APPENDIX A

Harriet Tubman Middle School Air Toxics Summary

Exhibit A-1. Air Toxics Data from Harriet Tubman Middle School Monitoring (2009)

		Sample									
MSATs	**SSL[a] ($\mu g/m^3$)**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1,3-Butadiene	20	0.029	0.058	0.044	0.071	0.104	ND	0.064	--	0.062	0.268
Acetaldehyde	90	1.082	1.911	1.783	1.386	1.148	2.055	1.404	1.302	1.193	2.452
Benzene	30	0.432	0.806	0.432	0.684	1.093	0.716	0.738	--	0.604	2.247
Formaldehyde	50	3.429	3.232	3.085	2.925	1.831	5.321	3.220	2.003	3.035	2.827
Other Gaseous Pollutants	**SSL ($\mu g/m^3$)**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1,1,2,2-Tetrachloroethane	120	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
1,1,2-Trichloroethane	440	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
1,1-Dichloroethane	4400	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
1,1-Dichloroethylene	80	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
1,2,4-Trichlorobenzene	2000	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
1,2-Dichloropropane	200	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
1,4-Dichlorobenzene	10000	0.042	0.060	0.048	0.084	0.060	ND	0.042	--	0.084	0.078
Acetonitrile	600	6.854	13.994	20.831	15.001	24.023	40.150	2.352	--	19.991	37.294
Acrylonitrile	200	0.202	ND	ND	ND	ND	ND	ND	--	ND	ND
Benzyl chloride	140	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
Bromoform	6400	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
Bromomethane	200	0.093	0.082	0.074	0.062	0.051	ND	0.051	--	0.039	0.043
Carbon disulfide	7000	0.231	0.234	0.190	0.112	0.299	0.361	0.106	--	0.072	0.143
Carbon tetrachloride	200	1.058	0.982	0.724	0.629	0.988	1.152	1.246	--	0.573	0.724
Chlorobenzene	10000	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
Chloroethane	40000	0.021	0.034	0.026	0.021	0.029	ND	0.042	--	ND	0.042
Chloroform	500	0.186	0.210	0.151	0.161	0.215	0.151	0.176	--	0.127	0.225
Chloromethane	1000	1.413	1.546	1.265	1.217	1.459	1.498	1.488	--	1.196	1.744
Chloroprene	70	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
Dichloromethane	2000	0.775	0.636	1.008	0.455	1.786	0.570	0.792	--	0.521	2.979
Ethyl acrylate	20000	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
Ethylbenzene	40000	0.361	0.487	0.239	0.421	0.630	0.200	0.196	--	0.322	0.934
Ethylene dibromide	12	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
Ethylene dichloride	270	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
Hexachlorobutadiene	320	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
Methyl chloroform	10000	0.098	0.087	0.066	0.066	0.109	ND	0.098	--	0.055	0.087
Methyl isobutyl ketone	30000	0.607	1.115	0.955	0.717	0.377	0.353	0.107	--	0.545	0.541
Methyl methacrylate	7000	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
Methyl tert-butyl ether	7000	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
Propionaldehyde	80	0.204	0.328	0.318	0.264	0.193	0.376	0.254	0.195	0.197	0.338
Styrene	9000	0.486	0.482	0.341	0.618	0.371	0.251	0.149	--	0.443	0.575
Tetrachloroethylene	1400	0.068	0.129	0.102	0.129	0.231	0.095	0.122	--	0.109	0.821
Toluene	4000	0.894	1.863	1.425	2.760	2.394	1.146	0.984	--	1.889	5.317

		Sample									
Trichloroethylene	10000	0.038	ND	ND	0.032	0.065	ND	ND	--	ND	0.231
Vinyl chloride	1000	ND	ND	0.010	0.010	ND	ND	ND	--	ND	ND
o-Xylene	9000	0.391	0.591	0.226	0.395	0.652	0.213	0.169	--	0.339	0.930
Metals	**SSL (ng/m^3)**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Antimony	2000	0.86	0.83	1.21	2.66	2.78	1.28	3.12	2.96	1.8	5.47
Arsenic	150	0.16	0.25	0.28	0.54	1.15	ND	ND	1.03	0.61	2.93
Beryllium	20	ND	0.002	0.05	0.006	0.008	0.0003	0.002	0.009	0.04	ND
Cadmium	30	0.05	0.22	0.07	23.1	4.81	2.41	15.7	22.6	0.12	5.45
Cobalt	100	ND	0.52	0.56	0.18	0.24	0.41	0.43	0.35	0.25	0.37
Manganese	500	5.1	6.4	17.6	9.09	10.3	17.7	13.2	3.79	8.92	26.3
Mercury	3000	ND	ND	0.04	0.01	0.004	ND	0.004	0.005	0.03	0.06
Nickel	200	0.84	2.08	3.25	1.55	1.13	0.97	2.08	1.17	0.3	3.62
Selenium	20000	0.14	0.4	0.41	0.28	5.39	2.56	5.87	5.06	0.42	9.32

Notes:

a Sample Screening Level

ND - No detect

-- Sample not taken or invalid

APPENDIX B

Intersection Ranking Tables

Exhibit B-1. Vancouver Intersection Ranking

Number	Intersection	Period	TEV	LOS	V/C	Delay
Existing (2009)						
11	8th St. @ Esther St.	PM	605	A	0.05	8
20	9th St. @ Main St.	PM	305	A	0	6.7
22	Evergreen Blvd. @ Esther St.	PM	445	A	0.32	6.6
34	Mill Plain Blvd. @ Columbia St.	PM	1,355	B	0	14.7
38	Mill Plain Blvd. @ C St.	PM	2,195	B	0.34	14.1
39	Mill Plain Blvd. @ I-5 SB On-/Off-Ramps	PM	3,585	D	0.07	37.5
*	Mill Plain Blvd. @ I-5 SPUI	-	-	-	-	-
40	Mill Plain Blvd. @ I-5 NB On-/Off-Ramps	PM	3,310	C	0.18	26.8
63	33rd St. @ Main St.	PM	1,255	B		18.3
64	39th St. @ Main St.	PM	2,220	D		38.3
65	39th St. @ F St.	PM	1,340	F		> 100
66	39th St. @ H St.	PM	1,445	A	0.11	8.3
68	39th St. @ I-5 NB On-/Off-Ramps	PM	1,980	C	0.21	23.1
No-Build (2030)						
11	8th St. @ Esther St.	PM	1,185	B	0.50	14.6
20	9th St. @ Main St.	PM	640	A	0.06	6.0
22	Evergreen Blvd. @ Esther St.	PM	710	A	0.12	6.4
34	Mill Plain Blvd. @ Columbia St.	PM	2,145	F	0.75	> 100
38	Mill Plain Blvd. @ C St.	PM	3,345	D	0.78	51.9
39	Mill Plain Blvd. @ I-5 SB On-/Off-Ramps	PM	5,035	F	0.97	94.4
*	Mill Plain Blvd. @ I-5 SPUI	-	-	-	-	-
40	Mill Plain Blvd. @ I-5 NB On-/Off-Ramps	PM	4,495	D	0.97	36.5
63	33rd St. @ Main St.	PM	2,205	D	0.56	48.6
64	39th St. @ Main St.	PM	3,605	F	0.96	> 100
65	39th St. @ F St.	PM	2,085	F	0.33	> 100
66	39th St. @ H St.	PM	2,175	E	0.76	64.3
68	39th St. @ I-5 NB On-/Off-Ramps	PM	2,785	F	0.91	> 100
Full Build LPA (2030)						
11	8th St. @ Esther St.	PM	957	B	0.35	14.3
20	9th St. @ Main St.	PM	926	C	0.36	18.0
22	Evergreen Blvd. @ Esther St.	PM	620	A	0.22	9.7
34	Mill Plain Blvd. @ Columbia St.	PM	2,241	F	1.10	> 100
38	Mill Plain Blvd. @ C St.	PM	3,407	F	1.35	>81.4
39	Mill Plain Blvd. @ I-5 SB On-/Off-Ramps	-	-	-	-	-
*	Mill Plain Blvd. @ I-5 SPUI	PM	6,231	E	0.99	63.3
40	Mill Plain Blvd. @ I-5 NB On-/Off-Ramps	-	-	-	-	-
63	33rd St. @ Main St.	PM	1,559	B	0.58	14.5
64	39th St. @ Main St.	PM	3,297	F	1.03	> 100
65	39th St. @ F St.	PM	1,887	F	0.59	50.6
66	39th St. @ H St.	PM	1,995	C	0.76	30.8
68	39th St. @ I-5 NB On-/Off-Ramps	PM	1,944	F	0.65	> 100

Note: The intersections evaluated in the hot spots analysis are indicated with shading.

Exhibit B-2. Portland Intersection Ranking

Number	Intersection	Period	TEV	LOS	V/C	Delay
Existing (2005)						
14	Lombard and MLK Jr.	PM	3,485	E	0.85	74
11	Lombard and Interstate	PM	2,650	C	0.76	32
1	Fremont and MLK Jr.	PM	3,205	C	0.89	31
17	Columbia Blvd and MLK Jr.	PM	3,305	D	0.71	39
6	Alberta and MLK Jr.	PM	2,930	D	0.88	38
2	Going and Interstate	PM	2,605	C	0.72	34
No-Build (2030)						
14	Lombard and MLK Jr.	PM	4,685	F	0.99	> 100
11	Lombard and Interstate	PM	4,020	F	0.95	> 100
1	Fremont and MLK Jr.	PM	3,910	F	0.99	94
17	Columbia Blvd and MLK Jr.	PM	4,130	F	0.74	84
6	Alberta and MLK Jr.	PM	3,640	E	0.91	72
2	Going and Interstate	PM	3,345	E	0.84	65
Full Build LPA (2030)						
14	Lombard and MLK Jr.	PM	4,260	F	0.90	> 100
11	Lombard and Interstate	PM	3,950	F	0.92	> 100
1	Fremont and MLK Jr.	PM	3,785	E	0.98	62
17	Columbia Blvd and MLK Jr.	PM	3,720	D	0.77	46
6	Alberta and MLK Jr.	PM	3,415	D	0.88	46
2	Going and Interstate	PM	3,205	D	0.83	43

Note: The intersections evaluated in the hot spots analysis are indicated with shading.