL ROAD RASHR10 RASHR1		3 p				
Source ID: WAB-HR1 to WAB-HR13 WAB P4-HR10 WAB-HR10 WC-P4-HR10 WC-P4-HR10 WC-P4-HR10 WC-P4-HR10 EAR HR1 to EAB-HR4 EAC-HR1 to EAC-HR4 EC-P2-HR1 to EAC-HR4 EC-P2-HR10 EC-P2-HR10 Emission factor, E  Emission factor, E  Source ID: WAB-HR10 WAB-P4-HR10 WC-P4-HR10 WC-P4-HR10  Emission factor, E  Source ID: WC-P4-HR10 WC-P4-HR10  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  Source ID: WC-P4-HR10 EAC-HR4 EC-P2-HR10 EC-P2-HR1 EC-P2-HR10 EC-P2-HR1  Emission factor, E  Source ID: WC-P4-HR10 WC-P4-HR10  WC-P4-HR10 WC-	Jatoming Frank	For I aden Vehicle				
WAB-HR1 to WAB-HR13 WC-P4-HR10 WC-HR1 to WC-HR13 WC-P4-HR10 EAB-HR1 to EAB-HR4 EAC-HR1 to EAC-HR4 EC-HR1 to EC-P2-HR7  Paved haul road outside concrete batching plant - For Unladen Vehicle Source ID: WAB-HR10 to WAB-P4-HR10  WC-P4-HR10  EAB-HR1 to WAB-P4-R10  EAB-HR10 EAD-HR4 EC-HR1 to EC-P2-HR7  WC-P4-HR10  EC-R10 EC-R14			Average track weight, **	20.0	toris	Tuli loading of Asphalt Tipper, engineering estimate
WAB-P4-HR1 to WAB-P4-HR10 WC-HR13 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 WC-HR10 EAB-HR4 EAC-HR1 to EAC-HR4 EC-HR1 to EAC-HR4 EC-HR1 to EC-HR14 EC-P2-HR1 to EC-P2-HR7 WC-WAB-P4-HR10 WC-W				İ		
WC-HR1 to WC-HR13 WC-P4-HR1 to WC-P4-HR10 EAB-HR1 to EAB-HR4 AB-HR1 to EAB-HR4 EAC-HR4 to EAC-HR4 EC-HR1 to EC-P2-HR7  No. of truck trips per day  No. of dust suppression  No. of operation hour Emission Rate  No. of operation hour No. of dust suppression  Particle size multiplier, k Road surface sit loading, st. Average truck weight, W Average truck weight, W Average truck weight, W Average truck weight, W Average truck weight, W Average truck weight, W Average truck weight, W Average truck weight, W Assume as the same as Express Rail Link and Extracted for the form to form the form the form to form the for			Emission beight	0.5		A accompany that cooking a could lift death from the ground according to the control of
WC-HR10 WC-HR10 WC-P4-HR10 WC-P4-HR10  EAB-HR1 to EAB-HR4  EAC-HR1 to EAC-HR4 EC-HR1 to EAC-HR4 EC-HR1 to EC-HR14 EC-P2-HR7  No. of truck trips per day  No. of peration hour Emission Rate  Paved haul road outside concrete batching plant For Unladen Vehicle Source ID: WAB-P4-HR1 to WAB-P4-HR10  WC-P4-HR10  WC-P4-HR10  EAB-HR1 to EC-HR14 EC-P2-HR7  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  Paved haul road outside concrete batching plant  For Unladen Vehicle Source ID: WAB-HR10  WAB-P4-HR10  WC-P4-HR10  WC-P4-HR10  WC-P4-HR10  EAB-HR1 to WC-P4-HR10  EAB-HR1 to WC-P4-HR10  EAB-HR1 to WC-P4-HR10  EAB-HR1 to EAB-HR4  No. of truck trips per day  No. of truck trips per day  No. of poreation hour  TSP emission factor, E  938  gVKT  Set trips/hr From engineer, Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Concrete Batching Plant  Eak-KR1, (Appendix C).  For Unladen Vehicle Source ID: WAB-HR10  WAB-P4-HR10  WC-P4-HR10  WC-P4-HR10  EAB-HR1 to WC-P4-HR10  EAB-HR1 to WC-P4-HR10  EAB-HR1 to EC-P4-HR4  EC-P2-HR1 to EC-P4-HR4  EC-P2-HR1 to EC-P4-HR4  EC-P2-HR1 to EC-P4-HR7  No. of operation hour  10 trips/hr 10 trips/hr From engineer, Asphalt Tipper Lorries in Asphalt Plant From Engineer, Asphalt Tipper Lorries in Asphalt Plant From Engineer, Asphalt Tipper Lorries in Concrete Batching  EAC-HR1 to EC-P2-HR7  No. of dust suppression  WC-P2-HR1 to EC-P2-HR7  No. of operation hour  10 trips/hr 11 trips/hr 12 tr  No. of poreation hour  12 tr  No. of dust suppression  No. of dust suppression  No. of dust suppression  No. of dust suppression  No. of dust suppression  No. of dust suppression  No. of dust suppression  No. of dust suppression  No. of dust suppression  No. of dust suppression  No. of dust suppression  No. of dust suppression  No. of dust su		WAB-P4-HRT to WAB-P4-HRTU	Emission neight	0.5	m	
WC-P4-HR1 to WC-P4-HR10  EAB-HR4  EAC-HR1 to EAC-HR4  EAC-HR1 to EAC-HR4  EC-P2-HR1 to EC-P2-HR7  No. of peration hour  Emission Rate  Paved haul road outside concrete batching plant- Statching Plant  For Uniden Vehicle Source ID: WASH-R1 to WAS-HR13 WAS-P4-HR10 to WC-P4-HR10  WC-P4-HR10 to WC-P4-HR10  EAS-HR10 to EAB-HR4  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  No. of dust suppression  Paved haul road outside concrete batching plant- Statching Plant  For Uniden Vehicle Source ID: WC-P4-HR10 to WC-P4-HR10  WC-P4-HR10 to WC-P4-HR10  EAS-HR10 to WC-P4-HR10  EAS-HR10 to WC-P4-HR10  EAS-HR10 to EAB-HR4  No. of truck trips per day  No. of truck trips per						
EAB-HR1 to EAB-HR4  EAC-HR1 to EAC-HR4 EC-HR1 to EC-HR14 EC-HR1 to EC-HR14 EC-HR1 to EC-HR14 EC-P2-HR7 to EC-P2-HR7  No. of operation hour % of dust suppression  Paved haul road outside concrete batching plant— For Uniden Vehicle Source ID: WAB-HR1 to WAB-HR13 WAB-P4-HR10 WAB-P4-HR10 WC-P4-HR10 EAC-HR1 EAC-HR1 to WC-P4-HR10 EAC-HR1 EAC-HR1 to EA-HR4 EAC-HR1 to EA-HR4 EAC-HR1 to EC-P2-HR7  No. of operation hour % of dust suppression  No. of poration hour % of dust suppression  Paved haul road outside concrete batching plant— For Uniden Vehicle Source ID: WC-P4-HR10 WC-P4-HR10 WC-P4-HR10 EAC-HR11 to WC-P4-HR10 EAC-HR1 to EC-HR14 EAC-HR1 to EC-HR14 EAC-HR1 to EC-HR14 EAC-HR1 to EC-HR14 EC-P2-HR7  No. of truck trips per day  No. of truck trips per day  No. of truck trips per day  No. of poration hour 12 hr 140 trips/hr From engineer, Asphalt Tipper Lorries in Asphalt Tipper Lorries in Concrete Batching Plant From Engineer, Asphalt Tipper Lorries in Concrete Batching Plant From Engineer, Asphalt Tipper Lorries in Asphalt Plant From Engineer, Asphalt Tipper Lorries in Asphalt Plant From Engineer, Asphalt Tipper Lorries in Asphalt Plant From Engineer, Asphalt Tipper Lorries in Asphalt Plant From Engineer, Asphalt Tipper Lorries in Asphalt Plant From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphal			TSP emission factor, E			
RAC-HR1 to EAC-HR4 EC-HR1 to EC-HR4 EC-HR1 to EC-HR4 EC-HR1 to EC-P2-HR7  No. of operation hour EC-P2-HR1 to EC-P2-HR7  No. of operation hour EC-P2-HR1 to EC-P2-HR7  No. of operation hour Some as the same as Express Rall Link and Extracted for License of XRL (Appendix C).  Emission Rate  Paved haul road outside concrete batching plant For Unladen Vehicle Source ID: WAB-HR1 to WAB-HR13 WAB-P4-HR1 to WAB-P4-HR10  WC-P4-HR1 to WAB-P4-HR10  EAB-HR1 to EAC-HR4 EAC-HR1 to EAC-HR4 EC-HR1 to EC-P2-HR7  No. of truck trips per day  No. of truck trips per day No. of peration hour 12 br Assume as the same as Express Rall Link and Extracted for License of XRL (Appendix C).  Emission Rate  Paved haul road outside concrete batching plant For Unladen Vehicle Source ID: WAB-HR1 to WAB-HR13 WAB-P4-HR10  WC-P4-HR1 to WAB-P4-HR10  EAB-HR1 to EAC-HR4 EAC-HR1 to EAC-HR4 EC-HR1 to EAC-HR4 EC-HR1 to EC-P2-HR7  No. of preration hour 12 br Assume as the same as Express Rall Link and Extracted for License of XRL (Appendix C).  From engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Plant From Enginer, Asphalt Plant From Enginer, Asphalt Plant From Enginer, A		WC-P4-HR1 to WC-P4-HR10		938	g/VKT	Asphalt Tipper
RAC-HR1 to EAC-HR4 EC-HR1 to EC-HR4 EC-HR1 to EC-HR4 EC-HR1 to EC-P2-HR7  No. of operation hour EC-P2-HR1 to EC-P2-HR7  No. of operation hour EC-P2-HR1 to EC-P2-HR7  No. of operation hour Some as the same as Express Rall Link and Extracted for License of XRL (Appendix C).  Emission Rate  Paved haul road outside concrete batching plant For Unladen Vehicle Source ID: WAB-HR1 to WAB-HR13 WAB-P4-HR1 to WAB-P4-HR10  WC-P4-HR1 to WAB-P4-HR10  EAB-HR1 to EAC-HR4 EAC-HR1 to EAC-HR4 EC-HR1 to EC-P2-HR7  No. of truck trips per day  No. of truck trips per day No. of peration hour 12 br Assume as the same as Express Rall Link and Extracted for License of XRL (Appendix C).  Emission Rate  Paved haul road outside concrete batching plant For Unladen Vehicle Source ID: WAB-HR1 to WAB-HR13 WAB-P4-HR10  WC-P4-HR1 to WAB-P4-HR10  EAB-HR1 to EAC-HR4 EAC-HR1 to EAC-HR4 EC-HR1 to EAC-HR4 EC-HR1 to EC-P2-HR7  No. of preration hour 12 br Assume as the same as Express Rall Link and Extracted for License of XRL (Appendix C).  From engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Tipper Lorries in Concrete Batching From Engineer, Asphalt Plant From Enginer, Asphalt Plant From Enginer, Asphalt Plant From Enginer, A						
EAC-HR1 to EAC-HR4 EC-HR1 to EC-HR14 EC-P2-HR1 to EC-P2-HR7  No. of operation hour Emission Rate  Paved haul road outside concrete batching plant Source ID: WAB-HR1 to WAB-HR13 WAB-P4-HR10 to WAB-P4-HR10  WC-HR11 to WC-P4-HR10  WC-P4-HR1 to WC-P4-HR10  EAB-HR1 to EAC-HR4 EC-P2-HR7  No. of operation hour % of dust suppression  Paved haul road outside concrete batching plant Road surface silf loading, st. Average truck weight, W Road surface silf loading, st. Average truck weight, W RD-P4-HR10 to WAB-P4-HR10  EAB-HR1 to EAC-HR4 EC-P2-HR1 to EC-P2-HR7  From Enginner, Asphalt Tipper Lorries in Concrete Batching Plant Asphalt Tipper Lorries in Concrete Batching Plant Asphalt Tipper Lorries in Concrete Batching Plant Asphalt Tipper Lorries in Concrete Batching Plant Asphalt Tipper Lorries in Concrete Batching Plant Asphalt Tipper Lorries in Concrete Batching Plant Asphalt Tipper Lorries in Concrete Batching Plant Asphalt Tipper Lorries in Concrete Batching Plant Asphalt Tipper Lorries in Concrete Batching Plant Asphalt Tipper Lorries in Concrete Batching Plant Assume as the same as Express Rail Link and Extracted from 0.5m height TSP emission factor, E  266 g/VKT  EAB-HR1 to EAC-HR4 EC-HR1 to EAC-HR4 EC-HR1 to EAC-HR4 EC-P2-HR1 to EC-P2-HR7  No. of outst suppression  No. of outst suppression  TSP emission four Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper Lorries in Concrete Batching Typer Lorries in Concrete		EAB-HR1 to EAB-HR4				
EAC-HR1 to EAC-HR4 EC-HR1 to EC-HR14 EC-P2-HR7  No. of operation hour EC-P2-HR7 to EC-P2-HR7  No. of operation hour No. of operation			No. of truck trips per day	96	trips/hr	From engineer, Asphalt Tipper Lorries in Asphalt Plant
EC-HR1 to EC-P2-HR7    No. of operation hour % of dust suppression    Emission Rate    Paved haul road outside concrete batching plant or United Plant    For Unladen Vehicle Source ID: WAB-HR1 to WAB-P4-HR10    WC-P4-HR1 to WC-P4-HR1 to WC-P4-HR10    EAB-HR1 to EAB-HR4    EAC-P2-HR1 to EC-P2-HR7    No. of operation hour % of dust suppression    No. of operation hour % of dust suppression    Paved haul road outside concrete batching plant    Road surface sill loading, sL    Ro		EAC-HR1 to EAC-HR4	The state of the s			
EC-P2-HR1 to EC-P2-HR7  % of dust suppression  97.5 %  Assume as the same as Express Rail Link and Extracted fi License of XRL (Appendix C).  Emission Rate  6.25E-04 g/m/s (mitigated)  Asphalt Tipper Lorries in Asphalt Tipper Lorries in Concrete Batching Plant  Asphalt Tipper Lorries in Concrete Batching Plant			No. of operation hour			
License of XRL (Appendix C).  Emission Rate  6.25E-04 g/m/s (mitigated) 9.12E-04 g/m/s (mitigated) 9.12E-04 g/m/s (mitigated) Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Asphalt Plant Asphalt Tipper Lorries in Concrete Batchin Decrement to EAC-HR1 to EAC-HR4 EAC-HR1 to EAC-HR4 EC-P2-HR1 to EC-P2-HR7  Assume as the same as Express Rail Link and Extracted In License of XRL (Appendix C).						Assume as the same as Express Bail Link and Extracted from SP
Emission Rate  Emission Rate  Emission Rate  Emission Rate  Emission Rate  Emission Rate  Emission Rate  Emission Rate  Emission Rate  Emission Rate  Emission Rate  Emission Rate  Emission Rate  Particle size multiplier, k Road surface sit loading, sL Average truck weight, W Road surface sit loading, sL Average truck weight, W Road surface sit loading, sL Average truck weight, W Road surface sit loading, sL Average truck weight, W Road surface and the surfac		201211111020121111	70 of dust suppression	07.0	70	
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Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete batching plant - Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside concrete Batching Plant  Paved haul road outside c			Emissian Bata	0.055.04	= /== /= /== iti == to d\	Asshalt Tinney Lawies in Asshalt Dlant
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Road surface silt loading, sL For Unladen Vehicle Source ID: WAB-HR1 to WAB-HR13 WC-HR11 to WC-HR13 WC-P4-HR1 to EAB-HR4 EAC-HR1 to EAC-HR4 EC-P2-HR1 to EC-P2-HR1 EAC-HR1 to EC-P2-HR7  Road surface silt loading, sL Average truck weight, W Assumed that vehicle will lift dust from the road surface an from 0.5m height TsP emission height TsP emission factor, E  266 g/VKT Asphalt Tipper AP-42, Section 13.2.1, 01/11 ed. Empty loading of Asphalt Tipper, engineer, asphalt Tipper Lorries in Asphalt Plant from Engineer, Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper Lorries in Concrete Batchin TsP emission height AP-42, Section 13.2.1, 01/11 ed. Empty loading of Asphalt Tipper, engineer, asphalt Tipper Lorries in Asphalt Tipper Lorries in Asphalt Tipper Lorries in Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper Lorries in Concrete Batchin TsP emission height AP-42, Section 13.2.1, 01/11 ed. TsP emission height Assumed that vehicle will lift dust from the road surface an from 0.5m height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission height TsP emission hei				9.12E-04	g/m/s (miligaled)	Asprialt Tipper Lornes in Concrete Batching Plant
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For Unladen Vehicle Source ID: WAB-HR1 to WAB-P4-HR10 WAB-P4-HR10 WC-HR1 to WC-HR13 WC-P4-HR10 WC-P4-HR10  EAB-HR4  No. of truck trips per day  EAC-HR1 to EAC-HR4 EC-HR1 to EC-HR14 EC-P2-HR1 to EC-P2-HR7  Average truck weight, W  Average truck weight, W  Emission height  Emission height  D.5 m  Assumed that vehicle will lift dust from the road surface an from 0.5m height  Each will lift dust from 0.5m height  Each will lift will lift will lift will lift will lift wil		Paved haul road outside concrete batching plant -				
Source ID: WAB-HR1 to WAB-HR13 WAB-P4-HR10 WAB-P4-HR10  WC-HR11 to WAB-P4-HR10  EAB-HR1 to WC-P4-HR10  EAC-HR1 to EC-P2-HR1 to EC-P2-HR7  Emission height  Emission height  Emission height  Emission height  TSP emission factor, E  Emission height  TSP emission factor, E  266 g/VKT  Assumed that vehicle will lift dust from the road surface an from 0.5m height  E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 extends a sphalt Tipper  Asphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height  E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 extends a sphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height  E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 extends a sphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height  E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 extends a sphalt Tipper  Asphalt Tipper  No. of truck trips per day  No. of operation hour  12 hr  97.5 %  Assume as the same as Express Rail Link and Extracted from 0.5m height  E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 extends a sphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height  E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 extends a sphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height  E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 extends a sphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height  E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 extends a sphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height  E=k x (sL)^0.11x (W)^1.02 (AP-42, section 13.2.1, 01/11 extends a sphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height  E=k x (sL)^0.11x (W)^1.02 (AP-42, section 13.2.1, 01/11 extends a sphalt Tipper  Assumed that vehicle will lift dust from the road surface and sphalt Tipp	Batching Plant		Road surface silt loading, sL			AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
WAB-HR1 to WAB-P4-HR10 WAB-P4-HR1 to WAB-P4-HR10 WC-HR1 to WC-HR13 WC-P4-HR10 WC-P4-HR10 EAB-HR4 EC-HR1 to EAC-HR4 EC-P2-HR1 to EC-P2-HR7  Emission height TSP emission factor, E  TSP emission factor, E  TSP emission factor, E  266 g/VKT  Assumed that vehicle will lift dust from the road surface an from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  Asphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  Assume as in Asphalt Tipper  No. of operation hour 12 hr So of dust suppression  No. of operation hour 12 hr Assume as the same as Express Rail Link and Extracted from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  Assume and in the road surface an from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  From engineer, Asphalt Tipper Lorries in Concrete Batchin 140 hr EC-HR1 to EC-HR14 EC-HR1 to EC-HR14 EC-HR1 to EC-HR14 EC-P2-HR1 to EC-P2-HR7		For <b>Unladen</b> Vehicle	Average truck weight, W	8.24	tons	Empty loading of Asphalt Tipper, engineering estimate
WAB-HR1 to WAB-P4-HR10 WAB-P4-HR1 to WAB-P4-HR10 WC-HR1 to WC-HR13 WC-P4-HR10 WC-P4-HR10 EAB-HR4 EC-HR1 to EAC-HR4 EC-P2-HR1 to EC-P2-HR7  Emission height TSP emission factor, E  TSP emission factor, E  TSP emission factor, E  266 g/VKT  Assumed that vehicle will lift dust from the road surface an from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  Asphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  Assume as in Asphalt Tipper  No. of operation hour 12 hr So of dust suppression  No. of operation hour 12 hr Assume as the same as Express Rail Link and Extracted from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  Assumed that vehicle will lift dust from the road surface an from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  Assume and in the road surface an from 0.5m height E=k x (SL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  From engineer, Asphalt Tipper Lorries in Concrete Batchin 140 hr EC-HR1 to EC-HR14 EC-HR1 to EC-HR14 EC-HR1 to EC-HR14 EC-P2-HR1 to EC-P2-HR7		Source ID:				
WAB-P4-HR1 to WAB-P4-HR10  WC-HR1 to WC-HR13 WC-P4-HR1 to WC-P4-HR10  EAB-HR4  No. of truck trips per day  No. of operation hour EC-HR1 to EC-HR14 EC-P2-HR1 to EC-P2-HR7  WG-P4-HR1 to WG-P4-HR10  from 0.5m height E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ex Asphalt Tipper  Asphalt Tipper Lorries in Asphalt Plant From engineer, Asphalt Tipper Lorries in Concrete Batchin 12 hr 97.5  Assume as the same as Express Rail Link and Extracted fr License of XRL (Appendix C).			Emission height	0.5	m	Assumed that vehicle will lift dust from the road surface and disperse
TSP emission factor, E  WC-HR1 to WC-HR13 WC-P4-HR10  EAB-HR4 No. of truck trips per day  No. of operation hour EAC-HR1 to EAC-HR4 EC-P2-HR1 to EC-P2-HR7  TSP emission factor, E  266 g/VKT  Sphalt Tipper  Asphalt Tipper Lorries in Asphalt Plant From engineer, Asphalt Tipper Lorries in Concrete Batchin 12 hr  97.5  Assume as the same as Express Rail Link and Extracted fr License of XRL (Appendix C).						
WC-HR1 to WC-HR10 WC-P4-HR10 EAB-HR4 No. of truck trips per day  SAPHAI to EAB-HR4 No. of operation hour EAC-HR1 to EAC-HR4 EC-HR1 to EC-HR14 EC-P2-HR1 to EC-P2-HR7  No. of operation hour EC-P2-HR1 to EC-P2-HR7  No. of dust suppression  SAPHAI Tipper  Asphalt Tipper From engineer, Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper Lorries in Concrete Batchin 12 hr Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper Lorries in Asphalt Plant From Enginner, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Asphalt Tipper  Assume as the same as Express Rail Link and Extracted from Engineer, Assume as Express Rail Link and Extracted from Engineer, Assume as Express Rail Link and Extracted from Engineer, Assume as Ex		The state of the s	TSP emission factor. F	1		
WC-P4-HR1 to WC-P4-HR10  EAB-HR1 to EAB-HR4  No. of truck trips per day  September 140  EAC-HR1 to EAC-HR4  EC-HR1 to EC-HR14  EC-P2-HR1 to EC-P2-HR7  No. of operation hour  September 250  September 26		WC HP1 to WC HP13	TOT GITTOSTOTI TACIOI, L	200	a//KT	
EAB-HR1 to EAB-HR4  No. of truck trips per day  No. of truck trips per day  Security of trips per day  No. of truck trips per day  No. of operation hour  EC-HR1 to EC-HR14  EC-P2-HR1 to EC-P2-HR7  No. of operation hour  % of dust suppression  Security of trips per day  Security of trips per day  Trips per day  Security of trips per day  Trips per da				200	9/ / / /	Aspirali Tipper
EAC-HR1 to EAC-HR4 EC-HR1 to EC-HR14 EC-P2-HR1 to EC-P2-HR7  No. of operation hour 97.5  From Enginner, Asphalt Tipper Lorries in Concrete Batchin 12 hr  Assume as the same as Express Rail Link and Extracted fr License of XRL (Appendix C).		WG-P4-HRT 10 WG-P4-HRT0				
EAC-HR1 to EAC-HR4 EC-HR1 to EC-HR14 EC-P2-HR1 to EC-P2-HR7  No. of operation hour 97.5  From Enginner, Asphalt Tipper Lorries in Concrete Batchin 12 hr  Assume as the same as Express Rail Link and Extracted fr License of XRL (Appendix C).		EAR URA L EAR URA	N 7. 1			
EAC-HR1 to EAC-HR4  EC-HR1 to EC-HR14  EC-P2-HR1 to EC-P2-HR7  No. of operation hour  97.5  Assume as the same as Express Rail Link and Extracted fr License of XRL (Appendix C).		EAB-HR1 to EAB-HR4	No. of truck trips per day			
EC-HR1 to EC-HR14  **Cof dust suppression  **Gof dust suppression  **Sof dust						From Enginner, Asphalt Tipper Lorries in Concrete Batching Plant
EC-P2-HR1 to EC-P2-HR7  License of XRL (Appendix C).						
		EC-HR1 to EC-HR14	% of dust suppression	97.5	%	Assume as the same as Express Rail Link and Extracted from SP
Emission Rate  5.55.05 (a/m/s (mitigated))  Applied Timper Lewise in Applied Plant		EC-P2-HR1 to EC-P2-HR7				License of XRL (Appendix C).
Emission Rate  5.55 05 a/m/s (mitirated)  Applied Tippor Lervice in Applied Blant						
			Emission Rate	5.5E-05	g/m/s (mitigated)	Asphalt Tipper Lorries in Asphalt Plant
2.59E-04 g/m/s (mitigated)  Asphalt Tipper Lorries in Concrete Batching Plant						

Description	Sources	Parameter		Emission Rate	Remarks
Concrete	Unloading aggregate	Consumption Rate (Western + Eastern)	300	Mg/h (Asphalt)	From engineer: Asphalt: 300 ton/hr = 150 ton/hr x 2 plants
Batching Plant (Unloading of raw	Source ID: (EP9)	Consumption Rate (Western only)	2000	Mg/h (Concrete) Mg/h (Asphalt)	From engineer: Concrete: 2000 ton/hr = 500 ton/hr x4 plants From engineer: Asphalt: 150 ton/hr
materials)	WAB-EP9, WAB-P4-EP9,	, , ,	500	Mg/h (Concrete)	From engineer: Concrete: 500 ton/hr
	WC-EP9, WC-P4-EP9	Particle size multiplier, k Moisture content, M	0.74	) 2 %	For TSP, AP-42, section 13.2.4, 11/06 ed. Assume as the same as Express Rail Link and Extracted from SP
	EAB-EP9, EC-EP9, EC-2-EP9, EC-3-EP9,	Mean wind speed, U	4.9	) m/s	License of XRL (Appendix C). HKOAMO 2012 annual average wind speed
	EC-P2-EP9	Emission Factor, E	3.35E-03	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
				kg/hr (Asphalt - Westen + Eastern)	(A1 -42, Section 13.2.4, 11/00 ed.)
			0.50	kg/hr (Concrete - Western +Eastern) kg/hr (Asphalt - Westen only)	
		Mitigation efficiency		kg/hr (Concrete - Western only) %	Assume as the same as Express Rail Link and Extracted from SP
		No. of operation hour		? hr	License of XRL (Appendix C).
		Emission height	4	l m	5 1 1 1 (450 1 4 )
		Emission Rate (Western + Eastern) - Period 2 to 4	1.40E-03	g/s (mitigated) (Asphalt)	For each plant (150 ton/hr) Period 2 to 4: 150 ton/hr x 2 plants
			4.66E-03	g/s (mitigated) (Concrete)	For each plant (500ton/hr)
					Period 2: 500ton/hr x 2 plants Period 3&4: 500ton/hr x 4 plants
			4 405 00	) = /= (:4i41) (A114)	· ·
		Emission Rate (Western only) - Period 1	4.66E-03	g/s (mitigated) (Asphalt) g/s (mitigated) (Concrete)	For 150 ton/hr only For 500 ton/hr only
Concrete Batching Plant	Small Cementitious Material Silos Source ID: (EP5-EP8)	Density	2.24	Mg/m3	For Concrete & Asphalt density Refer to this web
(Cement / PFA Silos)	WAB-EP5 to EP8, WAB-P4-EP5 to EP8,				"http://www.aqua-calc.com/page/density-table/substance/concrete-coma- and-blank-asphalt"
01103)	WC-EP5 to EP8, WC-P4-EP5 to EP8	TSP emission factor	50	mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable
	EAB-EP5 to EP8,				Means for Cement Works (Concrete Batching Plant), EPD
	EC-EP5 to EP8, EC-2-EP5 to EP8, EC-3-EP5 to EP8, EC-P2-EP5 to EP8	Dust exhaust flow rate for each mixer (Total 4 sources)		tons/hr (Asphalt) tons/hr (Concrete)	Assume volume displacement by loading material
			26.8	m3/hr (Asphalt) m3/hr (Concrete)	For concrete & Asphalt density: 2.24 tons/m3
		No. of operation hour		hr	Assume so the same or France Bullion 15 to
		No. of small cement silos	4	<b>'</b>	Assume as the same as Express Rail Link and Extracted from SP License of XRL (Appendix C).
		Emission height	21 or 22	? m	EP5: 21m, EP6-EP8: 22m Assume as the same as Express Rail Link and Extracted from SP
		Emission Pate (Total Acquiress)	9 705 0	I a/c (mitigated) (Acabelt)	License of XRL (Appendix C).
		Emission Rate (Total 4 sources)	7.44E-03	g/s (mitigated) (Asphalt) g/s (mitigated) (Concrete)	
		Emission Rate (Each source)	1.86E-03	g/s (mitigated) (Asphalt) g/s (mitigated) (Concrete)	
	PFA weight Hopper Source ID: (EP3-EP4)	Emission Factor (without mitigation)	2.60E-03	kg/Mg	Weight hopper loading (uncontrolled), AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
	WAB-EP3 to EP4. WAB-P4-EP3 to EP4.	Density	2.24	Mg/m3	For Concrete & Asphalt density
	WAB-EP3 to EP4, WAB-P4-EP3 to EP4, WC-EP3 to EP4, WC-P4-EP3 to EP4				Refer to this web "http://www.aqua-calc.com/page/density-table/substance/concrete-coma-
	EAB-EP3 to EP4,	TSP emission factor	5.82E-03	kg/m3	and-blank-asphalt"
	EC-EP3 to EP4, EC-2-EP3 to EP4, EC-3-EP3 to EP4, EC-P2-EP3 to EP4	Production rate (Total 2 sources)	25	m3/hr (Asphalt) m3/hr (Concrete)	From engineer
	2-21 0 10 21 4	Mitigation efficiency	99	%	Total enclosure and fabric filter
		Emission height Emission Rate (Total 2 sources)	4.04E-04	m g/s (mitigated) (Asphalt)	
Concrete	Mixer Source ID: (EP1-EP2)	Density		g/s (mitigated) (Concrete) Mg/m3	For Concrete & Asphalt density
Batching Plant (Mixing Tower)	WAB-EP1 to EP2, WAB-P4-EP1 to EP2,	,			Refer to this web "http://www.aqua-calc.com/page/density-table/substance/concrete-coma-
(Wilking Tower)	WC-EP1 to EP2, WC-P4-EP1 to EP2	TOD			and-blank-asphalt"
	EAB-EP1 to EP2,	TSP emission factor	50	) mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable Means for Cement Works (Concrete Batching Plant), EPD
	EC-EP1 to EP2, EC-2-EP1 to EP2, EC-3-EP1 to EP2, EC-P2-EP1 to EP2	Dust exhaust flow rate for each mixer (Total 2 sources)	60	tons/hr (Asphalt)	Assume volume displacement by loading material
			1200	tons/hr (Concrete) m3/hr (Asphalt)	For concrete & Asphalt density: 2.24 tons/m3
			535.7	m3/hr (Concrete)	Tor concrete & Aspiral density. 2.24 tons/ins
		No. of operation hour No. of small cement silos	12	l hr l	
		Emission height Emission Rate (Total 2 sources)		m g/s (mitigated) (Asphalt)	
Stockpile within	Material handling and storage piles	Percentage open stockpile area, p	7.44E-03	g/s (mitigated) (Concrete)	80% stockpiling area is covered by impervious sheets and all dusty
Asphalt batching	Source ID:	r elemage open stockpile area, p	20	7 / 76	material should be sprayed with water immediately prior to any loading
plant in western location	WABA1, WABA1-P4	Particle size multiplier, k	0.74	1	or transfer operation so as to keep the dusty material wet. k (particle size < 30µm)
	WABA2, WABA2-P4	Moisture content, M Average wind speed, U		5 % 9 m/s	Assume worst case scenario HKOAMO 2012 annual average wind speed
		Emission Factor, E	0.000929696	S ka/Ma	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4]
		Monthly output		m3/month (Asphalt)	From engineer
			5,250	m3/month (Aggregate)	From engineer
		Maximum hourly output, op	1 1	m3/hr (Asphalt)	26 days per month, 12 working hours per day
		,r	16.8	3 m3/hr (Aggregate) Mg/hr (Asphalt)	
		Area of the Anakali at a limit.	42.1	Mg/hr (Aggregate)	Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
		Area of the Asphalt stockpile, A Area of the Aggregate stockpile, A		m <sup>2</sup> (Asphalt) m <sup>2</sup> (Aggregate)	
		Emission Rate (Asphalt stockpile)	2.96247E-06	g/m²/s (unmitigated) 7 g/m²/s (mitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
		Emission Rate (Aggregate stockpile)	4.93937E-06	g/m²/s (initigated) 7 g/m²/s (unmitigated) 7 g/m²/s (mitigated)	
	Wind erosion	Percentage open stockpile area, p	100	% (unmitigated)	OOV stades like a second secon
	Source ID: As above	Emission Factor	0.85	% (mitigated) Mg/hectare/year	80% stockpiling area is covered by impervious sheets AP42, Section 11.9.4
		Emission Rate		g/m²/s (unmitigated) g/m²/s (mitigated)	=0.85*1000000/(10000*365*24*60*60)*p/100
Milled Material,	Material handling and storage piles	Percentage open stocknile area in		9/11/3 (Intigated)	80% stockpiling area is covered by impervious sheets and all dusty
Crushed	Source ID:	Percentage open stockpile area, p	20	70	material should be sprayed with water immediately prior to any loading
Aggregate and Sub-base	WAR1, WAR1-P4	Particle size multiplier, k	0.74	ı	or transfer operation so as to keep the dusty material wet. k (particle size < 30µm)
Stockpile in western location	WCAS1, WCAS1-P4	Moisture content, M Average wind speed, U		5 % 0 m/s	Assume worst case scenario HKOAMO 2012 annual average wind speed
	WSS1, WSS1-P4	Emission Factor, E	0.000929696		E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4]
		Monthly output	422	m3/month (Milled Material)	From engineer
			16,275	m3/month (Crushed Aggregate) m3/month (Sub-base stockpile)	From engineer From engineer
		Maximum hourly output, op		m3/hr (Milled Material) m3/hr (Crushed Aggregate)	26 days per month, 12 working hours per day
			52.2	2 m3/hr (Sub-base stockpile) Mg/hr (Milled Material)	Accume conscitu of disease trivals in Could and 4.5 to 1
			121.6	Mg/hr (Crushed Aggregate)	Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
		Area of the Milled Material stockpile, A	279	Mg/hr (Sub-base stockpile) m <sup>2</sup> (Milled Material)	
		Area of the Crushed Aggregate stockpile, A Area of the Sub-base stockpile, A	5,822	m <sup>2</sup> (Crushed Aggregate)	
		Emission Rate (Milled Material stockpile)	3.1328E-06	m²(Sub-base stockpile) g/m²/s (unmitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60)
		Emission Rate (Crushed Aggregate stockpile)	5.3963E-06	g/m²/s (mitigated) g/m²/s (unmitigated)	Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
		Emission Rate (Sub-base stockpile)	1.07926E-06	g/m²/s (mitigated) g/m²/s (unmitigated)	
	Windowski	, , ,	1.08472E-06	g/m²/s (mitigated)	
	Wind erosion Source ID: As above	Percentage open stockpile area, p	20	% (unmitigated) % (mitigated)	80% stockpiling area is covered by impervious sheets
		Emission Factor Emission Rate		Mg/hectare/year g/m²/s (unmitigated)	AP42, Section 11.9.4 =0.85*1000000/(10000*365*24*60*60)*p/100
		-		7 g/m²/s (mitigated)	
L	<u>l</u>	1	1	<u>I</u>	1

	Crushing Plant, Concrete and Asphalt Batching		Factor's Box	
Description Stockpile within Asphalt batching plant in eastern	Sources  Material handling and storage piles Source ID: EABA1, EABA2	Parameter Percentage open stockpile area, p	Emission Rate	Remarks  80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.
location		Particle size multiplier, k Moisture content, M Average wind speed, U	0.74 5 % 4.9 m/s	k (particle size < 30µm) Assume worst case scenario HKOAMO 2012 annual average wind speed
		Emission Factor, E Monthly output	0.000929696 kg/Mg 67 m3/month (Asphalt)	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
		Monthly output	1,050 m3/month (Aggregate)	·
		Maximum hourly output, op	0.2 m3/hr (Asphalt)	26 days per month, 12 working hours per day
			3.4 m3/hr (Aggregate) 0.5 Mg/hr (Asphalt)	Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
		Area of the Asphalt stockpile, A	8.4 Mg/hr (Aggregate) 154 m²(Asphalt)	
		Area of the Aggregate stockpile, A Emission Rate (Asphalt stockpile)	562 m <sup>2</sup> (Aggregate) 9.02135E-07 g/m <sup>2</sup> /s (unmitigated) 1.80427E-07 g/m <sup>2</sup> /s (mitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60)
		Emission Rate (Aggregate stockpile)	3.86851E-06 g/m²/s (mitigated) 7.73703E-07 g/m²/s (unmitigated)	Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Wind erosion Source ID: As above	Percentage open stockpile area, p	100 % (unmitigated) 20 % (mitigated)	80% stockpiling area is covered by impervious sheets
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.69533E-06 g/m²/s (unmitigated) 5.39066E-07 g/m²/s (mitigated)	AP42, Section 11.9.4 =0.85*1000000/(10000*365*24*60*60)*p/100
Stockpile within Airfield batching plant in eastern	Material handling and storage piles Source ID: EACC1, EACA1	Percentage open stockpile area, p	20 %	80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loadin or transfer operation so as to keep the dusty material wet.
location	Endot, Endit	Particle size multiplier, k Moisture content, M	0.74 5 %	k (particle size < 30µm) Assume worst case scenario
		Average wind speed, U	4.9 m/s	HKOAMO 2012 annual average wind speed
		Emission Factor, E Monthly output	0.000929696 kg/Mg 2,540 m3/month (Cement)	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
			13,824 m3/month (Aggregate)	From engineer
		Maximum hourly output, op	8.1 m3/hr (Cement) 44.3 m3/hr (Aggregate)	26 days per month, 12 working hours per day
			20.3 Mg/hr (Cement) 110.8 Mg/hr (Aggregate)	Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
		Area of the Cement stockpile, A Area of the Aggregate stockpile, A	1,163 m <sup>2</sup> (Cement) 5,329 m <sup>2</sup> (Aggregate)	
		Emission Rate (Cement stockpile)	4.5194E-06 g/m²/s (unmitigated) 9.0388E-07 g/m²/s (mitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Wind erosion	Emission Rate (Aggregate stockpile)	5.36789E-06 g/m²/s (unmitigated) 1.07358E-06 g/m²/s (mitigated)	
	Source ID: As above	Percentage open stockpile area, p Emission Factor	100 % (unmitigated) 20 % (mitigated) 0.85 Mg/hectare/year	80% stockpiling area is covered by impervious sheets AP42, Section 11.9.4
		Emission Rate	2.69533E-06 g/m²/s (unmitigated) 5.39066E-07 g/m²/s (mitigated)	=0.85*1000000/(10000*365*24*60*60)*p/100
Stockpile within Concrete	Material handling and storage piles Source ID:	Percentage open stockpile area, p	20 %	80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loadin
	ECC1_2, ECC1_3, ECC1-P2	Particle size multiplier, k	0.74	or transfer operation so as to keep the dusty material wet.  k (particle size < 30µm)
	ECA1_2, ECA1_3, ECA1-P2	Moisture content, M Average wind speed, U	5 % 4.9 m/s	Assume worst case scenario HKOAMO 2012 annual average wind speed
		Emission Factor, E	0.000929696 kg/Mg	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4]
		Monthly output	43,270 m3/month (Cement)	From engineer
		Maximum hourly output, op	173,079 m3/month (Aggregate) 138.7 m3/hr (Cement) 554.7 m3/hr (Aggregate)	From engineer 26 days per month, 12 working hours per day
			346.7 Mg/hr (Cement) 1386.8 Mg/hr (Aggregate)	Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
		Area of the Cement stockpile, A Area of the Aggregate stockpile, A	3,944 m2 (Cement) 14,520 m2(Aggregate)	
		Emission Rate (Cement stockpile)	2.27033E-05 g/m²/s (unmitigated) 4.54066E-06 g/m²/s (mitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Wind erosion	Emission Rate (Aggregate stockpile)	2.46657E-05 g/m²/s (unmitigated) 4.93315E-06 g/m²/s (mitigated) 100 % (unmitigated)	
	Source ID: As above	Percentage open stockpile area, p  Emission Factor	20 % (mitigated) 0.85 Mg/hectare/year	80% stockpiling area is covered by impervious sheets AP42. Section 11.9.4
		Emission Rate	2.69533E-06 g/m²/s (unmitigated) 5.39066E-07 g/m²/s (mitigated)	=0.85*1000000/(10000*365*24*60*60)*p/100
Crushed Aggregate	Material handling and storage piles Source ID:	Percentage open stockpile area, p	20 %	80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loadin
Stockpile in eastern location	ECA2, ECA2-P2	Particle size multiplier, k	0.74	or transfer operation so as to keep the dusty material wet.  k (particle size < 30µm)
odotom location		Moisture content, M Average wind speed, U	5 % 4.9 m/s	Assume worst case scenario HKOAMO 2012 annual average wind speed
		Emission Factor, E	0.000929696 kg/Mg	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4]
		Monthly output	4,364 m3/month	From engineer
		Maximum hourly output, op	14.0 m3/hr 35.0 Mg/hr 1,866 m2	26 days per month, 12 working hours per day Assume capacity of dump truck is 6m <sup>3</sup> and 15 tons
		Area of the stockpile, A Emission Rate	4.83836E-06 g/m²/s (unmitigated) 9.67672E-07 g/m²/s (mitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Wind erosion Source ID: As above	Percentage open stockpile area, p	100 % (unmitigated) 20 % (mitigated)	80% stockpiling area is covered by impervious sheets
		Emission Factor Emission Rate	0.85 Mg/hectare/year 2.69533E-06 g/m²/s (unmitigated)	AP42, Section 11.9.4 =0.85*1000000/(10000*365*24*60*60)*p/100
C&D Stockpilo	Material handling and storage piles	Porcentage open steeknile area n	5.39066E-07 g/m²/s (mitigated)	80% stockpiling area is covered by impervious sheets and all dusty
C&D Stockpile near seawall	Source ID: CD1	Percentage open stockpile area, p	20 %	80% stockplining area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loadin or transfer operation so as to keep the dusty material wet.
		Particle size multiplier, k Moisture content, M	0.74 5 %	k (particle size < 30µm) Assume worst case scenario
		Average wind speed, U	4.9 m/s	HKOAMO 2012 annual average wind speed
		Emission Factor, E Monthly output	0.000929696 kg/Mg 1,167 m3/month	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
		Maximum hourly output, op	3.7 m3/hr 7.5 Mg/hr	26 days per month, 12 working hours per day Density of C&D material: 2Mg/m3 (from engineer)
		Area of the stockpile, A Emission Rate	3,900 m2 4.95218E-07 g/m²/s (unmitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60)
	Wind erosion	Percentage open stockpile area, p	9.90435E-08 g/m²/s (mitigated)	Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Source ID: As above	Emission Factor Emission Rate	20 % (mitigated) 0.85 Mg/hectare/year 2.69533E-06 g/m²/s (unmitigated)	80% stockpiling area is covered by impervious sheets AP42, Section 11.9.4 =0.85*1000000/(10000*365*24*60*60)*p/100
			5.39066E-07 g/m²/s (mitigated)	
C&D Stockpile at midfield	Material handling and storage piles Source ID:	Percentage open stockpile area, p	20 %	80% stockpiling area is covered by impervious sheets and all dusty material should be sprayed with water immediately prior to any loading stranger or starting age of the load the distribution of the starting dust.
	CD2, CD3	Particle size multiplier, k Moisture content, M	0.74	or transfer operation so as to keep the dusty material wet. k (particle size < 30µm) Assume worst case scenario
		Moisture content, M Average wind speed, U	5 % 4.9 m/s	Assume worst case scenario HKOAMO 2012 annual average wind speed
		Emission Factor, E Monthly output	0.000929696 kg/Mg 33,222 m3/month	E=k*0.0016*[(U/2.2)^1.3/(M/2)^1.4] From engineer
		Maximum hourly output, op	106.5 m3/hr	26 days per month, 12 working hours per day
		Area of the stockpile, A	213.0 Mg/hr 8,100 m2	Density of C&D material: 2Mg/m3 (from engineer)
	Wind erosion	Emission Rate  Percentage open stockpile area, p	6.78981E-06 g/m²/s (unmitigated) 1.35796E-06 g/m²/s (mitigated) 100 % (unmitigated)	Unmitigated Emission Rate=E*1000*op/(A*60*60) Mitigated Emission Rate'=E*1000*op/(A*60*60)*p/100
	Source ID: As above	Emission Factor	20 % (mitigated) 0.85 Mg/hectare/year	80% stockpiling area is covered by impervious sheets AP42, Section 11.9.4
		Emission Rate	2.69533E-06 g/m²/s (unmitigated) 5.39066E-07 g/m²/s (mitigated)	=0.85*1000000/(10000*365*24*60*60)*p/100
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## Barging Points, Crushing Plant, Concrete and Asphalt Batching Plants, C&D Stockpile and other Stockpiles

Description	Sources	Parameter		Emission Rate	Remarks
Crushing Plant	Screening				
	Source ID: CP1, CP2	TSP emission factor  Density of rock		mg/m3 Kg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable Means for Mineral Works (Stone Crushing Plants), EPD Assume the same as approved EIA South East New Territories (SENT)
					Landfill Extension (EIA-143/2007) Annex A2
		Maximum handling capcity	700	Mg/hr	From engineer
		No. of operation hour		hr	
		Emission height Emission Rate		m g/s (mitigated)	
Crushing Plant	Tertiary Crushing Source ID: CP1, CP2	TSP emission factor		mg/m3	Concretration limit, Annex I, A Guidance Note on the Best Praticable
		Density of rock	1760	Kg/m3	Means for Mineral Works (Stone Crushing Plants), EPD Assume the same as approved EIA South East New Territories (SENT) Landfill Extension (EIA-143/2007) Annex A2
		Maximum handling capcity	700	Mg/hr	From engineer
		No. of operation hour		hr	
		Emission height Emission Rate		m g/s (mitigated)	
Crushing Plant	Paved haul road outside crushing plant -	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
	For <b>Laden</b> Vehicle	Road surface silt loading, sL Average truck weight, W		g/m2 tons	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of truck, assume the same as Asphalt Tipper, engineering
	Source ID:				estimate
	WAB-HR1 to WAB-HR13 WC-HR1 to WC-HR13	Emission height	0.5	m	Assumed that vehicle will lift dust from the road surface and disperse
		TSP emission factor, E			from 0.5m height E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			938	g/VKT	Truck
		No. of truck trips per day	66	trips/hr	From engineer:
					700Mg/hr * (1/(6m3/veh)) * (1/1760 kg/m3) * 1000 Assume density = 1760kg/m3, truck loading = 6m3/veh
		No. of operation hour % of dust suppression	12 97.5	hr o/	Assume as the same as Express Rail Link and Extracted from SP
		% of dust suppression	97.5	76	License of XRL (Appendix C).
		Emission Rate	4.32E-04	g/m/s (mitigated)	Truck for crushing plant
Crushing Plant	Paved haul road outside crushing plant -	Particle size multiplier, k		g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
	For <b>Unladen</b> Vehicle	Road surface silt loading, sL Average truck weight, W		g/m2 tons	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Empty loading of truck, assume the same as Asphalt Tipper, engineering
	Source ID:	Average track weight, w	0.24	ions	estimate
	WAB-HR1 to WAB-HR13	Emission height	0.5	m	Assumed that vehicle will lift dust from the road surface and disperse
	WC-HR1 to WC-HR13	TSP emission factor, E			from 0.5m height E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			266	g/VKT	Truck
		No. of truck trips per day	66	trips/hr	From engineer:
		No. of dock dipo por day		( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	700Mg/hr * (1/(6m3/veh)) * (1/1760 kg/m3) * 1000 Assume density = 1760kg/m3, truck loading = 6m3/veh
		No. of operation hour	12	hr	
		% of dust suppression	97.5		Assume as the same as Express Rail Link and Extracted from SP License of XRL (Appendix C).
		Emission Rate	1.2E-04	g/m/s (mitigated)	Truck for crushing plant