

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1292-02
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0630 to 1830
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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<b>DATE</b>	3 <sup>rd</sup> April, 2009	<b>STPA NO.</b>	TP6D-0012

**SUBJECT: 2<sup>nd</sup> April, 2009, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Access Roads  
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 2<sup>nd</sup> of April, 2009. Jennifer Andrews and Tyler Rowe, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Sunny with cloudy periods
- Temperature: approximately 4°C
- Wind Direction: Southwest

**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 Jennifer Andrews 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 – Material Processing Facility**  
**2<sup>nd</sup> April, 2009**

<b>Sample No. &amp; Air Monitoring Location</b>	<b>Time of Day</b>	<b>PM<sub>10</sub> Action Level (µg/m<sup>3</sup>)</b>	<b>Average Result (µg/m<sup>3</sup>)</b>	<b>Wind Direction</b>	<b>Relative Position</b>	<b>Description of Activity</b>	<b>Observations that may affect sample</b>
1 5m Northeast of Walker St and Ferry St Intersection	0700	155	17	Southwest	Upwind	Background	No observations seen to affect sampling integrity
2 60m Northeast of TP6D main gate	0700	155	17	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 60m Northeast of TP6D main gate	0740	155	19	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
4 5m Northeast of Walker St and Ferry St Intersection	0800	155	20	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 60m Northeast of TP6D main gate	0800	155	22	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
6 60m Northeast of TP6D main gate	0845	155	25	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity

<b>Sample No. &amp; Air Monitoring Location</b>	<b>Time of Day</b>	<b>PM<sub>10</sub> Action Level (µg/m<sup>3</sup>)</b>	<b>Average Result (µg/m<sup>3</sup>)</b>	<b>Wind Direction</b>	<b>Relative Position</b>	<b>Description of Activity</b>	<b>Observations that may affect sample</b>
7 5m Northeast of Walker St and Ferry St Intersection	0900	155	22	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 60m Northeast of TP6D main gate	0900	155	25	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
9 60m Northeast of TP6D main gate	0920	155	25	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
10 5m Northeast of Walker St and Ferry St Intersection	1000	155	20	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 60m Northeast of TP6D main gate	1000	155	25	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
12 60m Northeast of TP6D main gate	1035	155	21	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
13 5m Northeast of Walker St and Ferry St Intersection	1100	155	22	Southwest	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 60m Northeast of TP6D main gate	1100	155	21	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
15 60m Northeast of TP6D main gate e	1125	155	20	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
16 5m Northeast of Walker St and Ferry St Intersection	1200	155	21	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 60m Northeast of TP6D main gate	1200	155	19	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 60m Northeast of TP6D main gate	1220	155	19	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
19 5m Northeast of Walker St and Ferry St Intersection	1300	155	18	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 60m Northeast of TP6D main gate	1300	155	19	Southwest	Downwind	Excavator and dump truck 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 60m Northeast of TP6D main gate	1315	155	17	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
22 60m Northeast of TP6D main gate	1400	155	15	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
23 60m Northeast of TP6D main gate	1420	155	14	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
24 5m Northeast of Walker St and Ferry St Intersection	1500	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
25 60m Northeast of TP6D main gate	1500	155	15	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
26 60m Northeast of TP6D main gate	1525	155	17	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
27 5m Northeast of Walker St and Ferry St Intersection	1600	155	12	Southwest	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
28 60m Northeast of TP6D main gate	1600	155	16	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
29 60m Northeast of TP6D main gate	1640	155	18	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
30 5m Northeast of Walker St and Ferry St Intersection	1700	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
31 60m Northeast of TP6D main gate	1700	155	17	Southwest	Downwind	Excavator and dump truck in operation	No observations seen to affect sampling integrity
32 60m Northeast of TP6D main gate	1745	155	15	Southwest	Downwind	Excavator and dump truck in operation	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 ( $\mu\text{g}/\text{m}^3$ )
60m Northeast of TP6D main gate	0700 to 0759	18	990
60m Northeast of TP6D main gate	0800 to 0859	42	990
60m Northeast of TP6D main gate	0900 to 0959	67	990
60m Northeast of TP6D main gate	1000 to 1059	90	990
60m Northeast of TP6D main gate	1100 to 1159	111	990
60m Northeast of TP6D main gate	1200 to 1259	130	990
60m Northeast of TP6D main gate	1300 to 1359	148	990
60m Northeast of TP6D main gate	1400 to 1459	163	990
60m Northeast of TP6D main gate	1500 to 1559	179	990
60m Northeast of TP6D main gate	1600 to 1659	196	990
60m Northeast of TP6D main gate	1700 to 1759	212	990



### VOC Monitoring

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