

**Microscale Carbon Monoxide Impact Assessment
for the Atlantic Steel Development Project**

**Appendix 3
Average Speed Emission Rate Matrices**

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This appendix contains the average speed emission rate tables that were generated in the MOBILE5a analyses. The carbon monoxide emission rate values are for the average fleet vehicle and are based upon the assumptions outlined in the input file discussion (Appendix 2). These values serve as lookup tables in the PERL processing script for CALINE4. For each scenario year, link, and average speed, an emission rate is selected from this table (using linear interpolation). Because the MOBILE5a model only predicts emission rates through the year 2020, the 2025 emission rates are assumed to be equal to the 2020 emission rates. This provides a conservative assumption likely to overestimate emission rates for the 2025 scenario.

Atlantic Steel CO Emissions by Average Speed	1998 am	Atlantic Steel CO Emissions by Average Speed	2000 am	Atlantic Steel CO Emissions by Average Speed	2005 am	Atlantic Steel CO Emissions by Average Speed	2015 am
Average Speed	g/mile	Average Speed	g/mile	Average Speed	g/mile	Average Speed	g/mile
2.5	217.495	2.5	189.331	2.5	160.553	2.5	148.039
5.0	119.526	5.0	105.851	5.0	91.428	5.0	85.144
7.5	85.439	7.5	76.968	7.5	67.71	7.5	63.544
10.0	67.992	10.0	62.17	10.0	55.552	10.0	52.458
12.5	57.373	12.5	53.14	12.5	48.111	12.5	45.667
15.0	50.225	15.0	47.045	15.0	43.078	15.0	41.07
17.5	45.08	17.5	42.65	17.5	39.447	17.5	37.751
20.0	40.938	20.0	38.971	20.0	36.196	20.0	34.679
22.5	36.643	22.5	34.585	22.5	31.723	22.5	30.227
25.0	33.194	25.0	31.065	25.0	28.144	25.0	26.665
27.5	30.365	27.5	28.18	27.5	25.219	27.5	23.755
30.0	28.008	30.0	25.777	30.0	22.788	30.0	21.334
32.5	26.022	32.5	23.752	32.5	20.738	32.5	19.293
35.0	24.334	35.0	22.029	35.0	18.99	35.0	17.552
37.5	22.892	37.5	20.552	37.5	17.483	37.5	16.051
40.0	21.654	40.0	19.28	40.0	16.175	40.0	14.747
42.5	20.588	42.5	18.179	42.5	15.032	42.5	13.607
45.0	19.668	45.0	17.222	45.0	14.028	45.0	12.604
47.5	18.87	47.5	16.387	47.5	13.142	47.5	11.719
50.0	18.746	50.0	16.253	50.0	12.991	50.0	11.567
52.5	18.793	52.5	16.293	52.5	13.021	52.5	11.594
55.0	18.863	55.0	16.355	55.0	13.068	55.0	11.636
57.5	24.773	57.5	20.916	57.5	16.057	57.5	13.998
60.0	30.713	60.0	25.504	60.0	19.067	60.0	13.998
62.5	36.689	62.5	30.124	62.5	22.101	62.5	18.782
65.0	42.709	65.0	34.782	65.0	25.165	65.0	21.213

Atlantic Steel CO Emissions by Average Speed	1998 pm	Atlantic Steel CO Emissions by Average Speed	2000 pm	Atlantic Steel CO Emissions by Average Speed	2005 pm	Atlantic Steel CO Emissions by Average Speed	2015 pm
Average Speed	g/mile	Average Speed	g/mile	Average Speed	g/mile	Average Speed	g/mile
2.5	194.341	2.5	169.014	2.5	143.545	2.5	132.377
5.0	106.995	5.0	94.66	5.0	81.875	5.0	76.267
7.5	76.533	7.5	68.877	7.5	60.666	7.5	56.95
10.0	60.91	10.0	55.639	10.0	49.771	10.0	47.015
12.5	51.387	12.5	47.546	12.5	43.092	12.5	40.918
15.0	44.968	15.0	42.076	15.0	38.568	15.0	36.785
17.5	40.345	17.5	38.13	17.5	35.302	17.5	33.799
20.0	36.625	20.0	34.828	20.0	32.382	20.0	31.039
22.5	32.784	22.5	30.909	22.5	28.382	22.5	27.055
25.0	29.699	25.0	27.764	25.0	25.181	25.0	23.868
27.5	27.169	27.5	25.187	27.5	22.567	27.5	21.264
30.0	25.063	30.0	23.042	30.0	20.393	30.0	19.099
32.5	23.288	32.5	21.235	32.5	18.561	32.5	17.273
35.0	21.782	35.0	19.698	35.0	16.999	35.0	15.716
37.5	20.495	37.5	18.382	37.5	15.654	37.5	14.375
40.0	19.391	40.0	17.248	40.0	14.487	40.0	13.211
42.5	18.442	42.5	16.268	42.5	13.468	42.5	12.193
45.0	17.623	45.0	15.417	45.0	12.573	45.0	11.299
47.5	16.915	47.5	14.676	47.5	11.785	47.5	10.511
50.0	16.807	50.0	14.558	50.0	11.652	50.0	10.377
52.5	16.852	52.5	14.597	52.5	11.681	52.5	10.403
55.0	16.92	55.0	14.656	55.0	11.726	55.0	10.444
57.5	22.193	57.5	18.72	57.5	14.395	57.5	12.55
60.0	27.496	60.0	22.81	60.0	17.085	60.0	14.675
62.5	32.833	62.5	26.931	62.5	19.798	62.5	16.821
65.0	38.213	65.0	31.088	65.0	22.539	65.0	18.994