

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1291-05
FROM	Dianne Theriault	SHIFT:	0730 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	7 th April, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP2 - 0139

**SUBJECT: 7th April, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Material Processing Facility
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 7th of April, 2009. Alison Giovannetti and Jennifer Andrews, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly cloudy with periods of rain
- Temperature: approximately 2°C
- Wind Direction: Southeast

Comments: *ALL-TECH was on-Site at 0730 hours and sampling began as soon as there was site activity, but was later put on standby between 0930 and 1230 hours and between 1530 and 1730 due to precipitation. Air monitoring was performed during AECOM's construction activities.*

A reading of 116 µg/m³ was recorded at 1300 hours at the downwind location, but was attributed to off-site activities, as a truck was unloading material near the sampling location. STPA was notified, but the numbers progressively got lower during the rest of the afternoon.

All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were below the established Site Action Level for this parameter of 0.66 ppm. Each measurement is the average of a 15 minute sample. A minimum of 2 samples were taken downwind and 1 sample upwind every hour. All measurements were found to be below the detection limit of the instrument. Levels above detection limit will be noted in the table below.

Due to operational criteria, during periods of precipitation (snow and rain) and high humidity, TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Alison Giovannetti and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



Dianne Theriault, B.Tech
Environmental Technologist
ALL-TECH Environmental Services Cape Breton Ltd.

Copied via e-mail:

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Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Material Processing Facility
7th April, 2009

Sample No. & Air Monitoring Location	Time of Day	PM₁₀ Action Level (µg/m³)	Average Result (µg/m³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 75m North of STPA building along railway tracks	0800	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
2 120m North of Ferry St. and Railway Rd. Intersection	0800	155	37	Southeast	Downwind	Worker activity	No observations seen to affect sampling integrity
3 120m North of Ferry St. and Railway Rd. Intersection	0830	155	31	Southeast	Downwind	Worker activity	No observations seen to affect sampling integrity
4 75m North of STPA building along railway tracks	0900	155	12	Southeast	Upwind	Background	No observations seen to affect sampling integrity
5 120m North of Ferry St. and Railway Rd. Intersection	0900	155	36	Southeast	Downwind	Worker activity	No observations seen to affect sampling integrity
6 120m North of Ferry St. and Railway Rd. Intersection	0915	155	39	Southeast	Downwind	Worker activity	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
7 75m North of STPA building along railway tracks	1230	155	18	Southeast	Upwind	Background	No observations seen to affect sampling integrity
8 120m North of Ferry St. and Railway Rd. Intersection	1230	155	50	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 120m North of Ferry St. and Railway Rd. Intersection	1245	155	55	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
10 75m North of STPA building along railway tracks	1300	155	20	Southeast	Upwind	Background	No observations seen to affect sampling integrity
11 120m North of Ferry St. and Railway Rd. Intersection	1300	155	116	Southeast	Downwind	Worker activity	Off-site truck nearby pouring material, creating dust
12 120m North of Ferry St. and Railway Rd. Intersection	1330	155	82	Southeast	Downwind	Worker activity	Off-site truck nearby pouring material, creating dust
13 75m North of STPA building along railway tracks	1400	155	31	Southeast	Upwind	Background	Changed sampling location 15m North of truck creating dust

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
14 135m North of Ferry St. and Railway Rd. Intersection	1400	155	93	Southeast	Downwind	Worker activity	Off-site truck nearby pouring material, creating dust
15 135m North of Ferry St. and Railway Rd. Intersection	1420	155	77	Southeast	Downwind	Worker activity	Off-site truck nearby pouring material, creating dust
16 75m North of STPA building along railway tracks	1500	155	21	Southeast	Upwind	Background	No observations seen to affect sampling integrity
17 135m North of Ferry St. and Railway Rd. Intersection	1500	155	49	Southeast	Downwind	Worker activity	No observations seen to affect sampling integrity

Notes: Air sample duration for each monitoring event was 15 minutes.

Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
120m North of Ferry St. and Railway Rd. Intersection	0800 to 0859	34	990
120m North of Ferry St. and Railway Rd. Intersection	0900 to 0959	72	990
120m North of Ferry St. and Railway Rd. Intersection	1200 to 1259	125	990
120m North of Ferry St. and Railway Rd. Intersection	1300 to 1359	226	990
135m North of Ferry St. and Railway Rd. Intersection	1400 to 1459	311	990
135m North of Ferry St. and Railway Rd. Intersection	1500 to 1559	360	990

VOC Monitoring

Monitoring Method	Yes	No
Sustained Odours Observed		●
P.I.D. Required	●	