

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1313-29
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1830
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	28 <sup>th</sup> May, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	TP6D-SP-0067

**SUBJECT: 27<sup>th</sup> May, 2009 Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads, South Pond  
FINAL REPORT**

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Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 27<sup>th</sup> of May, 2009. David Reeves 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 8°C
- Wind Direction: West to Northwest to North to East

**Comments:** *ALL-TECH was on-Site at 0630 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 PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

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,



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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<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Access Roads, South Pond**  
**27<sup>th</sup> May, 2009**

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 40m Northeast of Dodd St. and Pitt St. intersection	0700	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
2 80m Southwest of Plaza Ford	0700	155	7	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 80m Southwest of Plaza Ford	0730	155	12	West	Downwind	Excavator, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
4 40m Northeast of Dodd St. and Pitt St. intersection	0800	155	4	West	Upwind	Background	No observations seen to affect sampling integrity
5 80m Southwest of Plaza Ford	0800	155	6	West	Downwind	Excavator, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
6 80m Southwest of Plaza Ford	0830	155	6	West	Downwind	Excavator, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
7 30m Southeast of Walker St. and Ferry St. intersection	0900	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity
8 20m North of Terminal Rd. and Prince St. intersection	0900	155	8	Northwest	Downwind	Excavator, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
9 20m North of Terminal Rd. and Prince St. intersection	0920	155	8	Northwest	Downwind	Excavator, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
10 30m Southeast of Walker St. and Ferry St. intersection	1000	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
11 20m North of Terminal Rd. and Prince St. intersection	1000	155	5	Northwest	Downwind	Excavator, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
12 20m North of Terminal Rd. and Prince St. intersection	1035	155	8	Northwest	Downwind	Excavator, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
13 30m Southeast of Walker St. and Ferry St. intersection	1100	155	5	Northwest	Upwind	Background	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
14 20m North of Prince St. and Dodd St. intersection	1100	155	12	Northwest	Downwind	Excavator, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
15 20m North of Prince St. and Dodd St. intersection	1125	155	21	Northwest	Downwind	Excavator, dozer, dump trucks, roller in operation	No observations seen to affect sampling integrity
16 25m West of Inglis St. and Ferry St. intersection	1200	155	8	North	Upwind	Background	No observations seen to affect sampling integrity
17 30m North of Prince St. and Dodd St. intersection	1200	155	6	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 30m North of Prince St. and Dodd St. intersection	1240	155	3	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 25m West of Inglis St. and Ferry St. intersection	1300	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
20 30m North of Prince St. and Dodd St. intersection	1300	155	3	North	Downwind	Roller, dozer in operation	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
21 30m North of Prince St. and Dodd St. intersection	1330	155	4	North	Downwind	Roller, dozer in operation	No observations seen to affect sampling integrity
22 25m West of Inglis St. and Ferry St. intersection	1400	155	9	North	Upwind	Background	No observations seen to affect sampling integrity
23 40m North of former train station on Dodd St.	1400	155	10	North	Downwind	Roller, dozer in operation	No observations seen to affect sampling integrity
24 40m North of former train station on Dodd St.	1420	155	22	North	Downwind	Roller, dozer in operation	No observations seen to affect sampling integrity
25 25m West of Inglis St. and Ferry St. intersection	1500	155	7	North	Upwind	Background	No observations seen to affect sampling integrity
26 40m North of former train station on Dodd St.	1500	155	20	North	Downwind	Excavator, dump trucks, roller, dozer in operation	No observations seen to affect sampling integrity
27 40m North of former train station on Dodd St.	1540	155	4	North	Downwind	Excavator, dump trucks, roller, dozer in operation	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
28 60m Northeast of Plaza Ford	1600	155	4	East	Upwind	Background	No observations seen to affect sampling integrity
29 100m North of former train station on Dodd St.	1600	155	8	East	Downwind	Excavator, dump trucks, roller, dozer in operation	No observations seen to affect sampling integrity
30 100m North of former train station on Dodd St.	1625	155	5	East	Downwind	Dump trucks and dozer in operation	No observations seen to affect sampling integrity
31 60m Northeast of Plaza Ford	1700	155	3	East	Upwind	Background	No observations seen to affect sampling integrity
32 100m North of former train station on Dodd St.	1700	155	6	East	Downwind	Dump trucks and dozer in operation	No observations seen to affect sampling integrity
33 100m North of former train station on Dodd St.	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 ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
80m Southwest of Plaza Ford	0700 to 0759	10	990
80m Southwest of Plaza Ford	0800 to 0859	16	990
20m North of Terminal Rd. and Prince St. intersection	0900 to 0959	24	990
20m North of Terminal Rd. and Prince St. intersection	1000 to 1059	32	990
20m North of Dodd St. and Prince St. intersection	1100 to 1159	49	990
30m North of Dodd St. and Prince St. intersection	1200 to 1259	54	990
30m North of Dodd St. and Prince St. intersection	1300 to 1359	58	990
40m North of former train station on Dodd St.	1400 to 1459	74	990
40m North of former train station on Dodd St.	1500 to 1559	86	990
100m North of former train station on Dodd St.	1600 to 1659	93	990
100m North of former train station on Dodd St.	1700 to 1759	98	990



### VOC Monitoring

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