

Appendix 3-4

Hourly TSP Calculation Results (Unmitigated Scenario)

Appendix 3-4A Summary Table of Highest Hourly TSP Level (Unmitigated Scenario)

ASR	X	Y	Z	Height above ground	Max. Hourly TSP (With Bkg. Level) *	Max. Hourly TSP (W/o Bkg.)	TSP Concentration, µg/m ³			
					With Bkg. Level	= Max of (A), (B), (C1), and (C2)	(A) Workdays (day-time)	(B) Workdays (Night-time)	(C1) Holidays (Day-time)	(C2) Holidays (Night-time)
A01	823101.12	837242.4	4.4	1.5	1300	1136	1136.0	34.5	9.2	35.4
A01A	823124.28	837181.3	4.4	1.5	1344	1180	1180.0	33.8	7.9	32.2
A02	823092.84	837314	4.4	1.5	1221	1057	1056.8	38.0	9.4	35.0
A02A	823119.86	837359.1	4.4	1.5	1257	1093	1092.5	40.8	9.8	38.9
A03	823260.81	837373.7	4.4	1.5	1784	1620	1619.6	46.4	11.0	45.7
A04	823276.81	837456.1	4.3	1.5	2060	1896	1896.3	53.1	13.8	53.2
A05	823287.12	837673.9	4.2	1.5	2587	2423	2423.0	82.9	17.6	85.8
A05A	823269.63	837644.5	4.2	1.5	2142	1978	1978.1	77.6	14.5	77.3
A05B	823308.73	837726.2	4.2	1.5	2860	2696	2695.9	103.5	24.6	91.9
A06	823405	837870	4.2	1.5	4078	3914	3913.6	116.1	34.0	114.2
A06A	823365.92	837883.6	4.2	1.5	3308	3144	3143.7	99.4	28.6	99.1
A07	823788.62	837882.5	3.1	1.5	11363	11199	11198.6	156.9	69.0	148.3
A08	823679.12	837571.7	2.3	1.5	2012	1848	1847.6	83.8	17.1	27.7
A09	823717.31	837567	3.5	1.5	1893	1729	1729.4	81.1	16.9	28.2
A10	823227.62	837343.9	4.4	1.5	1702	1538	1537.5	43.3	10.6	39.7
A10A	823188.8	837327.3	4.4	1.5	1588	1424	1423.8	39.6	10.7	41.2
A11	823382.12	837043.2	4.5	1.5	1211	1047	1047.1	28.4	5.3	28.8
A12	823509.19	837017.6	6.5	1.5	1048	884	883.8	32.0	5.7	20.5
A13	823171.38	837105	4.6	1.5	1044	880	879.8	29.0	6.4	28.8
A14	823175.5	837030.5	4.4	1.5	785	621	621.4	29.9	5.4	25.6
A15	823271.81	836947.2	4.1	1.5	603	439	439.0	28.7	5.4	26.4
A16	823496	837908.2	4.2	1.5	8653	8489	8489.1	137.2	47.9	137.2
A16A	823470.21	837871.6	4.2	1.5	7868	7704	7703.7	143.6	45.8	143.2
A17	823500.62	838152.4	5.7	1.5	3585	3421	3421.4	98.7	25.3	98.3
A18	823725.62	838015.9	3.5	1.5	4441	4277	4276.8	107.1	30.0	103.4
A19	823749.5	837459.6	3.3	1.5	1412	1248	1247.6	66.0	11.6	21.6
A20	823745.38	837355.3	4.2	1.5	1163	999	998.8	54.5	9.1	15.2
A21	823713.88	837274	4.2	1.5	1272	1108	1108.4	42.1	6.1	10.4
A22	823645.12	837066.1	3.5	1.5	1008	844	844.4	34.5	4.7	7.4
A23	823920.62	837886.7	3.6	1.5	6146	5982	5981.6	102.8	34.4	76.0
A24	823927.69	837923.6	3.5	1.5	6019	5855	5854.9	82.6	29.1	86.8
A25	823756	838085.2	4.9	1.5	2126	1962	1961.6	84.3	21.0	84.0
A26	823040.62	838098.6	4.4	1.5	2800	2636	2636.1	60.1	12.8	57.3
A27	823465.59	837089.9	4.5	1.5	1367	1203	1202.7	33.2	5.7	26.4
A28	823286.57	837864.2	4.3	1.5	2394	2230	2230.2	85.4	24.1	77.0
A29	823279.17	837826.6	4.3	1.5	2700	2536	2536.2	92.5	22.6	77.7
A30	823293.2	837534.5	4.5	1.5	2220	2056	2055.7	58.1	16.8	60.1
A31	823393.53	837959.7	3.9	1.5	5244	5080	5080.4	109.9	36.3	109.7
A32	823353.02	837069.1	4.5	1.5	1047	883	882.5	30.8	5.8	31.4
A33	823439.27	837932.1	3.9	1.5	6326	6162	6162.3	107.3	33.5	106.4
A34	823424.53	838140.2	5.2	1.5	5309	5145	5145.0	119.8	22.8	119.6
A35	823581.4	838166.3	5	1.5	3457	3293	3292.8	93.5	25.7	93.2
A36	823703.1	837968.5	3.5	1.5	5189	5025	5024.5	141.1	44.9	138.4
A1Pa	823687.9	837719	3	1.5	6327	6163	6163.2	136.6	41.5	75.3
A2Pa	823545.2	837421.1	3	1.5	2117	1953	1952.6	51.9	12.4	38.5
A3Pa	823454.7	837785.1	4	1.5	7535	7371	7370.9	163.2	61.2	157.7
A4Pa	823304.9	837427.1	4	1.5	1930	1766	1766.2	50.0	12.0	51.5
A5Pa	823482.3	837384.6	6.5	1.5	2030	1866	1865.8	47.5	9.6	42.5
V01	823571.7	837355.7	3	1.5	1617	1453	1453.0	48.1	10.4	29.4
V02	823780.1	837738.5	2.4	1.5	4777	4613	4613.2	114.0	26.1	125.3
V03	823524.7	837232	3	1.5	1504	1340	1339.8	39.4	8.3	27.9
V04	823384.5	837124.2	4.8	1.5	1258	1094	1093.9	31.2	6.1	31.8
A01	823101.12	837242.4	4.4	4.5	1286	1122	1121.7	32.3	9.1	33.1
A01A	823124.28	837181.3	4.4	4.5	1330	1166	1166.2	31.8	7.8	30.4
A02	823092.84	837314	4.4	4.5	1206	1042	1041.8	35.4	9.1	32.6
A02A	823119.86	837359.1	4.4	4.5	1239	1075	1075.2	37.6	9.5	35.9
A03	823260.81	837373.7	4.4	4.5	1751	1587	1587.0	41.9	10.8	41.2
A04	823276.81	837456.1	4.3	4.5	2011	1847	1846.5	46.6	13.5	46.7
A05	823287.12	837673.9	4.2	4.5	2357	2193	2193.3	64.3	16.7	66.4
A05A	823269.63	837644.5	4.2	4.5	1976	1812	1812.4	62.2	14.0	61.7
A05B	823308.73	837726.2	4.2	4.5	2706	2542	2541.9	74.8	22.9	68.6
A06	823405	837870	4.2	4.5	3324	3160	3160.0	64.8	26.1	61.8
A06A	823365.92	837883.6	4.2	4.5	2981	2817	2817.2	65.8	23.8	65.2
A07	823788.62	837882.5	3.1	4.5	5962	5798	5797.9	53.5	45.4	48.2
A08	823679.12	837571.7	2.3	4.5	1972	1808	1807.8	64.8	16.8	26.2
A09	823717.31	837567	3.5	4.5	1862	1698	1697.5	64.5	16.6	26.7
A10	823227.62	837343.9	4.4	4.5	1674	1510	1509.7	39.5	10.5	36.3
A10A	823188.8	837327.3	4.4	4.5	1564	1400	1400.0	36.5	10.5	37.9
A11	823382.12	837043.2	4.5	4.5	1200	1036	1035.6	26.8	5.3	27.2
A12	823509.19	837017.6	6.5	4.5	1038	874	874.0	30.3	5.7	19.3
A13	823171.38	837105	4.6	4.5	1035	871	870.6	27.4	6.3	27.3
A14	823175.5	837030.5	4.4	4.5	772	608	608.4	28.4	5.3	24.3
A15	823271.81	836947.2	4.1	4.5	595	431	430.5	27.4	5.3	25.2
A16	823496	837908.2	4.2	4.5	4475	4311	4310.5	54.1	38.0	54.0
A16A	823470.21	837871.6	4.2	4.5	3959	3795	3794.6	58.9	32.0	58.6
A17	823500.62	838152.4	5.7	4.5	3164	3000	3000.4	65.5	22.9	65.5
A18	823725.62	838015.9	3.5	4.5	3375	3211	3210.8	59.8	27.8	55.2
A19	823749.5	837459.6	3.3	4.5	1371	1207	1207.1	57.0	11.5	20.9
A20	823745.38	837355.3	4.2	4.5	1140	976	976.2	48.9	9.0	14.9
A21	823713.88	837274	4.2	4.5	1229	1065	1064.9	38.6	6.1	10.2
A22	823645.12	837066.1	3.5	4.5	998	834	834.2	32.6	4.6	7.2
A23	823920.62	837886.7	3.6	4.5	5318	5154	5153.9	72.7	31.7	58.0
A24	823927.69	837923.6	3.5	4.5	5241	5077	5077.3	59.6	27.0	62.5

ASR	X	Y	Z	Height above ground	Max. Hourly TSP (With Bkg. Level) *	Max. Hourly TSP (W/o Bkg.)	TSP Concentration, $\mu\text{g}/\text{m}^3$			
					With Bkg. Level	= Max of (A), (B), (C1), and (C2)	(A) Workdays (day-time)	(B) Workdays (Night-time)	(C1) Holidays (Day-time)	(C2) Holidays (Night-time)
A25	823756	838085.2	4.9	4.5	2059	1895	1894.8	59.9	20.3	59.7
A26	823040.62	838098.6	4.4	4.5	2695	2531	2531.3	54.1	12.2	52.0
A27	823465.59	837089.9	4.5	4.5	1352	1188	1187.6	31.2	5.7	24.8
A28	823286.57	837864.2	4.3	4.5	2160	1996	1996.4	65.2	21.4	56.7
A29	823279.17	837826.6	4.3	4.5	2424	2260	2259.9	70.1	20.3	60.2
A30	823293.2	837534.5	4.5	4.5	2148	1984	1984.3	49.1	16.3	50.6
A31	823393.53	837959.7	3.9	4.5	4409	4245	4245.0	65.9	23.3	63.6
A32	823353.02	837069.1	4.5	4.5	1037	873	872.5	29.1	5.7	29.6
A33	823439.27	837932.1	3.9	4.5	4737	4573	4572.8	58.6	28.5	58.5
A34	823424.53	838140.2	5.2	4.5	4800	4636	4635.8	77.1	20.4	76.6
A35	823581.4	838166.3	5	4.5	3186	3022	3022.1	61.9	24.8	62.2
A36	823703.1	837968.5	3.5	4.5	3754	3590	3589.7	52.5	35.7	51.5
A1Pa	823687.9	837719	3	4.5	5203	5039	5038.8	70.1	38.2	38.3
A2Pa	823545.2	837421.1	3	4.5	2055	1891	1890.7	45.1	12.2	33.1
A3Pa	823454.7	837785.1	4	4.5	4895	4731	4731.3	62.0	45.5	58.3
A4Pa	823304.9	837427.1	4	4.5	1887	1723	1723.0	44.2	11.8	45.5
A5Pa	823482.3	837384.6	6.5	4.5	1981	1817	1817.4	42.1	9.5	37.3
V01	823571.7	837355.7	3	4.5	1580	1416	1415.9	42.8	10.3	26.0
V02	823780.1	837738.5	2.4	4.5	4020	3856	3856.1	63.4	22.8	76.7
V03	823524.7	837232	3	4.5	1480	1316	1316.1	36.3	8.2	25.5
V04	823384.5	837124.2	4.8	4.5	1244	1080	1079.9	29.3	6.1	29.8
A01	823101.12	837242.4	4.4	7.5	1258	1094	1093.7	28.4	8.8	29.1
A01A	823124.28	837181.3	4.4	7.5	1303	1139	1139.1	28.2	7.6	26.9
A02	823092.84	837314	4.4	7.5	1177	1013	1012.7	30.6	8.6	28.4
A02A	823119.86	837359.1	4.4	7.5	1205	1041	1041.3	32.0	8.9	30.7
A03	823260.81	837373.7	4.4	7.5	1688	1524	1523.8	34.2	10.3	33.7
A04	823276.81	837456.1	4.3	7.5	1915	1751	1751.0	36.0	12.8	36.0
A05	823287.12	837673.9	4.2	7.5	1968	1804	1804.1	40.6	15.3	40.7
A05A	823269.63	837644.5	4.2	7.5	1719	1555	1554.6	40.6	13.6	40.0
A05B	823308.73	837726.2	4.2	7.5	2429	2265	2264.7	42.7	21.6	40.1
A06	823405	837870	4.2	7.5	2680	2516	2515.7	37.5	20.6	37.1
A06A	823365.92	837883.6	4.2	7.5	2444	2280	2280.2	38.1	18.5	39.0
A07	823788.62	837882.5	3.1	7.5	3352	3188	3187.7	34.4	33.9	26.6
A08	823679.12	837571.7	2.3	7.5	1895	1731	1731.2	39.6	16.1	23.5
A09	823717.31	837567	3.5	7.5	1800	1636	1635.5	41.4	16.0	24.0
A10	823227.62	837343.9	4.4	7.5	1620	1456	1455.6	33.0	10.1	30.4
A10A	823188.8	837327.3	4.4	7.5	1518	1354	1353.8	30.9	10.2	32.0
A11	823382.12	837043.2	4.5	7.5	1177	1013	1013.1	23.9	5.2	24.3
A12	823509.19	837017.6	6.5	7.5	1019	855	854.7	27.1	5.6	17.2
A13	823171.38	837105	4.6	7.5	1016	852	852.4	24.5	6.2	24.4
A14	823175.5	837030.5	4.4	7.5	747	583	583.3	25.7	5.2	22.0
A15	823271.81	836947.2	4.1	7.5	580	416	415.6	24.9	5.1	22.9
A16	823496	837908.2	4.2	7.5	2817	2653	2652.7	29.9	26.5	25.0
A16A	823470.21	837871.6	4.2	7.5	3051	2887	2887.0	30.4	26.8	28.5
A17	823500.62	838152.4	5.7	7.5	2502	2338	2338.4	35.4	18.9	31.6
A18	823725.62	838015.9	3.5	7.5	2435	2271	2271.2	27.1	23.8	33.5
A19	823749.5	837459.6	3.3	7.5	1294	1130	1130.2	42.6	11.2	19.6
A20	823745.38	837355.3	4.2	7.5	1097	933	932.6	39.4	8.9	14.2
A21	823713.88	837274	4.2	7.5	1147	983	983.1	32.4	6.0	9.9
A22	823645.12	837066.1	3.5	7.5	978	814	814.3	28.9	4.5	6.8
A23	823920.62	837886.7	3.6	7.5	4034	3870	3870.2	38.6	27.0	34.8
A24	823927.69	837923.6	3.5	7.5	4020	3856	3856.2	32.3	23.4	34.2
A25	823756	838085.2	4.9	7.5	1940	1776	1776.2	31.5	19.0	31.4
A26	823040.62	838098.6	4.4	7.5	2498	2334	2334.2	44.1	11.5	42.7
A27	823465.59	837089.9	4.5	7.5	1322	1158	1158.1	27.6	5.7	21.9
A28	823286.57	837864.2	4.3	7.5	1929	1765	1765.3	39.3	17.0	38.0
A29	823279.17	837826.6	4.3	7.5	2032	1868	1868.3	41.8	16.5	36.9
A30	823293.2	837534.5	4.5	7.5	2013	1849	1849.3	35.2	15.1	36.1
A31	823393.53	837959.7	3.9	7.5	3171	3007	3006.6	38.0	21.5	37.9
A32	823353.02	837069.1	4.5	7.5	1017	853	852.9	25.9	5.6	26.4
A33	823439.27	837932.1	3.9	7.5	2847	2683	2683.3	33.9	24.8	33.6
A34	823424.53	838140.2	5.2	7.5	3967	3803	3802.8	45.6	16.5	37.8
A35	823581.4	838166.3	5	7.5	2720	2556	2555.6	33.4	23.1	33.2
A36	823703.1	837968.5	3.5	7.5	2854	2690	2690.2	29.0	24.7	25.7
A1Pa	823686.4	837724.4	3	7.5	3716	3552	3551.8	40.3	32.6	25.9
A2Pa	823545.2	837421.1	3	7.5	1937	1773	1772.8	34.2	12.0	24.6
A3Pa	823453.6	837780.9	4	7.5	3274	3110	3109.6	35.6	32.7	33.1
A4Pa	823304.9	837427.1	4	7.5	1804	1640	1639.9	34.6	11.2	35.6
A5Pa	823482.3	837384.6	6.5	7.5	1889	1725	1724.7	33.1	9.4	28.8
V01	823571.7	837355.7	3	7.5	1509	1345	1344.5	33.9	10.1	20.3
V02	823780.1	837738.5	2.4	7.5	3040	2876	2876.3	42.3	19.0	34.9
V03	823524.7	837232	3	7.5	1434	1270	1269.9	30.8	8.1	21.5
V04	823384.5	837124.2	4.8	7.5	1216	1052	1052.4	25.7	5.9	26.2
Max. TSP Level, $\mu\text{g}/\text{m}^3$					11363	11199				
Relevant AQO Criteria, $\mu\text{g}/\text{m}^3$					500	500				

Remark: * The above results have included the background level extracted from the PATH Output (year 2015). The predicted TSP level due to this Project has already exceeded the relevant air quality criteria regardless the background level (i.e. mitigation measures will be required regardless the background level), thus in calculating the total concentration of TSP (i.e. background + Project contribution), the maximum hourly RSP level from the PATH output file (i.e. $164 \mu\text{g}/\text{m}^3$) is used (a conservative approach).