

Air Quality Monitoring Summary Report

Toronto Transit Commission
Ashbridges Bay LFLRV Maintenance and Storage Facilities
Ambient Air Quality Sampling at Seven Perimeter Air Quality Stations
Monitoring Period: July 2011

The air quality sampling results for Polycyclic Aromatic Hydrocarbons (PAHs) and metals presented here were collected at seven perimeter monitoring stations in July 2011. 24-hr sampling was conducted three times per week until July 15th, 2011. As of July 19th, the sampling followed a one in six-day schedule (or sampling was conducted every sixth day - perhaps just pick one of these). The data presented below is for days when there was activity at the TTC site, that is, Monday through Saturday. All concentrations are 24-hour average values unless otherwise stated.

Polycyclic Aromatic Hydrocarbons (PAHs)

		Benzo(a)pyrene	Naphthalene
July Summary Data	Number of Samples	56	56
	Average Concentration $\mu\text{g}/\text{m}^3$	0.00018	0.128
	Maximum Concentration $\mu\text{g}/\text{m}^3$	0.00047	0.985
	Minimum Concentration $\mu\text{g}/\text{m}^3$	0.00014	0.0166
	Number of days greater than AAQC	0	0
	Baseline Concentration $\mu\text{g}/\text{m}^3$	0.00017	0.029
	24-hour Ambient Air Quality Criteria (AAQC) $\mu\text{g}/\text{m}^3$	0.0011	22.5

Metals

The metals concentrations were determined from analysis of the total particulate matter samples collected.

		Arsenic	Cadmium	Chromium	Lead	Manganese	Nickel
July Summary Data	Number of Samples	56	56	56	56	56	56
	Average Concentration $\mu\text{g}/\text{m}^3$	0.0041	0.0011	0.0097	0.030	0.056	0.0047
	Maximum Concentration $\mu\text{g}/\text{m}^3$	0.006	0.0020	0.035	0.190	0.165	0.018
	Minimum Concentration $\mu\text{g}/\text{m}^3$	0.0030	0.0010	0.0026	0.0020	0.011	0.0020
	Number of days greater than AAQC	0	0.0000	0	0	0	0.0000
	Baseline Concentration $\mu\text{g}/\text{m}^3$	0.0035	0.001	0.0048	0.0137	0.0406	0.005
	24-hour Ambient Air Quality Criteria (AAQC) $\mu\text{g}/\text{m}^3$	0.3	0.025	1.5	0.5	2.5	2

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Ashbridges Bay LFLRV Maintenance and Storage Facilities
Ambient Air Quality Sampling at Seven Perimeter Air Quality Stations
Weekend Sampling (Sundays)
Monitoring Period: July 2011

The air quality sampling results for Polycyclic Aromatic Hydrocarbons (PAHs) and metals presented here were collected over 24-hour periods at seven perimeter monitoring stations in July 2011 on Sundays when there was no activity on-site. All concentrations are 24-hour average values unless otherwise stated.

Polycyclic Aromatic Hydrocarbons (PAHs)

		Benzo(a)pyrene	Naphthalene
July Summary Data	Number of Samples	20	20
	Average Concentration $\mu\text{g}/\text{m}^3$	0.00017	0.232
	Maximum Concentration $\mu\text{g}/\text{m}^3$	0.00022	1.009
	Minimum Concentration $\mu\text{g}/\text{m}^3$	0.00015	0.0340
	Number of days greater than AAQC	0	0
	Baseline Concentration $\mu\text{g}/\text{m}^3$	0.00017	0.029
	24-hour Ambient Air Quality Criteria (AAQC) $\mu\text{g}/\text{m}^3$	0.0011	22.5

Metals

The metals concentrations were determined from analysis of the total particulate matter samples collected.

		Arsenic	Cadmium	Chromium	Lead	Manganese	Nickel
July Summary Data	Number of Samples	21	21	21	21	21	21
	Average Concentration $\mu\text{g}/\text{m}^3$	0.0040	0.0011	0.0058	0.016	0.038	0.0032
	Maximum Concentration $\mu\text{g}/\text{m}^3$	0.004	0.0032	0.014	0.052	0.083	0.006
	Minimum Concentration $\mu\text{g}/\text{m}^3$	0.0040	0.0010	0.0026	0.0031	0.014	0.0018
	Number of days greater than AAQC	0	0	0	0	0	0
	Baseline Concentration $\mu\text{g}/\text{m}^3$	0.0035	0.0010	0.0048	0.0137	0.0406	0.0050
	24-hour Ambient Air Quality Criteria (AAQC) $\mu\text{g}/\text{m}^3$	0.3	0.025	1.5	0.5	2.5	2

Air Quality Monitoring Summary Report

Toronto Transit Commission
Ashbridges Bay LFLRV Maintenance and Storage Facilities
Ambient Air Quality Sampling at the Community Monitoring Station
Monitoring Period: July 2011

The air quality sampling results for Polycyclic Aromatic Hydrocarbons (PAHs) and metals presented here were collected at the community monitoring station in July 2011. 24-hr sampling was conducted three times per week until July 15th, 2011. As of July 19th, the sampling followed a one in six-day schedule (or the alternate language from the 1st page). The data presented below is for days when there was activity at the TTC site. All concentrations are 24-hour average values unless otherwise stated.

Fine Particulate Matter PM₁₀

		PM ₁₀
July Summary Data	Number of Samples	8
	Average Concentration	μg/m ³ 26.4
	Maximum Concentration	μg/m ³ 37.6
	Minimum Concentration	μg/m ³ 16.0
	Number of Days greater than AAQC	0
	Baseline Concentration	μg/m ³ 39.4
	24-hour Ambient Air Quality Criteria (AAQC)	μg/m ³ 50

PM₁₀: Particulate Matter less than 10 micron in diameter

Metals

The metals concentrations were determined from analysis of the total particulate matter samples collected.

		Arsenic	Cadmium	Chromium	Lead	Manganese	Nickel
July Summary Data	Number of Samples	8	8	8	8	8	8
	Average Concentration	μg/m ³ 0.0038	0.0010	0.0037	0.0070	0.026	0.0026
	Maximum Concentration	μg/m ³ 0.0040	0.0010	0.0055	0.014	0.045	0.0037
	Minimum Concentration	μg/m ³ 0.0030	0.0010	0.0027	0.0027	0.018	0.0019
	Number of days greater than AAQC	0	0	0	0	0	0
	Baseline Concentration	μg/m ³ 0.0035	0.0010	0.0048	0.0137	0.0406	0.0050
	24-hour Ambient Air Quality Criteria (AAQC)	μg/m ³ 0.3	0.025	1.5	0.5	2.5	2

Air Quality Monitoring Summary Report

Toronto Transit Commission
Ashbridges Bay LFLRV Maintenance and Storage Facilities
Ambient Air Quality Sampling at the Community Monitoring Station
Weekend Sampling (Sundays)
Monitoring Period: July 2011

The air quality sampling results for PM10 and metals presented here were collected over 24-hr sampling periods at the community monitoring station in July 2011 on Sundays when there was no activity on-site. All concentrations are 24-hour average values unless otherwise stated.

Fine Particulate Matter PM₁₀

		PM ₁₀
July Summary Data	Number of Samples	3
	Average Concentration	µg/m ³ 35.7
	Maximum Concentration	µg/m ³ 42.9
	Minimum Concentration	µg/m ³ 26.9
	Number of Days greater than AAQC	0
	Baseline Concentration	µg/m ³ 39.4
	24-hour Ambient Air Quality Criteria (AAQC)	µg/m ³ 50

PM₁₀: Particulate Matter less than 10 micron in diameter

Metals

The metals concentrations were determined from analysis of the total particulate matter samples collected.

		Arsenic	Cadmium	Chromium	Lead	Manganese	Nickel
July Summary Data	Number of Samples	3	3	3	3	3	3
	Average Concentration	µg/m ³ 0.0040	0.0010	0.0033	0.0085	0.031	0.0023
	Maximum Concentration	µg/m ³ 0.0040	0.0010	0.0039	0.010	0.039	0.0025
	Minimum Concentration	µg/m ³ 0.0040	0.0010	0.0029	0.0052	0.021	0.0022
	Number of days greater than AAQC	0	0	0	0	0	0
	Baseline Concentration	µg/m ³ 0.0035	0.0010	0.0048	0.0137	0.0406	0.0050
	24-hour Ambient Air Quality Criteria (AAQC)	µg/m ³ 0.3	0.025	1.5	0.5	2.5	2

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Meteorological Data Summary

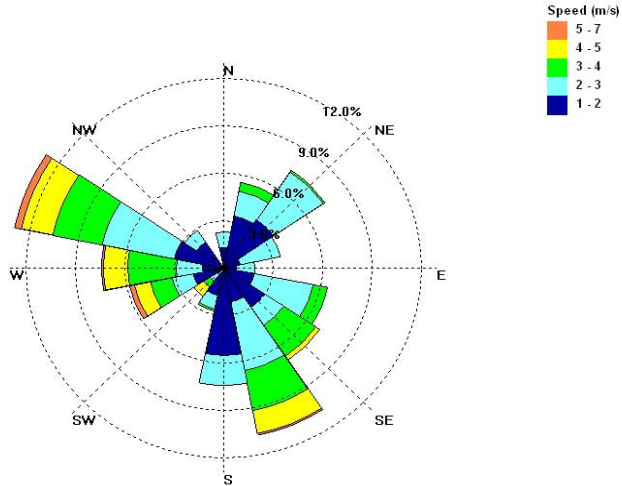


Figure 1.0 - Monthly Wind Rose: July, 2011
 (Source: On-Site Meteorological Station)

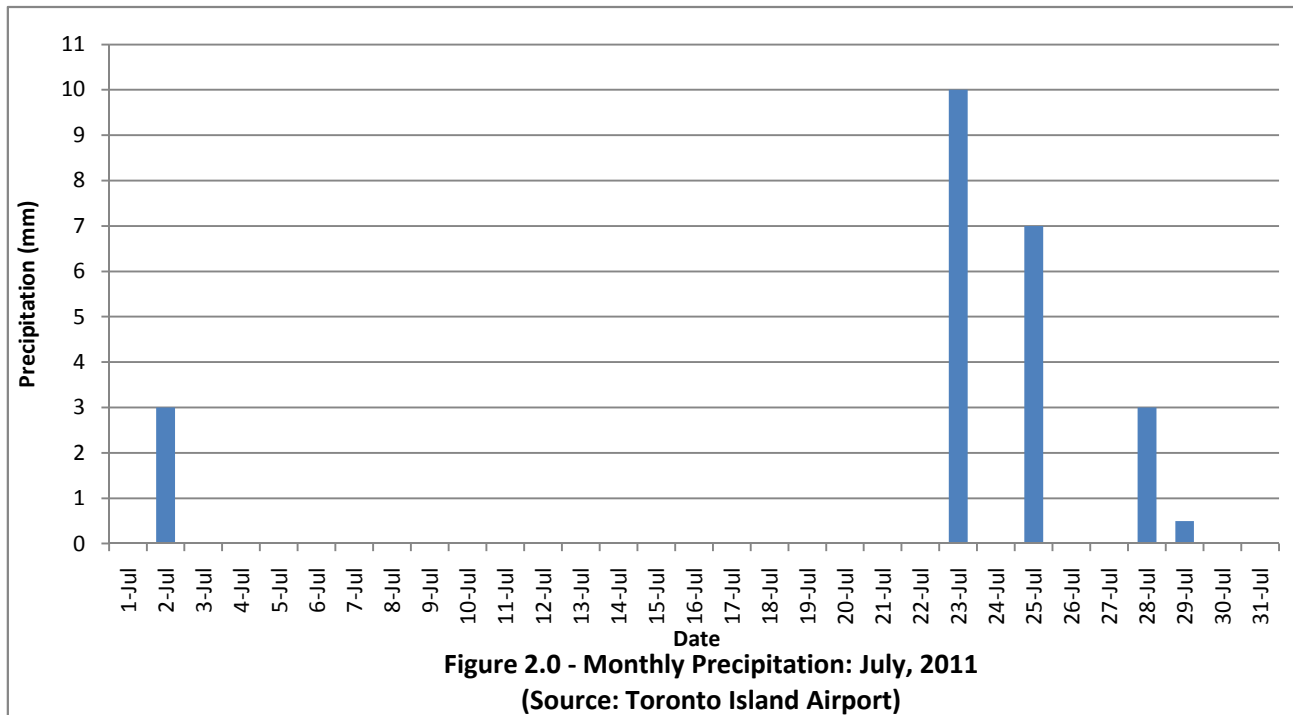


Figure 2.0 - Monthly Precipitation: July, 2011
 (Source: Toronto Island Airport)