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MEMORANDUM

TO	Dawn MacNeil, STPA	**FILE NO.**	S-1312-29
FROM	Dianne Theriault	**SHIFT:**	0630 to 1830
TEL	(902) 539-3012	**CC:**	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	28th May, 2009		Terry Smith, ALL-TECH
		STPA NO.	**CO2-NSL-0060**

SUBJECT: 27th 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 27th of May, 2009. Donald MacIsaac 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 sunny
- Temperature: approximately 8°C
- Wind Direction: West to Northwest to North to East

Comments: *ALL-TECH was on-Site at 0630 and sampling began as soon as there was site activity. 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 Donald MacIsaac 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
27th 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 100m East of railway building	0700	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
2 100m South of new truck scale	0700	155	6	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 100m South of new truck scale	0720	155	26	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
4 100m East of railway building	0800	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
5 100m South of new truck scale	0800	155	31	West	Downwind	Equipment operating	No observations seen to affect sampling integrity
6 100m South of new truck scale	0830	155	19	West	Downwind	Equipment operating	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 110m Northeast of railway building	0900	155	6	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 140m South of new truck scale	0900	155	13	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
9 140m South of new truck scale	0945	155	70	Northwest	Downwind	Equipment operating	Dust from road traffic
10 110m Northeast of railway building	1000	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 140m South of new truck scale	1000	155	12	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
12 140m South of new truck scale	1025	155	6	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
13 110m Northeast of railway building	1100	155	9	Northwest	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 140m Southwest of new truck scale	1100	155	7	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
15 140m Southwest of new truck scale	1120	155	22	Northwest	Downwind	Equipment operating	No observations seen to affect sampling integrity
16 140m East of railway building	1200	155	6	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
17 250m South of old incinerator	1205	155	10	North	Upwind	Background	No observations seen to affect sampling integrity
18 140m East of railway building	1225	155	6	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
19 250m South of old incinerator	1300	155	17	North	Upwind	Background	No observations seen to affect sampling integrity
20 140m East of railway building	1300	155	7	North	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 ($\mu g/m^3$)	Average Result ($\mu g/m^3$)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
21 140m East of railway building	1335	155	11	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
22 250m South of old incinerator	1400	155	5	North	Upwind	Background	No observations seen to affect sampling integrity
23 140m East of railway building	1400	155	17	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
24 140m East of railway building	1425	155	18	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
25 250m South of old incinerator	1500	155	13	North	Upwind	Background	No observations seen to affect sampling integrity
26 140m East of railway building	1500	155	16	North	Downwind	Equipment operating	No observations seen to affect sampling integrity
27 140m East of railway building	1515	155	38	North	Downwind	Equipment operating	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
28 90m South of new truck scale	1600	155	9	East	Upwind	Background	No observations seen to affect sampling integrity
29 120m North of railway building	1600	155	7	East	Downwind	Equipment operating	No observations seen to affect sampling integrity
30 120m North of railway building	1625	155	7	East	Downwind	Equipment operating	No observations seen to affect sampling integrity
31 90m South of new truck scale	1700	155	5	East	Upwind	Background	No observations seen to affect sampling integrity
32 120m North of railway building	1700	155	2	East	Downwind	Equipment operating	No observations seen to affect sampling integrity
33 120m North of railway building	1745	155	3	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 ($\mu g/m^3$)	Dust Budget Exceedance Value ($\mu g/m^3$)
100m South of new truck scale	0700 to 0759	16	990
100m South of new truck scale	0800 to 0859	41	990
140m South of new truck scale	0900 to 0959	83	990
140m South of new truck scale	1000 to 1059	92	990
140m Southwest of new truck scale	1100 to 1159	107	990
140m East of railway building	1200 to 1259	113	990
140m East of railway building	1300 to 1359	122	990
140m East of railway building	1400 to 1459	140	990
140m East of railway building	1500 to 1559	167	990
120m North of railway building	1600 to 1659	174	990
120m North of railway building	1700 to 1759	177	990

VOC Monitoring

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