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MEMORANDUM

TO	Dawn MacNeil, STPA	**FILE NO.**	S-1312-19
FROM	Dianne Theriault	**SHIFT:**	0630 to 1830
TEL	(902) 539-3012	**CC:**	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	19th May, 2009		Terry Smith, ALL-TECH
		STPA NO.	**CO2-NSL-0050**

SUBJECT: 15th May, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Tar Cell, Sysco Site
FINAL REPORT

Attached is a summary of Real-time particulate (as PM_{10}) results for air monitoring performed on the 15th of May, 2009. David Reeves and Reg Peters 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 0630 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 SLR`s construction activities.*

All downwind and upwind measurements of PM_{10} were below the established Site Action Level for this parameter of 155 µg/m^3.

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 David Reeves 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 PM_{10} Concentration Results
Sydney Tar Ponds Agency – Tar Cell, Sysco Site
15th May, 2009

Sample No. & Air Monitoring Location	Time of Day	PM_{10} Action Level ($\mu g/m^3$)	Average Result ($\mu g/m^3$)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 40m East of railway building	0700	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 30m North of new scale, 400m North of TP2 entrance	0700	155	14	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
3 30m North of new scale, 400m North of TP2 entrance	0720	155	16	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
4 40m East of railway building	0800	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 30m North of new scale, 400m North of TP2 entrance	0800	155	30	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
6 30m North of new scale, 400m North of TP2 entrance	0820	155	23	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM_{10} Action Level ($\mu g/m^3$)	Average Result ($\mu g/m^3$)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
7 40m East of railway building	1000	155	6	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 30m North of new scale, 400m North of TP2 entrance	1000	155	15	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
9 30m North of new scale, 400m North of TP2 entrance	1030	155	15	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
10 40m East of railway building	1100	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 30m North of new scale, 400m North of TP2 entrance	1100	155	16	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
12 30m North of new scale, 400m North of TP2 entrance	1115	155	15	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
13 40m East of railway building	1200	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM_{10} Action Level ($\mu g/m^3$)	Average Result ($\mu g/m^3$)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
14 30m North of new scale, 400m North of TP2 entrance	1200	155	19	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
15 30m North of new scale, 400m North of TP2 entrance	1225	155	18	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
16 40m East of railway building	1300	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 30m North of new scale, 400m North of TP2 entrance	1300	155	13	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
18 30m North of new scale, 400m North of TP2 entrance	1345	155	16	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
19 40m East of railway building	1400	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 40m North of new scale, 410m North of TP2 entrance	1400	155	32	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM_{10} Action Level ($\mu g/m^3$)	Average Result ($\mu g/m^3$)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
21 40m North of new scale, 410m North of TP2 entrance	1435	155	23	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
22 40m East of railway building	1500	155	11	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 40m North of new scale, 410m North of TP2 entrance	1500	155	28	Southwest	Downwind	Activity not visible from sample location	No observations seen to affect sampling integrity
24 40m North of new scale, 410m North of TP2 entrance	1525	155	60	Southwest	Downwind	Activity not visible from sample location	Dust from road traffic
25 40m East of railway building	1600	155	12	Southwest	Upwind	Background	No observations seen to affect sampling integrity
21 40m North of new scale, 410m North of TP2 entrance	1600	155	61	Southwest	Downwind	Activity not visible from sample location	Dust from road traffic
21 40m North of new scale, 410m North of TP2 entrance	1645	155	18	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 ($\mu g/m^3$)	Dust Budget Exceedance Value ($\mu g/m^3$)
30m North of new scale, 400m North of TP2 entrance	0700 to 0759	15	990
30m North of new scale, 400m North of TP2 entrance	0800 to 0859	42	990
30m North of new scale, 400m North of TP2 entrance	0900 to 0959	75	990
30m North of new scale, 400m North of TP2 entrance	1000 to 1059	90	990
30m North of new scale, 400m North of TP2 entrance	1100 to 1159	106	990
30m North of new scale, 400m North of TP2 entrance	1200 to 1259	125	990
30m North of new scale, 400m North of TP2 entrance	1300 to 1359	140	990
40m North of new scale, 410m North of TP2 entrance	1400 to 1459	168	990
40m North of new scale, 410m North of TP2 entrance	1500 to 1559	212	990
40m North of new scale, 410m North of TP2 entrance	1600 to 1659	252	990

VOC Monitoring

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