

Appendix 3.1

Calculation of Emission Rate (Fugitive Dust)

Calculations of Emission Rates (Fugitive Dust)

Source	Emission Factors	Mitigated	Parameters	
Construction Site	Heavy Construction Area Source (g/m ² /s)	1.49684E-05	TSP emission factor (tonnes/hectare/month of activity) Percentage area actively operating (%) % of dust suppression	2.69 50 87.5 from AP-42, 5th ed., S13.2.3.3 12 working hr/day & 26 working day/month for watering eight times a day
For all construction work (including barging point)	Wind erosion E (g/m ² /s)	1.34767E-06	TSP emission factor (Mg/hectare/yr) Percentage area actively operating (%) % of dust suppression	0.85 50 0 AP-42, 5th ed., Table 11.9.4

Source	Emission Factors	Mitigated	Parameters
Construction Site (Barging point)	Area Source (g/m ² /s)	2.04236E-05	k, particle size multiplier
			U, mean wind speed (m/s)
			M, material moisture content (%)
			Emission Factors (Kg/megagram)
			No. of truck loading/unloading at barging point (per hr)
			Average carrying capacity for each truck
			Quantity of excavated material loading at barging point, (megagram per day)
			Total area at barging facility, (m ²)
			% of dust suppression
			0.74 3.3 2.5 0.00147 167 24 4008 20000 75
			from AP-42, 5th ed., S13.2.4 average wind speed at Kai Tak Station (Year 2006) From Engineer From Engineer From Engineer Water suppression for each unloading

Major dust generating activities in the worst case scenarios during construction phase

Activities	Source ID	Period	
		Mid 2009 to Mid 2013	Mid 2013 to Late 2016
		Scenario 1	Scenario 2
Package A - Cruise Terminal Development (Phase 1 Berth), related advance works and Runway Park			
Phase 1 Berth	119-120	✓	
Road TD3, TD4, L14 and minor road works in Kowloon Bay	116, 303-308	✓	
Modification off Taxiway Bridge	309	✓	
Pumping Station PS6	122	✓	
Fireboat Berth	125	✓	
Runway Park	124	✓	
Package B - Infrastructure works at North Apron, Phase 1 - Housing Sites and Government Offices			
Construction of Road D1 (part)	118	✓	
Local Roads L2, L3, L15 and associated footpaths at North Apron	103-115, 117	✓	
Local Roads L4 & L5	354-357	✓	✓
Construction of Box Culvert (2.5m x 2.5m)	123	✓	
Construction of Box Culvert (3m x 2.8m)	101-102	✓	
Construction of Pumping Station PS1A	340	✓	✓
Construction of Road D1	225-231		✓
Construction of Road D2 (part)	294		✓
Construction of Road L1	301-302	✓	✓
Construction of Road L2 & L11 (part)	201-205,213		✓
Construction of Slip Road S7 & S8 of CKR/T2 Interchange	251-255		✓
Construction of Box Culvert (5m x 2.5m)	341	✓	✓
Upgrading of Pumping Station PS1	242	✓	✓
Package D - Kai Tak Nullah modification works			
Rebuild Kai Tak Nullah	335-339	✓	✓
Construction of DSD's Desilting Compounds at Kai Tak Nullah	335	✓	✓
Package E - Infrastructure works at runway and Metro Park			
600m Wide Opening in Runway	330	✓	✓
Construction of Road D3 (near at Metro Park)	237-241		✓
Construction of Road L12 & L13	214-216		✓
Conversion of TD3 into D3 with Street Lighting/ Landscaping Works(include Road L14)	303-305	✓	✓
Conversion of TD4 into D4	306-309		✓
Elevated Landscape Deck above Road D3	303-305	✓	✓
Package F - Infrastructure works at North Apron, Phase 2			
Construction of Road D1, L7, L8, L9 & L16	208-210,217,225-231		✓
Construction of Drainage Culvert (2.5x2.5m)	346-348	✓	✓
Construction of Drainage Culvert (4x3m)	342-344	✓	✓
Construction of Drainage Culvert (5x4m)	345	✓	✓
Construction of Road D2, D3, L6, L17 & L19	206,207,232-241,218,220-224		✓
Pumping Station PS2	243		✓
Pumping Station NPS	245		✓
Upgrading of Pumping Station PS3	244	✓	✓
Stadium Complex	291-293		✓
Package G - Trunk Road T2 and infrastructure works at South Apron			
Construction of Trunk Road T2, Local Roads L10, L18 and associated footpaths at South Apron	315-324,211,212, 219, 256-290	✓	✓
Cut and Cover Section of T2	325-329	✓	✓
Kwun Tong Transportation Link	246-250,349-353	✓	✓
Other concurrent projects			
SCL Construction	331-334	✓	✓
CKR Construction	251-255, 310-314	✓	✓
Anderson Road Project	358	✓	✓

Summary of dust emission sources (Scenario 1)

Source ID	Watering frequency	Emission Rate, g/m/s		Coordinate				Height	Width
		Heavy Construction	Wind Eorsion	Start - x	Start - y	End - x	End - y		
101	8 times per day	5.987E-04	5.391E-05	838851.8	820750.7	838917.1	820801.7	0	40.0
102	8 times per day	4.491E-04	4.043E-05	838917.1	820801.7	839032.6	820913.2	0	30.0
103	8 times per day	2.994E-04	2.695E-05	839032.6	820912.7	839112.2	821008.0	0	20.0
104	8 times per day	2.994E-04	2.695E-05	839112.2	821008.0	839135.8	821069.1	0	20.0
105	8 times per day	2.395E-04	2.156E-05	839135.8	821069.1	839145.5	821140.6	0	16.0
106	8 times per day	2.395E-04	2.156E-05	839145.5	821140.6	839148.3	821234.1	0	16.0
107	8 times per day	2.395E-04	2.156E-05	839148.3	821234.1	839149.7	821349.6	0	16.0
108	8 times per day	2.395E-04	2.156E-05	839149.7	821349.6	839137.9	821543.3	0	16.0
109	8 times per day	2.994E-04	2.695E-05	839137.9	821543.3	839136.5	821660.5	0	20.0
110	8 times per day	2.994E-04	2.695E-05	839136.5	821660.5	839111.5	821714.7	0	20.0
111	8 times per day	4.491E-04	4.043E-05	839111.5	821714.7	839065.7	821749.4	0	30.0
112	8 times per day	4.491E-04	4.043E-05	839065.7	821749.4	838977.4	821771.6	0	30.0
113	8 times per day	2.994E-04	2.695E-05	839140.2	821349.2	839006.5	821356.4	0	20.0
114	8 times per day	2.994E-04	2.695E-05	839006.5	821356.4	838872.8	821363.5	0	20.0
115	8 times per day	2.994E-04	2.695E-05	839038.0	821364.2	839044.5	821494.2	0	20.0
116	8 times per day	2.994E-04	2.695E-05	839928.7	818854.0	839897.6	818820.7	0	20.0
117	8 times per day	2.994E-04	2.695E-05	839038.0	821741.2	838963.8	821662.5	0	20.0
118	8 times per day	4.491E-04	4.043E-05	838463.5	821464.8	838347.2	821360.7	0	30.0
119	8 times per day	8.981E-04	8.086E-05	839620.7	818907.1	839794.1	818742.2	0	60.0
120	8 times per day	1.497E-03	1.348E-04	839807.7	818756.3	840246.6	818329.4	0	100.0
122	8 times per day	5.688E-04	5.121E-05	840148.4	818646.2	840183.0	818688.2	0	38.0
123	8 times per day	1.497E-04	1.348E-05	838872.3	821355.8	838757.1	821360.0	0	10.0
124	8 times per day	2.395E-03	2.156E-04	840394.0	818363.0	840149.0	818614.0	0	160.0
125	8 times per day	3.742E-04	3.369E-05	839035.0	819125.0	839501.0	818972.0	0	25.0
301	8 times per day	1.197E-04	1.078E-05	838653.0	821762.7	838654.1	821823.5	0	8.0
302	8 times per day	1.197E-04	1.078E-05	838654.1	821823.5	838690.7	821940.4	0	8.0
303	8 times per day	5.987E-04	5.391E-05	839088.2	819697.2	839407.9	819386.4	0	40.0
304	8 times per day	5.987E-04	5.391E-05	839407.9	819386.4	839727.6	819075.6	0	40.0
305	8 times per day	5.987E-04	5.391E-05	839727.6	819075.6	839940.8	818868.4	0	40.0
306	8 times per day	2.994E-04	2.695E-05	839850.9	819760.7	839853.6	819700.4	0	20.0
307	8 times per day	2.994E-04	2.695E-05	839853.6	819700.4	839735.7	819575.8	0	20.0
308	8 times per day	2.994E-04	2.695E-05	839707.7	819544.6	839663.3	819497.0	0	20.0
309	8 times per day	5.987E-04	5.391E-05	839475.9	819784.3	839259.7	819558.9	0	40.0
310	8 times per day	5.987E-04	5.391E-05	838387.1	820058.1	838523.6	820276.0	0	40.0
311	8 times per day	8.981E-04	8.086E-05	838523.6	820276.0	838597.2	820337.4	0	60.0
312	8 times per day	8.981E-04	8.086E-05	838626.6	820356.4	838768.2	820400.4	0	60.0
313	8 times per day	4.491E-04	4.043E-05	838768.2	820400.4	838848.1	820381.2	0	30.0
314	8 times per day	5.688E-04	5.121E-05	837848.2	819994.7	838050.2	819923.5	0	38.0
315	8 times per day	1.497E-04	1.348E-05	838798.3	820409.8	838867.4	820407.9	0	10.0
316	8 times per day	1.497E-04	1.348E-05	838867.4	820407.9	838975.7	820426.0	0	10.0
317	8 times per day	1.497E-04	1.348E-05	838975.7	820426.0	839030.1	820409.0	0	10.0
318	8 times per day	1.197E-04	1.078E-05	838940.9	820491.8	838982.9	820440.9	0	8.0
319	8 times per day	1.197E-04	1.078E-05	838983.4	820440.4	839030.8	820333.3	0	8.0
320	8 times per day	1.197E-04	1.078E-05	839029.6	820332.3	839170.4	820166.0	0	8.0
321	8 times per day	1.197E-04	1.078E-05	839170.4	820166.0	839231.4	820144.7	0	8.0
322	8 times per day	1.197E-04	1.078E-05	839231.4	820144.7	839294.3	820135.5	0	8.0
323	8 times per day	1.197E-04	1.078E-05	839294.3	820135.5	839375.0	820084.7	0	8.0
324	8 times per day	1.197E-04	1.078E-05	839375.0	820084.7	839441.6	820010.2	0	8.0
325	8 times per day	5.987E-04	5.391E-05	83954.0	819425.7	839534.4	819752.6	0	40.0
326	8 times per day	5.987E-04	5.391E-05	839534.4	819752.6	839260.1	820041.8	0	40.0
327	8 times per day	5.987E-04	5.391E-05	839260.1	820041.8	839092.4	820221.8	0	40.0
328	8 times per day	5.987E-04	5.391E-05	839092.4	820221.8	838956.7	820330.9	0	40.0
329	8 times per day	5.987E-04	5.391E-05	838956.7	820330.9	838847.5	820379.8	0	40.0
330	8 times per day	3.892E-03	3.504E-04	839037.0	819603.8	838603.4	820016.1	0	260.0
331	8 times per day	2.994E-04	2.695E-05	838760.6	821445.0	838626.1	821302.8	0	20.0
332	8 times per day	4.491E-04	4.043E-05	838626.1	821302.8	838420.9	821089.3	0	30.0
333	8 times per day	2.994E-04	2.695E-05	838420.9	821089.3	838297.8	820963.9	0	20.0
334	8 times per day	2.994E-04	2.695E-05	838178.2	820612.3	838063.0	820390.0	0	20.0
335	8 times per day	5.987E-04	5.391E-05	838213.6	821403.0	838617.1	821010.1	0	40.0
336	8 times per day	5.987E-04	5.391E-05	838617.1	821010.1	838760.7	820832.8	0	40.0
337	8 times per day	5.987E-04	5.391E-05	838760.7	820832.8	838824.0	820640.4	0	40.0
338	8 times per day	5.987E-04	5.391E-05	838824.0	820640.4	838818.8	820470.7	0	40.0
339	8 times per day	5.987E-04	5.391E-05	838818.8	820470.7	838785.2	820313.2	0	40.0
340	8 times per day	6.436E-04	5.795E-05	838891.0	820936.8	838945.7	820882.2	0	43.0
341	8 times per day	1.497E-04	1.348E-05	838755.3	821366.2	838646.9	821242.0	0	10.0
342	8 times per day	1.497E-04	1.348E-05	837914.1	820618.1	837979.5	820630.0	0	10.0
343	8 times per day	1.497E-04	1.348E-05	837979.5	820630.0	838134.4	820781.5	0	10.0
344	8 times per day	1.497E-04	1.348E-05	838134.4	820781.5	838329.3	820969.9	0	10.0
345	8 times per day	1.497E-04	1.348E-05	838329.3	820969.9	838480.8	821113.7	0	10.0
346	8 times per day	8.981E-05	8.086E-06	838331.2	820962.3	838323.1	820931.0	0	6.0
347	8 times per day	8.981E-05	8.086E-06	838323.1	820931.0	838379.1	820771.3	0	6.0
348	8 times per day	8.981E-05	8.086E-06	838379.1	820771.3	838458.8	820792.6	0	6.0
349	8 times per day	1.497E-04	1.348E-05	839936.5	818904.2	839990.9	818913.8	0	10.0
350	8 times per day	1.497E-04	1.348E-05	839990.9	818913.8	840224.3	818686.8	0	10.0
351	8 times per day	1.497E-04	1.348E-05	840224.3	818686.8	840108.3	818557.4	0	10.0
352	8 times per day	1.497E-04	1.348E-05	840108.3	818557.4	840286.6	818389.6	0	10.0
353	8 times per day	1.497E-04	1.348E-05	840286.6	818389.6	840389.6	818470.4	0	10.0
354	8 times per day	2.694E-04	2.426E-05	839035.0	820931.6	838829.2	821133.2	0	18.0
355	8 times per day	2.994E-04	2.695E-05	838935.0	821040.8	838990.7	821105.2	0	20.0
356	8 times per day	2.694E-04	2.426E-05	838829.2	821133.2	838715.5	821244.9	0	18.0
357	8 times per day	2.994E-04	2.695E-05	838815.2	821133.4	838709.8	821024.5	0	20.0

Summary of dust emission sources (Scenario 1)

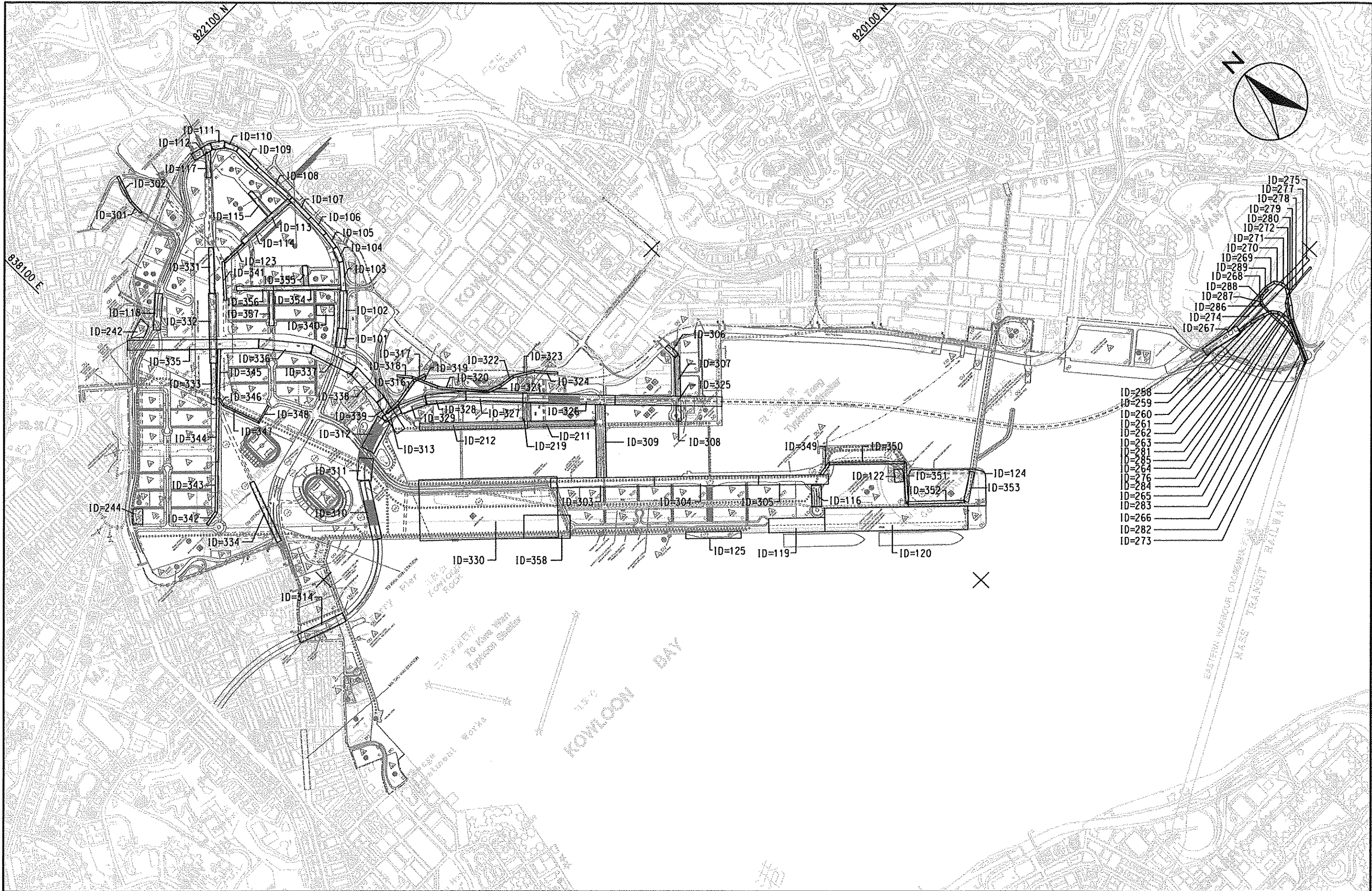
Source ID	Watering frequency	Emission Rate, g/m/s		Coordinate				Height	Width
		Heavy Construction	Wind Eorsion	Start - x	Start - y	End - x	End - y		
358	Watering each unloading	5.106E-04	1.685E-05	838951.0	819528.0	838981.0	819494.0	0	25.0
246	8 times per day	1.497E-04	1.348E-05	840850.8	818783.9	840940.3	818812.7	0	10.0
247	8 times per day	1.497E-04	1.348E-05	840940.3	818812.7	840995.6	818750.9	0	10.0
248	8 times per day	1.497E-04	1.348E-05	840995.6	818750.9	840933.8	818692.3	0	10.0
249	8 times per day	1.497E-04	1.348E-05	840933.8	818692.3	840874.2	818771.1	0	10.0
250	8 times per day	1.497E-04	1.348E-05	840874.2	818771.1	840922.1	818827.6	0	10.0
251	8 times per day	4.491E-04	4.043E-05	838765.9	820419.4	838857.2	820518.3	0	30.0
252	8 times per day	2.994E-04	2.695E-05	838857.2	820518.3	838877.0	820560.6	0	20.0
253	8 times per day	2.994E-04	2.695E-05	838877.0	820560.6	838892.5	820617.4	0	20.0
254	8 times per day	2.994E-04	2.695E-05	838892.5	820617.4	838887.4	820671.6	0	20.0
255	8 times per day	2.994E-04	2.695E-05	838887.4	820671.6	838860.7	820730.1	0	20.0
256	8 times per day	7.484E-04	6.738E-05	839362.3	819999.8	839418.0	819945.4	0	50.0
257	8 times per day	7.484E-04	6.738E-05	841469.2	818121.9	841250.6	818199.1	0	50.0
258	8 times per day	4.790E-04	4.313E-05	841467.4	818113.3	841640.3	818077.1	0	32.0
259	8 times per day	1.497E-04	1.348E-05	841637.3	818068.0	841699.1	818057.1	0	10.0
260	8 times per day	1.497E-04	1.348E-05	841699.1	818057.1	841758.5	818040.6	0	10.0
261	8 times per day	1.497E-04	1.348E-05	841758.5	818040.6	841793.6	818027.8	0	10.0
262	8 times per day	1.497E-04	1.348E-05	841793.6	818027.8	841812.1	818004.8	0	10.0
263	8 times per day	1.497E-04	1.348E-05	841812.1	818004.8	841819.8	817976.1	0	10.0
264	8 times per day	1.497E-04	1.348E-05	841819.8	817976.1	841817.8	817946.7	0	10.0
265	8 times per day	1.497E-04	1.348E-05	841817.8	817946.7	841771.9	817831.8	0	10.0
266	8 times per day	1.497E-04	1.348E-05	841771.9	817831.8	841746.4	817776.6	0	10.0
267	8 times per day	1.497E-04	1.348E-05	841601.3	818104.1	841759.9	818111.9	0	10.0
268	8 times per day	1.497E-04	1.348E-05	841759.9	818111.9	841855.0	818116.3	0	10.0
269	8 times per day	1.497E-04	1.348E-05	841855.0	818116.3	841891.4	818108.3	0	10.0
270	8 times per day	1.497E-04	1.348E-05	841891.4	818108.3	841909.3	818080.8	0	10.0
271	8 times per day	1.497E-04	1.348E-05	841909.3	818080.8	841911.9	818054.1	0	10.0
272	8 times per day	1.497E-04	1.348E-05	841911.9	818054.1	841869.6	817990.1	0	10.0
273	8 times per day	1.497E-04	1.348E-05	841827.4	817936.8	841760.8	817772.4	0	10.0
274	8 times per day	3.592E-04	3.234E-05	841641.7	818076.4	841783.0	818076.0	0	24.0
275	8 times per day	3.592E-04	3.234E-05	841783.0	818076.0	842067.3	818079.9	0	24.0
276	8 times per day	1.497E-04	1.348E-05	841869.6	817990.1	841827.4	817936.8	0	10.0
277	8 times per day	8.981E-05	8.086E-06	842049.6	818040.8	841949.9	818036.9	0	6.0
278	8 times per day	1.048E-04	9.434E-06	841949.9	818036.9	841922.3	818035.9	0	7.0
279	8 times per day	1.048E-04	9.434E-06	841922.3	818035.9	841898.4	818029.9	0	7.0
280	8 times per day	1.048E-04	9.434E-06	841898.4	818029.9	841863.4	818007.6	0	7.0
281	8 times per day	1.048E-04	9.434E-06	841863.4	818007.6	841833.1	817965.7	0	7.0
282	8 times per day	1.048E-04	9.434E-06	841834.3	817965.6	841753.3	817771.7	0	7.0
283	8 times per day	1.048E-04	9.434E-06	841774.0	817853.9	841787.4	817908.9	0	7.0
284	8 times per day	1.048E-04	9.434E-06	841787.4	817908.9	841791.4	817946.0	0	7.0
285	8 times per day	1.048E-04	9.434E-06	841791.4	817946.0	841786.2	818042.1	0	7.0
286	8 times per day	1.048E-04	9.434E-06	841786.2	818042.1	841789.7	818078.1	0	7.0
287	8 times per day	1.048E-04	9.434E-06	841789.7	818078.1	841799.5	818097.2	0	7.0
288	8 times per day	1.048E-04	9.434E-06	841799.5	818097.2	841821.5	818105.9	0	7.0
289	8 times per day	1.048E-04	9.434E-06	841821.5	818105.9	841851.1	818105.9	0	7.0
290	8 times per day	1.048E-04	9.434E-06	841853.8	818108.0	841975.8	818097.8	0	7.0
242	8 times per day	7.185E-04	6.469E-05	838264.0	821397.0	838326.0	821417.1	0	48.0
244	8 times per day	5.688E-04	5.121E-05	837720.0	820847.5	837750.5	820877.0	0	38.0
211	8 times per day	2.096E-04	1.887E-05	839409.1	819743.6	839198.2	819949.6	0	14.0
212	8 times per day	2.096E-04	1.887E-05	839198.2	819949.6	838846.6	820292.9	0	14.0
219	8 times per day	2.395E-04	2.156E-05	839203.5	819954.3	839257.6	820014.0	0	16.0

Summary of dust emission sources (Scenario 2)

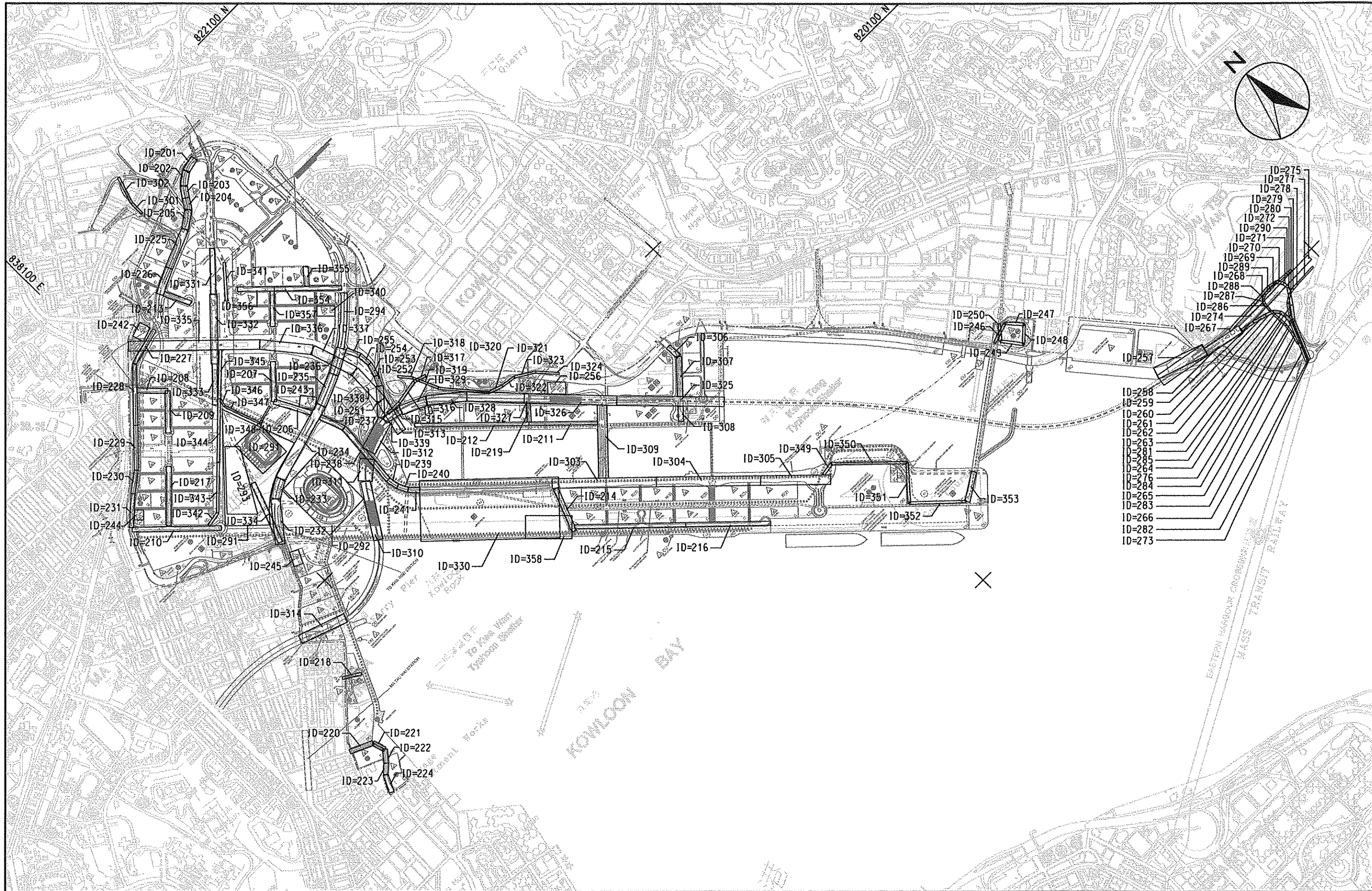
Source ID	Watering frequency	Emission Rate		Coordinate				Height	Width
		Heavy Construction	Wind Eorsion	Start - x	Start - y	End - x	End - y		
201	8 times per day	4.491E-04	4.043E-05	838977.4	821771.6	838913.5	821758.5	0	30.0
202	8 times per day	4.491E-04	4.043E-05	838913.5	821758.5	838860.7	821720.3	0	30.0
203	8 times per day	4.491E-04	4.043E-05	838860.7	821720.3	838830.9	821678.0	0	30.0
204	8 times per day	4.491E-04	4.043E-05	838830.9	821678.0	838803.8	821634.4	0	30.0
205	8 times per day	4.491E-04	4.043E-05	838803.8	821634.4	838735.0	821585.0	0	30.0
206	8 times per day	2.994E-04	2.695E-05	838568.1	820644.3	838487.3	820793.8	0	20.0
207	8 times per day	2.994E-04	2.695E-05	838487.3	820793.8	838604.8	820918.8	0	20.0
208	8 times per day	2.994E-04	2.695E-05	838106.9	821244.3	838196.4	821151.2	0	20.0
209	8 times per day	2.994E-04	2.695E-05	838196.4	821151.2	838071.1	821022.4	0	20.0
210	8 times per day	2.994E-04	2.695E-05	837670.4	820838.5	837945.0	820572.8	0	20.0
211	8 times per day	2.096E-04	1.887E-05	839409.1	819743.6	839198.2	819949.6	0	14.0
212	8 times per day	2.096E-04	1.887E-05	839198.2	819949.6	838846.6	820292.9	0	14.0
213	8 times per day	2.994E-04	2.695E-05	838477.4	821455.8	838529.9	821345.3	0	20.0
214	8 times per day	2.994E-04	2.695E-05	839083.7	819672.2	839009.5	819486.9	0	20.0
215	8 times per day	2.395E-04	2.156E-05	839025.4	819498.3	839365.0	819170.6	0	16.0
216	8 times per day	2.395E-04	2.156E-05	839365.0	819170.6	839629.0	818915.6	0	16.0
217	8 times per day	2.994E-04	2.695E-05	837792.8	820740.2	837971.7	820919.7	0	20.0
218	8 times per day	1.497E-04	1.348E-05	837857.6	819750.0	837930.0	819705.8	0	10.0
219	8 times per day	2.395E-04	2.156E-05	839203.5	819954.3	839257.6	820014.0	0	16.0
220	8 times per day	2.994E-04	2.695E-05	837657.2	819504.5	837754.6	819460.0	0	20.0
221	8 times per day	2.994E-04	2.695E-05	837754.6	819460.0	837771.9	819404.8	0	20.0
222	8 times per day	2.994E-04	2.695E-05	837771.9	819404.8	837734.8	819358.7	0	20.0
223	8 times per day	2.994E-04	2.695E-05	837734.8	819358.7	837697.2	819325.4	0	20.0
224	8 times per day	2.994E-04	2.695E-05	837697.2	819325.4	837663.1	819253.4	0	20.0
225	8 times per day	4.491E-04	4.043E-05	838735.0	821585.0	838570.5	821518.3	0	30.0
226	8 times per day	4.491E-04	4.043E-05	838570.5	821518.3	838463.5	821464.8	0	30.0
227	8 times per day	2.395E-04	2.156E-05	838341.6	821373.9	838178.0	821332.8	0	16.0
228	8 times per day	2.395E-04	2.156E-05	838178.0	821332.8	837996.3	821142.8	0	16.0
229	8 times per day	2.395E-04	2.156E-05	837996.3	821142.8	837862.0	821005.5	0	16.0
230	8 times per day	2.395E-04	2.156E-05	837862.0	821005.5	837781.9	820944.7	0	16.0
231	8 times per day	2.395E-04	2.156E-05	837781.9	820944.7	837674.1	820846.4	0	16.0
232	8 times per day	5.987E-04	5.391E-05	838086.0	820366.0	838198.1	820496.2	0	40.0
233	8 times per day	5.987E-04	5.391E-05	838198.1	820496.2	838274.3	820541.4	0	40.0
234	8 times per day	5.987E-04	5.391E-05	838274.3	820541.4	838619.6	820639.5	0	40.0
235	8 times per day	5.987E-04	5.391E-05	838619.6	820639.5	838750.7	820694.7	0	40.0
236	8 times per day	5.987E-04	5.391E-05	838750.7	820694.7	838851.8	820750.7	0	40.0
237	8 times per day	2.994E-04	2.695E-05	838581.5	820606.5	838618.9	820501.2	0	20.0
238	8 times per day	2.994E-04	2.695E-05	838618.9	820501.2	838598.4	820209.3	0	20.0
239	8 times per day	2.994E-04	2.695E-05	838598.4	820209.3	838608.4	820160.5	0	20.0
240	8 times per day	2.994E-04	2.695E-05	838608.4	820160.5	838629.7	820117.9	0	20.0
241	8 times per day	2.994E-04	2.695E-05	838629.7	820117.9	838665.0	820080.4	0	20.0
242	8 times per day	7.185E-04	6.469E-05	838264.0	821397.0	838326.0	821417.1	0	48.0
243	8 times per day	7.484E-04	6.738E-05	838568.2	820717.3	838608.5	820661.8	0	50.0
244	8 times per day	5.688E-04	5.121E-05	837720.0	820847.5	837750.5	820877.0	0	38.0
245	8 times per day	5.838E-04	5.256E-05	838068.0	820225.0	838095.7	820281.9	0	39.0
246	8 times per day	1.497E-04	1.348E-05	840850.8	818783.9	840940.3	818812.7	0	10.0
247	8 times per day	1.497E-04	1.348E-05	840940.3	818812.7	840995.6	818750.9	0	10.0
248	8 times per day	1.497E-04	1.348E-05	840995.6	818750.9	840933.8	818692.3	0	10.0
249	8 times per day	1.497E-04	1.348E-05	840933.8	818692.3	840874.2	818771.1	0	10.0
250	8 times per day	1.497E-04	1.348E-05	840874.2	818771.1	840922.1	818827.6	0	10.0
251	8 times per day	4.491E-04	4.043E-05	838765.9	820419.4	838857.2	820518.3	0	30.0
252	8 times per day	2.994E-04	2.695E-05	838857.2	820518.3	838877.0	820560.6	0	20.0
253	8 times per day	2.994E-04	2.695E-05	838877.0	820560.6	838892.5	820617.4	0	20.0
254	8 times per day	2.994E-04	2.695E-05	838892.5	820617.4	838887.4	820671.6	0	20.0
255	8 times per day	2.994E-04	2.695E-05	838887.4	820671.6	838860.7	820730.1	0	20.0
256	8 times per day	7.484E-04	6.738E-05	839362.3	819999.8	839418.0	819945.4	0	50.0
257	8 times per day	7.484E-04	6.738E-05	841469.2	818121.9	841250.6	818199.1	0	50.0
258	8 times per day	4.790E-04	4.313E-05	841467.4	818113.3	841640.3	818077.1	0	32.0
259	8 times per day	1.497E-04	1.348E-05	841637.3	818068.0	841699.1	818057.1	0	10.0
260	8 times per day	1.497E-04	1.348E-05	841699.1	818057.1	841758.5	818040.6	0	10.0
261	8 times per day	1.497E-04	1.348E-05	841758.5	818040.6	841793.6	818027.8	0	10.0
262	8 times per day	1.497E-04	1.348E-05	841793.6	818027.8	841812.1	818004.8	0	10.0
263	8 times per day	1.497E-04	1.348E-05	841812.1	818004.8	841819.8	817976.1	0	10.0
264	8 times per day	1.497E-04	1.348E-05	841819.8	817976.1	841817.8	817946.7	0	10.0
265	8 times per day	1.497E-04	1.348E-05	841817.8	817946.7	841771.9	817831.8	0	10.0
266	8 times per day	1.497E-04	1.348E-05	841771.9	817831.8	841746.4	817776.6	0	10.0
267	8 times per day	1.497E-04	1.348E-05	841601.3	818104.1	841759.9	818111.9	0	10.0
268	8 times per day	1.497E-04	1.348E-05	841759.9	818111.9	841855.0	818116.3	0	10.0
269	8 times per day	1.497E-04	1.348E-05	841855.0	818116.3	841891.4	818108.3	0	10.0
270	8 times per day	1.497E-04	1.348E-05	841891.4	818108.3	841909.3	818080.8	0	10.0
271	8 times per day	1.497E-04	1.348E-05	841909.3	818080.8	841911.9	818054.1	0	10.0
272	8 times per day	1.497E-04	1.348E-05	841911.9	818054.1	841869.6	817990.1	0	10.0
273	8 times per day	1.497E-04	1.348E-05	841827.4	817936.8	841760.8	817772.4	0	10.0
274	8 times per day	3.592E-04	3.234E-05	841641.7	818076.4	841783.0	818076.0	0	24.0
275	8 times per day	3.592E-04	3.234E-05	841783.0	818076.0	842067.3	818079.9	0	24.0
276	8 times per day	1.497E-04	1.348E-05	841869.6	817990.1	841827.4	817936.8	0	10.0
277	8 times per day	8.981E-05	8.086E-06	842049.6	818040.8	841949.9	818036.9	0	6.0
278	8 times per day	1.048E-04	9.434E-06	841949.9	818036.9	841922.3	818035.9	0	7.0

Summary of dust emission sources (Scenario 2)

Source ID	Watering frequency	Emission Rate		Coordinate				Height	Width
		Heavy Construction	Wind Eorsion	Start - x	Start - y	End - x	End - y		
279	8 times per day	1.048E-04	9.434E-06	841922.3	818035.9	841898.4	818029.9	0	7.0
280	8 times per day	1.048E-04	9.434E-06	841898.4	818029.9	841863.4	818007.6	0	7.0
281	8 times per day	1.048E-04	9.434E-06	841863.4	818007.6	841833.1	817965.7	0	7.0
282	8 times per day	1.048E-04	9.434E-06	841834.3	817965.6	841753.3	817771.7	0	7.0
283	8 times per day	1.048E-04	9.434E-06	841774.0	817853.9	841787.4	817908.9	0	7.0
284	8 times per day	1.048E-04	9.434E-06	841787.4	817908.9	841791.4	817946.0	0	7.0
285	8 times per day	1.048E-04	9.434E-06	841791.4	817946.0	841786.2	818042.1	0	7.0
286	8 times per day	1.048E-04	9.434E-06	841786.2	818042.1	841789.7	818078.1	0	7.0
287	8 times per day	1.048E-04	9.434E-06	841789.7	818078.1	841799.5	818097.2	0	7.0
288	8 times per day	1.048E-04	9.434E-06	841799.5	818097.2	841821.5	818105.9	0	7.0
289	8 times per day	1.048E-04	9.434E-06	841821.5	818105.9	841851.1	818105.9	0	7.0
290	8 times per day	1.048E-04	9.434E-06	841853.8	818108.0	841975.8	818097.8	0	7.0
291	8 times per day	1.587E-03	1.429E-04	838288.0	820767.0	838292.0	820619.0	0	106.0
292	8 times per day	3.293E-03	2.965E-04	838366.0	820499.0	838367.0	820202.0	0	220.0
293	8 times per day	1.197E-03	1.078E-04	838033.0	820544.0	838188.0	820737.0	0	80.0
301	8 times per day	1.197E-04	1.078E-05	838653.0	821762.7	838654.1	821823.5	0	8.0
302	8 times per day	1.197E-04	1.078E-05	838654.1	821823.5	838690.7	821940.4	0	8.0
303	8 times per day	5.987E-04	5.391E-05	839088.2	819697.2	839407.9	819386.4	0	40.0
304	8 times per day	5.987E-04	5.391E-05	839407.9	819386.4	839727.6	819075.6	0	40.0
305	8 times per day	5.987E-04	5.391E-05	839727.6	819075.6	839940.8	818868.4	0	40.0
306	8 times per day	2.994E-04	2.695E-05	839850.9	819760.7	839853.6	819700.4	0	20.0
307	8 times per day	2.994E-04	2.695E-05	839853.6	819700.4	839735.7	819575.8	0	20.0
308	8 times per day	2.994E-04	2.695E-05	839707.7	819544.6	839663.3	819497.0	0	20.0
309	8 times per day	5.987E-04	5.391E-05	839475.9	819784.3	839259.7	819558.9	0	40.0
310	8 times per day	5.987E-04	5.391E-05	838387.1	820058.1	838523.6	820276.0	0	40.0
311	8 times per day	8.981E-04	8.086E-05	838523.6	820276.0	838597.2	820337.4	0	60.0
312	8 times per day	8.981E-04	8.086E-05	838626.6	820356.4	838768.2	820400.4	0	60.0
313	8 times per day	4.491E-04	4.043E-05	838768.2	820400.4	838848.1	820381.2	0	30.0
314	8 times per day	5.688E-04	5.121E-05	837848.2	819994.7	838050.2	819923.5	0	38.0
315	8 times per day	1.497E-04	1.348E-05	838798.3	820409.8	838867.4	820407.9	0	10.0
316	8 times per day	1.497E-04	1.348E-05	838867.4	820407.9	838975.7	820426.0	0	10.0
317	8 times per day	1.497E-04	1.348E-05	838975.7	820426.0	839030.1	820409.0	0	10.0
318	8 times per day	1.197E-04	1.078E-05	838940.9	820491.8	838982.9	820440.9	0	8.0
319	8 times per day	1.197E-04	1.078E-05	838983.4	820440.4	839030.8	820333.3	0	8.0
320	8 times per day	1.197E-04	1.078E-05	839029.6	820332.3	839170.4	820166.0	0	8.0
321	8 times per day	1.197E-04	1.078E-05	839170.4	820166.0	839231.4	820144.7	0	8.0
322	8 times per day	1.197E-04	1.078E-05	839231.4	820144.7	839294.3	820135.5	0	8.0
323	8 times per day	1.197E-04	1.078E-05	839294.3	820135.5	839375.0	820084.7	0	8.0
324	8 times per day	1.197E-04	1.078E-05	839375.0	820084.7	839441.6	820010.2	0	8.0
325	8 times per day	5.987E-04	5.391E-05	839854.0	819425.7	839534.4	819752.6	0	40.0
326	8 times per day	5.987E-04	5.391E-05	839534.4	819752.6	839260.1	820041.8	0	40.0
327	8 times per day	5.987E-04	5.391E-05	839260.1	820041.8	839092.4	820221.8	0	40.0
328	8 times per day	5.987E-04	5.391E-05	839092.4	820221.8	838956.7	820330.9	0	40.0
329	8 times per day	5.987E-04	5.391E-05	838956.7	820330.9	838847.5	820379.8	0	40.0
330	8 times per day	3.892E-03	3.504E-04	839037.0	819603.8	838603.4	820016.1	0	260.0
331	8 times per day	2.994E-04	2.695E-05	838760.6	821445.0	838626.1	821302.8	0	20.0
332	8 times per day	4.491E-04	4.043E-05	838626.1	821302.8	838420.9	821089.3	0	30.0
333	8 times per day	2.994E-04	2.695E-05	838420.9	821089.3	838297.8	820963.9	0	20.0
334	8 times per day	2.994E-04	2.695E-05	838178.2	820612.3	838063.0	820390.0	0	20.0
335	8 times per day	5.987E-04	5.391E-05	838213.6	821403.0	838617.1	821010.1	0	40.0
336	8 times per day	5.987E-04	5.391E-05	838617.1	821010.1	838760.7	820832.8	0	40.0
337	8 times per day	5.987E-04	5.391E-05	838760.7	820832.8	838824.0	820640.4	0	40.0
338	8 times per day	5.987E-04	5.391E-05	838824.0	820640.4	838818.8	820470.7	0	40.0
339	8 times per day	5.987E-04	5.391E-05	838818.8	820470.7	838785.2	820313.2	0	40.0
340	8 times per day	6.436E-04	5.795E-05	838891.0	820936.8	838945.7	820882.2	0	43.0
341	8 times per day	1.497E-04	1.348E-05	838755.3	821366.2	838646.9	821242.0	0	10.0
342	8 times per day	1.497E-04	1.348E-05	837914.1	820618.1	837979.5	820630.0	0	10.0
343	8 times per day	1.497E-04	1.348E-05	837979.5	820630.0	838134.4	820781.5	0	10.0
344	8 times per day	1.497E-04	1.348E-05	838134.4	820781.5	838329.3	820969.9	0	10.0
345	8 times per day	1.497E-04	1.348E-05	838329.3	820969.9	838480.8	821113.7	0	10.0
346	8 times per day	8.981E-05	8.086E-06	838331.2	820962.3	838323.1	820931.0	0	6.0
347	8 times per day	8.981E-05	8.086E-06	838323.1	820931.0	838379.1	820771.3	0	6.0
348	8 times per day	8.981E-05	8.086E-06	838379.1	820771.3	838458.8	820792.6	0	6.0
349	8 times per day	1.497E-04	1.348E-05	839936.5	818904.2	839990.9	818913.8	0	10.0
350	8 times per day	1.497E-04	1.348E-05	839990.9	818913.8	840224.3	818686.8	0	10.0
351	8 times per day	1.497E-04	1.348E-05	840224.3	818686.8	840108.3	818557.4	0	10.0
352	8 times per day	1.497E-04	1.348E-05	840108.3	818557.4	840286.6	818389.6	0	10.0
353	8 times per day	1.497E-04	1.348E-05	840286.6	818389.6	840389.6	818470.4	0	10.0
354	8 times per day	2.694E-04	2.426E-05	839035.2	820931.6	838829.2	821133.2	0	18.0
355	8 times per day	2.994E-04	2.695E-05	838935.0	821040.8	838990.7	821105.2	0	20.0
356	8 times per day	2.694E-04	2.426E-05	838829.2	821133.2	838715.5	821244.9	0	18.0
357	8 times per day	2.994E-04	2.695E-05	838815.2	821133.4	838709.8	821024.5	0	20.0
294	8 times per day	1.796E-04	1.617E-05	838853.0	820752.0	839031.0	820907.0	0	12.0
358	Watering each unloading	5.106E-04	1.685E-05	838951.0	819528.0	838981.0	819494.0	0	25.0



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LOCATIONS OF EMISSION SOURCES - SCENARIO 2

SCALE	A3 1:15000	DATE	MAY 2007
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