

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: October 2011

The air quality sampling results for Polycyclic Aromatic Hydrocarbons (PAHs) and metals presented here were collected at seven perimeter monitoring stations in October 2011, with 24-hr sampling conducted on a six-day schedule. 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
Oct. Summary Data	Number of Samples	35	35
	Average Concentration $\mu\text{g}/\text{m}^3$	0.00025	0.25
	Maximum Concentration $\mu\text{g}/\text{m}^3$	0.0020	1.06
	Minimum Concentration $\mu\text{g}/\text{m}^3$	0.00015	0.037
	Number of days greater than AAQC	1	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
Oct. Summary Data	Number of Samples	35	35	35	35	35	35
	Average Concentration $\mu\text{g}/\text{m}^3$	0.0036	0.0010	0.0066	0.017	0.047	0.0041
	Maximum Concentration $\mu\text{g}/\text{m}^3$	0.0040	0.0014	0.034	0.10	0.17	0.012
	Minimum Concentration $\mu\text{g}/\text{m}^3$	0.0030	0.0010	0.0018	0.0029	0.0064	0.0018
	Number of days greater than AAQC	0	0	0	0	0	0
	Baseline Concentration $\mu\text{g}/\text{m}^3$	0.0035	0.001	0.0048	0.0137	0.041	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 Community Monitoring Station
Monitoring Period: October 2011

The air quality sampling results for PM10 and metals presented here were collected at the community monitoring station in October 2011, with 24-hr sampling conducted on a six-day schedule. 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
Oct. Summary Data	Number of Samples	5.0
	Average Concentration $\mu\text{g}/\text{m}^3$	29.1
	Maximum Concentration $\mu\text{g}/\text{m}^3$	40.1
	Minimum Concentration $\mu\text{g}/\text{m}^3$	15.8
	Number of Days greater than AAQC	0
	Baseline Concentration $\mu\text{g}/\text{m}^3$	39.4
	24-hour Ambient Air Quality Criteria (AAQC) $\mu\text{g}/\text{m}^3$	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.

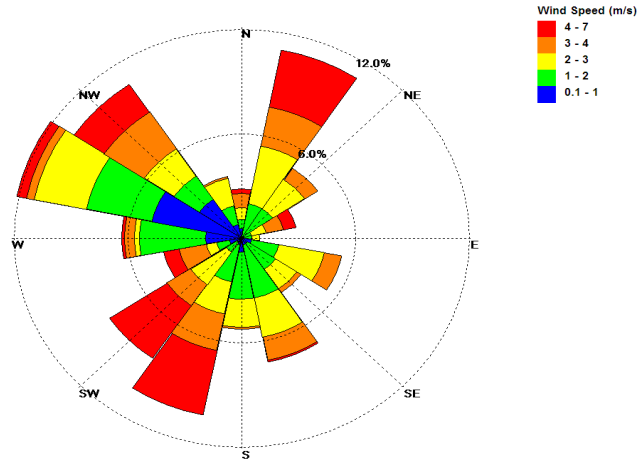
		Arsenic	Cadmium	Chromium	Lead	Manganese	Nickel
Oct. Summary Data	Number of Samples	5	5	5	5	5	5
	Average Concentration $\mu\text{g}/\text{m}^3$	0.0030	0.0010	0.0036	0.0088	0.027	0.0026
	Maximum Concentration $\mu\text{g}/\text{m}^3$	0.0030	0.0010	0.0058	0.012	0.041	0.0032
	Minimum Concentration $\mu\text{g}/\text{m}^3$	0.0030	0.0010	0.0022	0.0050	0.014	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	0.041	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

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Meteorological Data Summary



October 2011 - On Site

Figure 1.0 - Monthly Wind Rose: October, 2011

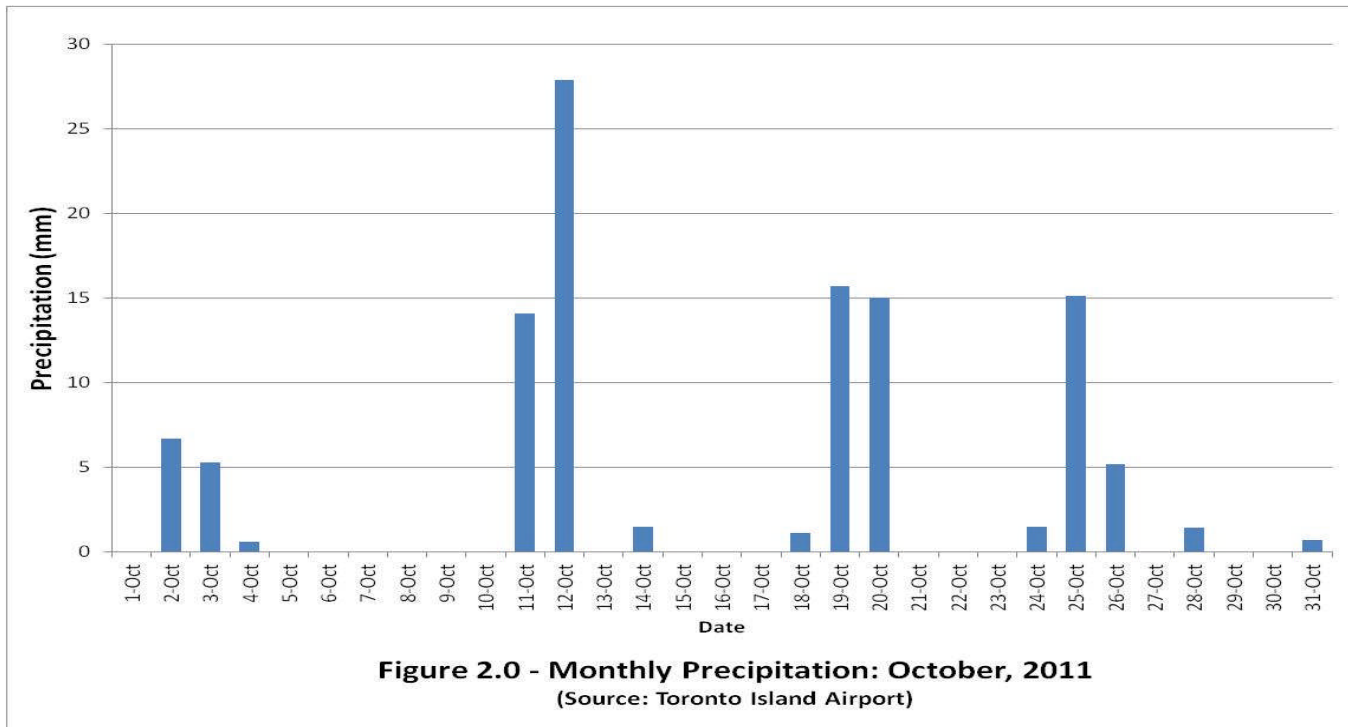


Figure 2.0 - Monthly Precipitation: October, 2011
(Source: Toronto Island Airport)