

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1329-03
FROM	Dianne Theriault	SHIFT:	0730 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
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DATE	4 th June, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP2-0171

**SUBJECT: 3rd June, 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 3rd of June, 2009. Shaun Dove and Alison Giovannetti of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Partly cloudy
- Temperature: approximately 19°C
- Wind Direction: Southwest to West to Southwest

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
3rd June, 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 South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.465')	0800	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	0800	155	10	Southwest	Downwind	Zoom boom and excavators operating	No observations seen to affect sampling integrity
3 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	0820	155	21	Southwest	Downwind	Zoom boom and excavators operating	No observations seen to affect sampling integrity
4 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.465')	0900	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	0900	155	58	Southwest	Downwind	Zoom boom and excavators operating	No observations seen to affect sampling integrity
6 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	0915	155	30	Southwest	Downwind	Zoom boom and excavators 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 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.465')	1000	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	1000	155	12	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	1025	155	44	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
10 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.465')	1100	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	1100	155	33	Southwest	Downwind	Excavators moving material	No observations seen to affect sampling integrity
12 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	1115	155	17	Southwest	Downwind	Excavators moving 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
13 75m North of Ferry St. and Railway Rd. intersection (N 46° 08.789' W 060° 11.565')	1200	155	10	West	Upwind	Background	No observations seen to affect sampling integrity
14 100m Southeast of TP2 main entrance (N 46° 08.955' W 060° 11.245')	1200	155	17	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 100m Southeast of TP2 main entrance (N 46° 08.955' W 060° 11.245')	1220	155	15	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 75m North of Ferry St. and Railway Rd. intersection (N 46° 08.789' W 060° 11.565')	1300	155	11	West	Upwind	Background	No observations seen to affect sampling integrity
17 100m Southeast of TP2 main entrance (N 46° 08.955' W 060° 11.245')	1300	155	37	West	Downwind	Zoom boom and excavators operating	No observations seen to affect sampling integrity
18 100m Southeast of TP2 main entrance (N 46° 08.955' W 060° 11.245')	1315	155	24	West	Downwind	Zoom boom and excavators 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
19 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.465')	1400	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	1400	155	37	Southwest	Downwind	Zoom boom and excavators operating	No observations seen to affect sampling integrity
21 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	1420	155	29	Southwest	Downwind	Zoom boom and excavators operating	No observations seen to affect sampling integrity
22 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.465')	1500	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	1500	155	28	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	1515	155	51	Southwest	Downwind	Excavator moving 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
25 100m South of Ferry St. and Railway Rd. intersection (N 46° 08.668' W 060° 11.465')	1600	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	1600	155	75	Southwest	Downwind	Worker activity	Traffic close to equipment
27 50m Southeast of TP2 main entrance (N 46° 08.939' W 060° 11.237')	1640	155	16	Southwest	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 ($\mu\text{g}/\text{m}^3$)
50m Southeast of TP2 main entrance	0800 to 0859	16	990
50m Southeast of TP2 main entrance	0900 to 0959	60	990
50m Southeast of TP2 main entrance	1000 to 1059	88	990
50m Southeast of TP2 main entrance	1100 to 1159	113	990
100m Southeast of TP2 main entrance	1200 to 1259	129	990
100m Southeast of TP2 main entrance	1300 to 1359	160	990
50m Southeast of TP2 main entrance	1400 to 1459	193	990
50m Southeast of TP2 main entrance	1500 to 1559	233	990
50m Southeast of TP2 main entrance	1600 to 1659	279	990

VOC Monitoring

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