

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1269-12
FROM	Dianne Theriault	SHIFT:	0730 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	19 th February, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP2-0110

**SUBJECT: 19th February, 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 19th of February, 2009. Alison Giovannetti and Colin MacIsaac, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly sunny with cloudy periods
- Temperature: approximately -5°C
- Wind Direction: East

Comments: *ALL-TECH was on-Site at 0730 hours and sampling began as soon as there was site activity. Air monitoring was performed during AECOM's construction activities.*

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
19th February, 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 100m North of Spar and Inglis Intersection	0800	155	32	East	Upwind	Background	No observations seen to affect sampling integrity
2 70m East of the Midland building	0800	155	32	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 70m East of the Midland building	0830	155	27	East	Downwind	Excavation of material	No observations seen to affect sampling integrity
4 100m North of Spar and Inglis Intersection	0900	155	28	East	Upwind	Background	No observations seen to affect sampling integrity
5 70m East of the Midland building	0900	155	18	East	Downwind	Excavation of material	No observations seen to affect sampling integrity
6 70m East of the Midland building	0930	155	16	East	Downwind	Excavation of material	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 100m North of Spar and Inglis Intersection	1000	155	16	East	Upwind	Background	No observations seen to affect sampling integrity
8 70m East of the Midland building	1000	155	6	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 70m East of the Midland building	1030	155	6	East	Downwind	Excavation of material	No observations seen to affect sampling integrity
10 100m North of Spar and Inglis Intersection	1100	155	4	East	Upwind	Background	No observations seen to affect sampling integrity
11 70m East of the Midland building	1100	155	2	East	Downwind	Excavation of material	No observations seen to affect sampling integrity
12 70m East of the Midland building	1145	155	2	East	Downwind	Excavation of material	No observations seen to affect sampling integrity
13 100m North of Spar and Inglis Intersection	1200	155	6	East	Upwind	Background	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
14 70m East of the Midland building	1200	155	1	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 70m East of the Midland building	1245	155	2	East	Downwind	Excavation of material	No observations seen to affect sampling integrity
16 100m North of Spar and Inglis Intersection	1300	155	6	East	Upwind	Background	No observations seen to affect sampling integrity
17 70m East of the Midland building	1300	155	5	East	Downwind	Personnel working on building	No observations seen to affect sampling integrity
18 70m East of the Midland building	1345	155	0	East	Downwind	Personnel working on building	Re-zeroed dust track in the field due to zero results
19 100m North of Spar and Inglis Intersection	1400	155	2	East	Upwind	Background	No observations seen to affect sampling integrity
20 70m East of the Midland building	1400	155	3	East	Downwind	Excavation of material	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
21 70m East of the Midland building	1445	155	4	East	Downwind	Personnel working on building	No observations seen to affect sampling integrity
22 100m North of Spar and Inglis Intersection	1500	155	3	East	Upwind	Background	No observations seen to affect sampling integrity
23 70m East of the Midland building	1500	155	3	East	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 70m East of the Midland building	1530	155	4	East	Downwind	Personnel working on building	No observations seen to affect sampling integrity
25 100m North of Spar and Inglis Intersection	1600	155	5	East	Upwind	Background	No observations seen to affect sampling integrity
26 70m East of the Midland building	1600	155	6	East	Downwind	Personnel working on building	No observations seen to affect sampling integrity
27 70m East of the Midland building	1645	155	6	East	Downwind	No activity observed on site	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 ($\mu\text{g}/\text{m}^3$)
70m East of Midland building	0800 to 0859	30	990
70m East of Midland building	0900 to 0959	47	990
70m East of Midland building	1000 to 1059	53	990
70m East of Midland building	1100 to 1159	55	990
70m East of Midland building	1200 to 1259	57	990
70m East of Midland building	1300 to 1359	60	990
70m East of Midland building	1400 to 1459	64	990
70m East of Midland building	1500 to 1559	68	990
70m East of Midland building	1600 to 1659	74	990

VOC Monitoring

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