

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: August 2011

The air quality sampling results for Polycyclic Aromatic Hydrocarbons (PAHs) and metals presented here were collected at seven perimeter monitoring stations in August 2011, with 24-hr sampling conducted on a six-day schedule. 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. The baseline values presented were determined during Phase I monitoring conducted prior to the excavation.

Polycyclic Aromatic Hydrocarbons (PAHs)

		Benzo(a)pyrene	Naphthalene
August Summary Data	Number of Samples	33	33
	Average Concentration $\mu\text{g}/\text{m}^3$	0.00020	0.28
	Maximum Concentration $\mu\text{g}/\text{m}^3$	0.00054	2.8
	Minimum Concentration $\mu\text{g}/\text{m}^3$	0.00015	0.020
	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 (TSP) samples collected.

		Arsenic	Cadmium	Chromium	Lead	Manganese	Nickel
August Summary Data	Number of Samples	32	32	32	32	32	32
	Average Concentration $\mu\text{g}/\text{m}^3$	0.0038	0.0010	0.010	0.024	0.081	0.0049
	Maximum Concentration $\mu\text{g}/\text{m}^3$	0.0040	0.0014	0.028	0.068	0.28	0.013
	Minimum Concentration $\mu\text{g}/\text{m}^3$	0.0030	0.0010	0.0014	0.0026	0.013	0.0020
	Number of days greater than AAQC	0	0	0	0	0	0
	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: August 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 August 2011 on Sundays when there was no activity on-site. All concentrations are 24-hour average values unless otherwise stated. The baseline values presented were determined during Phase I monitoring conducted prior to the excavation.

Polycyclic Aromatic Hydrocarbons (PAHs)

		Benzo(a)pyrene	Naphthalene
August Summary Data	Number of Samples	11	11
	Average Concentration $\mu\text{g}/\text{m}^3$	0.00016	0.087
	Maximum Concentration $\mu\text{g}/\text{m}^3$	0.00016	0.17
	Minimum Concentration $\mu\text{g}/\text{m}^3$	0.00015	0.052
	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 (TSP) samples collected.

		Arsenic	Cadmium	Chromium	Lead	Manganese	Nickel
August Summary Data	Number of Samples	13	13	13	13	13	13
	Average Concentration $\mu\text{g}/\text{m}^3$	0.0038	0.0010	0.0033	0.0052	0.015	0.0026
	Maximum Concentration $\mu\text{g}/\text{m}^3$	0.0040	0.0010	0.0056	0.0078	0.020	0.0072
	Minimum Concentration $\mu\text{g}/\text{m}^3$	0.0030	0.0010	0.0023	0.0028	0.0089	0.0020
	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 Community Monitoring Station
Monitoring Period: August 2011**

The air quality sampling results for PM10 and metals presented here were collected at the community monitoring station in August 2011, with 24-hr sampling conducted on a six-day schedule. 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. The baseline values presented were determined during Phase I monitoring conducted prior to the excavation.

Fine Particulate Matter PM₁₀

		PM ₁₀
August Summary Data	Number of Samples	5
	Average Concentration	µg/m ³ 52
	Maximum Concentration	µg/m ³ 72
	Minimum Concentration	µg/m ³ 26
	Number of Days greater than AAQC	3
	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 (TSP) samples collected.

		Arsenic	Cadmium	Chromium	Lead	Manganese	Nickel
August Summary Data	Number of Samples	4	4	4	4	4	4
	Average Concentration	µg/m ³ 0.0040	0.0010	0.0063	0.017	0.065	0.0037
	Maximum Concentration	µg/m ³ 0.0040	0.0010	0.0097	0.029	0.10	0.0062
	Minimum Concentration	µg/m ³ 0.0040	0.0010	0.0020	0.0046	0.017	0.0023
	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 Community Monitoring Station
Weekend Sampling (Sundays)
Monitoring Period: August 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 August 2011 on Sundays when there was no activity on-site. All concentrations are 24-hour average values unless otherwise stated. The baseline values presented were determined during Phase I monitoring conducted prior to the excavation.

Fine Particulate Matter PM₁₀

		PM ₁₀
August Summary Data	Number of Samples	2
	Average Concentration	μg/m ³ 25
	Maximum Concentration	μg/m ³ 36
	Minimum Concentration	μg/m ³ 15
	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 (TSP) samples collected.

		Arsenic	Cadmium	Chromium	Lead	Manganese	Nickel
August Summary Data	Number of Samples	2	2	2	2	2	2
	Average Concentration	μg/m ³ 0.0035	0.0010	0.0021	0.0028	0.011	0.0020
	Maximum Concentration	μg/m ³ 0.0040	0.0010	0.0024	0.0028	0.011	0.0020
	Minimum Concentration	μg/m ³ 0.0030	0.0010	0.0019	0.0028	0.011	0.0020
	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

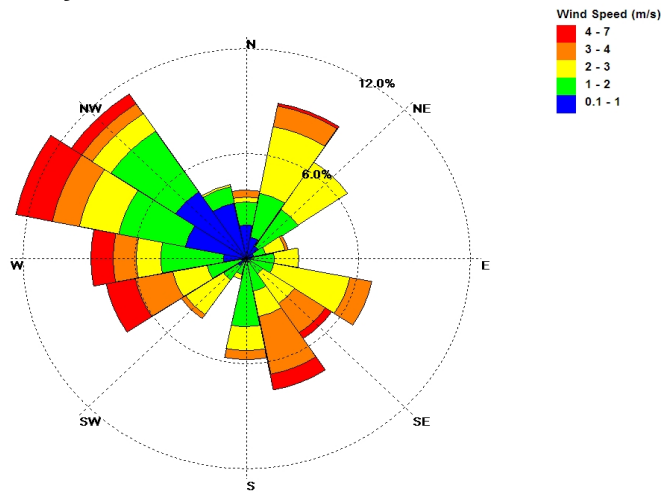


Figure 1.0 - Monthly Wind Rose: August, 2011
(Source: On-Site Meteorological Station)

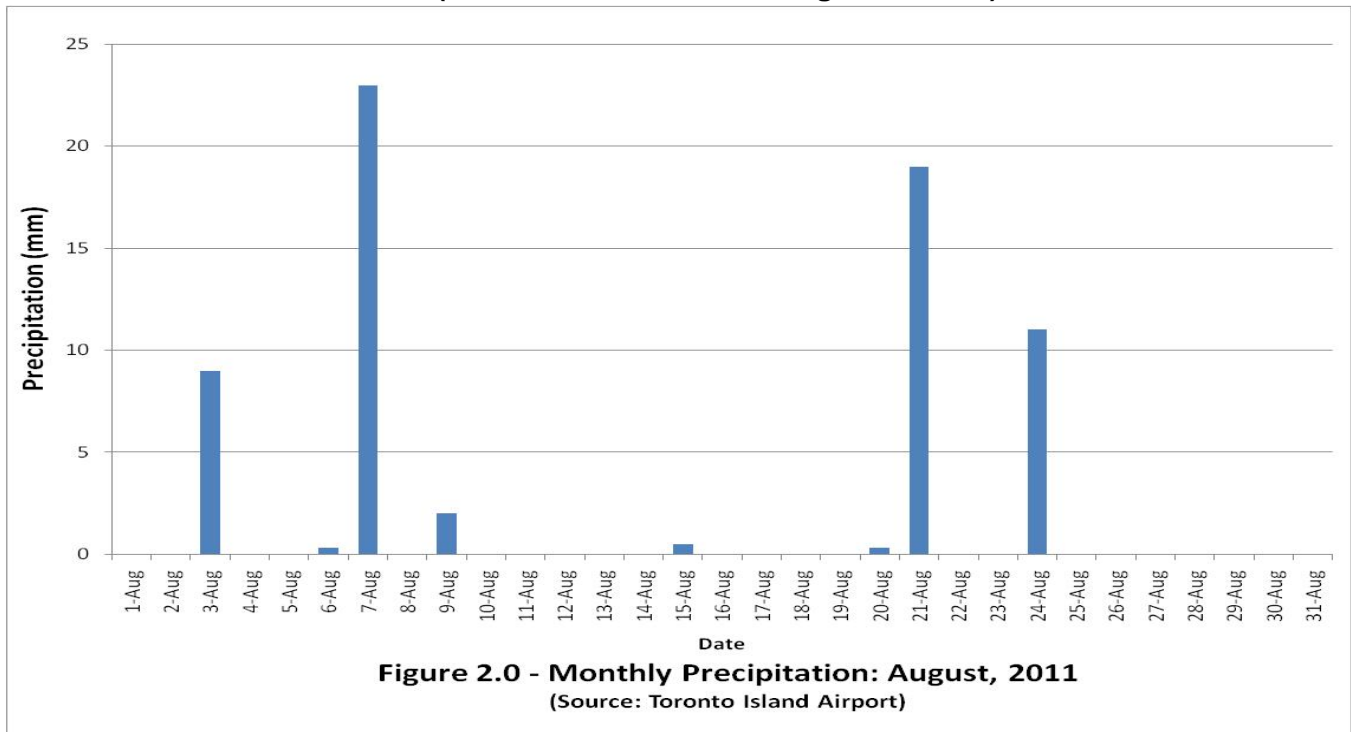


Figure 2.0 - Monthly Precipitation: August, 2011
(Source: Toronto Island Airport)