Appendix A
Electronic Files Submitted

In addition to this report, ERG is also providing all of the MOVES input databases, output databases, and runspecs generated for during the course of this study. We have also included the spreadsheet Converter Tools we used in developing model inputs, the XML import specifications used to populate the County Data Manager input databases, as well as the batch files used to process both the XML importer files and the MOVES runspecs themselves.

The input and output databases provided were copied directly from the C:\MySQL\data directory on ERG's MOVES server. These databases consist of several MySQL database files with a variety of extensions (.MYI, .MYD, .FRM, and .OPT files). Each input and output database is contained in its own subfolder. The nomenclature used for the MOVES files followed a convention of dot***_county***06***_activitytype***vmt***_extension***, with possible variations as follows:

- ***County***: county name
- ***Activity type***: either *TTI* (referring to TDM-based VMT) or *HPMS*
- ***Extension***: *.run* for runspec files, *_in* for an input database directory, and *_out* for an output database directory.

Please refer to Table 2-10 in Section 2.4 of this report for a listing of Converter Tool spreadsheets associated with inputs provided to the MOVES county data manager.

In addition to the above, we are providing spreadsheets (*KCupdateddriveschedule.xls*, *KCupdateddrivescheduleassoc.xls*, and *KCupdateddriveschedulesecond*.xls) containing our modified drive cycles based on our previous Kansas City project. We have also provided text files, based on the spreadsheets listed above, used to import drive cycles directly into MOVES. These include *LoadSchedTables.sql*, a simple SQL script used to manually load the drive cycles, *KCdriveschedules1 20100611 1036.sql*, a SQL Administrator backup script that can be used to REPLACE the default drive cycles in MOVES with our Kansas City based cycles, and *backup_original_driveschedule_tables 20100607 0959.sql*, a SQL Administrator backup script that can be used to RESTORE the default drive cycles in MOVES to their original state.

Appendix B
Additional Drive Cycle Development Documentation

Figure B-1a. Square of the Length of T-C as Micro-Trips Are Added: Restricted 0-20 MPH Bin

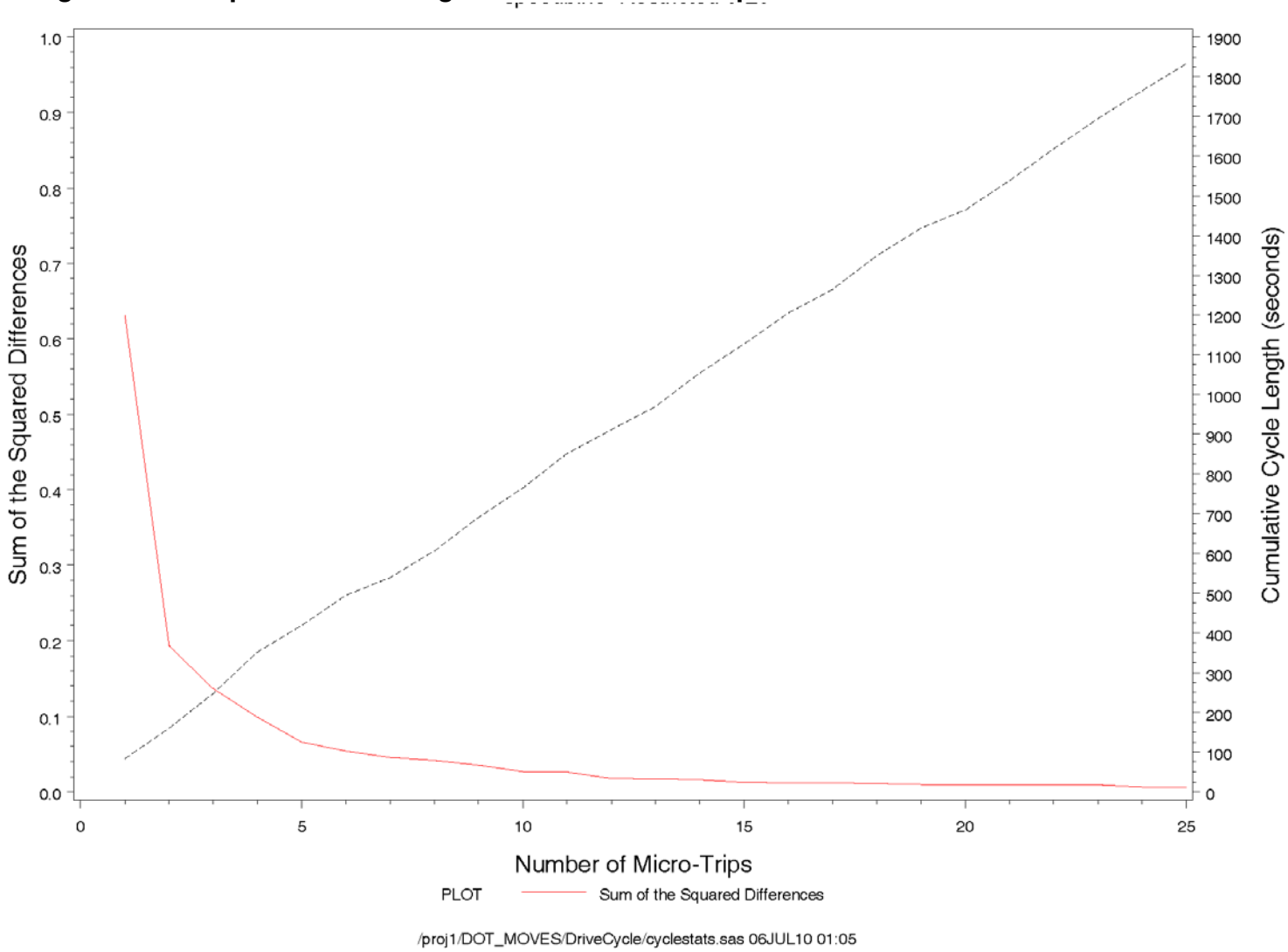


Figure B-1b. Square of the Length of T-C as Micro-Trips Are Added: Restricted 20-30 MPH Bin

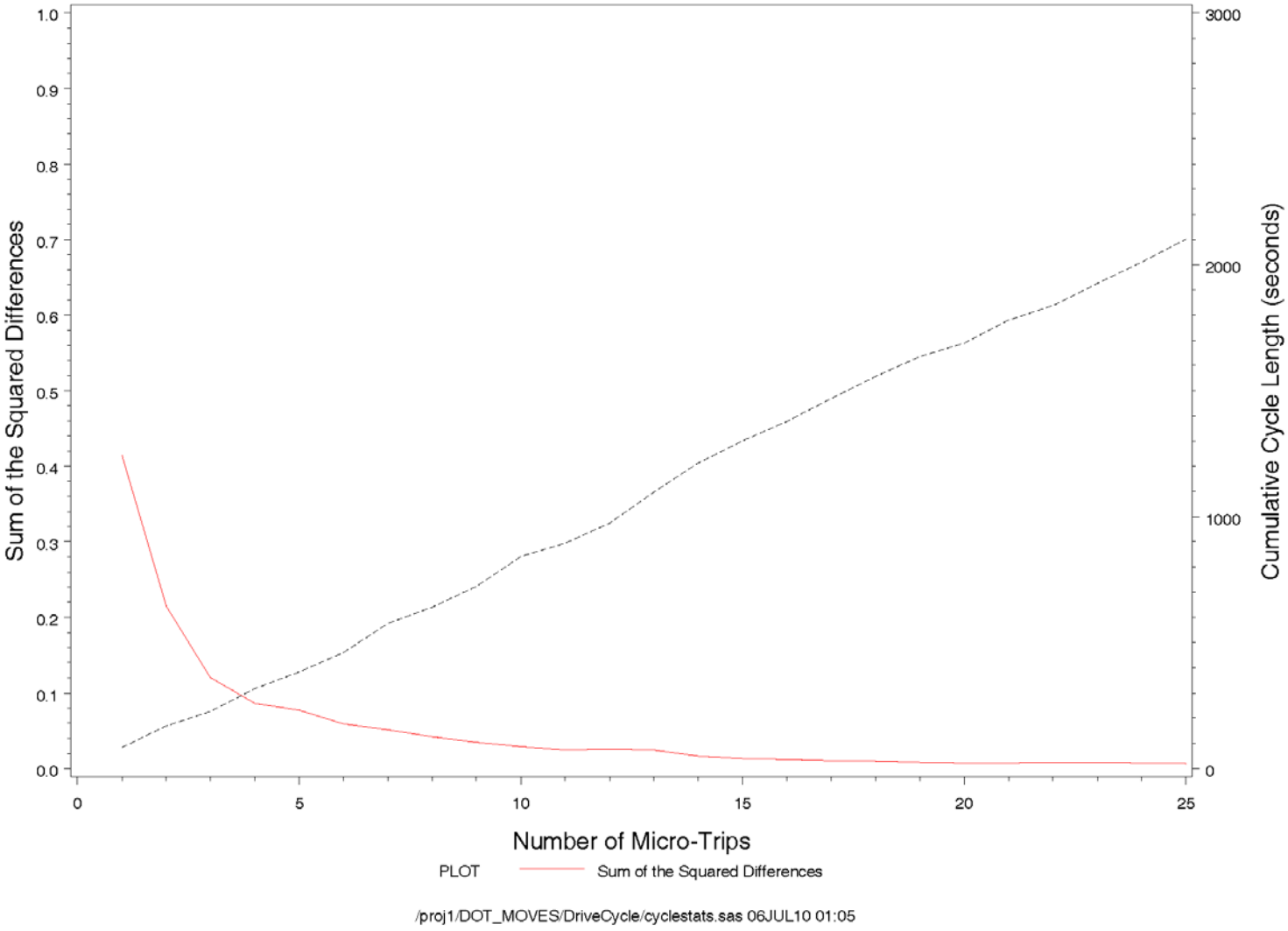


Figure B-1c. Square of the Length of T-C as Micro-Trips Are Added: Restricted 30-40 MPH Bin

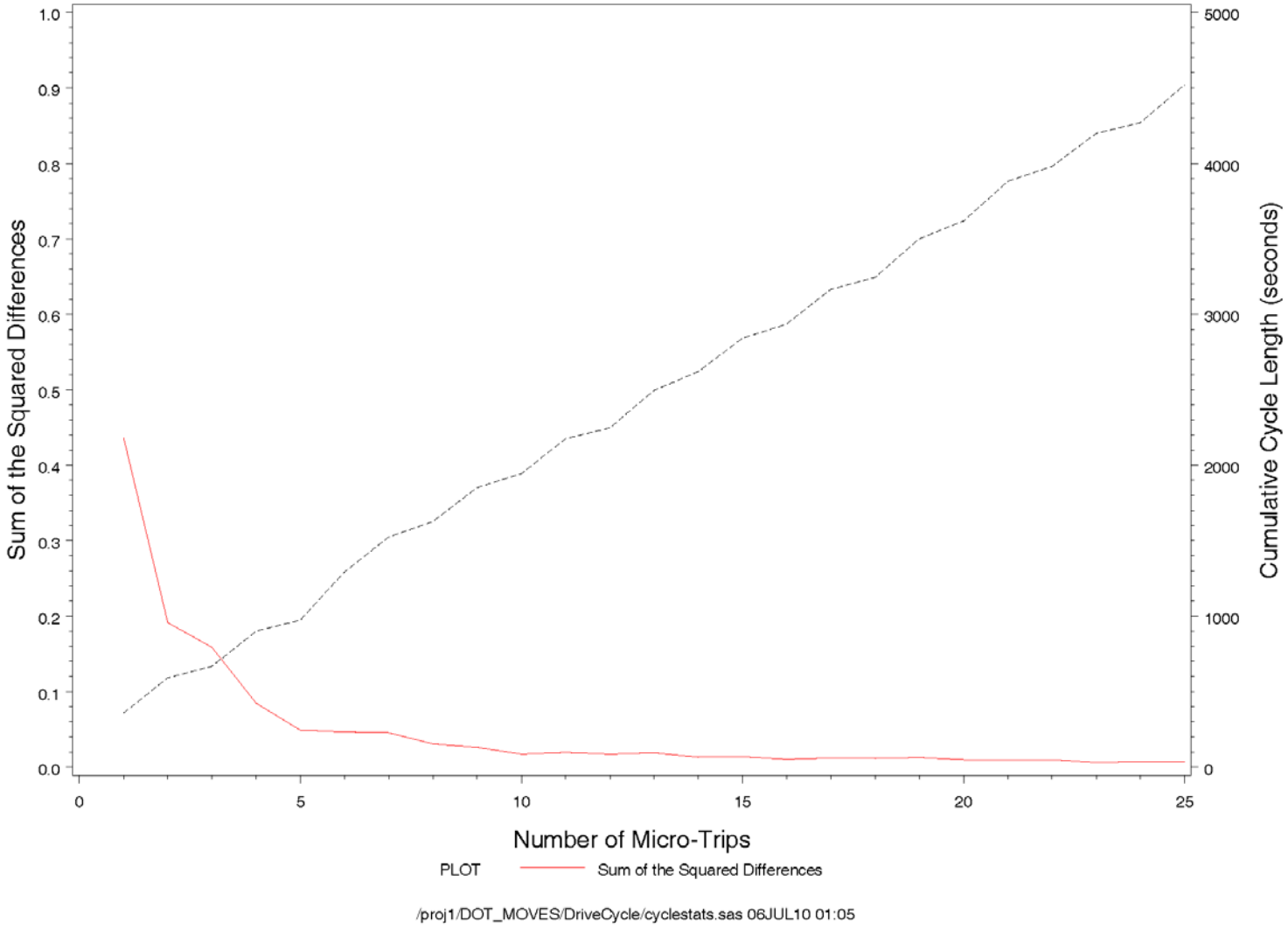


Figure B-1d. Square of the Length of T-C as Micro-Trips Are Added: Restricted 40-50 MPH Bin

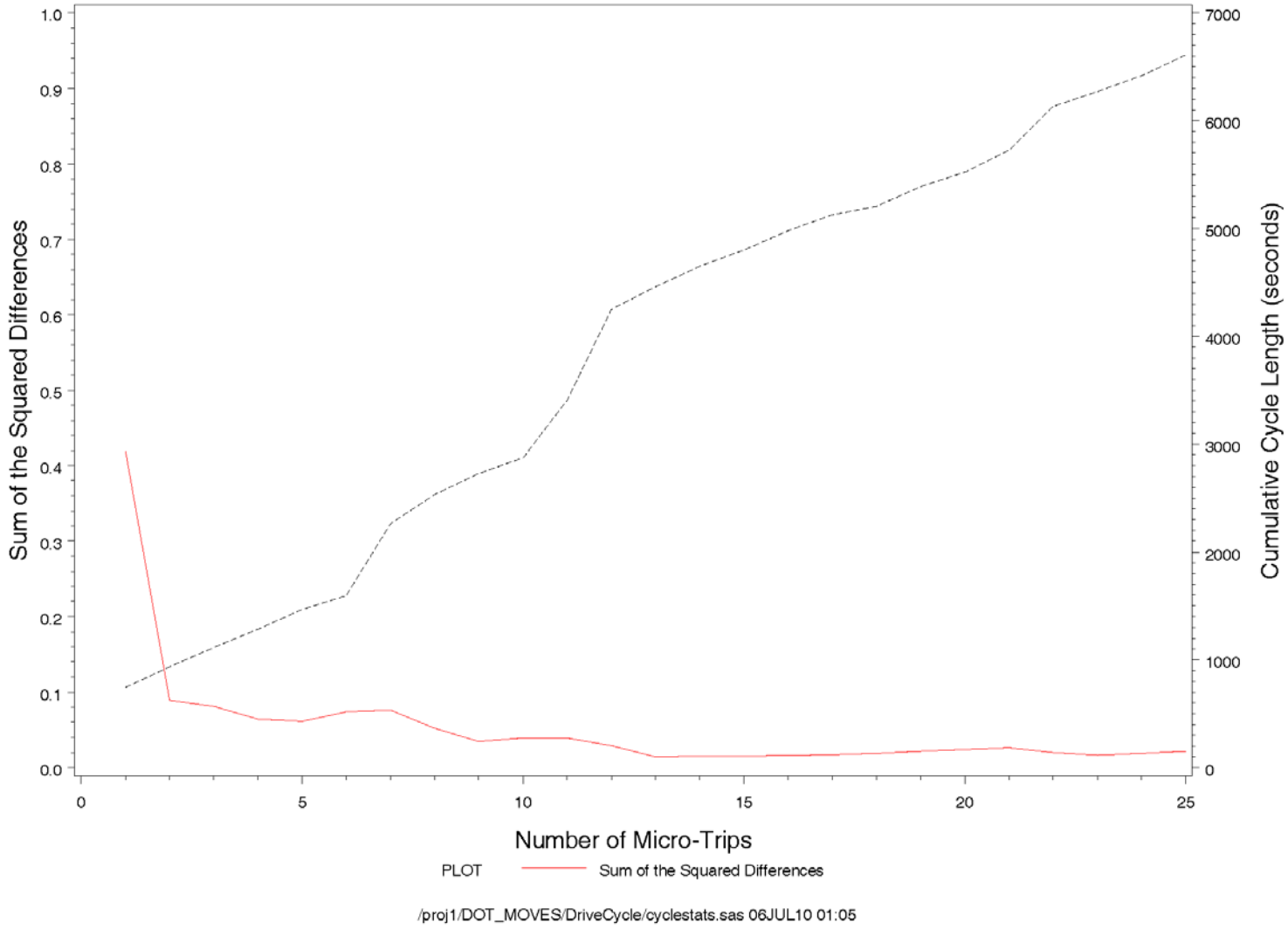


Figure B-1e. Square of the Length of T-C as Micro-Trips Are Added: Restricted 50-60 MPH Bin

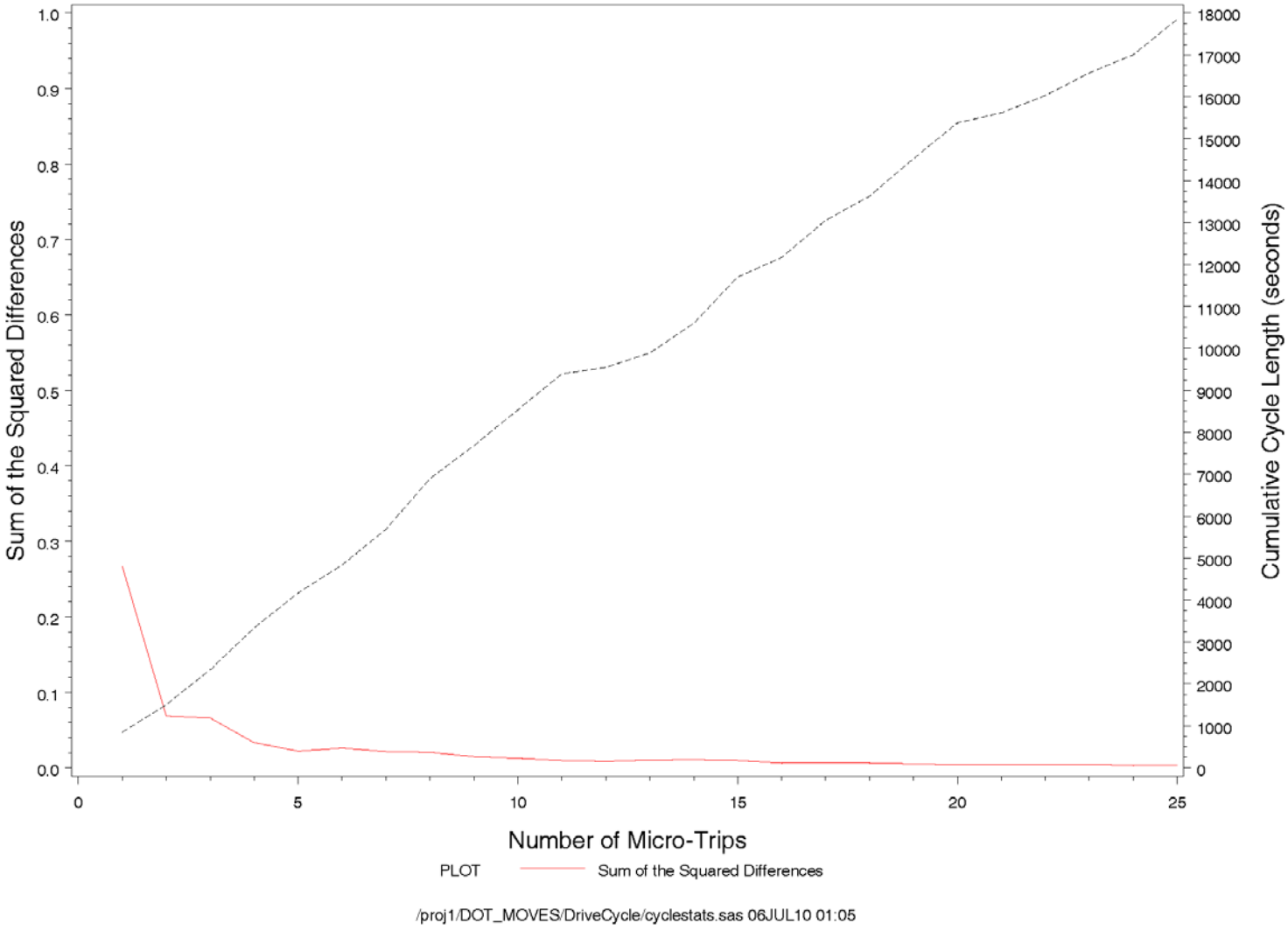


Figure B-1f. Square of the Length of T-C as Micro-Trips Are Added: Restricted 60+ MPH Bin

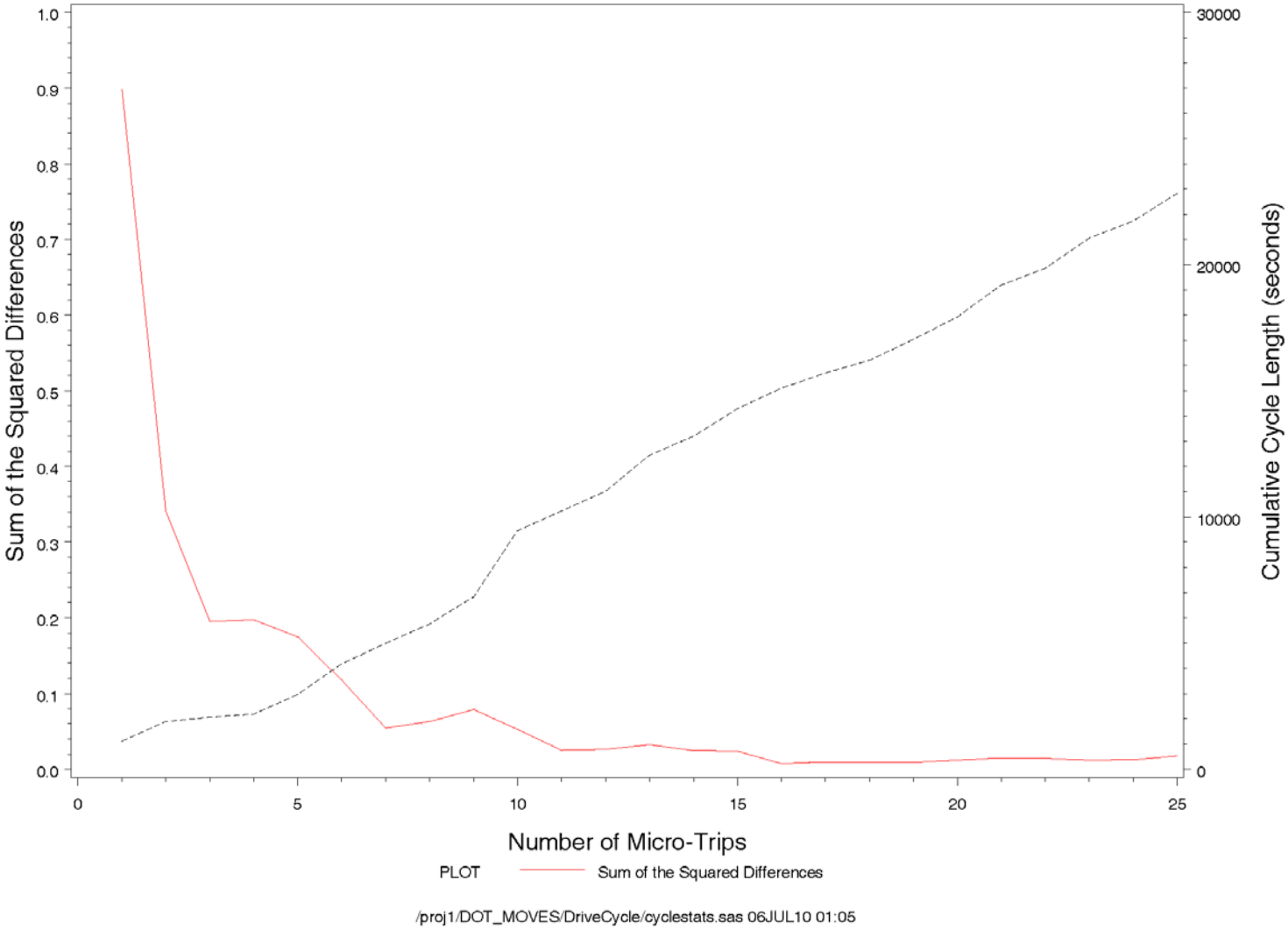


Figure B-1g. Square of the Length of T-C as Micro-Trips Are Added: Unrestricted 0-15 MPH Bin

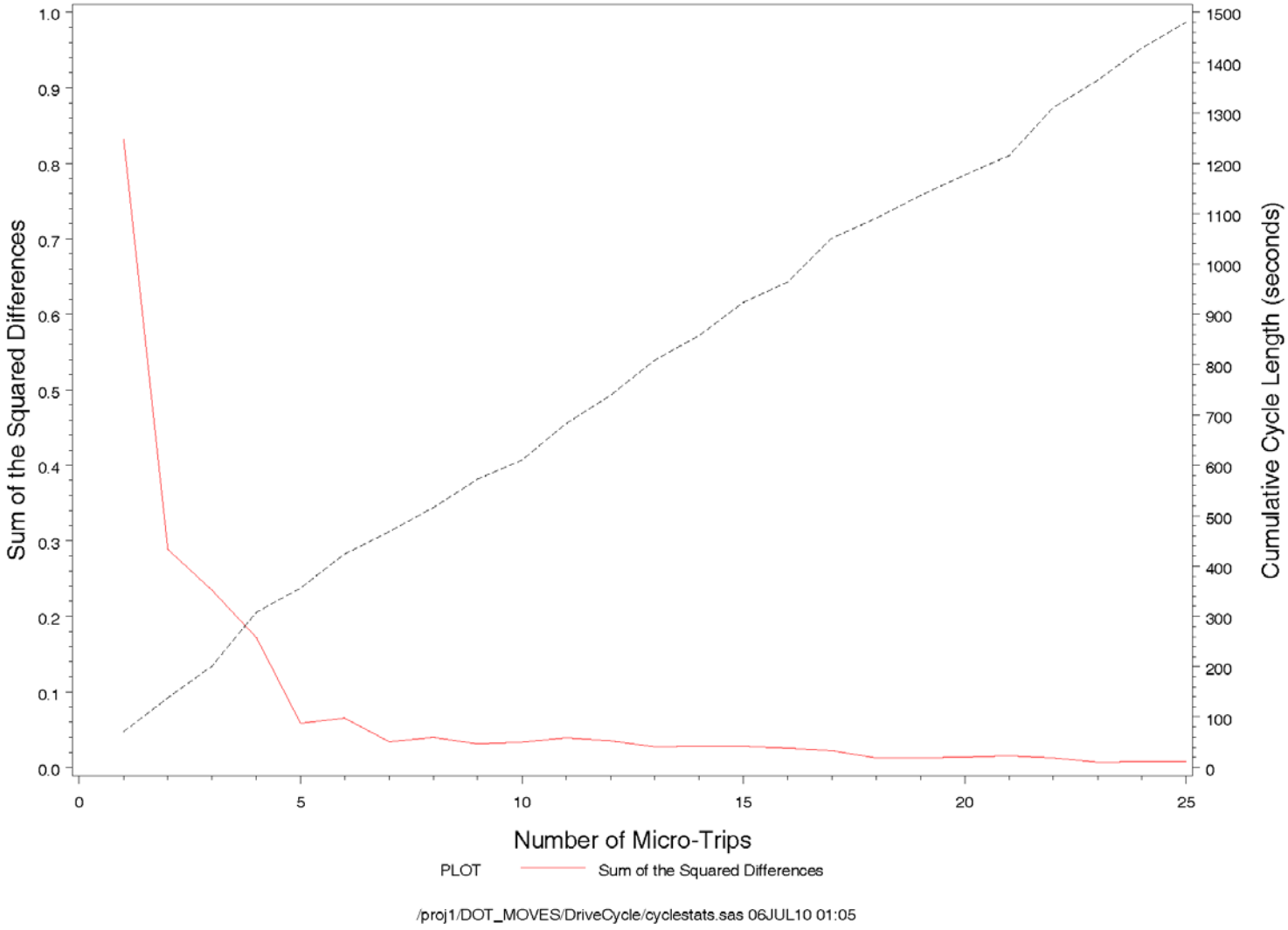


Figure B-1h. Square of the Length of T-C as Micro-Trips Are Added: Unrestricted 15-20 MPH Bin

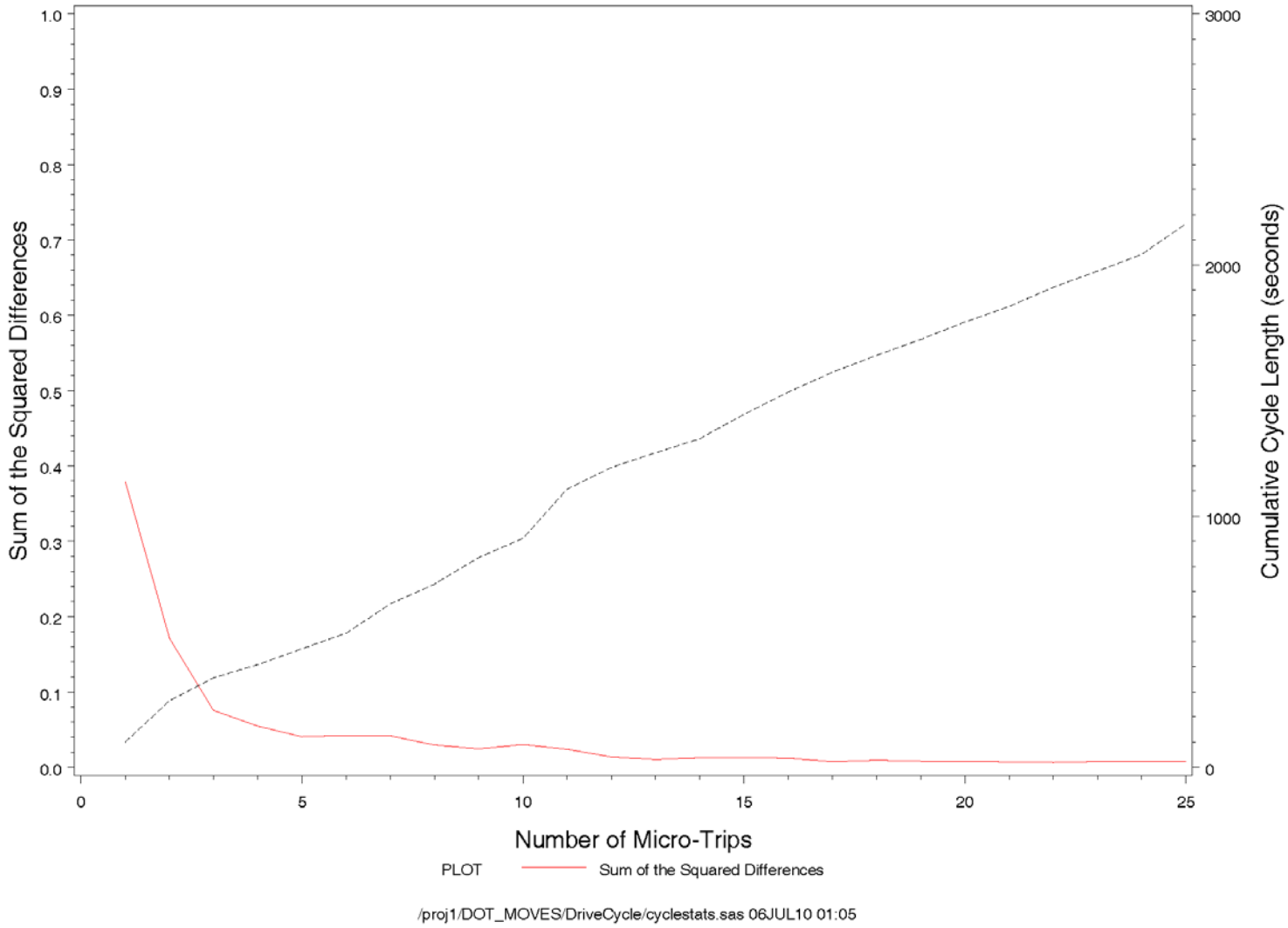


Figure B-1i. Square of the Length of T-C as Micro-Trips Are Added: Unrestricted 20-25 MPH Bin

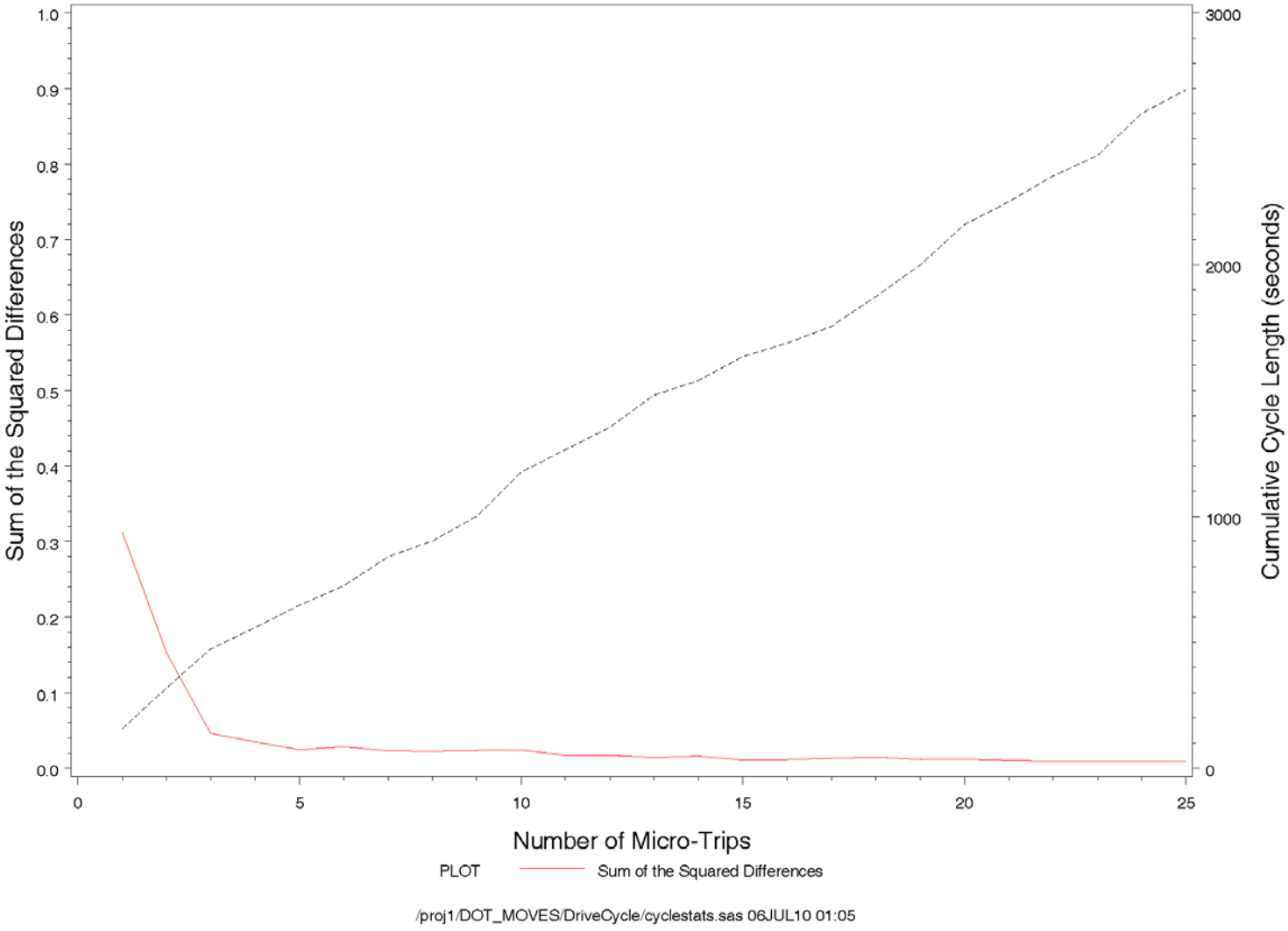


Figure B-1j. Square of the Length of T-C as Micro-Trips Are Added: Unrestricted 25-28 MPH Bin

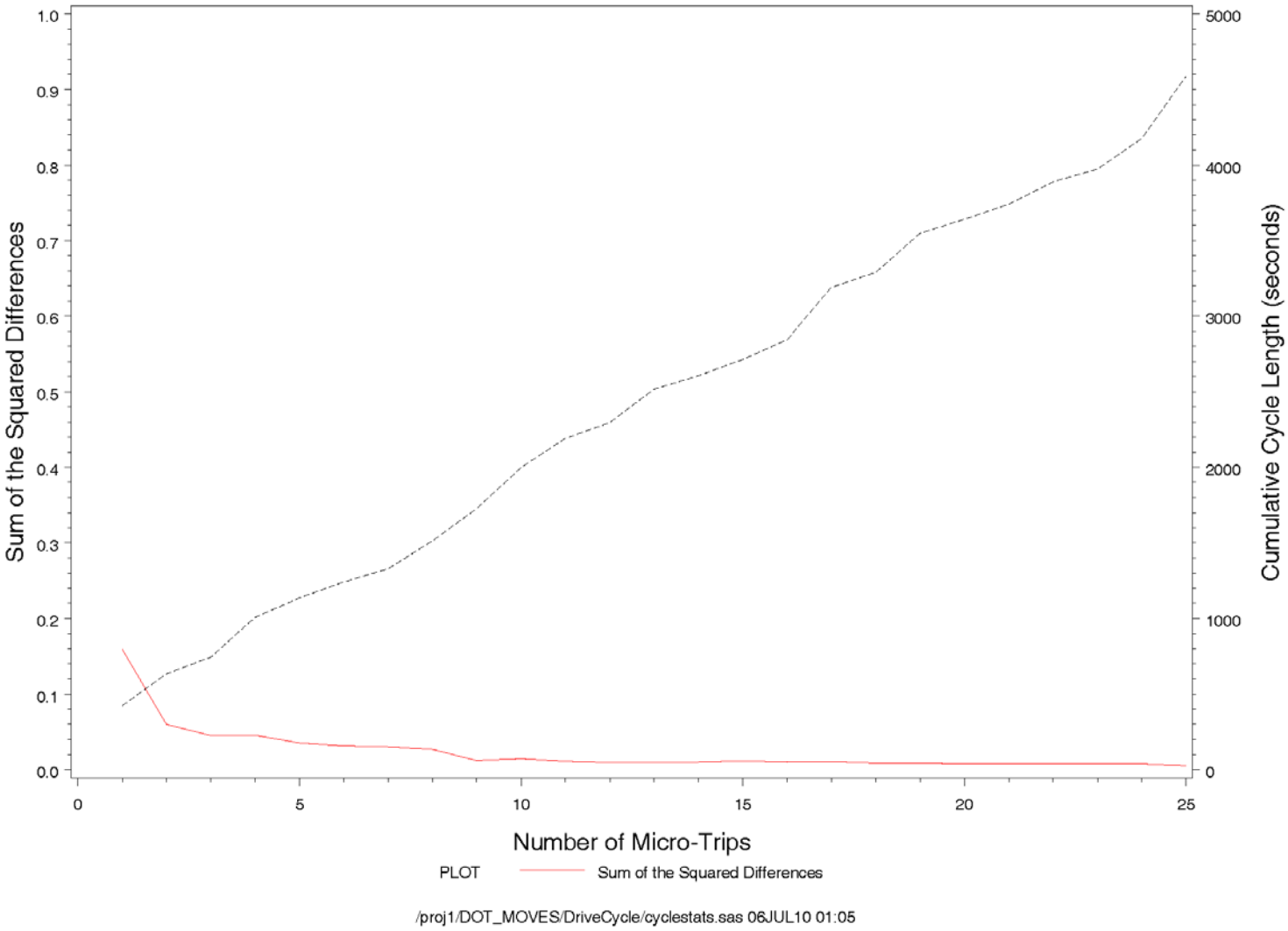


Figure B-1k. Square of the Length of T-C as Micro-Trips Are Added: Unrestricted 28-32 MPH Bin

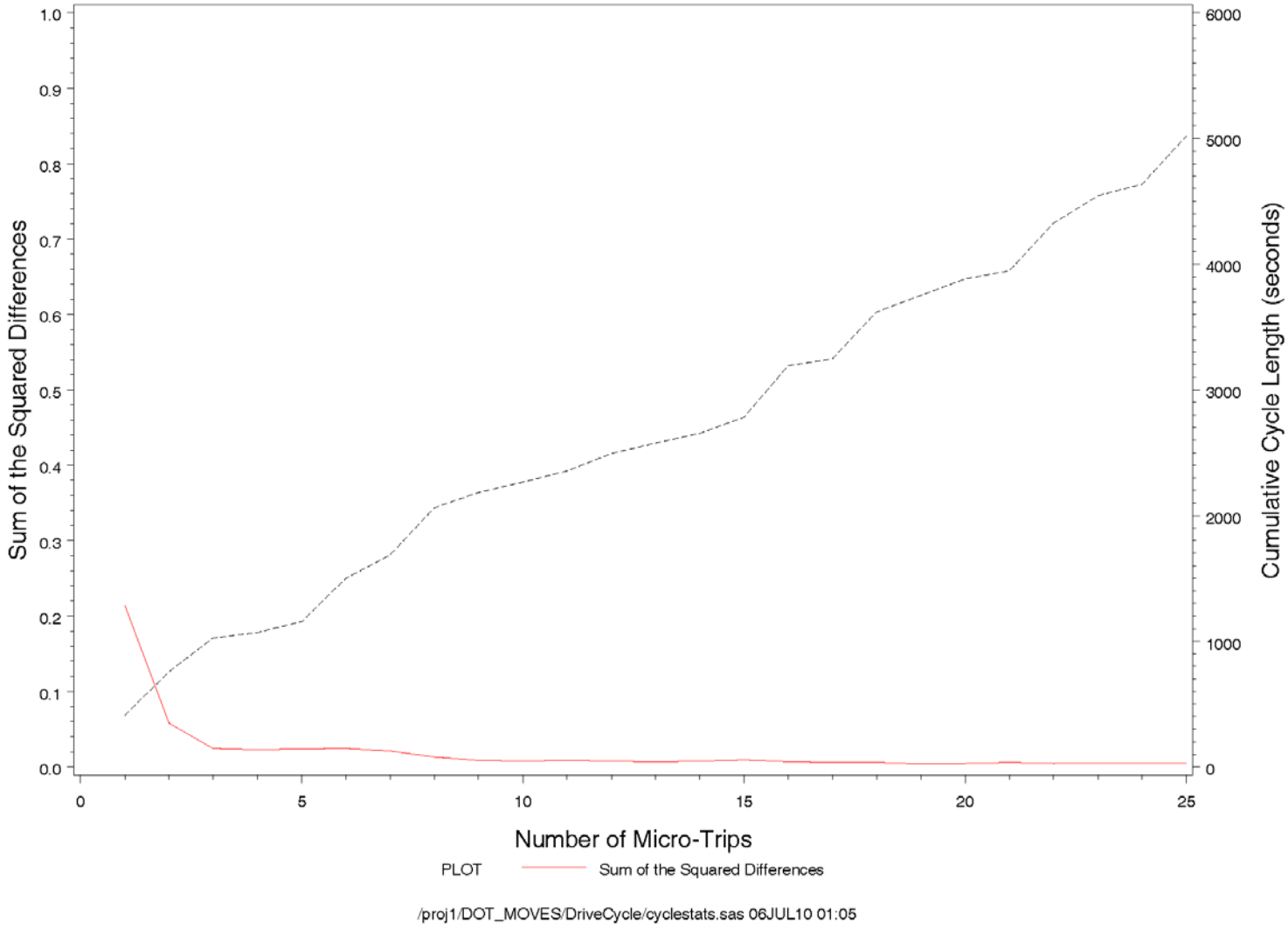


Figure B-1l. Square of the Length of T-C as Micro-Trips Are Added: Unrestricted 32+ MPH Bin

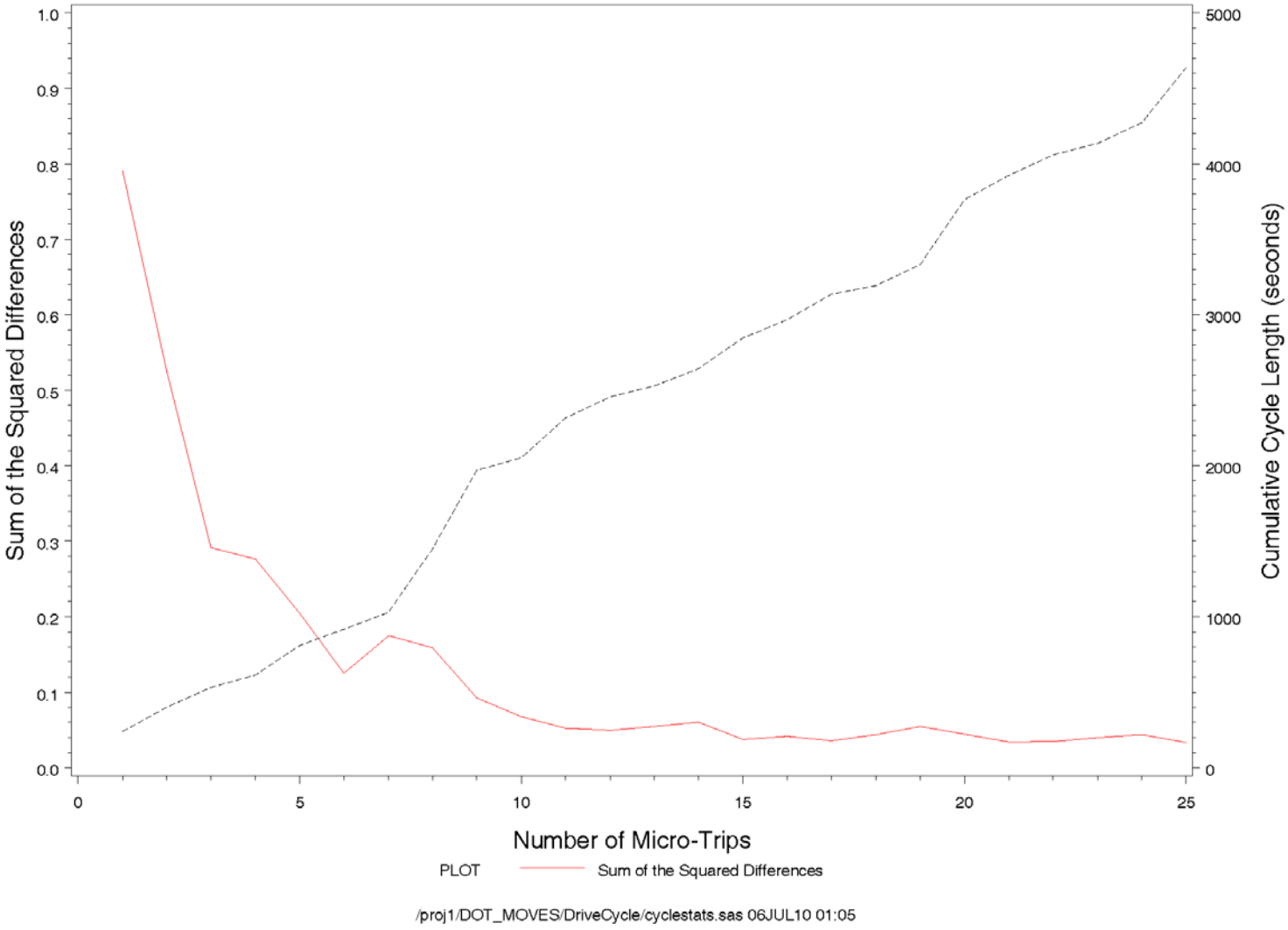


Figure B-2a. Speed Versus Time: Restricted 0-20 MPH

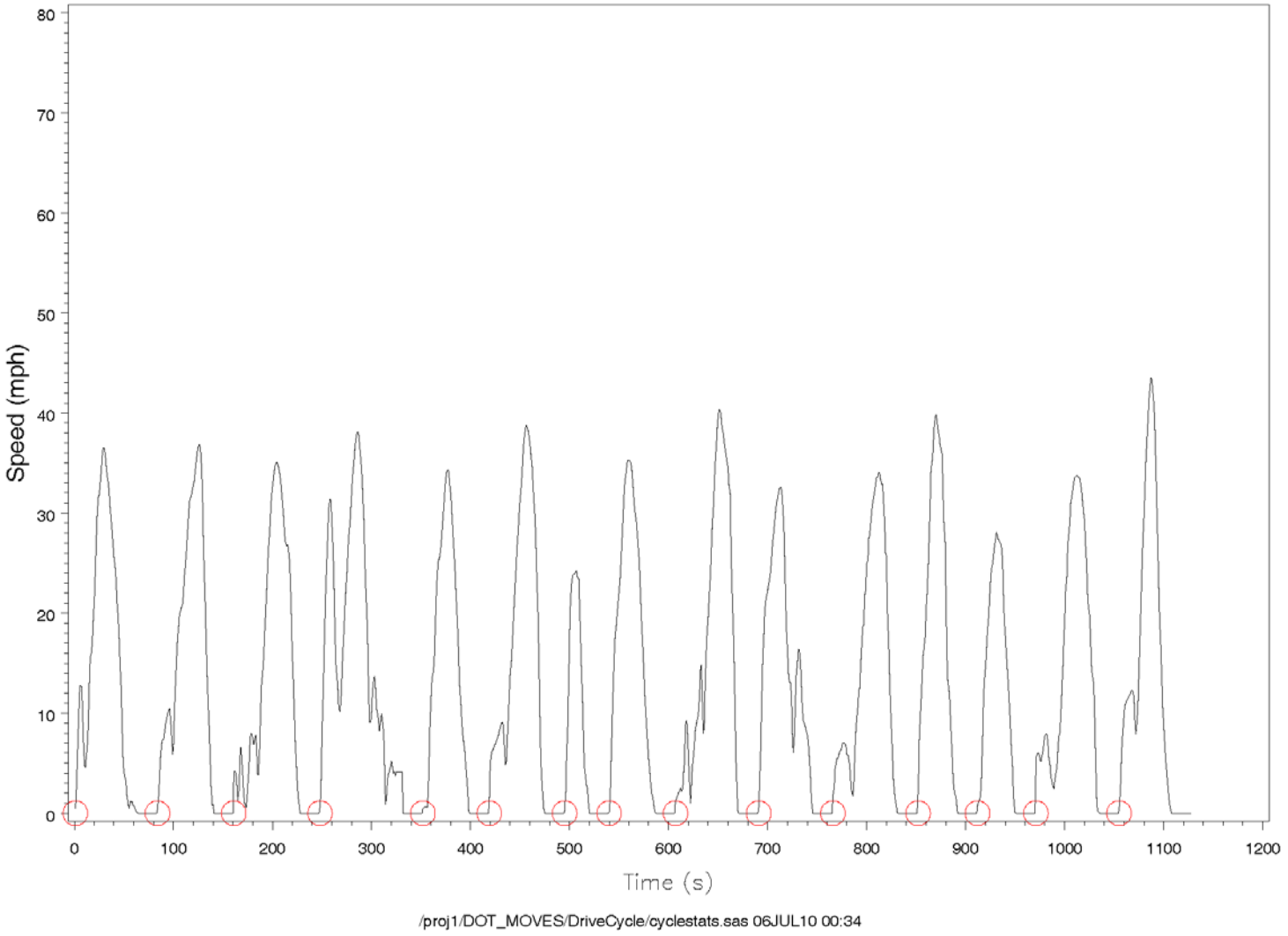


Figure B-2b. Speed versus Time: Restricted 20-30 MPH

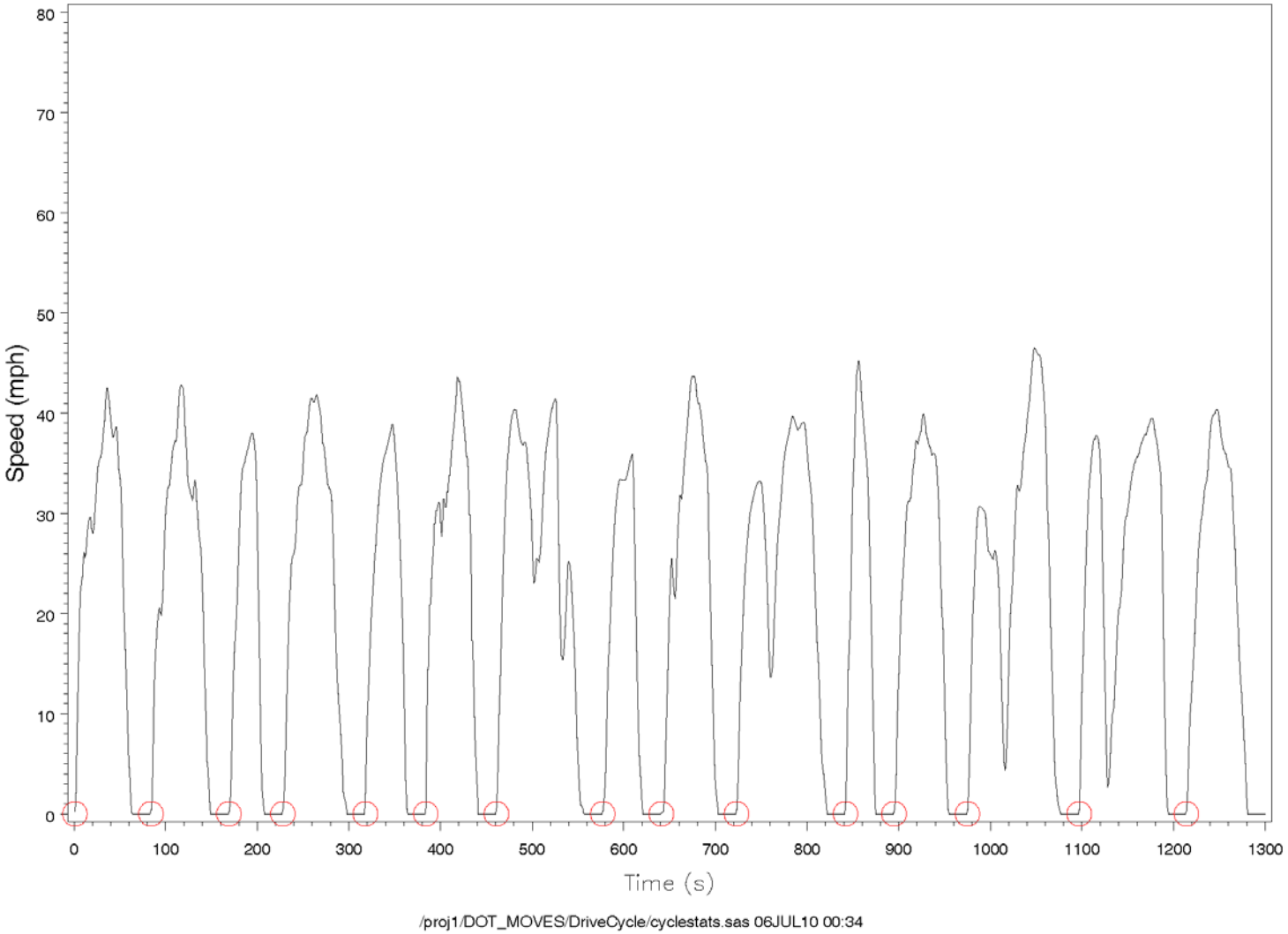


Figure B-2c. Speed versus Time: Restricted 30-40 MPH

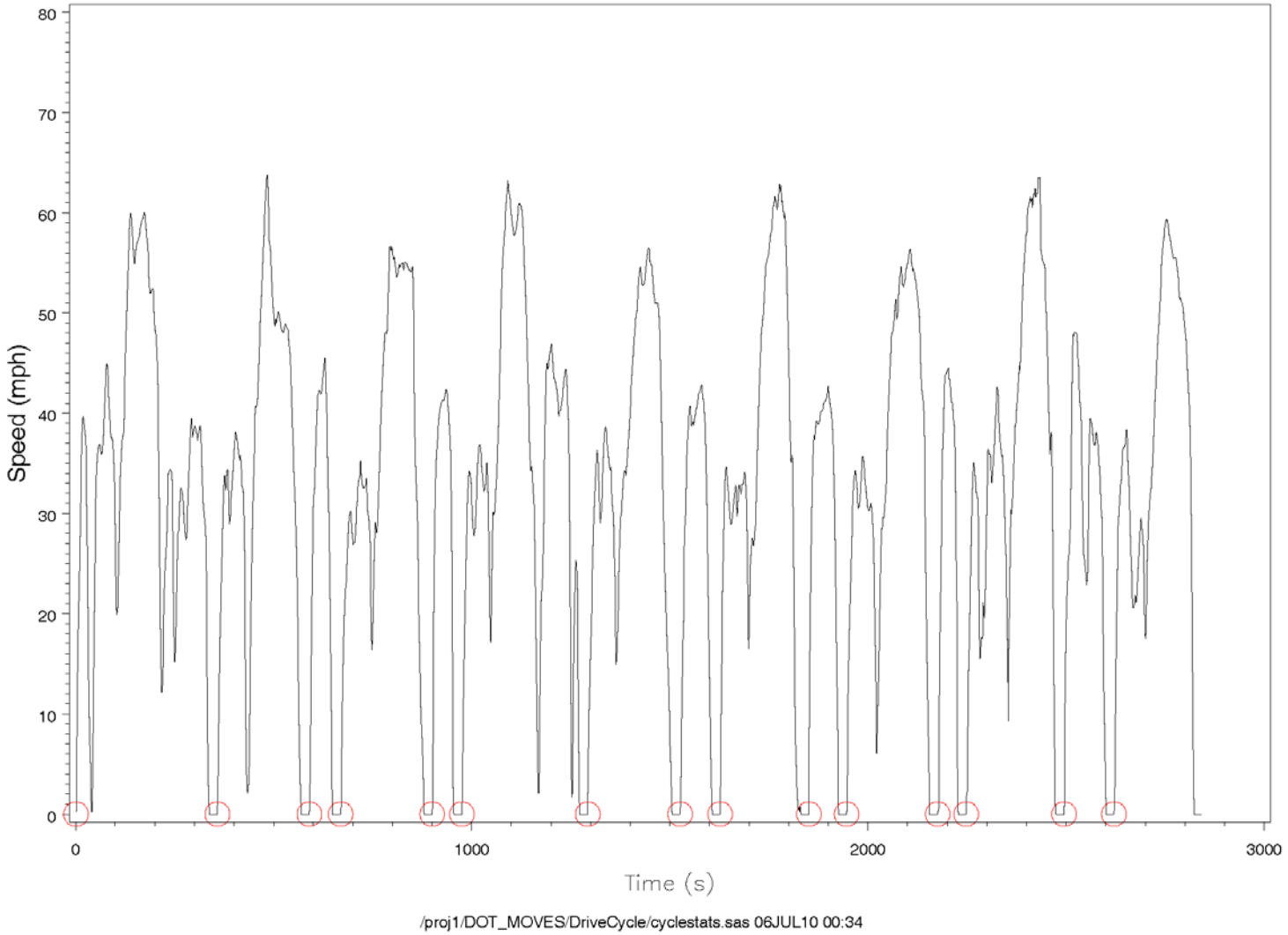


Figure B-2d. Speed versus Time: Restricted 40-50 MPH

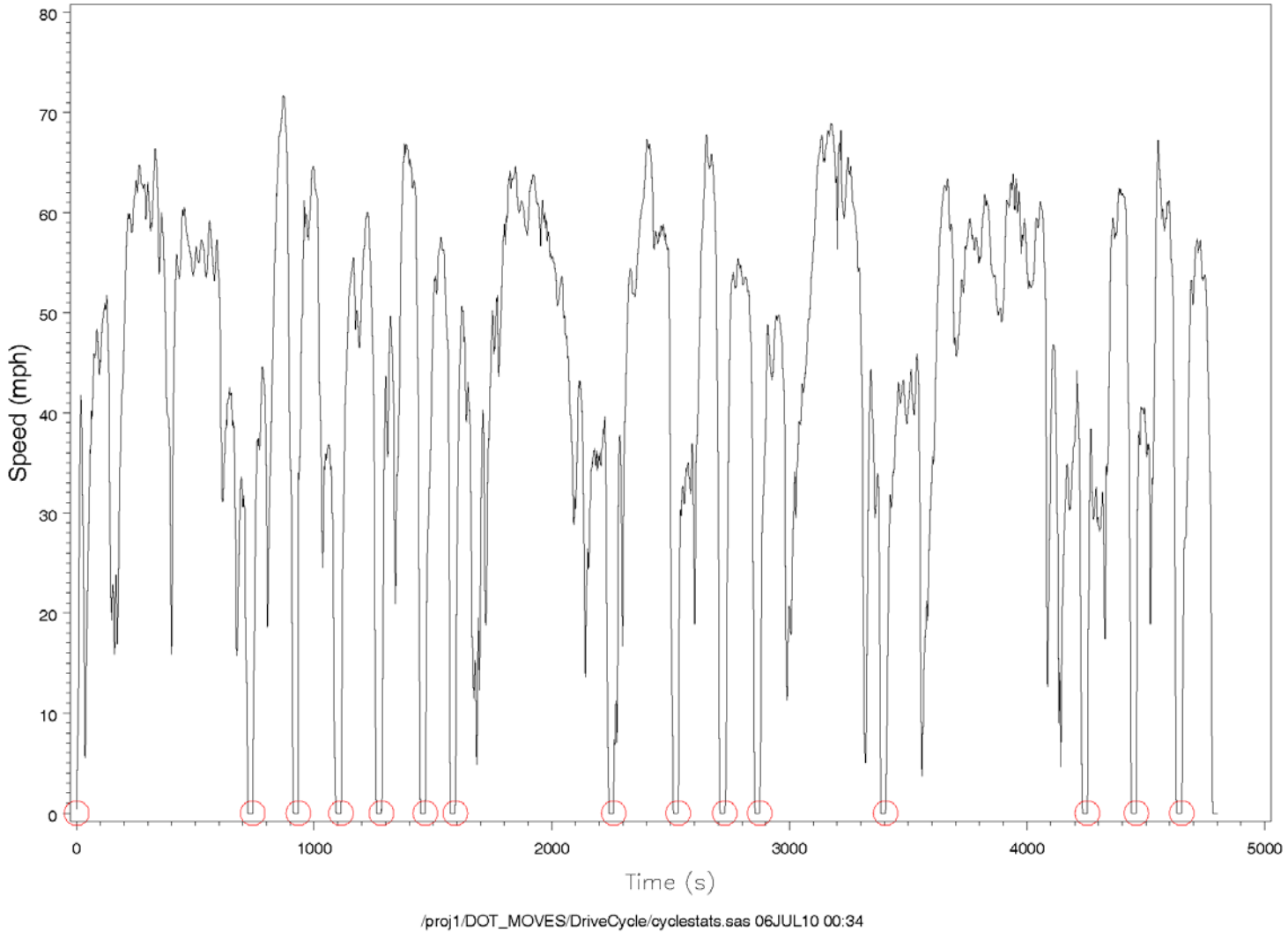


Figure B-2e. Speed Versus Time: Restricted 50-60 MPH

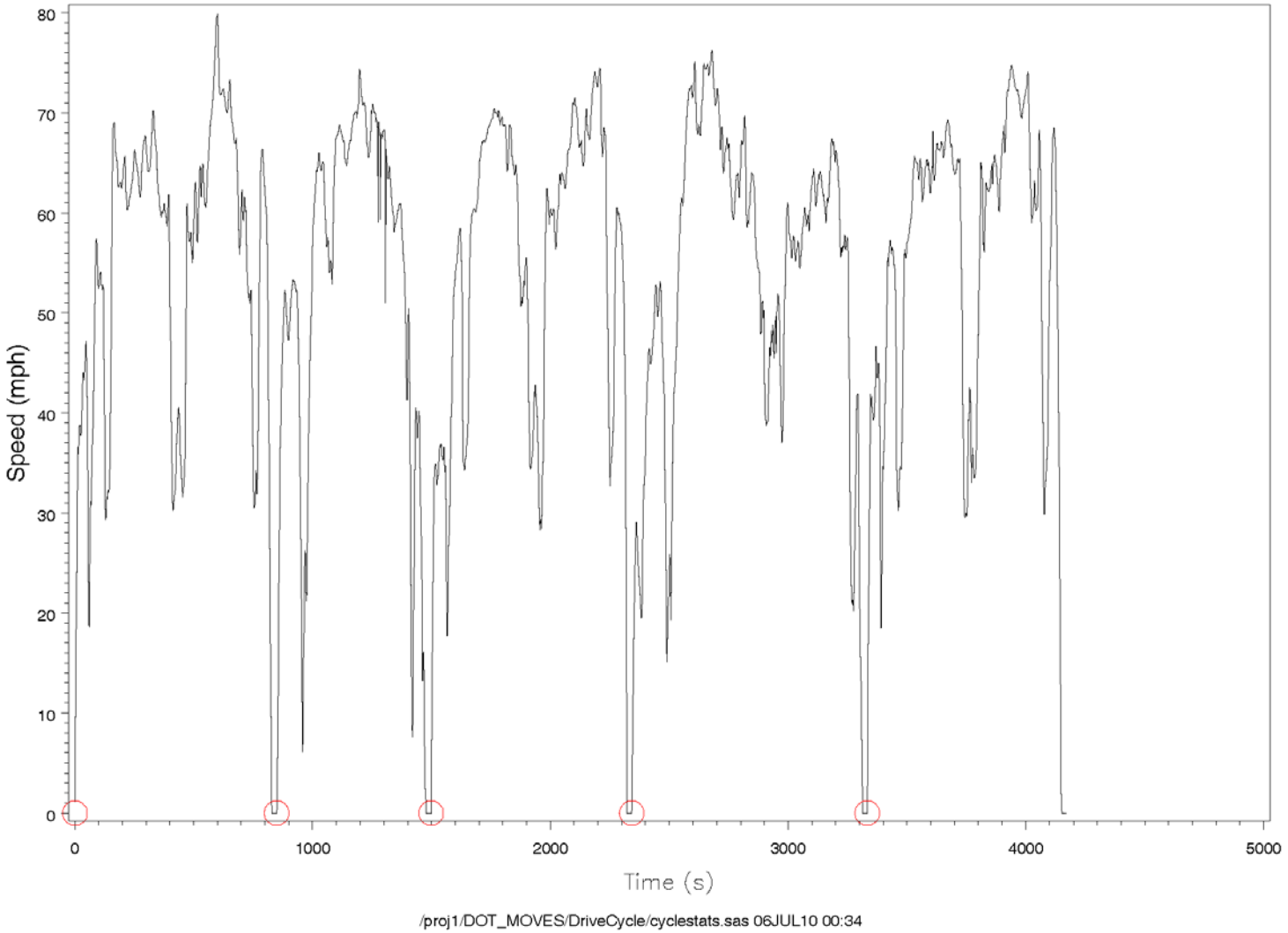


Figure B-2f. Speed versus Time: Restricted 60+ MPH

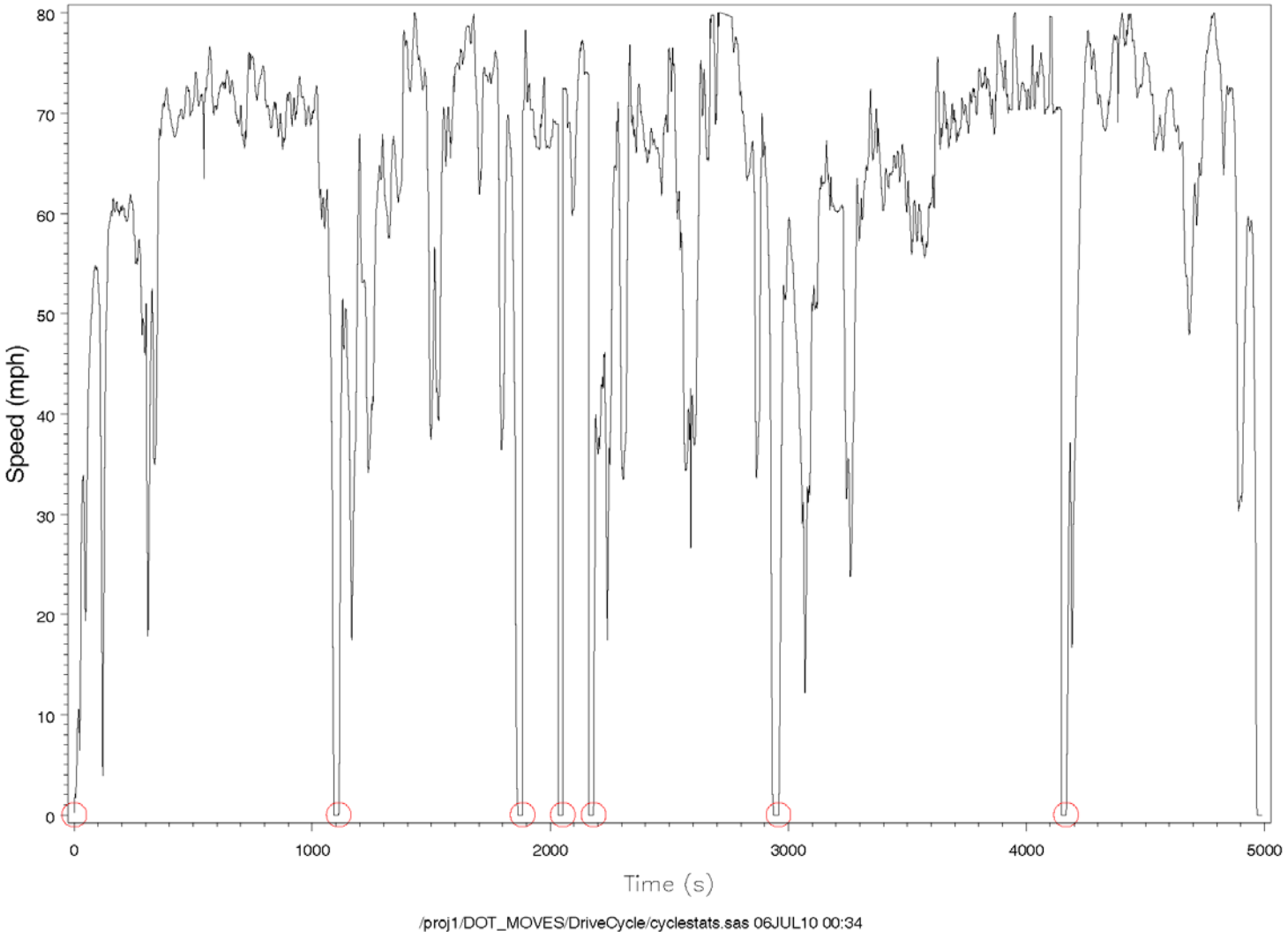


Figure B-2g. Speed Versus Time: Unrestricted 0-15 MPH

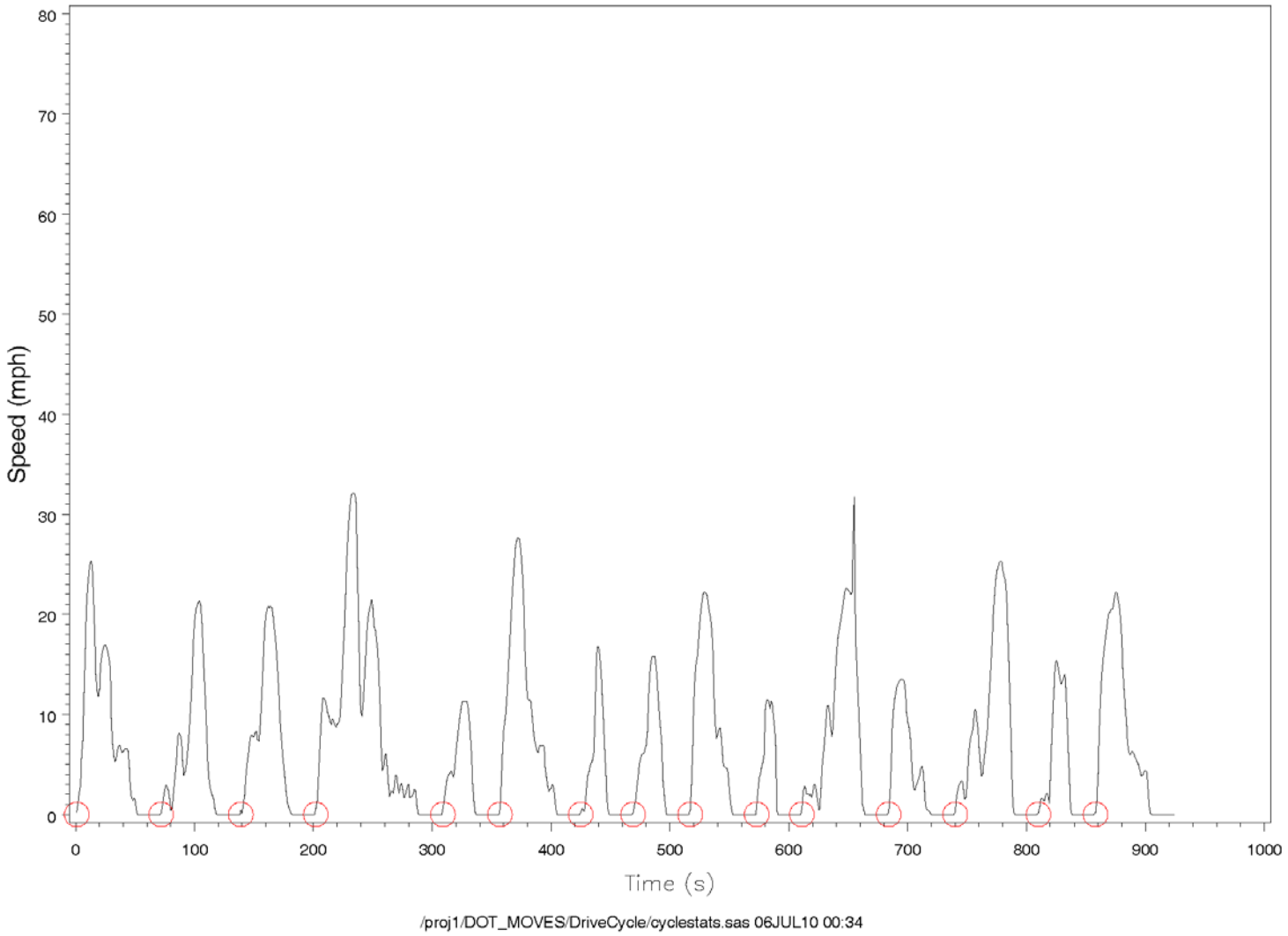


Figure B-2h. Speed versus Time: Unrestricted 15-20 MPH

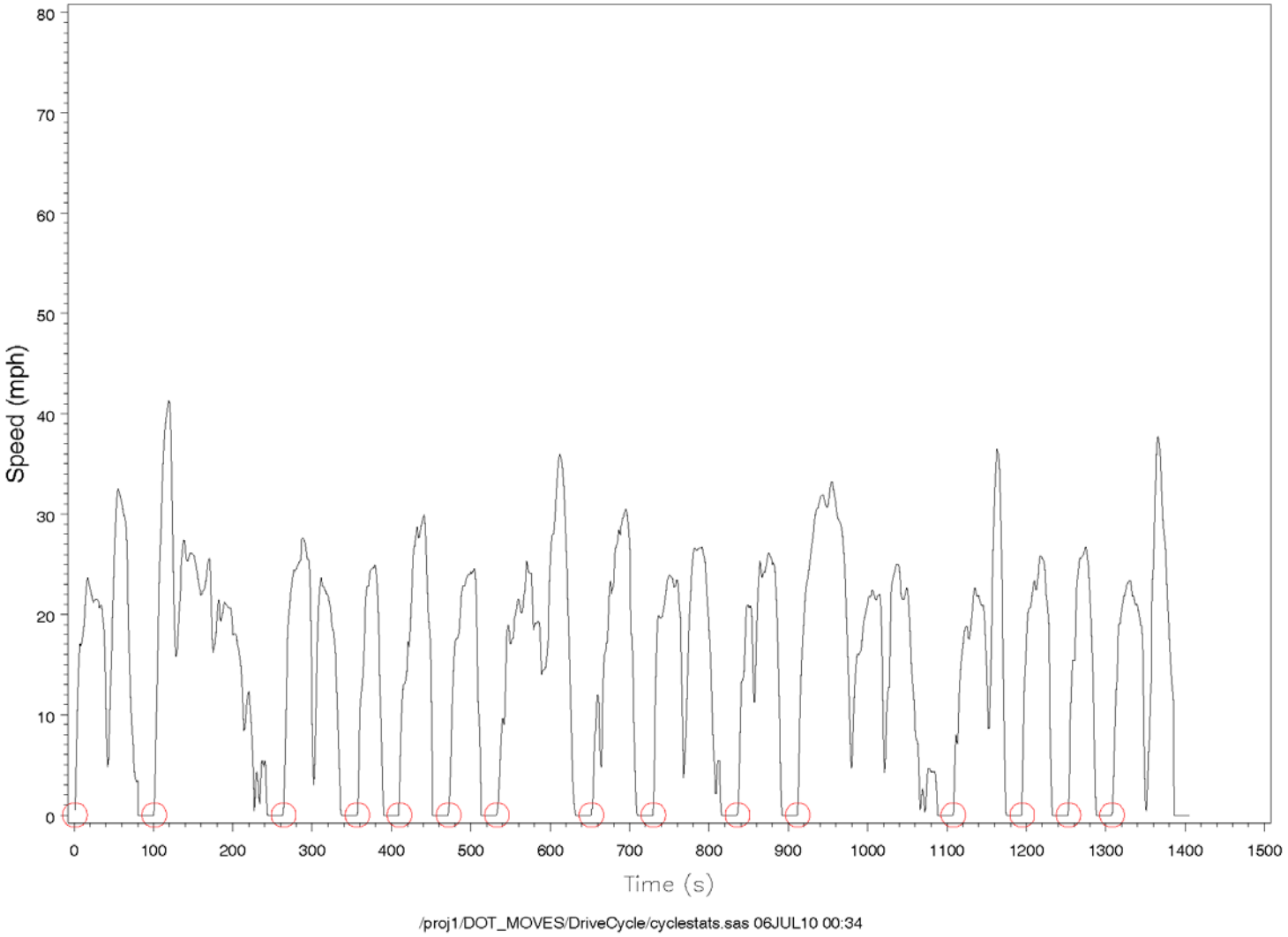


Figure B-2i. Speed versus Time: Unrestricted 20-25 MPH

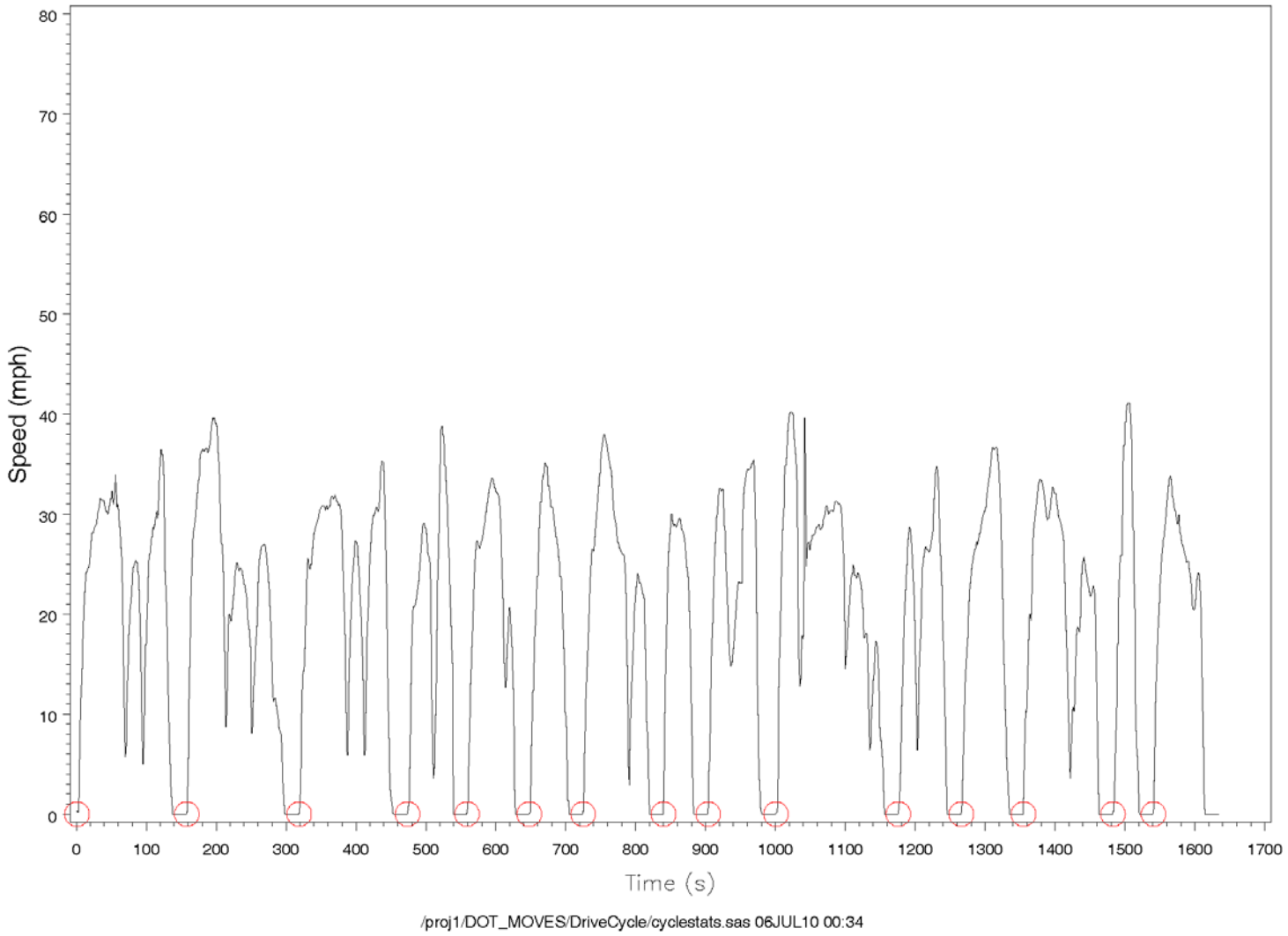


Figure B-2j. Speed versus Time: Unrestricted 25-28 MPH

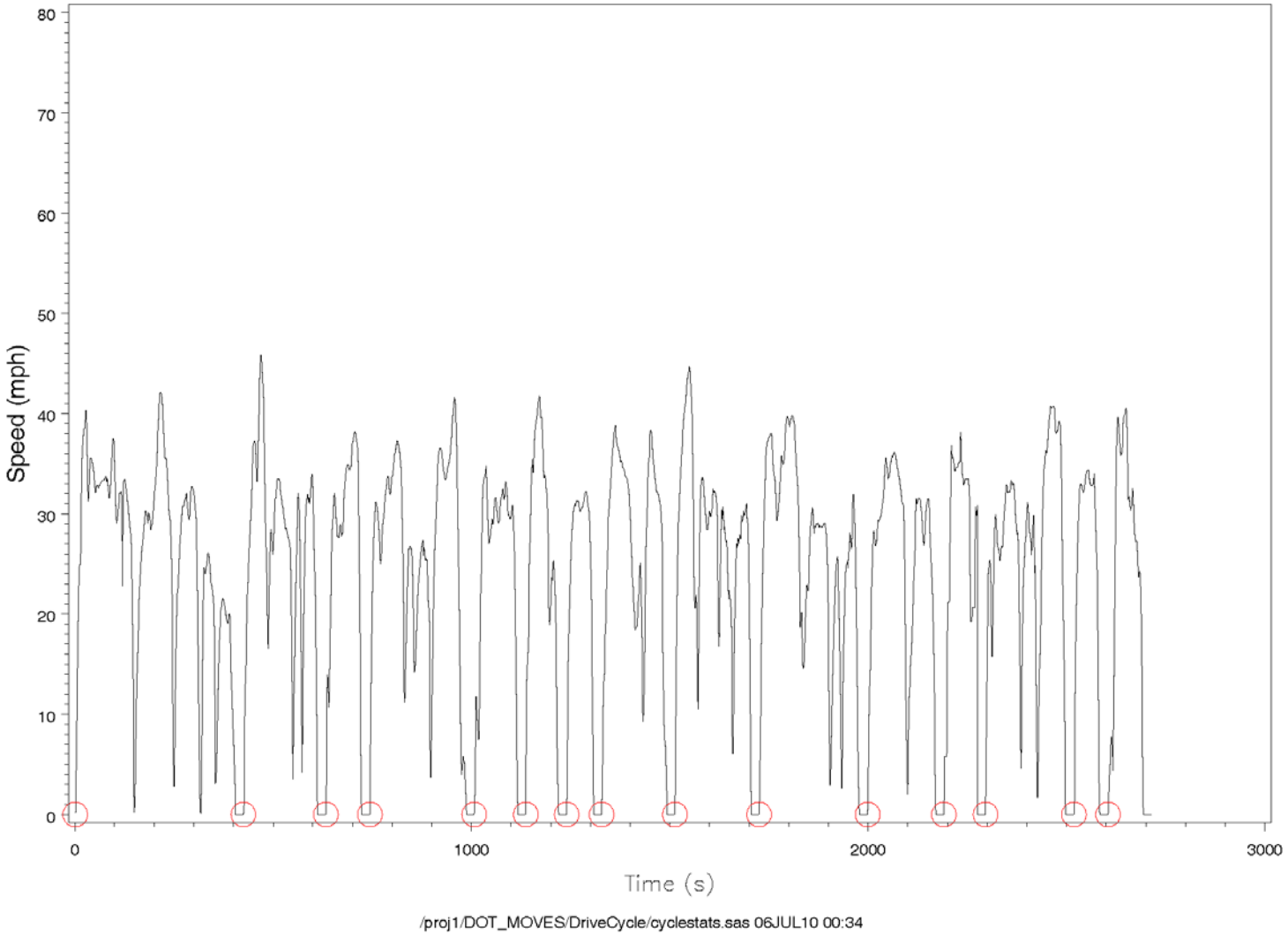


Figure B-2k. Speed versus Time: Unrestricted 28-32 MPH

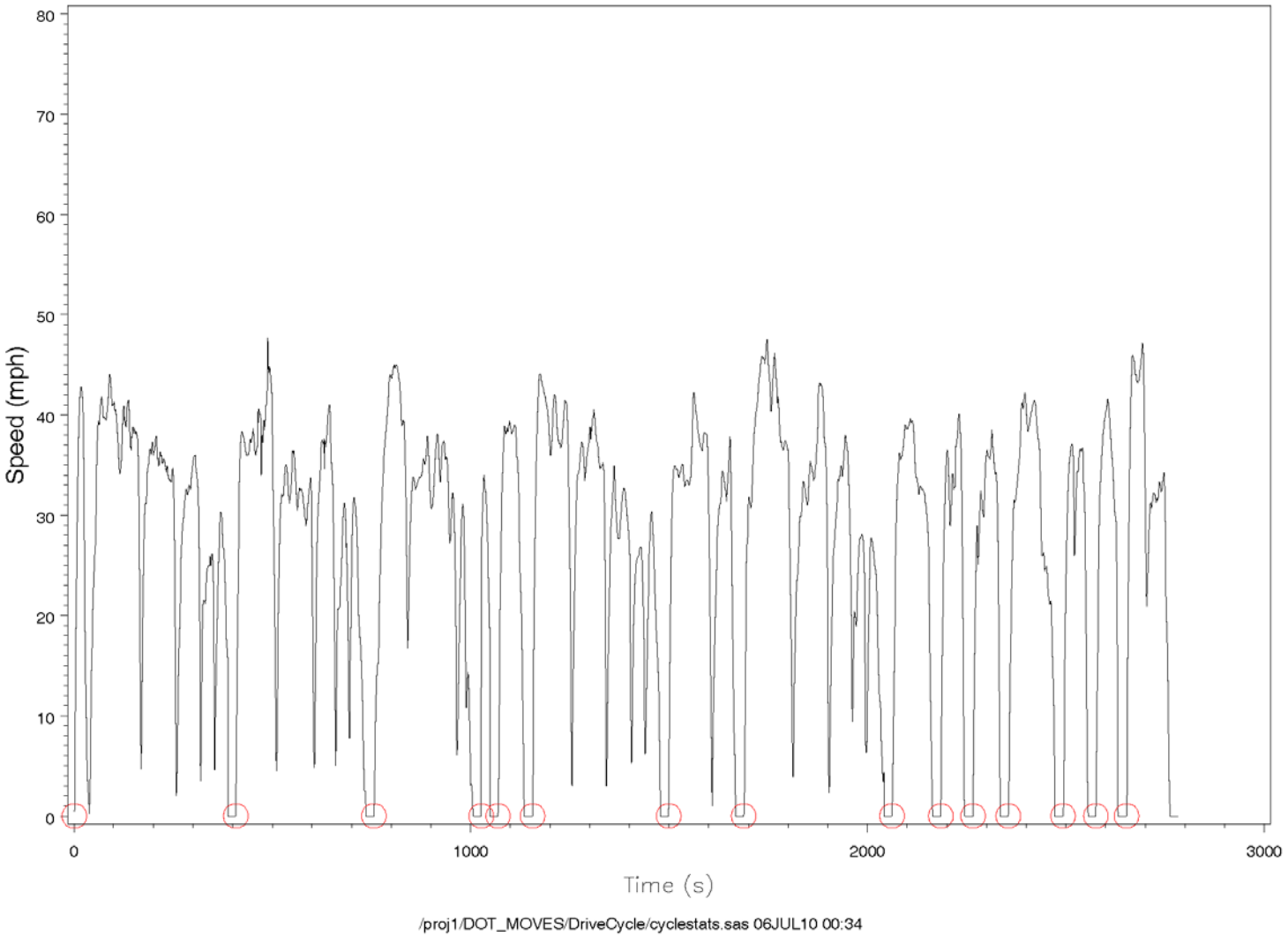


Figure B-2l. Speed versus Time: Unrestricted 32+ MPH

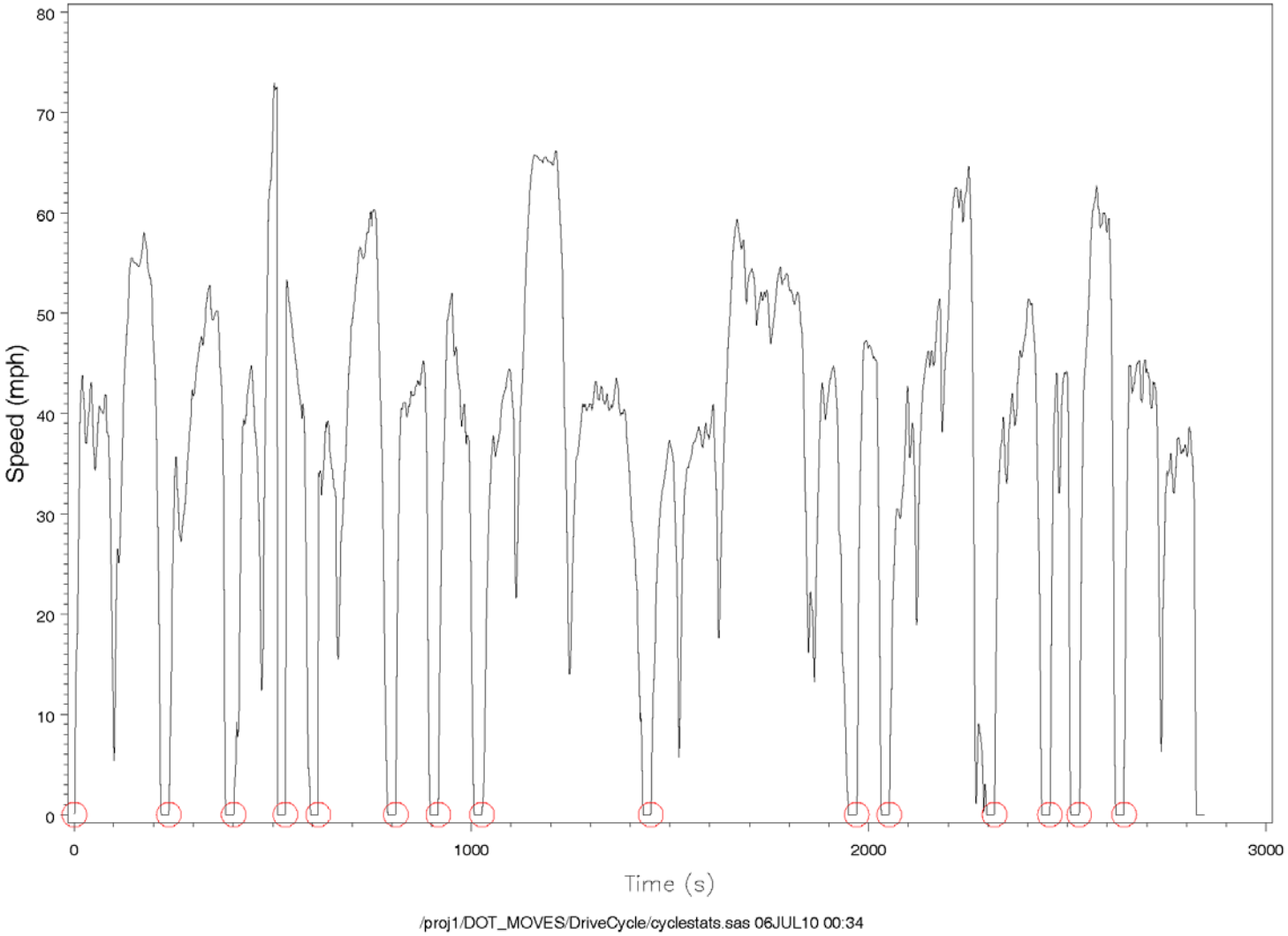


Figure B-3a. Acceleration versus Speed for Cycle: Restricted 50-60 MPH

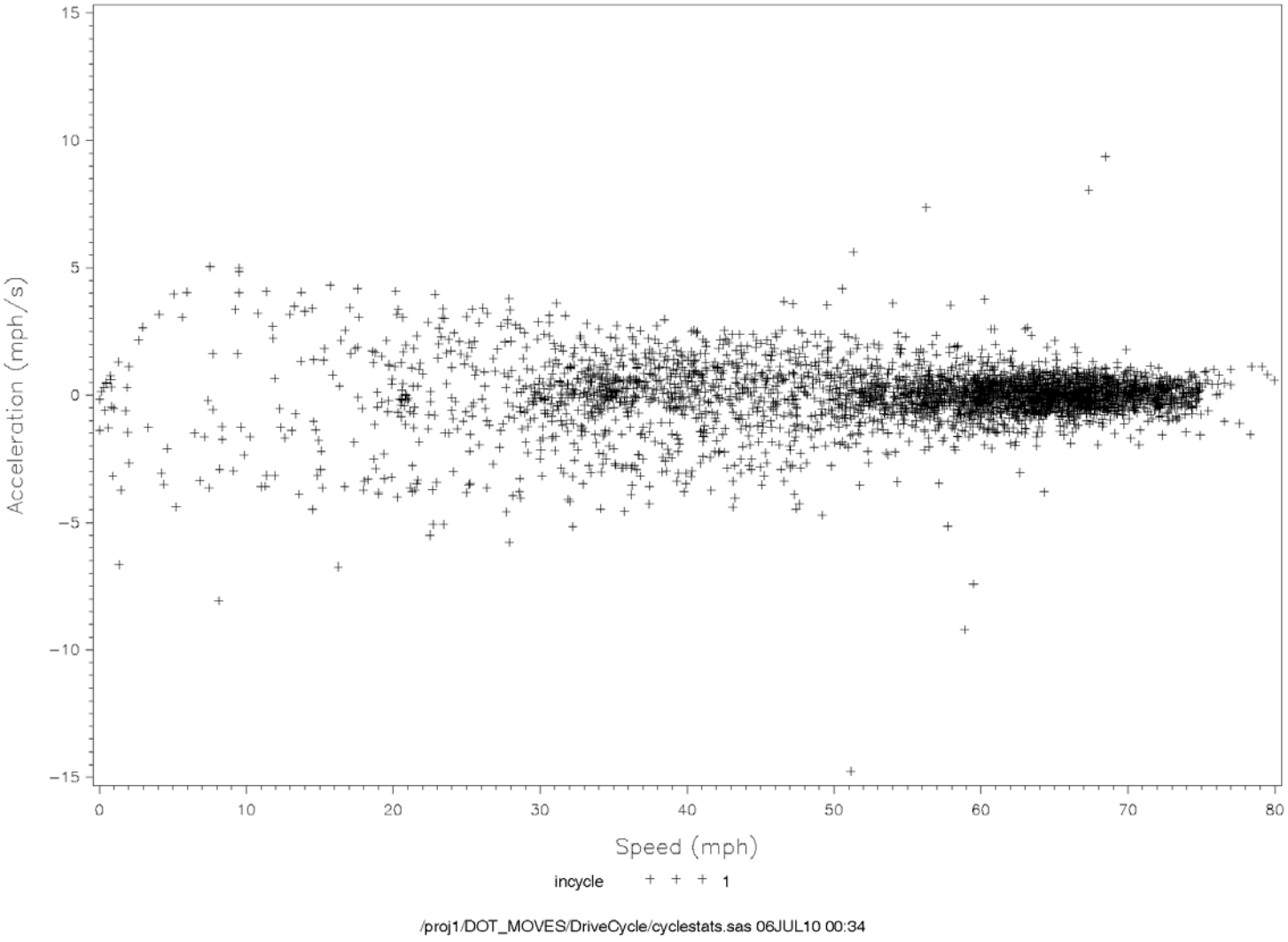


Figure B-3b. Acceleration versus Speed for Target: Restricted 50-60 MPH

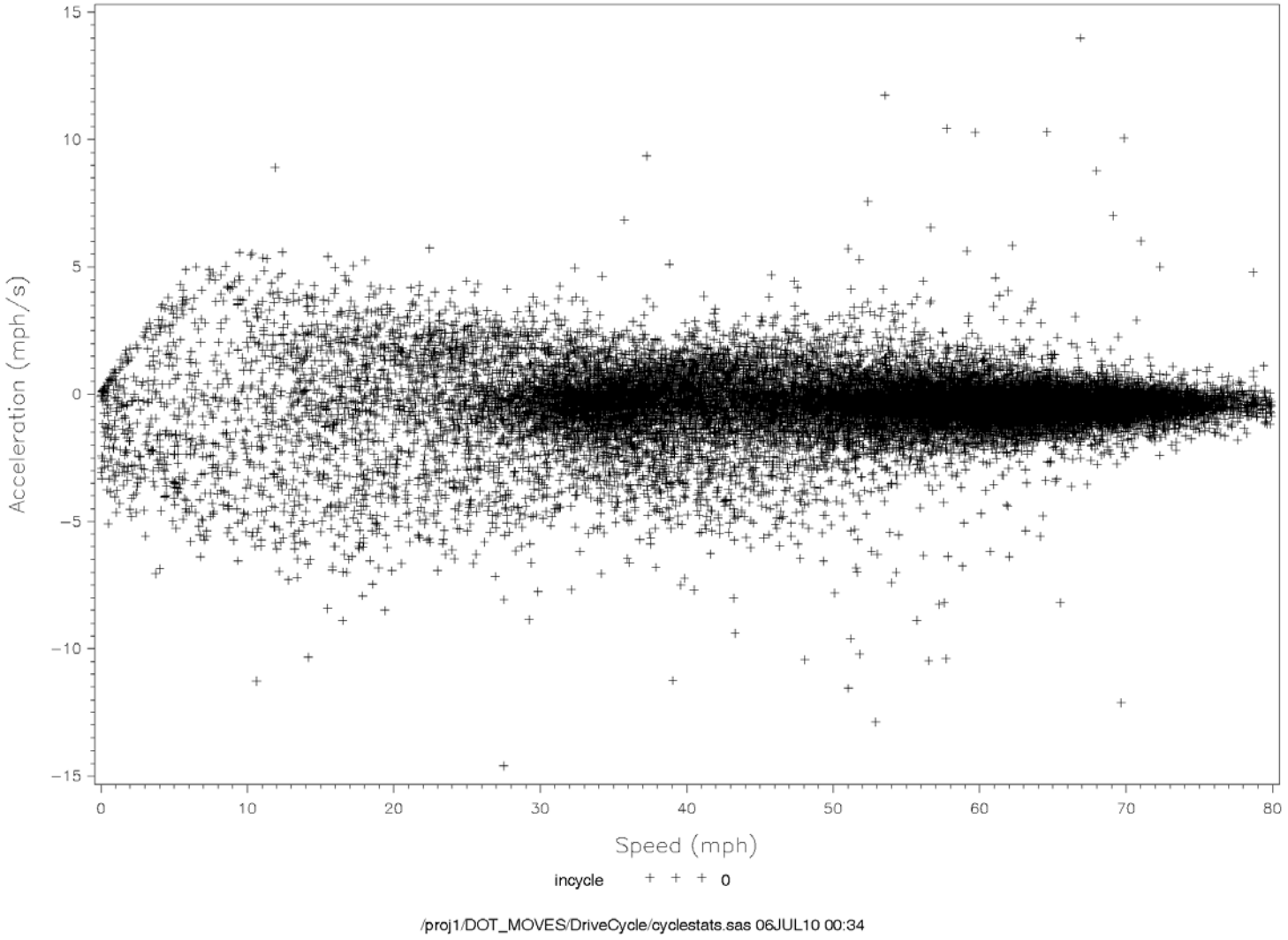


Figure B-3c. Acceleration versus Speed for Cycle: Unrestricted 25-28 MPH

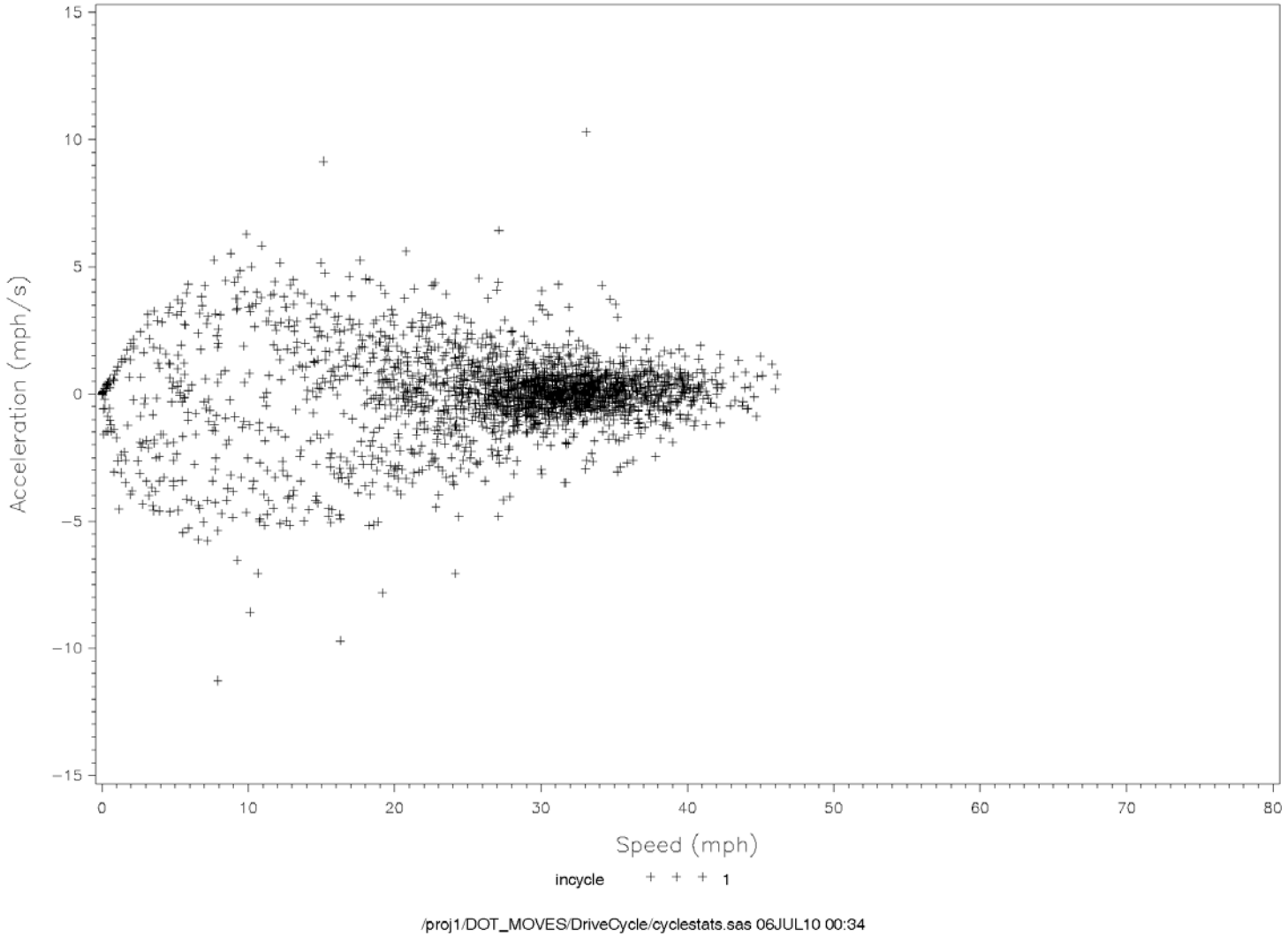


Figure B-3d. Acceleration versus Speed for Target: Unrestricted 25-28 MPH

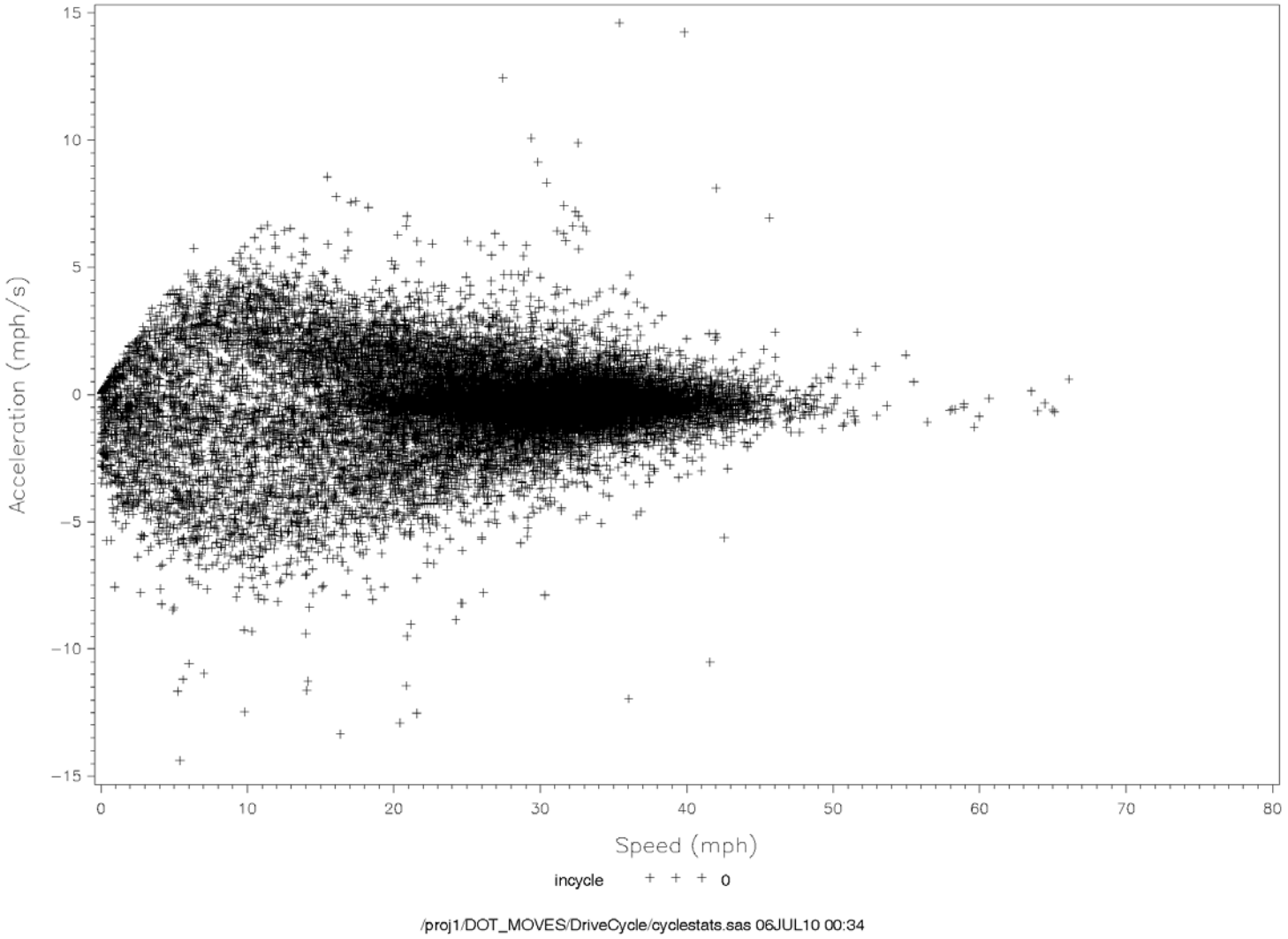
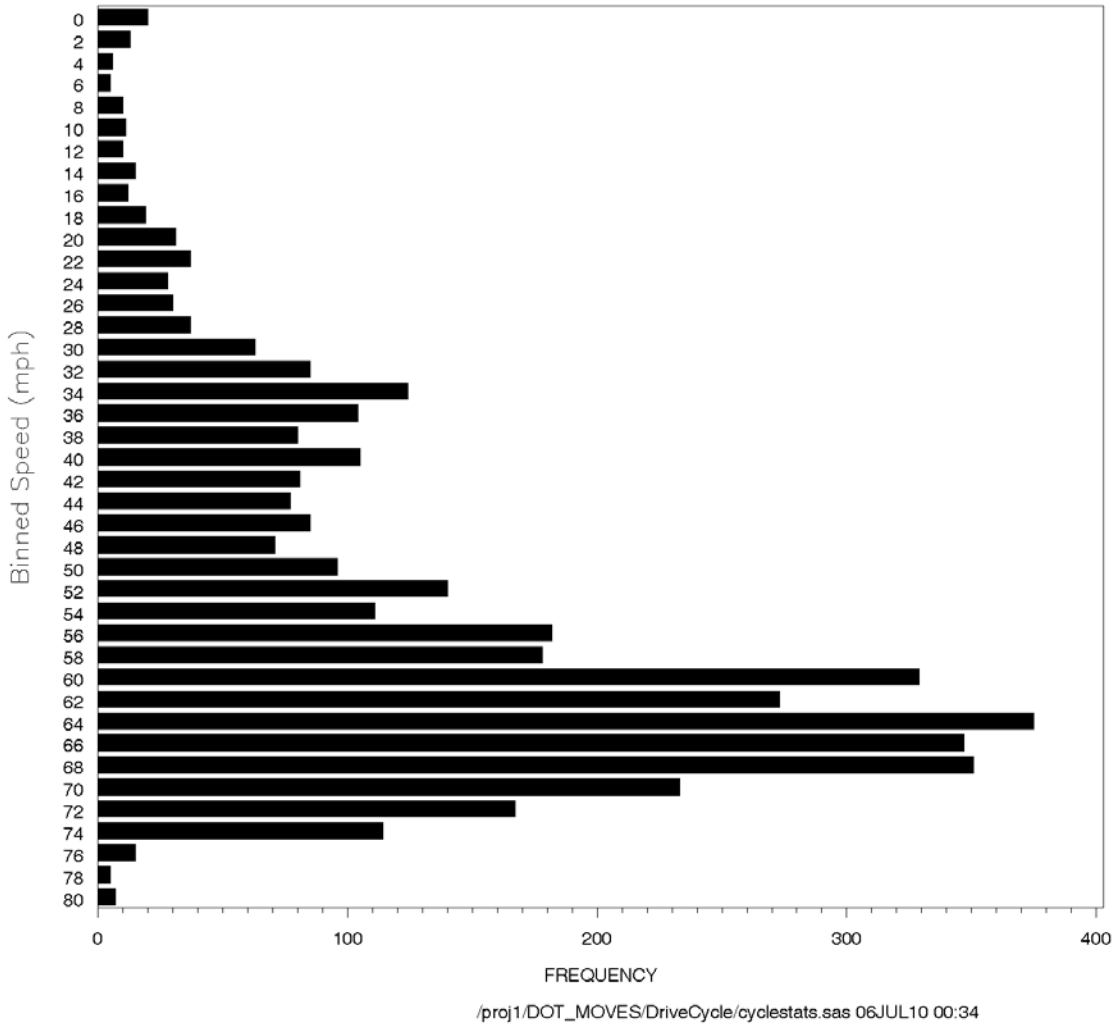
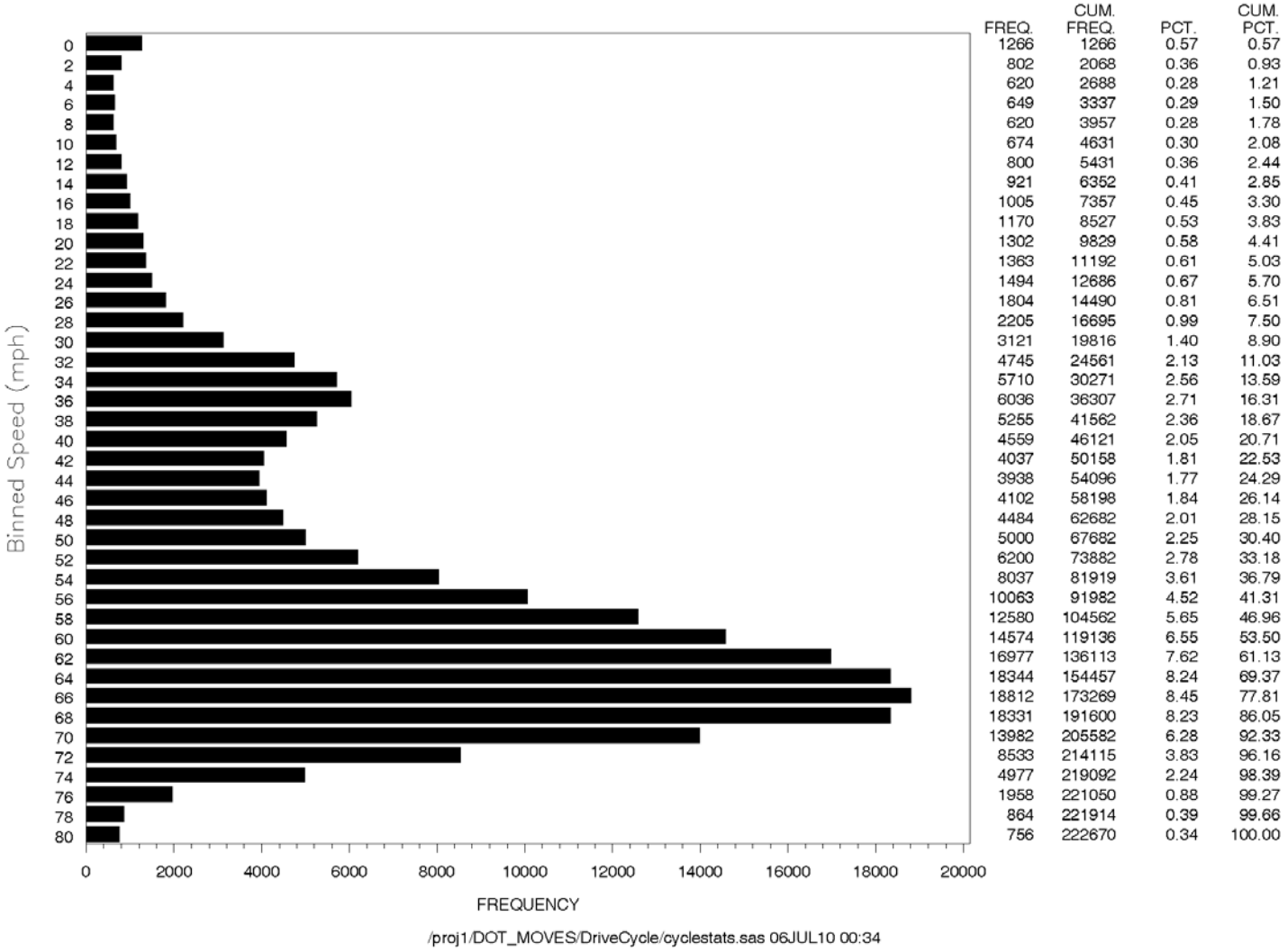


Figure B-4a. Frequency Distribution of Speeds in Cycle: Restricted 50-60 MPH



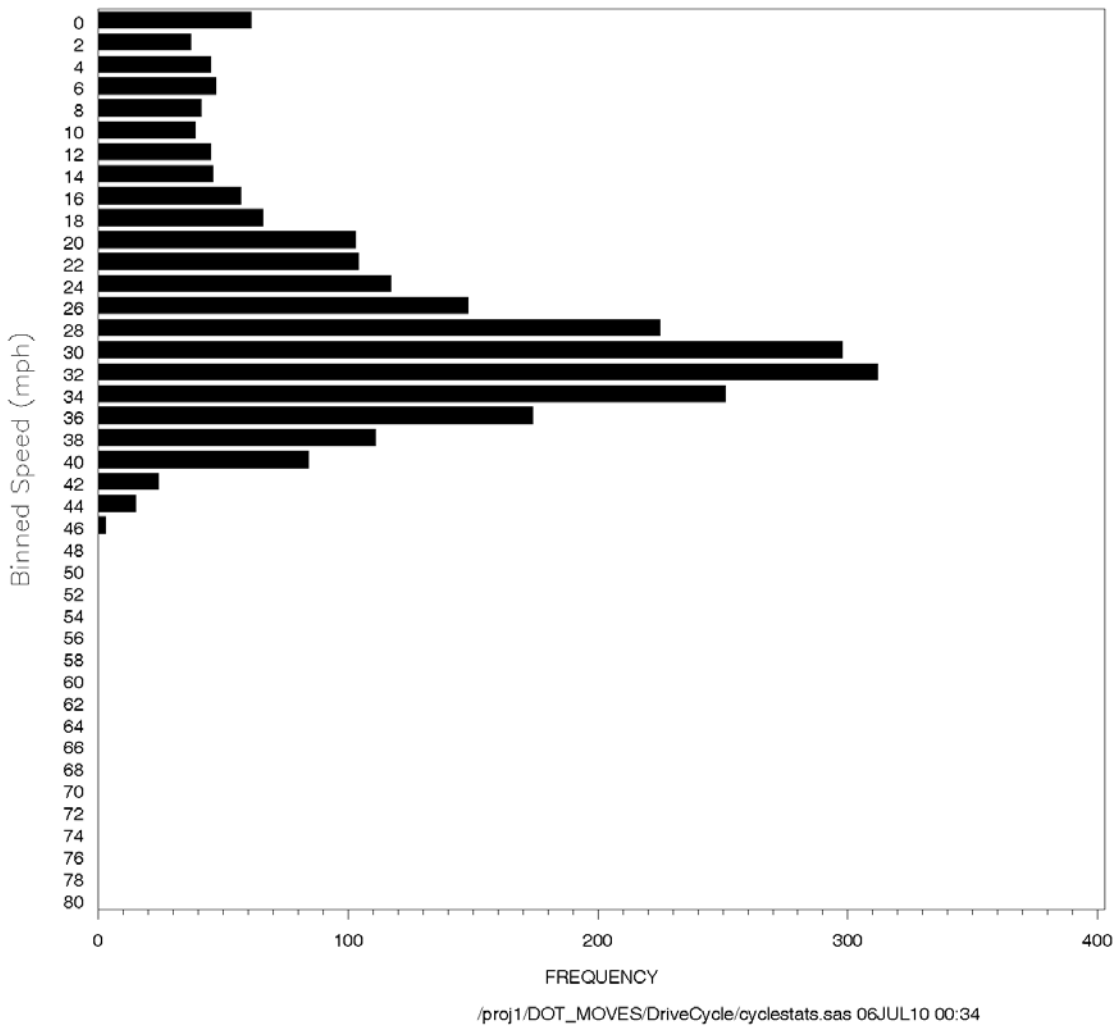
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
0	20	20	0.49	0.49
2	13	33	0.32	0.81
4	6	39	0.15	0.96
6	5	44	0.12	1.08
8	10	54	0.24	1.32
10	11	65	0.27	1.59
12	10	75	0.24	1.84
14	15	90	0.37	2.20
16	12	102	0.29	2.50
18	19	121	0.47	2.96
20	31	152	0.76	3.72
22	37	189	0.91	4.63
24	28	217	0.69	5.32
26	30	247	0.73	6.05
28	37	284	0.91	6.96
30	63	347	1.54	8.50
32	85	432	2.08	10.58
34	124	556	3.04	13.62
36	104	660	2.55	16.17
38	80	740	1.96	18.13
40	105	845	2.57	20.70
42	81	926	1.98	22.68
44	77	1003	1.89	24.57
46	85	1088	2.08	26.65
48	71	1159	1.74	28.39
50	96	1255	2.35	30.74
52	140	1395	3.43	34.17
54	111	1506	2.72	36.89
56	182	1688	4.46	41.35
58	178	1866	4.36	45.71
60	329	2195	8.06	53.77
62	273	2468	6.69	60.46
64	375	2843	9.19	69.65
66	347	3190	8.50	78.15
68	351	3541	8.60	86.75
70	233	3774	5.71	92.45
72	167	3941	4.09	96.55
74	114	4055	2.79	99.34
76	15	4070	0.37	99.71
78	5	4075	0.12	99.83
80	7	4082	0.17	100.00

Figure B-4b. Frequency Distribution of Speeds in Target: Restricted 50-60 MPH



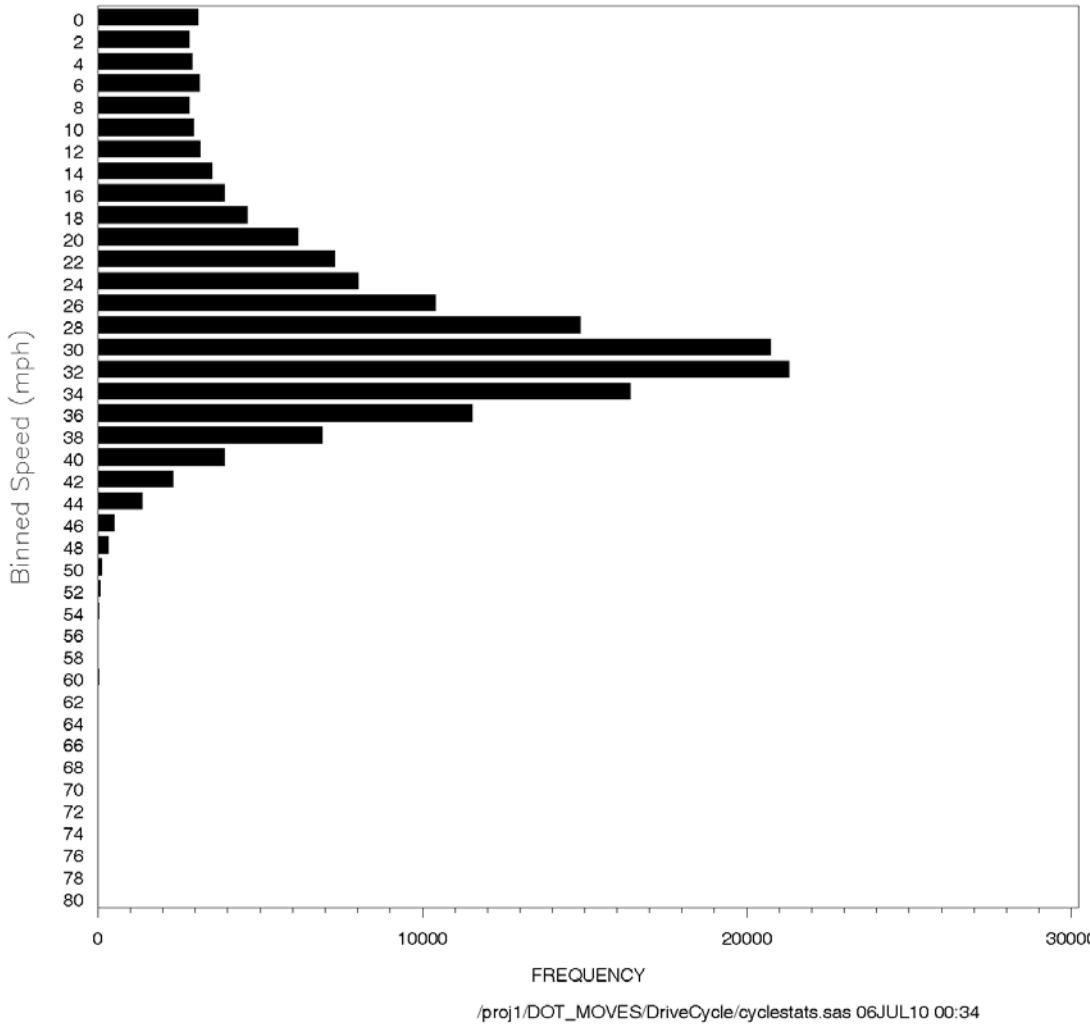
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
0	1266	1266	0.57	0.57
2	802	2068	0.36	0.93
4	620	2688	0.28	1.21
6	649	3337	0.29	1.50
8	620	3957	0.28	1.78
10	674	4631	0.30	2.08
12	800	5431	0.36	2.44
14	921	6352	0.41	2.85
16	1005	7357	0.45	3.30
18	1170	8527	0.53	3.83
20	1302	9829	0.58	4.41
22	1363	11192	0.61	5.03
24	1494	12686	0.67	5.70
26	1804	14490	0.81	6.51
28	2205	16695	0.99	7.50
30	3121	19816	1.40	8.90
32	4745	24561	2.13	11.03
34	5710	30271	2.56	13.59
36	6036	36307	2.71	16.31
38	5255	41562	2.36	18.67
40	4559	46121	2.05	20.71
42	4037	50158	1.81	22.53
44	3938	54096	1.77	24.29
46	4102	58198	1.84	26.14
48	4484	62682	2.01	28.15
50	5000	67682	2.25	30.40
52	6200	73882	2.78	33.18
54	8037	81919	3.61	36.79
56	10063	91982	4.52	41.31
58	12580	104562	5.65	46.96
60	14574	119136	6.55	53.50
62	16977	136113	7.62	61.13
64	18344	154457	8.24	69.37
66	18812	173269	8.45	77.81
68	18331	191600	8.23	86.05
70	13982	205582	6.28	92.33
72	8533	214115	3.83	96.16
74	4977	219092	2.24	98.39
76	1958	221050	0.88	99.27
78	864	221914	0.39	99.66
80	756	222670	0.34	100.00

Figure B-4c. Frequency Distribution of Speeds in Cycle: Unrestricted 25-28 MPH



	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
0	61	61	2.49	2.49
2	37	98	1.51	4.00
4	45	143	1.83	5.83
6	47	190	1.92	7.75
8	41	231	1.67	9.42
10	39	270	1.59	11.01
12	45	315	1.83	12.84
14	46	361	1.88	14.72
16	57	418	2.32	17.04
18	66	484	2.69	19.73
20	103	587	4.20	23.93
22	104	691	4.24	28.17
24	117	808	4.77	32.94
26	148	956	6.03	38.97
28	225	1181	9.17	48.15
30	298	1479	12.15	60.29
32	312	1791	12.72	73.01
34	251	2042	10.23	83.25
36	174	2216	7.09	90.34
38	111	2327	4.53	94.86
40	84	2411	3.42	98.29
42	24	2435	0.98	99.27
44	15	2450	0.61	99.88
46	3	2453	0.12	100.00
48	0	2453	0.00	100.00
50	0	2453	0.00	100.00
52	0	2453	0.00	100.00
54	0	2453	0.00	100.00
56	0	2453	0.00	100.00
58	0	2453	0.00	100.00
60	0	2453	0.00	100.00
62	0	2453	0.00	100.00
64	0	2453	0.00	100.00
66	0	2453	0.00	100.00
68	0	2453	0.00	100.00
70	0	2453	0.00	100.00
72	0	2453	0.00	100.00
74	0	2453	0.00	100.00
76	0	2453	0.00	100.00
78	0	2453	0.00	100.00
80	0	2453	0.00	100.00

Figure B-4d. Frequency Distribution of Speeds in Target: Unrestricted 25-28 MPH



	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
0	3092	3092	1.87	1.87
2	2798	5890	1.70	3.57
4	2900	8790	1.76	5.33
6	3115	11905	1.89	7.21
8	2809	14714	1.70	8.91
10	2942	17656	1.78	10.70
12	3149	20805	1.91	12.60
14	3506	24311	2.12	14.73
16	3887	28198	2.35	17.08
18	4590	32788	2.78	19.86
20	6167	38955	3.74	23.60
22	7291	46246	4.42	28.02
24	8020	54266	4.86	32.88
26	10394	64660	6.30	39.17
28	14869	79529	9.01	48.18
30	20740	100269	12.57	60.75
32	21314	121583	12.91	73.66
34	16412	137995	9.94	83.60
36	11527	149522	6.98	90.59
38	6908	156430	4.19	94.77
40	3899	160329	2.36	97.13
42	2306	162635	1.40	98.53
44	1346	163981	0.82	99.35
46	499	164480	0.30	99.65
48	304	164784	0.18	99.83
50	115	164899	0.07	99.90
52	65	164964	0.04	99.94
54	16	164980	0.01	99.95
56	5	164985	0.00	99.96
58	7	164992	0.00	99.96
60	23	165015	0.01	99.97
62	11	165026	0.01	99.98
64	12	165038	0.01	99.99
66	11	165049	0.01	99.99
68	0	165049	0.00	99.99
70	0	165049	0.00	99.99
72	0	165049	0.00	99.99
74	0	165049	0.00	99.99
76	2	165051	0.00	100.00
78	0	165051	0.00	100.00
80	8	165059	0.00	100.00

Appendix C
MOVES Model Output Summaries, by County

Table C-1. Brazoria County HPMS Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				3.0327	31.6563	34.6889	34.6889
	Start Exh	0.1627	12.0460	12.2086				12.2086
	Crank Run Exh				0.0054	0.0049	0.0103	0.0103
	Crank Start Exh	0.0001	0.0015	0.0016				0.0016
	Crank Ext Idle	0.0004		0.0004				0.0004
	Ext Idle Exh	0.1407		0.1407				0.1407
CO Total		**0.3039**	**12.0475**	**12.3513**	**3.0380**	**31.6612**	**34.6992**	**47.0505**
NOx	Running Exh				6.1609	5.0665	11.2274	11.2274
	Start Exh	0.0044	1.3320	1.3364				1.3364
	Crank Run Exh				0.0030	0.0003	0.0033	0.0033
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.2849		0.2849				0.2849
NOx Total		**0.2895**	**1.3320**	**1.6215**	**6.1639**	**5.0668**	**11.2307**	**12.8522**
VOC	Running Exh				0.3746	1.1361	1.5107	1.5107
	Start Exh	0.0052	1.4194	1.4246				1.4246
	Evap Permeation				0.0010	0.3280	0.3290	0.3290
	Evap Fuel Vent				0.0056	0.8101	0.8157	0.8157
	Evap Fuel Leak				0.0010	0.1464	0.1474	0.1474
	Crank Run Exh				0.0072	0.0150	0.0222	0.0222
	Crank start Exh	0.0001	0.0187	0.0188				0.0188
	Crank Ext Idle	0.0019		0.0019				0.0019
	Refuel Disp Vap	0.0008	0.0199	0.0207				0.0207
	Refuel Spillage	0.0134	0.0289	0.0423				0.0423
	Ext Idle Exh	0.0940		0.0940				0.0940
VOC Total		**0.1153**	**1.4870**	**1.6023**	**0.3894**	**2.4355**	**2.8249**	**4.4272**

Table C-2. Brazoria County TDM Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				1.9486	31.7531	33.7017	33.7017
	Start Exh	0.1627	12.0460	12.2086				12.2086
	Crank Run Exh				0.0040	0.0050	0.0089	0.0089
	Crank Start Exh	0.0001	0.0015	0.0016				0.0016
	Crank Ext Idle	0.0003		0.0003				0.0003
	Ext Idle Exh	0.1107		0.1107				0.1107
CO Total		**0.2738**	**12.0475**	**12.3212**	**1.9525**	**31.7581**	**33.7106**	**46.0318**
NOx	Running Exh				4.7143	5.1791	9.8934	9.8934
	Start Exh	0.0044	1.3320	1.3364				1.3364
	Crank Run Exh				0.0023	0.0003	0.0027	0.0027
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.2241		0.2241				0.2241
NOx Total		**0.2287**	**1.3320**	**1.5607**	**4.7166**	**5.1795**	**9.8961**	**11.4568**
VOC	Running Exh				0.2580	1.1059	1.3639	1.3639
	Start Exh	0.0052	1.4194	1.4246				1.4246
	Evap Permeation				0.0009	0.3277	0.3286	0.3286
	Evap Fuel Vent				0.0039	0.7924	0.7963	0.7963
	Evap Fuel Leak				0.0008	0.1453	0.1461	0.1461
	Crank Run Exh				0.0050	0.0150	0.0200	0.0200
	Crank start Exh	0.0001	0.0187	0.0188				0.0188
	Crank Ext Idle	0.0015		0.0015				0.0015
	Refuel Disp Vap	0.0004	0.0201	0.0204				0.0204
	Refuel Spillage	0.0101	0.0290	0.0391				0.0391
	Ext Idle Exh	0.0739		0.0739				0.0739
VOC Total		**0.0911**	**1.4872**	**1.5783**	**0.2686**	**2.3863**	**2.6549**	**4.2333**

Table C-3. Brazoria County HPMS Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				3.0327	27.4230	30.4557	30.4557
	Start Exh	0.1627	12.0460	12.2086				12.2086
	Crank Run Exh				0.0054	0.0044	0.0098	0.0098
	Crank Start Exh	0.0001	0.0015	0.0016				0.0016
	Crank Ext Idle	0.0004		0.0004				0.0004
	Ext Idle Exh	0.1407		0.1407				0.1407
CO Total		**0.3039**	**12.0475**	**12.3513**	**3.0380**	**27.4274**	**30.4654**	**42.8167**
NOx	Running Exh				6.1609	4.4819	10.6428	10.6428
	Start Exh	0.0044	1.3320	1.3364				1.3364
	Crank Run Exh				0.0030	0.0003	0.0033	0.0033
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.2849		0.2849				0.2849
NOx Total		**0.2895**	**1.3320**	**1.6215**	**6.1639**	**4.4822**	**10.6461**	**12.2676**
VOC	Running Exh				0.3746	1.0323	1.4068	1.4068
	Start Exh	0.0052	1.4194	1.4246				1.4246
	Evap Permeation				0.0010	0.3280	0.3290	0.3290
	Evap Fuel Vent				0.0056	0.8101	0.8157	0.8157
	Evap Fuel Leak				0.0010	0.1464	0.1474	0.1474
	Crank Run Exh				0.0072	0.0136	0.0208	0.0208
	Crank start Exh	0.0001	0.0187	0.0188				0.0188
	Crank Ext Idle	0.0019		0.0019				0.0019
	Refuel Disp Vap	0.0008	0.0170	0.0178				0.0178
	Refuel Spillage	0.0134	0.0247	0.0381				0.0381
	Ext Idle Exh	0.0940		0.0940				0.0940
VOC Total		**0.1153**	**1.4799**	**1.5952**	**0.3894**	**2.3303**	**2.7197**	**4.3149**

Table C-4. Brazoria County TDM Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				1.9486	27.8638	29.8123	29.8123
	Start Exh	0.1627	12.0460	12.2086				12.2086
	Crank Run Exh				0.0040	0.0045	0.0085	0.0085
	Crank Start Exh	0.0001	0.0015	0.0016				0.0016
	Crank Ext Idle	0.0003		0.0003				0.0003
	Ext Idle Exh	0.1107		0.1107				0.1107
CO Total		**0.2738**	**12.0475**	**12.3212**	**1.9525**	**27.8682**	**29.8208**	**42.1420**
NOx	Running Exh				4.7143	4.5778	9.2922	9.2922
	Start Exh	0.0044	1.3320	1.3364				1.3364
	Crank Run Exh				0.0023	0.0003	0.0027	0.0027
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.2241		0.2241				0.2241
NOx Total		**0.2287**	**1.3320**	**1.5607**	**4.7166**	**4.5782**	**9.2948**	**10.8555**
VOC	Running Exh				0.2580	1.0092	1.2672	1.2672
	Start Exh	0.0052	1.4194	1.4246				1.4246
	Evap Permeation				0.0009	0.3277	0.3286	0.3286
	Evap Fuel Vent				0.0039	0.7924	0.7963	0.7963
	Evap Fuel Leak				0.0008	0.1453	0.1461	0.1461
	Crank Run Exh				0.0050	0.0137	0.0187	0.0187
	Crank start Exh	0.0001	0.0187	0.0188				0.0188
	Crank Ext Idle	0.0015		0.0015				0.0015
	Refuel Disp Vap	0.0004	0.0172	0.0176				0.0176
	Refuel Spillage	0.0101	0.0249	0.0350				0.0350
	Ext Idle Exh	0.0739		0.0739				0.0739
VOC Total		**0.0911**	**1.4803**	**1.5714**	**0.2686**	**2.2883**	**2.5569**	**4.1284**

Table C-5. Chambers County HPMS Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				1.1945	18.8060	20.0005	20.0005
	Start Exh	0.0268	1.0607	1.0875				1.0875
	Crank Run Exh				0.0019	0.0028	0.0048	0.0048
	Crank Start Exh	0.0000	0.0001	0.0001				0.0001
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0301		0.0301				0.0301
CO Total		**0.0571**	**1.0608**	**1.1179**	**1.1964**	**18.8088**	**20.0053**	**21.1232**
NOx	Running Exh				2.5793	2.6302	5.2095	5.2095
	Start Exh	0.0007	0.1186	0.1193				0.1193
	Crank Run Exh				0.0013	0.0002	0.0014	0.0014
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0592		0.0592				0.0592
NOx Total		**0.0599**	**0.1186**	**0.1785**	**2.5805**	**2.6304**	**5.2110**	**5.3895**
VOC	Running Exh				0.1302	0.5049	0.6351	0.6351
	Start Exh	0.0008	0.1294	0.1303				0.1303
	Evap Permeation				0.0002	0.0363	0.0365	0.0365
	Evap Fuel Vent				0.0013	0.1567	0.1581	0.1581
	Evap Fuel Leak				0.0002	0.0242	0.0244	0.0244
	Crank Run Exh				0.0025	0.0067	0.0092	0.0092
	Crank start Exh	0.0000	0.0017	0.0017				0.0017
	Crank Ext Idle	0.0004		0.0004				0.0004
	Refuel Disp Vap	0.0004	0.0089	0.0092				0.0092
	Refuel Spillage	0.0055	0.0124	0.0179				0.0179
	Ext Idle Exh	0.0201		0.0201				0.0201
VOC Total		**0.0273**	**0.1524**	**0.1797**	**0.1345**	**0.7289**	**0.8633**	**1.0430**

Table C-6. Chambers County TDM Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				0.6722	16.1114	16.7835	16.7835
	Start Exh	0.0268	1.0607	1.0875				1.0875
	Crank Run Exh				0.0014	0.0025	0.0039	0.0039
	Crank Start Exh	0.0000	0.0001	0.0001				0.0001
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0244		0.0244				0.0244
CO Total		**0.0513**	**1.0608**	**1.1121**	**0.6736**	**16.1139**	**16.7875**	**17.8996**
NOx	Running Exh				1.9529	2.5171	4.4700	4.4700
	Start Exh	0.0007	0.1186	0.1193				0.1193
	Crank Run Exh				0.0010	0.0002	0.0011	0.0011
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0478		0.0478				0.0478
NOx Total		**0.0486**	**0.1186**	**0.1672**	**1.9538**	**2.5173**	**4.4711**	**4.6383**
VOC	Running Exh				0.0888	0.4637	0.5526	0.5526
	Start Exh	0.0008	0.1294	0.1303				0.1303
	Evap Permeation				0.0002	0.0362	0.0364	0.0364
	Evap Fuel Vent				0.0007	0.1541	0.1549	0.1549
	Evap Fuel Leak				0.0002	0.0241	0.0243	0.0243
	Crank Run Exh				0.0017	0.0063	0.0081	0.0081
	Crank start Exh	0.0000	0.0017	0.0017				0.0017
	Crank Ext Idle	0.0003		0.0003				0.0003
	Refuel Disp Vap	0.0001	0.0085	0.0086				0.0086
	Refuel Spillage	0.0041	0.0121	0.0162				0.0162
	Ext Idle Exh	0.0163		0.0163				0.0163
VOC Total		**0.0217**	**0.1517**	**0.1734**	**0.0916**	**0.6846**	**0.7762**	**0.9496**

Table C-7. Chambers County HPMS Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				1.1945	17.6107	18.8051	18.8051
	Start Exh	0.0268	1.0607	1.0875				1.0875
	Crank Run Exh				0.0019	0.0027	0.0046	0.0046
	Crank Start Exh	0.0000	0.0001	0.0001				0.0001
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0301		0.0301				0.0301
CO Total		**0.0571**	**1.0608**	**1.1179**	**1.1964**	**17.6133**	**18.8097**	**19.9276**
NOx	Running Exh				2.5793	2.4222	5.0015	5.0015
	Start Exh	0.0007	0.1186	0.1193				0.1193
	Crank Run Exh				0.0013	0.0002	0.0014	0.0014
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0592		0.0592				0.0592
NOx Total		**0.0599**	**0.1186**	**0.1785**	**2.5805**	**2.4224**	**5.0029**	**5.1814**
VOC	Running Exh				0.1302	0.4753	0.6055	0.6055
	Start Exh	0.0008	0.1294	0.1303				0.1303
	Evap Permeation				0.0002	0.0363	0.0365	0.0365
	Evap Fuel Vent				0.0013	0.1567	0.1581	0.1581
	Evap Fuel Leak				0.0002	0.0242	0.0244	0.0244
	Crank Run Exh				0.0025	0.0063	0.0089	0.0089
	Crank start Exh	0.0000	0.0017	0.0017				0.0017
	Crank Ext Idle	0.0004		0.0004				0.0004
	Refuel Disp Vap	0.0004	0.0078	0.0082				0.0082
	Refuel Spillage	0.0055	0.0109	0.0165				0.0165
	Ext Idle Exh	0.0201		0.0201				0.0201
VOC Total		**0.0273**	**0.1498**	**0.1771**	**0.1345**	**0.6989**	**0.8334**	**1.0105**

Table C-8. Chambers County TDM Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

Pollutant	Process	Off Network		Off Network Total	On Network		On Network Total	Total
		Heavy Duty	Light Duty		Heavy Duty	Light Duty		
CO	Running Exh				0.6722	15.1140	15.7861	15.7861
	Start Exh	0.0268	1.0607	1.0875				1.0875
	Crank Run Exh				0.0014	0.0024	0.0038	0.0038
	Crank Start Exh	0.0000	0.0001	0.0001				0.0001
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0244		0.0244				0.0244
CO Total		**0.0513**	**1.0608**	**1.1121**	**0.6736**	**15.1163**	**15.7899**	**16.9020**
NOx	Running Exh				1.9529	2.3176	4.2705	4.2705
	Start Exh	0.0007	0.1186	0.1193				0.1193
	Crank Run Exh				0.0010	0.0002	0.0011	0.0011
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0478		0.0478				0.0478
NOx Total		**0.0486**	**0.1186**	**0.1672**	**1.9538**	**2.3178**	**4.2716**	**4.4388**
VOC	Running Exh				0.0888	0.4369	0.5257	0.5257
	Start Exh	0.0008	0.1294	0.1303				0.1303
	Evap Permeation				0.0002	0.0362	0.0364	0.0364
	Evap Fuel Vent				0.0007	0.1541	0.1549	0.1549
	Evap Fuel Leak				0.0002	0.0241	0.0243	0.0243
	Crank Run Exh				0.0017	0.0059	0.0077	0.0077
	Crank start Exh	0.0000	0.0017	0.0017				0.0017
	Crank Ext Idle	0.0003		0.0003				0.0003
	Refuel Disp Vap	0.0001	0.0075	0.0076				0.0076
	Refuel Spillage	0.0041	0.0106	0.0147				0.0147
	Ext Idle Exh	0.0163		0.0163				0.0163
VOC Total		**0.0217**	**0.1492**	**0.1709**	**0.0916**	**0.6574**	**0.7490**	**0.9199**

Table C-9. Fort Bend County HPMS Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				4.6452	43.6857	48.3309	48.3309
	Start Exh	0.3675	15.2793	15.6469				15.6469
	Crank Run Exh				0.0081	0.0067	0.0148	0.0148
	Crank Start Exh	0.0002	0.0019	0.0020				0.0020
	Crank Ext Idle	0.0007		0.0007				0.0007
	Ext Idle Exh	0.2392		0.2392				0.2392
CO Total		**0.6076**	**15.2812**	**15.8889**	**4.6533**	**43.6924**	**48.3458**	**64.2346**
NOx	Running Exh				9.1965	6.7569	15.9534	15.9534
	Start Exh	0.0103	1.7253	1.7356				1.7356
	Crank Run Exh				0.0045	0.0005	0.0049	0.0049
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0002		0.0002				0.0002
	Ext Idle Exh	0.4770		0.4770				0.4770
NOx Total		**0.4876**	**1.7253**	**2.2129**	**9.2010**	**6.7574**	**15.9584**	**18.1713**
VOC	Running Exh				0.5650	1.4899	2.0549	2.0549
	Start Exh	0.0120	1.7790	1.7911				1.7911
	Evap Permeation				0.0020	0.3965	0.3984	0.3984
	Evap Fuel Vent				0.0098	1.0856	1.0955	1.0955
	Evap Fuel Leak				0.0016	0.1843	0.1859	0.1859
	Crank Run Exh				0.0108	0.0196	0.0304	0.0304
	Crank start Exh	0.0002	0.0235	0.0236				0.0236
	Crank Ext Idle	0.0032		0.0032				0.0032
	Refuel Disp Vap	0.0012	0.0277	0.0289				0.0289
	Refuel Spillage	0.0202	0.0416	0.0619				0.0619
	Ext Idle Exh	0.1598		0.1598				0.1598
VOC Total		**0.1967**	**1.8718**	**2.0685**	**0.5893**	**3.1758**	**3.7651**	**5.8336**

Table C-10. Fort Bend County TDM Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				2.9659	42.5394	45.5053	45.5053
	Start Exh	0.3675	15.2793	15.6469				15.6469
	Crank Run Exh				0.0060	0.0066	0.0126	0.0126
	Crank Start Exh	0.0002	0.0019	0.0020				0.0020
	Crank Ext Idle	0.0006		0.0006				0.0006
	Ext Idle Exh	0.1898		0.1898				0.1898
CO Total		**0.5581**	**15.2812**	**15.8393**	**2.9719**	**42.5460**	**45.5179**	**61.3572**
NOx	Running Exh				6.9567	6.6706	13.6273	13.6273
	Start Exh	0.0103	1.7253	1.7356				1.7356
	Crank Run Exh				0.0034	0.0005	0.0039	0.0039
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0002		0.0002				0.0002
	Ext Idle Exh	0.3785		0.3785				0.3785
NOx Total		**0.3890**	**1.7253**	**2.1143**	**6.9601**	**6.6711**	**13.6312**	**15.7455**
VOC	Running Exh				0.3881	1.4121	1.8002	1.8002
	Start Exh	0.0120	1.7790	1.7911				1.7911
	Evap Permeation				0.0019	0.3960	0.3978	0.3978
	Evap Fuel Vent				0.0073	1.0507	1.0579	1.0579
	Evap Fuel Leak				0.0013	0.1815	0.1828	0.1828
	Crank Run Exh				0.0075	0.0191	0.0266	0.0266
	Crank start Exh	0.0002	0.0235	0.0236				0.0236
	Crank Ext Idle	0.0025		0.0025				0.0025
	Refuel Disp Vap	0.0006	0.0269	0.0275				0.0275
	Refuel Spillage	0.0151	0.0404	0.0556				0.0556
	Ext Idle Exh	0.1268		0.1268				0.1268
VOC Total		**0.1573**	**1.8699**	**2.0271**	**0.4061**	**3.0594**	**3.4654**	**5.4926**

Table C-11. Fort Bend County HPMS Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				4.6452	40.4402	45.0854	45.0854
	Start Exh	0.3675	15.2793	15.6469				15.6469
	Crank Run Exh				0.0081	0.0063	0.0145	0.0145
	Crank Start Exh	0.0002	0.0019	0.0020				0.0020
	Crank Ext Idle	0.0007		0.0007				0.0007
	Ext Idle Exh	0.2392		0.2392				0.2392
CO Total		**0.6076**	**15.2812**	**15.8889**	**4.6533**	**40.4465**	**45.0999**	**60.9887**
NOx	Running Exh				9.1965	6.3820	15.5785	15.5785
	Start Exh	0.0103	1.7253	1.7356				1.7356
	Crank Run Exh				0.0045	0.0005	0.0049	0.0049
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0002		0.0002				0.0002
	Ext Idle Exh	0.4770		0.4770				0.4770
NOx Total		**0.4876**	**1.7253**	**2.2129**	**9.2010**	**6.3825**	**15.5835**	**17.7964**
VOC	Running Exh				0.5650	1.3933	1.9582	1.9582
	Start Exh	0.0120	1.7790	1.7911				1.7911
	Evap Permeation				0.0020	0.3965	0.3984	0.3984
	Evap Fuel Vent				0.0098	1.0856	1.0955	1.0955
	Evap Fuel Leak				0.0016	0.1843	0.1859	0.1859
	Crank Run Exh				0.0108	0.0183	0.0291	0.0291
	Crank start Exh	0.0002	0.0235	0.0236				0.0236
	Crank Ext Idle	0.0032		0.0032				0.0032
	Refuel Disp Vap	0.0012	0.0250	0.0263				0.0263
	Refuel Spillage	0.0202	0.0377	0.0579				0.0579
	Ext Idle Exh	0.1598		0.1598				0.1598
VOC Total		**0.1967**	**1.8652**	**2.0619**	**0.5893**	**3.0779**	**3.6672**	**5.7291**

Table C-12. Fort Bend County TDM Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

Pollutant	Process	Off Network		Off Network Total	On Network		On Network Total	Total
		Heavy Duty	Light Duty		Heavy Duty	Light Duty		
CO	Running Exh				2.9659	39.6900	42.6559	42.6559
	Start Exh	0.3675	15.2793	15.6469				15.6469
	Crank Run Exh				0.0060	0.0063	0.0123	0.0123
	Crank Start Exh	0.0002	0.0019	0.0020				0.0020
	Crank Ext Idle	0.0006		0.0006				0.0006
	Ext Idle Exh	0.1898		0.1898				0.1898
CO Total		**0.5581**	**15.2812**	**15.8393**	**2.9719**	**39.6963**	**42.6682**	**58.5075**
NOx	Running Exh				6.9567	6.2642	13.2208	13.2208
	Start Exh	0.0103	1.7253	1.7356				1.7356
	Crank Run Exh				0.0034	0.0005	0.0039	0.0039
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0002		0.0002				0.0002
	Ext Idle Exh	0.3785		0.3785				0.3785
NOx Total		**0.3890**	**1.7253**	**2.1143**	**6.9601**	**6.2646**	**13.2247**	**15.3391**
VOC	Running Exh				0.3881	1.3234	1.7115	1.7115
	Start Exh	0.0120	1.7790	1.7911				1.7911
	Evap Permeation				0.0019	0.3960	0.3978	0.3978
	Evap Fuel Vent				0.0073	1.0507	1.0579	1.0579
	Evap Fuel Leak				0.0013	0.1815	0.1828	0.1828
	Crank Run Exh				0.0075	0.0179	0.0254	0.0254
	Crank start Exh	0.0002	0.0235	0.0236				0.0236
	Crank Ext Idle	0.0025		0.0025				0.0025
	Refuel Disp Vap	0.0006	0.0245	0.0250				0.0250
	Refuel Spillage	0.0151	0.0367	0.0518				0.0518
	Ext Idle Exh	0.1268		0.1268				0.1268
VOC Total		**0.1573**	**1.8637**	**2.0209**	**0.4061**	**2.9695**	**3.3755**	**5.3965**

Table C-13. Galveston County HPMS Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				3.2549	37.8385	41.0934	41.0934
	Start Exh	0.0689	9.8266	9.8954				9.8954
	Crank Run Exh				0.0056	0.0057	0.0113	0.0113
	Crank Start Exh	0.0000	0.0012	0.0012				0.0012
	Crank Ext Idle	0.0005		0.0005				0.0005
	Ext Idle Exh	0.1584		0.1584				0.1584
CO Total		**0.2278**	**9.8278**	**10.0556**	**3.2605**	**37.8442**	**41.1047**	**51.1603**
NOx	Running Exh				6.4610	5.3531	11.8142	11.8142
	Start Exh	0.0019	1.1204	1.1223				1.1223
	Crank Run Exh				0.0031	0.0004	0.0035	0.0035
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0002		0.0002				0.0002
	Ext Idle Exh	0.3130		0.3130				0.3130
NOx Total		**0.3151**	**1.1204**	**1.4355**	**6.4642**	**5.3535**	**11.8177**	**13.2532**
VOC	Running Exh				0.3865	1.2201	1.6066	1.6066
	Start Exh	0.0022	1.1954	1.1976				1.1976
	Evap Permeation				0.0005	0.3215	0.3220	0.3220
	Evap Fuel Vent				0.0045	0.7286	0.7331	0.7331
	Evap Fuel Leak				0.0008	0.1429	0.1436	0.1436
	Crank Run Exh				0.0074	0.0161	0.0235	0.0235
	Crank start Exh	0.0000	0.0158	0.0158				0.0158
	Crank Ext Idle	0.0021		0.0021				0.0021
	Refuel Disp Vap	0.0009	0.0214	0.0223				0.0223
	Refuel Spillage	0.0144	0.0306	0.0450				0.0450
	Ext Idle Exh	0.1058		0.1058				0.1058
VOC Total		**0.1255**	**1.2632**	**1.3887**	**0.3997**	**2.4291**	**2.8289**	**4.2176**

Table C-14. Galveston County TDM Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				2.0946	35.8933	37.9879	37.9879
	Start Exh	0.0689	9.8266	9.8954				9.8954
	Crank Run Exh				0.0043	0.0056	0.0099	0.0099
	Crank Start Exh	0.0000	0.0012	0.0012				0.0012
	Crank Ext Idle	0.0004		0.0004				0.0004
	Ext Idle Exh	0.1360		0.1360				0.1360
CO Total		**0.2053**	**9.8278**	**10.0331**	**2.0989**	**35.8989**	**37.9979**	**48.0309**
NOx	Running Exh				4.9229	5.4455	10.3684	10.3684
	Start Exh	0.0019	1.1204	1.1223				1.1223
	Crank Run Exh				0.0024	0.0004	0.0028	0.0028
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.2687		0.2687				0.2687
NOx Total		**0.2707**	**1.1204**	**1.3912**	**4.9253**	**5.4459**	**10.3712**	**11.7623**
VOC	Running Exh				0.2764	1.2286	1.5050	1.5050
	Start Exh	0.0022	1.1954	1.1976				1.1976
	Evap Permeation				0.0005	0.3218	0.3223	0.3223
	Evap Fuel Vent				0.0028	0.7474	0.7502	0.7502
	Evap Fuel Leak				0.0006	0.1466	0.1472	0.1472
	Crank Run Exh				0.0054	0.0166	0.0220	0.0220
	Crank start Exh	0.0000	0.0158	0.0158				0.0158
	Crank Ext Idle	0.0018		0.0018				0.0018
	Refuel Disp Vap	0.0004	0.0216	0.0220				0.0220
	Refuel Spillage	0.0109	0.0309	0.0419				0.0419
	Ext Idle Exh	0.0909		0.0909				0.0909
VOC Total		**0.1062**	**1.2637**	**1.3699**	**0.2856**	**2.4610**	**2.7466**	**4.1165**

Table C-15. Galveston County HPMS Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				3.2549	36.0785	39.3335	39.3335
	Start Exh	0.0689	9.8266	9.8954				9.8954
	Crank Run Exh				0.0056	0.0055	0.0111	0.0111
	Crank Start Exh	0.0000	0.0012	0.0012				0.0012
	Crank Ext Idle	0.0005		0.0005				0.0005
	Ext Idle Exh	0.1584		0.1584				0.1584
CO Total		**0.2278**	**9.8278**	**10.0556**	**3.2605**	**36.0840**	**39.3446**	**49.4002**
NOx	Running Exh				6.4610	5.3023	11.7633	11.7633
	Start Exh	0.0019	1.1204	1.1223				1.1223
	Crank Run Exh				0.0031	0.0004	0.0035	0.0035
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0002		0.0002				0.0002
	Ext Idle Exh	0.3130		0.3130				0.3130
NOx Total		**0.3151**	**1.1204**	**1.4355**	**6.4642**	**5.3027**	**11.7669**	**13.2024**
VOC	Running Exh				0.3865	1.1607	1.5472	1.5472
	Start Exh	0.0022	1.1954	1.1976				1.1976
	Evap Permeation				0.0005	0.3215	0.3220	0.3220
	Evap Fuel Vent				0.0045	0.7286	0.7331	0.7331
	Evap Fuel Leak				0.0008	0.1429	0.1436	0.1436
	Crank Run Exh				0.0074	0.0153	0.0227	0.0227
	Crank start Exh	0.0000	0.0158	0.0158				0.0158
	Crank Ext Idle	0.0021		0.0021				0.0021
	Refuel Disp Vap	0.0009	0.0199	0.0208				0.0208
	Refuel Spillage	0.0144	0.0284	0.0429				0.0429
	Ext Idle Exh	0.1058		0.1058				0.1058
VOC Total		**0.1255**	**1.2595**	**1.3850**	**0.3997**	**2.3690**	**2.7687**	**4.1537**

Table C-16. Galveston County TDM Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				2.0946	33.8049	35.8995	35.8995
	Start Exh	0.0689	9.8266	9.8954				9.8954
	Crank Run Exh				0.0043	0.0054	0.0097	0.0097
	Crank Start Exh	0.0000	0.0012	0.0012				0.0012
	Crank Ext Idle	0.0004		0.0004				0.0004
	Ext Idle Exh	0.1360		0.1360				0.1360
CO Total		**0.2053**	**9.8278**	**10.0331**	**2.0989**	**33.8103**	**35.9092**	**45.9423**
NOx	Running Exh				4.9229	5.2891	10.2119	10.2119
	Start Exh	0.0019	1.1204	1.1223				1.1223
	Crank Run Exh				0.0024	0.0004	0.0028	0.0028
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.2687		0.2687				0.2687
NOx Total		**0.2707**	**1.1204**	**1.3912**	**4.9253**	**5.2895**	**10.2148**	**11.6059**
VOC	Running Exh				0.2764	1.1588	1.4352	1.4352
	Start Exh	0.0022	1.1954	1.1976				1.1976
	Evap Permeation				0.0005	0.3218	0.3223	0.3223
	Evap Fuel Vent				0.0028	0.7474	0.7502	0.7502
	Evap Fuel Leak				0.0006	0.1466	0.1472	0.1472
	Crank Run Exh				0.0054	0.0157	0.0210	0.0210
	Crank start Exh	0.0000	0.0158	0.0158				0.0158
	Crank Ext Idle	0.0018		0.0018				0.0018
	Refuel Disp Vap	0.0004	0.0200	0.0204				0.0204
	Refuel Spillage	0.0109	0.0286	0.0395				0.0395
	Ext Idle Exh	0.0909		0.0909				0.0909
VOC Total		**0.1062**	**1.2597**	**1.3659**	**0.2856**	**2.3903**	**2.6759**	**4.0418**

Table C-17. Harris County HPMS Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

Pollutant	Process	Off Network		Off Network Total	On Network		On Network Total	Total
		Heavy Duty	Light Duty		Heavy Duty	Light Duty		
CO	Running Exh				59.9874	677.8779	737.8653	737.8653
	Start Exh	3.3478	192.0671	195.4148				195.4148
	Crank Run Exh				0.1022	0.1033	0.2056	0.2056
	Crank Start Exh	0.0014	0.0236	0.0250				0.0250
	Crank Ext Idle	0.0078		0.0078				0.0078
	Ext Idle Exh	2.6025		2.6025				2.6025
CO Total		**5.9595**	**192.0906**	**198.0502**	**60.0896**	**677.9812**	**738.0708**	**936.1210**
NOx	Running Exh				115.9841	97.0662	213.0503	213.0503
	Start Exh	0.0929	22.6053	22.6982				22.6982
	Crank Run Exh				0.0564	0.0069	0.0633	0.0633
	Crank Start Exh	0.0000	0.0006	0.0006				0.0006
	Crank Ext Idle	0.0026		0.0026				0.0026
	Ext Idle Exh	5.1847		5.1847				5.1847
NOx Total		**5.2802**	**22.6059**	**27.8861**	**116.0405**	**97.0731**	**213.1136**	**240.9997**
VOC	Running Exh				7.1051	22.2602	29.3653	29.3653
	Start Exh	0.1087	23.8833	23.9920				23.9920
	Evap Permeation				0.0202	6.3596	6.3798	6.3798
	Evap Fuel Vent				0.1044	15.2133	15.3176	15.3176
	Evap Fuel Leak				0.0180	2.7503	2.7683	2.7683
	Crank Run Exh				0.1359	0.2940	0.4299	0.4299
	Crank start Exh	0.0014	0.3153	0.3167				0.3167
	Crank Ext Idle	0.0348		0.0348				0.0348
	Refuel Disp Vap	0.0164	0.3902	0.4065				0.4065
	Refuel Spillage	0.2565	0.5487	0.8052				0.8052
	Ext Idle Exh	1.7387		1.7387				1.7387
VOC Total		**2.1564**	**25.1375**	**27.2939**	**7.3835**	**46.8774**	**54.2609**	**81.5548**

Table C-18. Harris County TDM Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off	On Network		On	
Pollutant	**Process**	**Heavy Duty**	**Light Duty**	**Network Total**	**Heavy Duty**	**Light Duty**	**Network Total**	**Total**
CO	Running Exh				35.8088	636.6537	672.4624	672.4624
	Start Exh	3.3478	192.0671	195.4148				195.4148
	Crank Run Exh				0.0742	0.0991	0.1733	0.1733
	Crank Start Exh	0.0014	0.0236	0.0250				0.0250
	Crank Ext Idle	0.0063		0.0063				0.0063
	Ext Idle Exh	2.1147		2.1147				2.1147
CO Total		**5.4703**	**192.0906**	**197.5610**	**35.8830**	**636.7528**	**672.6358**	**870.1967**
NOx	Running Exh				83.4173	94.5313	177.9486	177.9486
	Start Exh	0.0929	22.6053	22.6982				22.6982
	Crank Run Exh				0.0411	0.0069	0.0479	0.0479
	Crank Start Exh	0.0000	0.0006	0.0006				0.0006
	Crank Ext Idle	0.0021		0.0021				0.0021
	Ext Idle Exh	4.2130		4.2130				4.2130
NOx Total		**4.3080**	**22.6059**	**26.9139**	**83.4583**	**94.5382**	**177.9965**	**204.9104**
VOC	Running Exh				4.7235	21.6448	26.3684	26.3684
	Start Exh	0.1087	23.8833	23.9920				23.9920
	Evap Permeation				0.0183	6.3604	6.3788	6.3788
	Evap Fuel Vent				0.0696	15.3090	15.3785	15.3785
	Evap Fuel Leak				0.0131	2.7855	2.7986	2.7986
	Crank Run Exh				0.0916	0.2927	0.3842	0.3842
	Crank start Exh	0.0014	0.3153	0.3167				0.3167
	Crank Ext Idle	0.0283		0.0283				0.0283
	Refuel Disp Vap	0.0067	0.3775	0.3842				0.3842
	Refuel Spillage	0.1835	0.5329	0.7164				0.7164
	Ext Idle Exh	1.4128		1.4128				1.4128
VOC Total		**1.7414**	**25.1091**	**26.8505**	**4.9162**	**46.3923**	**51.3085**	**78.1590**

Table C-19. Harris County HPMS Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

Pollutant	Process	Off Network		Off Network Total	On Network		On Network Total	Total
		Heavy Duty	Light Duty		Heavy Duty	Light Duty		
CO	Running Exh				59.9874	679.4819	739.4692	739.4692
	Start Exh	3.3478	192.0671	195.4148				195.4148
	Crank Run Exh				0.1022	0.1039	0.2062	0.2062
	Crank Start Exh	0.0014	0.0236	0.0250				0.0250
	Crank Ext Idle	0.0078		0.0078				0.0078
	Ext Idle Exh	2.6025		2.6025				2.6025
CO Total		**5.9595**	**192.0906**	**198.0502**	**60.0896**	**679.5858**	**739.6754**	**937.7256**
NOx	Running Exh				115.9841	97.9323	213.9164	213.9164
	Start Exh	0.0929	22.6053	22.6982				22.6982
	Crank Run Exh				0.0564	0.0071	0.0636	0.0636
	Crank Start Exh	0.0000	0.0006	0.0006				0.0006
	Crank Ext Idle	0.0026		0.0026				0.0026
	Ext Idle Exh	5.1847		5.1847				5.1847
NOx Total		**5.2802**	**22.6059**	**27.8861**	**116.0405**	**97.9395**	**213.9800**	**241.8661**
VOC	Running Exh				7.1051	21.7187	28.8238	28.8238
	Start Exh	0.1087	23.8833	23.9920				23.9920
	Evap Permeation				0.0202	6.3596	6.3798	6.3798
	Evap Fuel Vent				0.1044	15.2133	15.3176	15.3176
	Evap Fuel Leak				0.0180	2.7503	2.7683	2.7683
	Crank Run Exh				0.1359	0.2870	0.4229	0.4229
	Crank start Exh	0.0014	0.3153	0.3167				0.3167
	Crank Ext Idle	0.0348		0.0348				0.0348
	Refuel Disp Vap	0.0164	0.3775	0.3938				0.3938
	Refuel Spillage	0.2565	0.5309	0.7873				0.7873
	Ext Idle Exh	1.7387		1.7387				1.7387
VOC Total		**2.1564**	**25.1070**	**27.2634**	**7.3835**	**46.3288**	**53.7123**	**80.9757**

Table C-20. Harris County TDM Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

Pollutant	Process	Off Network		Off Network Total	On Network		On Network Total	Total
		Heavy Duty	Light Duty		Heavy Duty	Light Duty		
CO	Running Exh				35.8088	625.7783	661.5870	661.5870
	Start Exh	3.3478	192.0671	195.4148				195.4148
	Crank Run Exh				0.0742	0.0985	0.1727	0.1727
	Crank Start Exh	0.0014	0.0236	0.0250				0.0250
	Crank Ext Idle	0.0063		0.0063				0.0063
	Ext Idle Exh	2.1147		2.1147				2.1147
CO Total		**5.4703**	**192.0906**	**197.5610**	**35.8830**	**625.8768**	**661.7597**	**859.3207**
NOx	Running Exh				83.4173	93.3106	176.7278	176.7278
	Start Exh	0.0929	22.6053	22.6982				22.6982
	Crank Run Exh				0.0411	0.0070	0.0481	0.0481
	Crank Start Exh	0.0000	0.0006	0.0006				0.0006
	Crank Ext Idle	0.0021		0.0021				0.0021
	Ext Idle Exh	4.2130		4.2130				4.2130
NOx Total		**4.3080**	**22.6059**	**26.9139**	**83.4583**	**93.3176**	**176.7760**	**203.6898**
VOC	Running Exh				4.7235	20.8491	25.5727	25.5727
	Start Exh	0.1087	23.8833	23.9920				23.9920
	Evap Permeation				0.0183	6.3604	6.3788	6.3788
	Evap Fuel Vent				0.0696	15.3090	15.3785	15.3785
	Evap Fuel Leak				0.0131	2.7855	2.7986	2.7986
	Crank Run Exh				0.0916	0.2822	0.3738	0.3738
	Crank start Exh	0.0014	0.3153	0.3167				0.3167
	Crank Ext Idle	0.0283		0.0283				0.0283
	Refuel Disp Vap	0.0067	0.3610	0.3677				0.3677
	Refuel Spillage	0.1835	0.5099	0.6934				0.6934
	Ext Idle Exh	1.4128		1.4128				1.4128
VOC Total		**1.7414**	**25.0695**	**26.8109**	**4.9162**	**45.5862**	**50.5024**	**77.3133**

Table C-21. Liberty County HPMS Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				1.1149	15.0378	16.1527	16.1527
	Start Exh	0.1946	2.7036	2.8982				2.8982
	Crank Run Exh				0.0020	0.0024	0.0044	0.0044
	Crank Start Exh	0.0001	0.0003	0.0004				0.0004
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0370		0.0370				0.0370
CO Total		**0.2317**	**2.7040**	**2.9357**	**1.1169**	**15.0403**	**16.1571**	**19.0929**
NOx	Running Exh				2.3908	2.5672	4.9580	4.9580
	Start Exh	0.0056	0.2922	0.2978				0.2978
	Crank Run Exh				0.0012	0.0002	0.0013	0.0013
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0769		0.0769				0.0769
NOx Total		**0.0825**	**0.2922**	**0.3747**	**2.3919**	**2.5674**	**4.9593**	**5.3340**
VOC	Running Exh				0.1397	0.5622	0.7019	0.7019
	Start Exh	0.0065	0.3269	0.3334				0.3334
	Evap Permeation				0.0010	0.0802	0.0811	0.0811
	Evap Fuel Vent				0.0035	0.2995	0.3030	0.3030
	Evap Fuel Leak				0.0006	0.0461	0.0467	0.0467
	Crank Run Exh				0.0027	0.0075	0.0102	0.0102
	Crank start Exh	0.0001	0.0043	0.0044				0.0044
	Crank Ext Idle	0.0005		0.0005				0.0005
	Refuel Disp Vap	0.0003	0.0088	0.0092				0.0092
	Refuel Spillage	0.0050	0.0118	0.0168				0.0168
	Ext Idle Exh	0.0247		0.0247				0.0247
VOC Total		**0.0371**	**0.3518**	**0.3890**	**0.1475**	**0.9955**	**1.1429**	**1.5319**

Table C-22. Liberty County TDM Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				0.7861	16.4849	17.2710	17.2710
	Start Exh	0.1946	2.7036	2.8982				2.8982
	Crank Run Exh				0.0016	0.0027	0.0043	0.0043
	Crank Start Exh	0.0001	0.0003	0.0004				0.0004
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0320		0.0320				0.0320
CO Total		**0.2268**	**2.7040**	**2.9307**	**0.7877**	**16.4875**	**17.2753**	**20.2060**
NOx	Running Exh				2.0309	2.8264	4.8573	4.8573
	Start Exh	0.0056	0.2922	0.2978				0.2978
	Crank Run Exh				0.0010	0.0002	0.0012	0.0012
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0666		0.0666				0.0666
NOx Total		**0.0722**	**0.2922**	**0.3644**	**2.0319**	**2.8266**	**4.8585**	**5.2229**
VOC	Running Exh				0.1060	0.5984	0.7045	0.7045
	Start Exh	0.0065	0.3269	0.3334				0.3334
	Evap Permeation				0.0009	0.0803	0.0812	0.0812
	Evap Fuel Vent				0.0029	0.3062	0.3091	0.3091
	Evap Fuel Leak				0.0005	0.0474	0.0479	0.0479
	Crank Run Exh				0.0021	0.0081	0.0102	0.0102
	Crank start Exh	0.0001	0.0043	0.0044				0.0044
	Crank Ext Idle	0.0004		0.0004				0.0004
	Refuel Disp Vap	0.0002	0.0096	0.0098				0.0098
	Refuel Spillage	0.0042	0.0129	0.0171				0.0171
	Ext Idle Exh	0.0214		0.0214				0.0214
VOC Total		**0.0328**	**0.3536**	**0.3864**	**0.1125**	**1.0405**	**1.1529**	**1.5393**

Table C-23. Liberty County HPMS Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				1.1149	11.9946	13.1094	13.1094
	Start Exh	0.1946	2.7036	2.8982				2.8982
	Crank Run Exh				0.0020	0.0020	0.0040	0.0040
	Crank Start Exh	0.0001	0.0003	0.0004				0.0004
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0370		0.0370				0.0370
CO Total		**0.2317**	**2.7040**	**2.9357**	**1.1169**	**11.9966**	**13.1134**	**16.0492**
NOx	Running Exh				2.3908	2.0668	4.4575	4.4575
	Start Exh	0.0056	0.2922	0.2978				0.2978
	Crank Run Exh				0.0012	0.0002	0.0013	0.0013
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0769		0.0769				0.0769
NOx Total		**0.0825**	**0.2922**	**0.3747**	**2.3919**	**2.0669**	**4.4589**	**4.8336**
VOC	Running Exh				0.1397	0.4915	0.6313	0.6313
	Start Exh	0.0065	0.3269	0.3334				0.3334
	Evap Permeation				0.0010	0.0802	0.0811	0.0811
	Evap Fuel Vent				0.0035	0.2995	0.3030	0.3030
	Evap Fuel Leak				0.0006	0.0461	0.0467	0.0467
	Crank Run Exh				0.0027	0.0066	0.0093	0.0093
	Crank start Exh	0.0001	0.0043	0.0044				0.0044
	Crank Ext Idle	0.0005		0.0005				0.0005
	Refuel Disp Vap	0.0003	0.0069	0.0072				0.0072
	Refuel Spillage	0.0050	0.0092	0.0143				0.0143
	Ext Idle Exh	0.0247		0.0247				0.0247
VOC Total		**0.0371**	**0.3473**	**0.3845**	**0.1475**	**0.9239**	**1.0714**	**1.4559**

Table C-24. Liberty County TDM Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				0.7861	13.5237	14.3098	14.3098
	Start Exh	0.1946	2.7036	2.8982				2.8982
	Crank Run Exh				0.0016	0.0023	0.0039	0.0039
	Crank Start Exh	0.0001	0.0003	0.0004				0.0004
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0320		0.0320				0.0320
CO Total		**0.2268**	**2.7040**	**2.9307**	**0.7877**	**13.5259**	**14.3137**	**17.2444**
NOx	Running Exh				2.0309	2.3087	4.3395	4.3395
	Start Exh	0.0056	0.2922	0.2978				0.2978
	Crank Run Exh				0.0010	0.0002	0.0012	0.0012
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0666		0.0666				0.0666
NOx Total		**0.0722**	**0.2922**	**0.3644**	**2.0319**	**2.3089**	**4.3407**	**4.7051**
VOC	Running Exh				0.1060	0.5290	0.6351	0.6351
	Start Exh	0.0065	0.3269	0.3334				0.3334
	Evap Permeation				0.0009	0.0803	0.0812	0.0812
	Evap Fuel Vent				0.0029	0.3062	0.3091	0.3091
	Evap Fuel Leak				0.0005	0.0474	0.0479	0.0479
	Crank Run Exh				0.0021	0.0072	0.0093	0.0093
	Crank start Exh	0.0001	0.0043	0.0044				0.0044
	Crank Ext Idle	0.0004		0.0004				0.0004
	Refuel Disp Vap	0.0002	0.0077	0.0078				0.0078
	Refuel Spillage	0.0042	0.0102	0.0144				0.0144
	Ext Idle Exh	0.0214		0.0214				0.0214
VOC Total		**0.0328**	**0.3491**	**0.3818**	**0.1125**	**0.9701**	**1.0826**	**1.4644**

Table C-25. Montgomery County HPMS Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				5.2141	54.9700	60.1841	60.1841
	Start Exh	0.1638	16.5630	16.7269				16.7269
	Crank Run Exh				0.0091	0.0082	0.0173	0.0173
	Crank Start Exh	0.0001	0.0021	0.0021				0.0021
	Crank Ext Idle	0.0007		0.0007				0.0007
	Ext Idle Exh	0.2214		0.2214				0.2214
CO Total		**0.3859**	**16.5651**	**16.9510**	**5.2232**	**54.9782**	**60.2014**	**77.1524**
NOx	Running Exh				10.8132	8.5701	19.3832	19.3832
	Start Exh	0.0046	1.7281	1.7327				1.7327
	Crank Run Exh				0.0053	0.0006	0.0058	0.0058
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0002		0.0002				0.0002
	Ext Idle Exh	0.4597		0.4597				0.4597
NOx Total		**0.4645**	**1.7281**	**2.1927**	**10.8184**	**8.5706**	**19.3890**	**21.5817**
VOC	Running Exh				0.6254	1.8029	2.4283	2.4283
	Start Exh	0.0054	1.8563	1.8616				1.8616
	Evap Permeation				0.0011	0.4145	0.4156	0.4156
	Evap Fuel Vent				0.0078	1.2752	1.2830	1.2830
	Evap Fuel Leak				0.0013	0.2029	0.2042	0.2042
	Crank Run Exh				0.0120	0.0237	0.0357	0.0357
	Crank start Exh	0.0001	0.0245	0.0246				0.0246
	Crank Ext Idle	0.0030		0.0030				0.0030
	Refuel Disp Vap	0.0014	0.0330	0.0344				0.0344
	Refuel Spillage	0.0230	0.0492	0.0722				0.0722
	Ext Idle Exh	0.1479		0.1479				0.1479
VOC Total		**0.1807**	**1.9630**	**2.1437**	**0.6475**	**3.7192**	**4.3667**	**6.5104**

Table C-26. Montgomery County TDM Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

Pollutant	Process	Off Network		Off Network Total	On Network		On Network Total	Total
		Heavy Duty	Light Duty		Heavy Duty	Light Duty		
CO	Running Exh				3.6655	56.0751	59.7406	59.7406
	Start Exh	0.1638	16.5630	16.7269				16.7269
	Crank Run Exh				0.0075	0.0086	0.0161	0.0161
	Crank Start Exh	0.0001	0.0021	0.0021				0.0021
	Crank Ext Idle	0.0006		0.0006				0.0006
	Ext Idle Exh	0.1978		0.1978				0.1978
CO Total		**0.3623**	**16.5651**	**16.9274**	**3.6730**	**56.0837**	**59.7567**	**76.6841**
NOx	Running Exh				9.0666	8.8918	17.9583	17.9583
	Start Exh	0.0046	1.7281	1.7327				1.7327
	Crank Run Exh				0.0045	0.0006	0.0051	0.0051
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0002		0.0002				0.0002
	Ext Idle Exh	0.4108		0.4108				0.4108
NOx Total		**0.4156**	**1.7281**	**2.1438**	**9.0710**	**8.8924**	**17.9634**	**20.1072**
VOC	Running Exh				0.4821	1.8315	2.3136	2.3136
	Start Exh	0.0054	1.8563	1.8616				1.8616
	Evap Permeation				0.0009	0.4147	0.4156	0.4156
	Evap Fuel Vent				0.0054	1.2783	1.2837	1.2837
	Evap Fuel Leak				0.0010	0.2056	0.2066	0.2066
	Crank Run Exh				0.0094	0.0248	0.0341	0.0341
	Crank start Exh	0.0001	0.0245	0.0246				0.0246
	Crank Ext Idle	0.0026		0.0026				0.0026
	Refuel Disp Vap	0.0007	0.0340	0.0347				0.0347
	Refuel Spillage	0.0190	0.0506	0.0696				0.0696
	Ext Idle Exh	0.1322		0.1322				0.1322
VOC Total		**0.1600**	**1.9654**	**2.1254**	**0.4987**	**3.7549**	**4.2536**	**6.3790**

Table C-27. Montgomery County HPMS Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				5.2141	50.5559	55.7701	55.7701
	Start Exh	0.1638	16.5630	16.7269				16.7269
	Crank Run Exh				0.0091	0.0077	0.0167	0.0167
	Crank Start Exh	0.0001	0.0021	0.0021				0.0021
	Crank Ext Idle	0.0007		0.0007				0.0007
	Ext Idle Exh	0.2214		0.2214				0.2214
CO Total		**0.3859**	**16.5651**	**16.9510**	**5.2232**	**50.5636**	**55.7868**	**72.7378**
NOx	Running Exh				10.8132	7.7881	18.6013	18.6013
	Start Exh	0.0046	1.7281	1.7327				1.7327
	Crank Run Exh				0.0053	0.0005	0.0058	0.0058
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0002		0.0002				0.0002
	Ext Idle Exh	0.4597		0.4597				0.4597
NOx Total		**0.4645**	**1.7281**	**2.1927**	**10.8184**	**7.7887**	**18.6071**	**20.7998**
VOC	Running Exh				0.6254	1.6800	2.3054	2.3054
	Start Exh	0.0054	1.8563	1.8616				1.8616
	Evap Permeation				0.0011	0.4145	0.4156	0.4156
	Evap Fuel Vent				0.0078	1.2752	1.2830	1.2830
	Evap Fuel Leak				0.0013	0.2029	0.2042	0.2042
	Crank Run Exh				0.0120	0.0221	0.0341	0.0341
	Crank start Exh	0.0001	0.0245	0.0246				0.0246
	Crank Ext Idle	0.0030		0.0030				0.0030
	Refuel Disp Vap	0.0014	0.0292	0.0306				0.0306
	Refuel Spillage	0.0230	0.0436	0.0666				0.0666
	Ext Idle Exh	0.1479		0.1479				0.1479
VOC Total		**0.1807**	**1.9536**	**2.1342**	**0.6475**	**3.5947**	**4.2423**	**6.3765**

Table C-28. Montgomery County TDM Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

Pollutant	Process	Off Network		Off Network Total	On Network		On Network Total	Total
		Heavy Duty	Light Duty		Heavy Duty	Light Duty		
CO	Running Exh				3.6655	51.6547	55.3202	55.3202
	Start Exh	0.1638	16.5630	16.7269				16.7269
	Crank Run Exh				0.0075	0.0080	0.0155	0.0155
	Crank Start Exh	0.0001	0.0021	0.0021				0.0021
	Crank Ext Idle	0.0006		0.0006				0.0006
	Ext Idle Exh	0.1978		0.1978				0.1978
CO Total		**0.3623**	**16.5651**	**16.9274**	**3.6730**	**51.6627**	**55.3357**	**72.2631**
NOx	Running Exh				9.0666	8.0737	17.1403	17.1403
	Start Exh	0.0046	1.7281	1.7327				1.7327
	Crank Run Exh				0.0045	0.0006	0.0050	0.0050
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0002		0.0002				0.0002
	Ext Idle Exh	0.4108		0.4108				0.4108
NOx Total		**0.4156**	**1.7281**	**2.1438**	**9.0710**	**8.0743**	**17.1453**	**19.2891**
VOC	Running Exh				0.4821	1.7082	2.1903	2.1903
	Start Exh	0.0054	1.8563	1.8616				1.8616
	Evap Permeation				0.0009	0.4147	0.4156	0.4156
	Evap Fuel Vent				0.0054	1.2783	1.2837	1.2837
	Evap Fuel Leak				0.0010	0.2056	0.2066	0.2066
	Crank Run Exh				0.0094	0.0231	0.0325	0.0325
	Crank start Exh	0.0001	0.0245	0.0246				0.0246
	Crank Ext Idle	0.0026		0.0026				0.0026
	Refuel Disp Vap	0.0007	0.0301	0.0308				0.0308
	Refuel Spillage	0.0190	0.0448	0.0638				0.0638
	Ext Idle Exh	0.1322		0.1322				0.1322
VOC Total		**0.1600**	**1.9557**	**2.1157**	**0.4987**	**3.6300**	**4.1287**	**6.2444**

Table C-29. Waller County HPMS Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				0.8674	13.7606	14.6279	14.6279
	Start Exh	0.0243	4.6938	4.7181				4.7181
	Crank Run Exh				0.0015	0.0020	0.0035	0.0035
	Crank Start Exh	0.0000	0.0006	0.0006				0.0006
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0249		0.0249				0.0249
CO Total		**0.0493**	**4.6944**	**4.7437**	**0.8688**	**13.7626**	**14.6314**	**19.3751**
NOx	Running Exh				1.8603	2.0942	3.9545	3.9545
	Start Exh	0.0007	0.4264	0.4271				0.4271
	Crank Run Exh				0.0009	0.0001	0.0010	0.0010
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0501		0.0501				0.0501
NOx Total		**0.0508**	**0.4264**	**0.4772**	**1.8613**	**2.0943**	**3.9555**	**4.4327**
VOC	Running Exh				0.1031	0.4467	0.5498	0.5498
	Start Exh	0.0008	0.5019	0.5027				0.5027
	Evap Permeation				0.0002	0.1050	0.1052	0.1052
	Evap Fuel Vent				0.0012	0.2648	0.2660	0.2660
	Evap Fuel Leak				0.0002	0.0496	0.0498	0.0498
	Crank Run Exh				0.0020	0.0059	0.0079	0.0079
	Crank start Exh	0.0000	0.0066	0.0066				0.0066
	Crank Ext Idle	0.0003		0.0003				0.0003
	Refuel Disp Vap	0.0003	0.0074	0.0076				0.0076
	Refuel Spillage	0.0040	0.0095	0.0135				0.0135
	Ext Idle Exh	0.0167		0.0167				0.0167
VOC Total		**0.0220**	**0.5254**	**0.5474**	**0.1067**	**0.8721**	**0.9788**	**1.5262**

Table C-30. Waller County TDM Based Default Cycle Emissions (tons)
2006 Ozone Season Weekday

Pollutant	Process	Off Network		Off Network Total	On Network		On Network Total	Total
		Heavy Duty	Light Duty		Heavy Duty	Light Duty		
CO	Running Exh				0.5674	13.7302	14.2976	14.2976
	Start Exh	0.0243	4.6938	4.7181				4.7181
	Crank Run Exh				0.0012	0.0020	0.0032	0.0032
	Crank Start Exh	0.0000	0.0006	0.0006				0.0006
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0208		0.0208				0.0208
CO Total		**0.0451**	**4.6944**	**4.7395**	**0.5686**	**13.7322**	**14.3008**	**19.0403**
NOx	Running Exh				1.5526	2.1660	3.7186	3.7186
	Start Exh	0.0007	0.4264	0.4271				0.4271
	Crank Run Exh				0.0008	0.0001	0.0009	0.0009
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0418		0.0418				0.0418
NOx Total		**0.0425**	**0.4264**	**0.4689**	**1.5534**	**2.1662**	**3.7195**	**4.1884**
VOC	Running Exh				0.0756	0.4439	0.5195	0.5195
	Start Exh	0.0008	0.5019	0.5027				0.5027
	Evap Permeation				0.0001	0.1050	0.1051	0.1051
	Evap Fuel Vent				0.0008	0.2627	0.2635	0.2635
	Evap Fuel Leak				0.0001	0.0496	0.0497	0.0497
	Crank Run Exh				0.0015	0.0060	0.0075	0.0075
	Crank start Exh	0.0000	0.0066	0.0066				0.0066
	Crank Ext Idle	0.0003		0.0003				0.0003
	Refuel Disp Vap	0.0001	0.0076	0.0078				0.0078
	Refuel Spillage	0.0032	0.0099	0.0132				0.0132
	Ext Idle Exh	0.0139		0.0139				0.0139
VOC Total		**0.0183**	**0.5261**	**0.5444**	**0.0781**	**0.8672**	**0.9453**	**1.4898**

Table C-31. Waller County HPMS Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

		Off Network		Off Network Total	On Network		On Network Total	Total
Pollutant	**Process**	**Heavy Duty**	**Light Duty**		**Heavy Duty**	**Light Duty**		
CO	Running Exh				0.8674	11.6350	12.5024	12.5024
	Start Exh	0.0243	4.6938	4.7181				4.7181
	Crank Run Exh				0.0015	0.0017	0.0032	0.0032
	Crank Start Exh	0.0000	0.0006	0.0006				0.0006
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0249		0.0249				0.0249
CO Total		**0.0493**	**4.6944**	**4.7437**	**0.8688**	**11.6367**	**12.5056**	**17.2493**
NOx	Running Exh				1.8603	1.7300	3.5903	3.5903
	Start Exh	0.0007	0.4264	0.4271				0.4271
	Crank Run Exh				0.0009	0.0001	0.0010	0.0010
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0501		0.0501				0.0501
NOx Total		**0.0508**	**0.4264**	**0.4772**	**1.8613**	**1.7301**	**3.5913**	**4.0685**
VOC	Running Exh				0.1031	0.3983	0.5014	0.5014
	Start Exh	0.0008	0.5019	0.5027				0.5027
	Evap Permeation				0.0002	0.1050	0.1052	0.1052
	Evap Fuel Vent				0.0012	0.2648	0.2660	0.2660
	Evap Fuel Leak				0.0002	0.0496	0.0498	0.0498
	Crank Run Exh				0.0020	0.0053	0.0073	0.0073
	Crank start Exh	0.0000	0.0066	0.0066				0.0066
	Crank Ext Idle	0.0003		0.0003				0.0003
	Refuel Disp Vap	0.0003	0.0060	0.0062				0.0062
	Refuel Spillage	0.0040	0.0077	0.0117				0.0117
	Ext Idle Exh	0.0167		0.0167				0.0167
VOC Total		**0.0220**	**0.5222**	**0.5442**	**0.1067**	**0.8230**	**0.9297**	**1.4739**

Table C-32. Waller County TDM Based KC Cycle Emissions (tons)
2006 Ozone Season Weekday

Pollutant	Process	Off Network		Off Network Total	On Network		On Network Total	Total
		Heavy Duty	Light Duty		Heavy Duty	Light Duty		
CO	Running Exh				0.5674	12.1271	12.6945	12.6945
	Start Exh	0.0243	4.6938	4.7181				4.7181
	Crank Run Exh				0.0012	0.0018	0.0030	0.0030
	Crank Start Exh	0.0000	0.0006	0.0006				0.0006
	Crank Ext Idle	0.0001		0.0001				0.0001
	Ext Idle Exh	0.0208		0.0208				0.0208
CO Total		**0.0451**	**4.6944**	**4.7395**	**0.5686**	**12.1289**	**12.6974**	**17.4370**
NOx	Running Exh				1.5526	1.8709	3.4235	3.4235
	Start Exh	0.0007	0.4264	0.4271				0.4271
	Crank Run Exh				0.0008	0.0001	0.0009	0.0009
	Crank Start Exh	0.0000	0.0000	0.0000				0.0000
	Crank Ext Idle	0.0000		0.0000				0.0000
	Ext Idle Exh	0.0418		0.0418				0.0418
NOx Total		**0.0425**	**0.4264**	**0.4689**	**1.5534**	**1.8710**	**3.4244**	**3.8933**
VOC	Running Exh				0.0756	0.4054	0.4810	0.4810
	Start Exh	0.0008	0.5019	0.5027				0.5027
	Evap Permeation				0.0001	0.1050	0.1051	0.1051
	Evap Fuel Vent				0.0008	0.2627	0.2635	0.2635
	Evap Fuel Leak				0.0001	0.0496	0.0497	0.0497
	Crank Run Exh				0.0015	0.0055	0.0069	0.0069
	Crank start Exh	0.0000	0.0066	0.0066				0.0066
	Crank Ext Idle	0.0003		0.0003				0.0003
	Refuel Disp Vap	0.0001	0.0064	0.0065				0.0065
	Refuel Spillage	0.0032	0.0083	0.0116				0.0116
	Ext Idle Exh	0.0139		0.0139				0.0139
VOC Total		**0.0183**	**0.5232**	**0.5416**	**0.0781**	**0.8281**	**0.9063**	**1.4478**

Appendix D
MOVES Output Comparisons for Drive Cycles, by County

Table D-1. Drive Cycle Output Comparison, by County (tons)
2006 Ozone Season Weekday Light Duty Vehicles Only

		Default Cycle			KC Cycle			% Difference		
County	**VMTBasis**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**
Brazoria	HPMS	43.70863	6.398877	3.922461	39.47485	5.814259	3.810186	-9.69%	-9.14%	-2.86%
	TDM	43.80553	6.51149	3.873483	39.9157	5.910196	3.768589	-8.88%	-9.23%	-2.71%
Chambers	HPMS	19.86969	2.749032	0.881255	18.67417	2.540992	0.848735	-6.02%	-7.57%	-3.69%
	TDM	17.17472	2.635875	0.836268	16.17717	2.436423	0.806585	-5.81%	-7.57%	-3.55%
Fort Bend	HPMS	58.97364	8.482754	5.047657	55.72775	8.107834	4.943177	-5.50%	-4.42%	-2.07%
	TDM	57.82724	8.396444	4.929238	54.97754	7.989984	4.833137	-4.93%	-4.84%	-1.95%
Galveston	HPMS	47.67195	6.473907	3.692336	45.9118	6.423097	3.628485	-3.69%	-0.78%	-1.73%
	TDM	45.7267	6.566317	3.724724	43.63803	6.409915	3.649997	-4.57%	-2.38%	-2.01%
Harris	HPMS	870.0719	119.6789	72.01485	871.6764	120.5453	71.43576	0.18%	0.72%	-0.80%
	TDM	828.8435	117.144	71.5014	817.9674	115.9235	70.65574	-1.31%	-1.04%	-1.18%
Liberty	HPMS	17.74423	2.859585	1.347318	14.70055	2.359155	1.271278	-17.15%	-17.50%	-5.64%
	TDM	19.19152	3.118823	1.394125	16.22991	2.601076	1.319179	-15.43%	-16.60%	-5.38%
Montgomery	HPMS	71.54328	10.29874	5.682195	67.1287	9.516807	5.548272	-6.17%	-7.59%	-2.36%
	TDM	72.64882	10.6205	5.720273	68.22778	9.802398	5.585689	-6.09%	-7.70%	-2.35%
Waller	HPMS	18.45698	2.520675	1.397498	16.33115	2.15646	1.34518	-11.52%	-14.45%	-3.74%
	TDM	18.42664	2.59254	1.393278	16.8233	2.297426	1.351363	-8.70%	-11.38%	-3.01%

Table D-2. Drive Cycle Output Comparison, by County and Source Type (tons)
2006 Ozone Season Weekday Light Duty Vehicles Only

			Default Cycle			KC Cycle			% Difference		
County	**VMTBasis**	**Source**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**
Brazoria	**HPMS**	Motorcycles	0.52725	0.021156	0.12825	0.411062	0.015412	0.12406	-22.04%	-27.15%	-3.27%
		Passenger Cars	20.72819	2.917037	2.102078	18.82799	2.651469	2.051022	-9.17%	-9.10%	-2.43%
		Passenger Trucks	15.33627	2.154499	1.143553	13.76888	1.927655	1.104404	-10.22%	-10.53%	-3.42%
		Light Commercial Trucks	7.116922	1.306184	0.548579	6.466916	1.219723	0.5307	-9.13%	-6.62%	-3.26%
	TDM	Motorcycles	0.122865	0.005085	0.089685	0.097426	0.00382	0.08878	-20.70%	-24.87%	-1.01%
		Passenger Cars	20.85812	2.957643	2.090228	19.15599	2.689004	2.042067	-8.16%	-9.08%	-2.30%
		Passenger Trucks	15.60712	2.212295	1.144487	14.08078	1.975441	1.106182	-9.78%	-10.71%	-3.35%
		Light Commercial Trucks	7.217426	1.336467	0.549083	6.581506	1.241931	0.531561	-8.81%	-7.07%	-3.19%
Chambers	**HPMS**	Motorcycles	0.254802	0.01078	0.03894	0.20502	0.008345	0.037205	-19.54%	-22.59%	-4.45%
		Passenger Cars	9.897391	1.227728	0.454394	9.455743	1.14282	0.439817	-4.46%	-6.92%	-3.21%
		Passenger Trucks	4.821448	0.640222	0.178025	4.464287	0.580222	0.170537	-7.41%	-9.37%	-4.21%
		Light Commercial Trucks	4.896047	0.870302	0.209897	4.549123	0.809606	0.201177	-7.09%	-6.97%	-4.15%
	TDM	Motorcycles	0.059411	0.002567	0.024721	0.048316	0.002025	0.024334	-18.68%	-21.13%	-1.56%
		Passenger Cars	8.903993	1.227717	0.450281	8.571872	1.146188	0.436595	-3.73%	-6.64%	-3.04%
		Passenger Trucks	4.02214	0.592666	0.164978	3.695462	0.535098	0.157868	-8.12%	-9.71%	-4.31%
		Light Commercial Trucks	4.189174	0.812926	0.196288	3.861517	0.753113	0.187787	-7.82%	-7.36%	-4.33%
Fort Bend	**HPMS**	Motorcycles	0.741642	0.02877	0.187807	0.644685	0.024019	0.184153	-13.07%	-16.51%	-1.95%
		Passenger Cars	28.1779	3.909783	2.652771	26.68862	3.717443	2.605163	-5.29%	-4.92%	-1.79%
		Passenger Trucks	21.98207	3.025263	1.593642	20.7381	2.875081	1.554523	-5.66%	-4.96%	-2.45%
		Light Commercial Trucks	8.072024	1.518938	0.613436	7.656349	1.491291	0.599338	-5.15%	-1.82%	-2.30%
	TDM	Motorcycles	0.165966	0.0066	0.13022	0.145225	0.005574	0.12946	-12.50%	-15.55%	-0.58%
		Passenger Cars	27.78197	3.85464	2.609415	26.56614	3.657134	2.566275	-4.38%	-5.12%	-1.65%
		Passenger Trucks	21.86675	3.019335	1.58092	20.66278	2.851293	1.542556	-5.51%	-5.57%	-2.43%
		Light Commercial Trucks	8.012556	1.51587	0.608684	7.603392	1.475984	0.594847	-5.11%	-2.63%	-2.27%
Galveston	**HPMS**	Motorcycles	0.531792	0.020391	0.117291	0.483207	0.018107	0.115361	-9.14%	-11.20%	-1.65%
		Passenger Cars	24.81641	3.164275	2.239942	24.02579	3.1261	2.211014	-3.19%	-1.21%	-1.29%
		Passenger Trucks	15.55283	2.051671	0.904547	14.89976	2.025078	0.881677	-4.20%	-1.30%	-2.53%
		Light Commercial Trucks	6.770919	1.237571	0.430555	6.503047	1.253812	0.420433	-3.96%	1.31%	-2.35%
	TDM	Motorcycles	0.121118	0.004709	0.077825	0.11044	0.004201	0.077413	-8.82%	-10.77%	-0.53%
		Passenger Cars	24.11692	3.216474	2.271316	23.14126	3.120477	2.236322	-4.05%	-2.98%	-1.54%
		Passenger Trucks	14.88055	2.068695	0.92927	14.09953	2.009687	0.901732	-5.25%	-2.85%	-2.96%
		Light Commercial Trucks	6.608101	1.276439	0.446314	6.286802	1.275549	0.434531	-4.86%	-0.07%	-2.64%
Harris	**HPMS**	Motorcycles	9.23122	0.353998	1.854025	8.958747	0.339694	1.842335	-2.95%	-4.04%	-0.63%

			Default Cycle			KC Cycle			% Difference		
County	**VMTBasis**	**Source**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**
		Passenger Cars	462.8313	60.24636	45.47793	464.3603	60.22284	45.23172	0.33%	-0.04%	-0.54%
		Passenger Trucks	270.3934	35.5144	16.27798	270.7299	35.84237	16.05809	0.12%	0.92%	-1.35%
		Light Commercial Trucks	127.616	23.56415	8.404919	127.6274	24.14042	8.303611	0.01%	2.45%	-1.21%
	TDM	Motorcycles	1.959473	0.074472	1.132602	1.903016	0.071617	1.129965	-2.88%	-3.83%	-0.23%
		Passenger Cars	454.192	60.20051	45.8029	449.4793	59.17914	45.41924	-1.04%	-1.70%	-0.84%
		Passenger Trucks	251.993	33.86467	16.16649	247.869	33.49947	15.84785	-1.64%	-1.08%	-1.97%
		Light Commercial Trucks	120.699	23.00438	8.399413	118.7161	23.17324	8.258679	-1.64%	0.73%	-1.68%
Liberty	**HPMS**	Motorcycles	0.223702	0.009514	0.037584	0.148129	0.005687	0.03496	-33.78%	-40.22%	-6.98%
		Passenger Cars	9.044132	1.354014	0.776719	7.593006	1.120887	0.73912	-16.04%	-17.22%	-4.84%
		Passenger Trucks	4.056975	0.622682	0.245268	3.296763	0.494168	0.228196	-18.74%	-20.64%	-6.96%
		Light Commercial Trucks	4.419426	0.873375	0.287747	3.662651	0.738413	0.269002	-17.12%	-15.45%	-6.51%
	TDM	Motorcycles	0.055556	0.002386	0.023369	0.038198	0.001506	0.022768	-31.24%	-36.89%	-2.57%
		Passenger Cars	9.821042	1.469501	0.805581	8.424578	1.230802	0.768136	-14.22%	-16.24%	-4.65%
		Passenger Trucks	4.474413	0.68718	0.259936	3.699954	0.552161	0.242379	-17.31%	-19.65%	-6.75%
		Light Commercial Trucks	4.840506	0.959756	0.30524	4.067182	0.816606	0.285896	-15.98%	-14.92%	-6.34%
Montgomery	**HPMS**	Motorcycles	0.928327	0.038314	0.278112	0.763875	0.029951	0.272278	-17.71%	-21.83%	-2.10%
		Passenger Cars	33.67318	4.634644	2.861381	31.79994	4.280482	2.800185	-5.56%	-7.64%	-2.14%
		Passenger Trucks	26.57785	3.686995	1.799116	24.8284	3.372607	1.751356	-6.58%	-8.53%	-2.65%
		Light Commercial Trucks	10.36392	1.938792	0.743587	9.73648	1.833765	0.724452	-6.05%	-5.42%	-2.57%
	TDM	Motorcycles	0.219438	0.009193	0.214278	0.182429	0.007307	0.212968	-16.87%	-20.51%	-0.61%
		Passenger Cars	34.20369	4.701708	2.875734	32.45776	4.352449	2.816393	-5.10%	-7.43%	-2.06%
		Passenger Trucks	27.49395	3.862089	1.857636	25.5643	3.514919	1.804972	-7.02%	-8.99%	-2.84%
		Light Commercial Trucks	10.73174	2.047508	0.772625	10.02329	1.927722	0.751356	-6.60%	-5.85%	-2.75%
Waller	**HPMS**	Motorcycles	0.185081	0.007815	0.020868	0.128809	0.005028	0.018917	-30.40%	-35.66%	-9.35%
		Passenger Cars	8.271099	1.13423	0.642517	7.296081	0.968236	0.616533	-11.79%	-14.63%	-4.04%
		Passenger Trucks	6.256162	0.79141	0.454389	5.548082	0.668348	0.439219	-11.32%	-15.55%	-3.34%
		Light Commercial Trucks	3.744636	0.587221	0.279724	3.358182	0.514847	0.270511	-10.32%	-12.32%	-3.29%
	TDM	Motorcycles	0.044766	0.001906	0.009862	0.033423	0.001345	0.009466	-25.34%	-29.41%	-4.01%
		Passenger Cars	8.406366	1.185246	0.649495	7.722581	1.055248	0.628843	-8.13%	-10.97%	-3.18%
		Passenger Trucks	6.234707	0.808057	0.454132	5.650723	0.704518	0.441295	-9.37%	-12.81%	-2.83%
		Light Commercial Trucks	3.740799	0.597332	0.279789	3.416574	0.536313	0.271759	-8.67%	-10.22%	-2.87%

Table D-3. Drive Cycle Output Comparison, By County and Road Type (tons)
2006 Ozone Season Weekday Light Duty Vehicles Only

			Default Cycle			KC Cycle			% Difference		
County	**VMTBasis**	**Road Type**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**
Brazoria	**HPMS**	Off-Network	12.04746	1.332029	2.321668	12.04746	1.332029	2.31458	0.00%	0.00%	-0.31%
		Rural Restricted	0	0		0	0				
		Rural Unrestricted	16.82968	2.787746	0.88647	14.29974	2.402795	0.823712	-15.03%	-13.81%	-7.08%
		Urban Restricted	3.177106	0.417271	0.099848	3.173567	0.405546	0.09854	-0.11%	-2.81%	-1.31%
		Urban Unrestricted	11.65439	1.861831	0.614476	9.954079	1.673889	0.573353	-14.59%	-10.09%	-6.69%
	TDM	Off-Network	12.04746	1.332029	2.321962	12.04746	1.332029	2.315088	0.00%	0.00%	-0.30%
		Rural Restricted	5.394966	0.772524	0.180416	5.417032	0.749831	0.178163	0.41%	-2.94%	-1.25%
		Rural Unrestricted	22.62456	3.792735	1.176208	19.25444	3.274214	1.093407	-14.90%	-13.67%	-7.04%
		Urban Restricted	0	0		0	0				
		Urban Unrestricted	3.73854	0.614203	0.194897	3.196771	0.554122	0.181931	-14.49%	-9.78%	-6.65%
Chambers	**HPMS**	Off-Network	1.060839	0.118616	0.229671	1.060839	0.118616	0.227119	0.00%	0.00%	-1.11%
		Rural Restricted	14.16617	1.848084	0.438486	14.09673	1.80839	0.43199	-0.49%	-2.15%	-1.48%
		Rural Unrestricted	3.910382	0.664285	0.179481	2.959055	0.516586	0.159562	-24.33%	-22.23%	-11.10%
		Urban Restricted	0	0		0	0				
		Urban Unrestricted	0.732298	0.118047	0.033616	0.557552	0.0974	0.030065	-23.86%	-17.49%	-10.56%
	TDM	Off-Network	1.060839	0.118616	0.229036	1.060839	0.118616	0.226543	0.00%	0.00%	-1.09%
		Rural Restricted	11.89827	1.796377	0.415343	11.9157	1.750928	0.409028	0.15%	-2.53%	-1.52%
		Rural Unrestricted	3.528569	0.606546	0.160564	2.67683	0.472239	0.14295	-24.14%	-22.14%	-10.97%
		Urban Restricted	0	0		0	0				
		Urban Unrestricted	0.687039	0.114336	0.031324	0.523799	0.09464	0.028064	-23.76%	-17.23%	-10.41%
Fort Bend	**HPMS**	Off-Network	15.28123	1.72535	2.933869	15.28123	1.72535	2.927302	0.00%	0.00%	-0.22%
		Rural Restricted	0.403432	0.053156	0.012666	0.427221	0.054775	0.012869	5.90%	3.05%	1.61%
		Rural Unrestricted	12.55211	2.056211	0.667356	11.12163	1.865597	0.628327	-11.40%	-9.27%	-5.85%
		Urban Restricted	9.230479	1.216039	0.289832	9.777997	1.254034	0.294548	5.93%	3.12%	1.63%
		Urban Unrestricted	21.50639	3.431999	1.143933	19.11967	3.208078	1.08013	-11.10%	-6.52%	-5.58%
	TDM	Off-Network	15.28123	1.72535	2.932808	15.28123	1.72535	2.926589	0.00%	0.00%	-0.21%
		Rural Restricted	10.04983	1.320094	0.310366	10.68461	1.365573	0.316174	6.32%	3.45%	1.87%
		Rural Unrestricted	26.48723	4.394792	1.389799	23.50374	3.990832	1.308532	-11.26%	-9.19%	-5.85%
		Urban Restricted	0.916768	0.120398	0.02831	0.974688	0.124547	0.02884	6.32%	3.45%	1.87%
		Urban Unrestricted	5.092182	0.83581	0.267954	4.533273	0.783683	0.253002	-10.98%	-6.24%	-5.58%
Galveston	**HPMS**	Off-Network	9.827772	1.120431	1.987002	9.827772	1.120431	1.983327	0.00%	0.00%	-0.18%
		Rural Restricted	1.179475	0.149802	0.036525	1.186932	0.148842	0.036221	0.63%	-0.64%	-0.83%
		Rural Unrestricted	1.788855	0.27803	0.09737	1.639967	0.266627	0.092728	-8.32%	-4.10%	-4.77%

			Default Cycle			KC Cycle			% Difference		
County	**VMTBasis**	**Road Type**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**
		Urban Restricted	13.89603	1.765952	0.43025	13.98512	1.754053	0.426689	0.64%	-0.67%	-0.83%
		Urban Unrestricted	20.97982	3.159693	1.14119	19.27202	3.133144	1.08952	-8.14%	-0.84%	-4.53%
		Off-Network	9.827772	1.120431	1.985228	9.827772	1.120431	1.981237	0.00%	0.00%	-0.20%
		Rural Restricted	8.981914	1.238618	0.294854	9.098274	1.228091	0.292752	1.30%	-0.85%	-0.71%
	TDM	Rural Unrestricted	22.44916	3.518835	1.206583	20.59365	3.376948	1.148696	-8.27%	-4.03%	-4.80%
		Urban Restricted	0.111103	0.015321	0.003647	0.112542	0.015191	0.003621	1.30%	-0.85%	-0.71%
		Urban Unrestricted	4.356744	0.673112	0.234412	4.005789	0.669255	0.223691	-8.06%	-0.57%	-4.57%
		Off-Network	192.0906	22.60585	40.5819	192.0906	22.60585	40.55136	0.00%	0.00%	-0.08%
		Rural Restricted	4.585315	0.5856	0.157642	4.949386	0.638488	0.162266	7.94%	9.03%	2.93%
	HPMS	Rural Unrestricted	17.73641	2.848437	1.046152	16.33952	2.655718	0.997216	-7.88%	-6.77%	-4.68%
		Urban Restricted	344.173	43.9539	11.84874	371.2147	47.95919	12.19321	7.86%	9.11%	2.91%
Harris		Urban Unrestricted	311.4865	49.68513	18.38042	287.0822	46.68608	17.53171	-7.83%	-6.04%	-4.62%
		Off-Network	192.0906	22.60585	40.52188	192.0906	22.60585	40.48233	0.00%	0.00%	-0.10%
		Rural Restricted	132.9645	16.89972	4.529486	143.3171	18.50865	4.663813	7.79%	9.52%	2.97%
	TDM	Rural Unrestricted	280.8401	45.63547	16.37325	258.2965	42.36963	15.59148	-8.03%	-7.16%	-4.77%
		Urban Restricted	120.7583	15.34879	4.113693	130.1602	16.81004	4.235683	7.79%	9.52%	2.97%
		Urban Unrestricted	102.1899	16.6542	5.963093	94.10302	15.6293	5.682429	-7.91%	-6.15%	-4.71%
		Off-Network	2.703983	0.292224	0.57448	2.703983	0.292224	0.569988	0.00%	0.00%	-0.78%
		Rural Restricted	0	0		0	0				
	HPMS	Rural Unrestricted	11.27353	1.953977	0.583504	8.925349	1.547278	0.528017	-20.83%	-20.81%	-9.51%
		Urban Restricted	0.329034	0.045162	0.011218	0.328457	0.043788	0.01107	-0.18%	-3.04%	-1.32%
Liberty		Urban Unrestricted	3.437689	0.568222	0.178116	2.742759	0.475866	0.162204	-20.22%	-16.25%	-8.93%
		Off-Network	2.703983	0.292224	0.575288	2.703983	0.292224	0.570709	0.00%	0.00%	-0.80%
		Rural Restricted	2.016956	0.303369	0.07414	2.023217	0.293305	0.073175	0.31%	-3.32%	-1.30%
	TDM	Rural Unrestricted	12.62906	2.210347	0.649943	10.03062	1.75284	0.588902	-20.58%	-20.70%	-9.39%
		Urban Restricted	0	0		0	0				
		Urban Unrestricted	1.841519	0.312884	0.094755	1.472097	0.262708	0.086393	-20.06%	-16.04%	-8.82%
		Off-Network	16.5651	1.728133	3.168523	16.5651	1.728133	3.159073	0.00%	0.00%	-0.30%
		Rural Restricted	11.67506	1.563717	0.376881	12.11512	1.581179	0.379337	3.77%	1.12%	0.65%
	HPMS	Rural Unrestricted	26.13657	4.425637	1.386155	22.32587	3.785197	1.290309	-14.58%	-14.47%	-6.91%
		Urban Restricted	7.737089	1.03654	0.249868	8.02841	1.048839	0.251511	3.77%	1.19%	0.66%
Montgomery		Urban Unrestricted	9.429453	1.544718	0.500769	8.094206	1.373459	0.468043	-14.16%	-11.09%	-6.54%
		Off-Network	16.5651	1.728133	3.168415	16.5651	1.728133	3.158759	0.00%	0.00%	-0.30%
		Rural Restricted	19.32878	2.582937	0.61611	20.11291	2.620292	0.621333	4.06%	1.45%	0.85%
	TDM	Rural Unrestricted	29.6355	5.109463	1.560483	25.41965	4.383158	1.45449	-14.23%	-14.21%	-6.79%
		Urban Restricted	0	0		0	0				

			Default Cycle			KC Cycle			% Difference		
County	**VMTBasis**	**Road Type**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**
		Urban Unrestricted	7.119447	1.199965	0.375265	6.130122	1.070814	0.351108	-13.90%	-10.76%	-6.44%
Waller	**HPMS**	Off-Network	4.694406	0.426388	0.79625	4.694406	0.426388	0.792998	0.00%	0.00%	-0.41%
		Rural Restricted	4.655509	0.59704	0.153943	4.638789	0.580877	0.151902	-0.36%	-2.71%	-1.33%
		Rural Unrestricted	9.006093	1.481539	0.442348	6.919857	1.136362	0.395814	-23.16%	-23.30%	-10.52%
		Urban Restricted	0	0		0	0				
		Urban Unrestricted	0.100969	0.015707	0.004957	0.078103	0.012832	0.004466	-22.65%	-18.30%	-9.91%
	TDM	Off-Network	4.694406	0.426388	0.796881	4.694406	0.426388	0.79403	0.00%	0.00%	-0.36%
		Rural Restricted	6.655521	0.996453	0.250977	6.674646	0.964727	0.247546	0.29%	-3.18%	-1.37%
		Rural Unrestricted	5.974166	0.993783	0.291741	4.60047	0.762538	0.261368	-22.99%	-23.27%	-10.41%
		Urban Restricted	0	0		0	0				
		Urban Unrestricted	1.102545	0.175917	0.05368	0.85378	0.143772	0.048419	-22.56%	-18.27%	-9.80%

Table D-4. Drive Cycle Output Comparison, By County and Emissions Process (tons)
2006 Ozone Season Weekday Light Duty Vehicles Only

			Default			KC			% Difference		
County	**VMTBasis**	**Process**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**
Brazoria	**HPMS**	Running Exh	31.65626	5.066506	1.136113	27.423	4.481894	1.032273	-13.37%	-11.54%	-9.14%
		Start Exh	12.04597	1.331992	1.419395	12.04597	1.331992	1.419395	0.00%	0.00%	0.00%
		Evap Permeation			0.327969			0.327969			0.00%
		Evap Fuel Vent			0.810057			0.810057			0.00%
		Evap Fuel Leak			0.146375			0.146375			0.00%
		Crank Run Exh	0.004908	0.000343	0.014972	0.004384	0.000336	0.013625	-10.69%	-2.03%	-8.99%
		Crank Start Exh	0.001489	3.67E-05	0.018738	0.001489	3.67E-05	0.018738	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.019923			0.017036			-14.49%
		Refuel Spillage			0.02892			0.024719			-14.53%
	TDM	Running Exh	31.7531	5.179112	1.105894	27.86376	4.577828	1.009169	-12.25%	-11.61%	-8.75%
		Start Exh	12.04597	1.331992	1.419395	12.04597	1.331992	1.419395	0.00%	0.00%	0.00%
		Evap Permeation			0.327671			0.327671			0.00%
		Evap Fuel Vent			0.792447			0.792447			0.00%
		Evap Fuel Leak			0.145319			0.145319			0.00%
		Crank Run Exh	0.004969	0.000349	0.014962	0.004478	0.00034	0.013667	-9.89%	-2.73%	-8.65%
		Crank Start Exh	0.001489	3.67E-05	0.018738	0.001489	3.67E-05	0.018738	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.020052			0.017243			-14.01%
		Refuel Spillage			0.029004			0.02494			-14.01%
Chambers	**HPMS**	Running Exh	18.80601	2.630232	0.504903	17.61067	2.422196	0.475327	-6.36%	-7.91%	-5.86%
		Start Exh	1.060707	0.118612	0.129414	1.060707	0.118612	0.129414	0.00%	0.00%	0.00%
		Evap Permeation			0.036327			0.036327			0.00%
		Evap Fuel Vent			0.15674			0.15674			0.00%
		Evap Fuel Leak			0.024165			0.024165			0.00%
		Crank Run Exh	0.002841	0.000184	0.006728	0.002663	0.00018	0.006337	-6.29%	-2.21%	-5.82%
		Crank Start Exh	0.000132	3.44E-06	0.001705	0.000132	3.44E-06	0.001705	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.008865			0.007801			-12.00%
		Refuel Spillage			0.012407			0.010919			-11.99%
	TDM	Running Exh	16.11137	2.517087	0.463725	15.11398	2.317639	0.436906	-6.19%	-7.92%	-5.78%
		Start Exh	1.060707	0.118612	0.129414	1.060707	0.118612	0.129414	0.00%	0.00%	0.00%
		Evap Permeation			0.036244			0.036244			0.00%

			Default			KC			% Difference		
County	**VMTBasis**	**Process**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**
		Evap Fuel Vent			0.154137			0.154137			0.00%
		Evap Fuel Leak			0.024146			0.024146			0.00%
		Crank Run Exh	0.002512	0.000172	0.006314	0.002352	0.000168	0.005943	-6.34%	-2.35%	-5.87%
		Crank Start Exh	0.000132	3.44E-06	0.001705	0.000132	3.44E-06	0.001705	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.008509			0.007475			-12.16%
		Refuel Spillage			0.012074			0.010616			-12.08%
Fort Bend	**HPMS**	Running Exh	43.6857	6.75694	1.489929	40.4402	6.382013	1.393266	-7.43%	-5.55%	-6.49%
		Start Exh	15.27934	1.725302	1.779019	15.27934	1.725302	1.779019	0.00%	0.00%	0.00%
		Evap Permeation			0.396453			0.396453			0.00%
		Evap Fuel Vent			1.085649			1.085649			0.00%
		Evap Fuel Leak			0.184263			0.184263			0.00%
		Crank Run Exh	0.006712	0.000465	0.019556	0.006325	0.000471	0.018307	-5.77%	1.34%	-6.39%
		Crank Start Exh	0.001891	4.77E-05	0.023487	0.001891	4.77E-05	0.023487	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.027661			0.025046			-9.46%
		Refuel Spillage			0.041639			0.037687			-9.49%
	TDM	Running Exh	42.5394	6.670632	1.412068	39.69004	6.264171	1.323366	-6.70%	-6.09%	-6.28%
		Start Exh	15.27934	1.725302	1.779019	15.27934	1.725302	1.779019	0.00%	0.00%	0.00%
		Evap Permeation			0.395985			0.395985			0.00%
		Evap Fuel Vent			1.050683			1.050683			0.00%
		Evap Fuel Leak			0.181533			0.181533			0.00%
		Crank Run Exh	0.006613	0.000462	0.01909	0.006273	0.000464	0.017911	-5.15%	0.40%	-6.18%
		Crank Start Exh	0.001891	4.77E-05	0.023487	0.001891	4.77E-05	0.023487	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.026948			0.024456			-9.25%
		Refuel Spillage			0.040424			0.036696			-9.22%
Galveston	**HPMS**	Running Exh	37.83845	5.353113	1.22009	36.07853	5.302287	1.160686	-4.65%	-0.95%	-4.87%
		Start Exh	9.826565	1.120402	1.19541	9.826565	1.120402	1.19541	0.00%	0.00%	0.00%
		Evap Permeation			0.321497			0.321497			0.00%
		Evap Fuel Vent			0.728615			0.728615			0.00%
		Evap Fuel Leak			0.14286			0.14286			0.00%
		Crank Run Exh	0.005723	0.000363	0.016083	0.005507	0.000379	0.01531	-3.77%	4.40%	-4.80%
		Crank Start Exh	0.001207	2.87E-05	0.015775	0.001207	2.87E-05	0.015775	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.021398			0.019887			-7.06%
		Refuel Spillage			0.030609			0.028444			-7.07%

			Default			KC			% Difference		
County	**VMTBasis**	**Process**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**
	TDM	Running Exh	35.89331	5.445504	1.228596	33.80489	5.289091	1.158785	-5.82%	-2.87%	-5.68%
		Start Exh	9.826565	1.120402	1.19541	9.826565	1.120402	1.19541	0.00%	0.00%	0.00%
		Evap Permeation			0.321811			0.321811			0.00%
		Evap Fuel Vent			0.747386			0.747386			0.00%
		Evap Fuel Leak			0.146609			0.146609			0.00%
		Crank Run Exh	0.005608	0.000382	0.016607	0.005368	0.000393	0.015682	-4.28%	2.86%	-5.57%
		Crank Start Exh	0.001207	2.87E-05	0.015775	0.001207	2.87E-05	0.015775	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.021606			0.019964			-7.60%
		Refuel Spillage			0.030924			0.028576			-7.59%
Harris	**HPMS**	Running Exh	677.8779	97.06621	22.2602	679.4819	97.93234	21.71867	0.24%	0.89%	-2.43%
		Start Exh	192.0671	22.60527	23.88333	192.0671	22.60527	23.88333	0.00%	0.00%	0.00%
		Evap Permeation			6.359618			6.359618			0.00%
		Evap Fuel Vent			15.21327			15.21327			0.00%
		Evap Fuel Leak			2.750296			2.750296			0.00%
		Crank Run Exh	0.10333	0.006853	0.293988	0.103925	0.007135	0.286958	0.58%	4.11%	-2.39%
		Crank Start Exh	0.023588	0.000575	0.315297	0.023588	0.000575	0.315297	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.390153			0.377462			-3.25%
		Refuel Spillage			0.548708			0.530863			-3.25%
	TDM	Running Exh	636.6537	94.53132	21.64481	625.7783	93.31058	20.84912	-1.71%	-1.29%	-3.68%
		Start Exh	192.0671	22.60527	23.88333	192.0671	22.60527	23.88333	0.00%	0.00%	0.00%
		Evap Permeation			6.360426			6.360426			0.00%
		Evap Fuel Vent			15.30896			15.30896			0.00%
		Evap Fuel Leak			2.78547			2.78547			0.00%
		Crank Run Exh	0.099133	0.006857	0.292671	0.098497	0.007033	0.282243	-0.64%	2.56%	-3.56%
		Crank Start Exh	0.023588	0.000575	0.315297	0.023588	0.000575	0.315297	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.377541			0.361017			-4.38%
		Refuel Spillage			0.532899			0.509877			-4.32%
Liberty	**HPMS**	Running Exh	15.03784	2.567181	0.562163	11.99456	2.066764	0.491544	-20.24%	-19.49%	-12.56%
		Start Exh	2.703649	0.292216	0.326857	2.703649	0.292216	0.326857	0.00%	0.00%	0.00%
		Evap Permeation			0.080179			0.080179			0.00%
		Evap Fuel Vent			0.299522			0.299522			0.00%
		Evap Fuel Leak			0.046124			0.046124			0.00%
		Crank Run Exh	0.002407	0.000181	0.00749	0.00201	0.000168	0.006562	-16.49%	-7.05%	-12.40%

			Default			KC			% Difference		
County	**VMTBasis**	**Process**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**
		Crank Start Exh	0.000334	8.14E-06	0.004316	0.000334	8.14E-06	0.004316	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.00885			0.00693			-21.69%
		Refuel Spillage			0.011819			0.009246			-21.77%
	TDM	Running Exh	16.48488	2.826401	0.598447	13.52367	2.308668	0.529021	-17.96%	-18.32%	-11.60%
		Start Exh	2.703649	0.292216	0.326857	2.703649	0.292216	0.326857	0.00%	0.00%	0.00%
		Evap Permeation			0.080282			0.080282			0.00%
		Evap Fuel Vent			0.306185			0.306185			0.00%
		Evap Fuel Leak			0.04743			0.04743			0.00%
		Crank Run Exh	0.002651	0.000198	0.008137	0.002256	0.000184	0.007196	-14.91%	-6.96%	-11.56%
		Crank Start Exh	0.000334	8.14E-06	0.004316	0.000334	8.14E-06	0.004316	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.009617			0.00766			-20.35%
		Refuel Spillage			0.012854			0.010232			-20.40%
Montgomery	**HPMS**	Running Exh	54.96995	8.570053	1.802869	50.55593	7.788126	1.679985	-8.03%	-9.12%	-6.82%
		Start Exh	16.56305	1.728084	1.856271	16.56305	1.728084	1.856271	0.00%	0.00%	0.00%
		Evap Permeation			0.414504			0.414504			0.00%
		Evap Fuel Vent			1.275196			1.275196			0.00%
		Evap Fuel Leak			0.202913			0.202913			0.00%
		Crank Run Exh	0.008228	0.000558	0.023708	0.007679	0.000547	0.022118	-6.68%	-1.94%	-6.70%
		Crank Start Exh	0.00205	4.91E-05	0.024501	0.00205	4.91E-05	0.024501	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.03299			0.029202			-11.48%
		Refuel Spillage			0.049243			0.04358			-11.50%
	TDM	Running Exh	56.07515	8.891772	1.831516	51.65467	8.073683	1.70824	-7.88%	-9.20%	-6.73%
		Start Exh	16.56305	1.728084	1.856271	16.56305	1.728084	1.856271	0.00%	0.00%	0.00%
		Evap Permeation			0.414704			0.414704			0.00%
		Evap Fuel Vent			1.278304			1.278304			0.00%
		Evap Fuel Leak			0.205604			0.205604			0.00%
		Crank Run Exh	0.008574	0.000594	0.024755	0.008012	0.000581	0.023104	-6.55%	-2.08%	-6.67%
		Crank Start Exh	0.00205	4.91E-05	0.024501	0.00205	4.91E-05	0.024501	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.034044			0.030145			-11.45%
		Refuel Spillage			0.050575			0.044817			-11.39%
Waller	**HPMS**	Running Exh	13.76057	2.094166	0.446689	11.63502	1.72996	0.398257	-15.45%	-17.39%	-10.84%
		Start Exh	4.693822	0.426375	0.501865	4.693822	0.426375	0.501865	0.00%	0.00%	0.00%
		Evap Permeation			0.105038			0.105038			0.00%

			Default			KC			% Difference		
County	**VMTBasis**	**Process**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**	**CO**	**NOx**	**VOC**
		Evap Fuel Vent			0.26483			0.26483			0.00%
		Evap Fuel Leak			0.049597			0.049597			0.00%
		Crank Run Exh	0.002002	0.000121	0.005916	0.001727	0.000111	0.005281	-13.71%	-7.83%	-10.73%
		Crank Start Exh	0.000584	1.31E-05	0.006629	0.000584	1.31E-05	0.006629	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.007392			0.005976			-19.16%
		Refuel Spillage			0.009543			0.007707			-19.24%
	TDM	Running Exh	13.73021	2.16603	0.443948	12.1271	1.870922	0.405405	-11.68%	-13.62%	-8.68%
		Start Exh	4.693822	0.426375	0.501865	4.693822	0.426375	0.501865	0.00%	0.00%	0.00%
		Evap Permeation			0.104983			0.104983			0.00%
		Evap Fuel Vent			0.262694			0.262694			0.00%
		Evap Fuel Leak			0.049598			0.049598			0.00%
		Crank Run Exh	0.002019	0.000122	0.005984	0.001801	0.000115	0.005463	-10.80%	-5.90%	-8.71%
		Crank Start Exh	0.000584	1.31E-05	0.006629	0.000584	1.31E-05	0.006629	0.00%	0.00%	0.00%
		Refuel Disp Vap			0.007646			0.006406			-16.22%
		Refuel Spillage			0.009932			0.008321			-16.22%