

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1309-09
FROM	Dianne Theriault	SHIFT:	0730 to 1730
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
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DATE	19 th May, 2009		Terry Smith, ALL-TECH
		STPA NO.	TP2-0163

**SUBJECT: 15th May, 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 15th of May, 2009. Nigel MacLean and Shaun Dove of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly cloudy, showers
- Temperature: approximately 13°C
- Wind Direction: Southwest

Comments: *ALL-TECH was on-Site at 0730 and sampling began as soon as there was site activity, but was later put on standby at 0830 hours due to precipitation. Air monitoring resumed at 1000 hours when weather conditions were within instrument specifications. 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 Nigel MacLean 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
15th May, 2009

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
1 45m Northeast of Dodd St. and Dorchester St. intersection	0800	155	19	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 50m Southeast of TP2 main gate	0800	155	23	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
3 50m Southeast of TP2 main gate	0815	155	20	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
4 45m Northeast of Dodd St. and Dorchester St. intersection	1000	155	15	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 50m Southeast of TP2 main gate	1000	155	18	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
6 50m Southeast of TP2 main gate	1020	155	22	Southwest	Downwind	Machines moving material	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
7 45m Northeast of Dodd St. and Dorchester St. intersection	1100	155	23	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 50m Southeast of TP2 main gate	1100	155	39	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
9 50m Southeast of TP2 main gate	1120	155	51	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
10 45m Northeast of Dodd St. and Dorchester St. intersection	1200	155	19	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 50m Southeast of TP2 main gate	1200	155	32	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 50m Southeast of TP2 main gate	1220	155	28	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
13 45m Northeast of Dodd St. and Dorchester St. intersection	1300	155	17	Southwest	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 50m Southeast of TP2 main gate	1300	155	28	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
15 50m Southeast of TP2 main gate	1345	155	37	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
16 45m Northeast of Dodd St. and Dorchester St. intersection	1400	155	19	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 50m Southeast of TP2 main gate	1400	155	24	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
18 50m Southeast of TP2 main gate	1425	155	23	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
19 45m Northeast of Dodd St. and Dorchester St. intersection	1500	155	23	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 50m Southeast of TP2 main gate	1500	155	25	Southwest	Downwind	No activity observed on site	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 50m Southeast of TP2 main gate	1525	155	37	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
22 45m Northeast of Dodd St. and Dorchester St. intersection	1600	155	21	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 50m Southeast of TP2 main gate	1600	155	28	Southwest	Downwind	Machines moving material	No observations seen to affect sampling integrity
24 50m Southeast of TP2 main gate	1640	155	35	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 Gate	0800 to 0859	22	990
50m Southeast of TP2 Main Gate	0900 to 0959	55	990
50m Southeast of TP2 Main Gate	1000 to 1059	75	990
50m Southeast of TP2 Main Gate	1100 to 1159	120	990
50m Southeast of TP2 Main Gate	1200 to 1259	150	990
50m Southeast of TP2 Main Gate	1300 to 1359	183	990
50m Southeast of TP2 Main Gate	1400 to 1459	207	990
50m Southeast of TP2 Main Gate	1500 to 1559	238	990
50m Southeast of TP2 Main Gate	1600 to 1659	270	990

VOC Monitoring

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