

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1291-12
FROM	Dianne Theriault	SHIFT:	0730 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	20 th April, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP2-0146

**SUBJECT: 17th 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 17th of April, 2009. Tyler Rowe and Nigel MacLean of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly sunny
- Temperature: approximately 4°C
- Wind Direction: West to Northwest

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 Tyler Rowe 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
17th 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 Railway property, 100m North of Ferry Street	0800	155	12	West	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis Street, 5m North of Spar Road	0800	155	19	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 Inglis Street, 5m North of Spar Road	0820	155	16	West	Downwind	Excavator operating	No observations seen to affect sampling integrity
4 Railway property, 400m North of Ferry Street	0900	155	12	Northwest	Upwind	Background	No observations seen to affect sampling integrity
5 Spar Road, 20m West of Inglis Street	0900	155	13	Northwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
6 Spar Road, 20m West of Inglis Street	0930	155	22	Northwest	Downwind	Excavator operating	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 Railway property, 400m North of Ferry Street	1000	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 Spar Road, 20m West of Inglis Street	1000	155	11	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 Spar Road, 20m West of Inglis Street	1035	155	21	Northwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
10 Railway property, 400m North of Ferry Street	1100	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 Spar Road, 20m West of Inglis Street	1100	155	52	Northwest	Downwind	Excavator operating	High wind blowing dust from site road
12 Spar Road, 20m West of Inglis Street	1125	155	42	Northwest	Downwind	Excavator operating	High wind blowing dust from site road
13 Railway property, 400m North of Ferry Street	1200	155	8	Northwest	Upwind	Background	No observations seen to affect sampling integrity

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
14 Spar Road, 20m West of Inglis Street	1200	155	27	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 Spar Road, 20m West of Inglis Street	1215	155	17	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 Railway property, 400m North of Ferry Street	1300	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 Spar Road, 20m West of Inglis Street	1300	155	16	Northwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
18 Spar Road, 20m West of Inglis Street	1340	155	13	Northwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
19 Railway property, 400m North of Ferry Street	1400	155	9	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 Spar Road, 20m West of Inglis Street	1400	155	16	Northwest	Downwind	Excavator operating	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 Spar Road, 20m West of Inglis Street	1440	155	22	Northwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
22 Railway property, 400m North of Ferry Street	1500	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 Spar Road, 20m West of Inglis Street	1500	155	11	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 Spar Road, 20m West of Inglis Street	1525	155	25	Northwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
25 Railway property, 400m North of Ferry Street	1600	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 Spar Road, 20m West of Inglis Street	1600	155	18	Northwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
27 Spar Road, 20m West of Inglis Street	1645	155	15	Northwest	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 ($\mu\text{g}/\text{m}^3$)
Inglis Street, 5m North of Spar Road	0800 to 0859	18	990
Spar Road, 20m West of Inglis Street	0900 to 0959	36	990
Spar Road, 20m West of Inglis Street	1000 to 1059	52	990
Spar Road, 20m West of Inglis Street	1100 to 1159	99	990
Spar Road, 20m West of Inglis Street	1200 to 1259	121	990
Spar Road, 20m West of Inglis Street	1300 to 1359	136	990
Spar Road, 20m West of Inglis Street	1400 to 1459	155	990
Spar Road, 20m West of Inglis Street	1500 to 1559	173	990
Spar Road, 20m West of Inglis Street	1600 to 1659	190	990

VOC Monitoring

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