

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
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**DATE** 6<sup>th</sup> March, 2009

**FILE NO.** S-1279-02  
**SHIFT:** 0730 to 1730  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH

**STPA NO.** TP2-0118

**SUBJECT: 5<sup>th</sup> March, 2009, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Material Processing Facility  
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 5<sup>th</sup> of March, 2009. Alison Giovannetti 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:

- Cloudy with flurries
- Temperature: approximately -9°C
- Wind Direction: West to Northwest

**Comments:** *ALL-TECH was on-Site at 0730 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 Alison Giovannetti 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**  
**5<sup>th</sup> March, 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 100m North of Ferry St. And railway intersection	0800	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
2 Inglis St., 75m North of Spar Rd.	0830	155	6	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 Inglis St., 75m North of Spar Rd.	0835	155	4	West	Downwind	Boom operating	No observations seen to affect sampling integrity
4 100m North of Ferry St. And railway intersection	0900	155	7	West	Upwind	Background	No observations seen to affect sampling integrity
5 Inglis St., 75m North of Spar Rd.	0900	155	4	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
6 Inglis St., 75m North of Spar Rd.	0930	155	5	West	Downwind	No activity observed on site	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 100m North of Ferry St. And railway intersection	1000	155	3	West	Upwind	Background	Peak PID reading of 0.1 likely due to train travelling upwind (strong diesel smell)
8 Inglis St., 75m North of Spar Rd.	1000	155	2	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
9 Inglis St., 75m North of Spar Rd.	1015	155	9	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
10 100m North of Ferry St. And railway intersection	1100	155	3	West	Upwind	Background	PID Avg. reading of 0.1 ppm likely due to train travelling upwind (strong diesel smell)
11 Inglis St., 75m North of Spar Rd.	1100	155	3	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 Inglis St., 75m North of Spar Rd.	1120	155	29	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
13 100m North of Ferry St. And railway intersection	1200	155	4	West	Upwind	Background	Side by side PID reading with Tyler at 1250 hours gave duplicate results of 0 ppm (flurries delayed side by side comparison)

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 Inglis St., 75m North of Spar Rd.	1200	155	16	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 Inglis St., 75m North of Spar Rd.	1225	155	46	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 150m North of Ferry St. And railway intersection	1300	155	10	Northwest	Upwind	Background	No observations seen to affect sampling integrity
17 Inglis St., 15m North of Spar Rd.	1300	155	12	Northwest	Downwind	Personnel working by hand	No observations seen to affect sampling integrity
18 Inglis St., 15m North of Spar Rd.	1340	155	6	Northwest	Downwind	Personnel working by hand	No observations seen to affect sampling integrity
19 150m North of Ferry St. And railway intersection	1400	155	2	Northwest	Upwind	Background	No observations seen to affect sampling integrity
20 Inglis St., 15m North of Spar Rd.	1400	155	3	Northwest	Downwind	Personnel working by hand	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 Inglis St., 15m North of Spar Rd.	1415	155	1	Northwest	Downwind	Personnel working by hand	No observations seen to affect sampling integrity
22 150m North of Ferry St. And railway intersection	1500	155	14	Northwest	Upwind	Background	No observations seen to affect sampling integrity
23 Inglis St., 15m North of Spar Rd.	1500	155	33	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 Inglis St., 15m North of Spar Rd.	1535	155	11	Northwest	Downwind	Backhoe operating adjacent to site fence	No observations seen to affect sampling integrity
25 150m North of Ferry St. And railway intersection	1600	155	2	Northwest	Upwind	Background	No observations seen to affect sampling integrity
26 Inglis St., 15m North of Spar Rd.	1600	155	41	Northwest	Downwind	Backhoe operating adjacent to site fence	Backhoe operating adjacent to site fence
27 Inglis St., 15m North of Spar Rd.	1645	155	9	Northwest	Downwind	Backhoe operating adjacent to site fence	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 ( $\mu\text{g}/\text{m}^3$ )
Inglis St., 75m North of Spar Rd.	0800 to 0859	5	990
Inglis St., 75m North of Spar Rd.	0900 to 0959	10	990
Inglis St., 75m North of Spar Rd.	1000 to 1059	16	990
Inglis St., 75m North of Spar Rd.	1100 to 1159	32	990
Inglis St., 75m North of Spar Rd.	1200 to 1259	63	990
Inglis St., 15m North of Spar Rd.	1300 to 1359	72	990
Inglis St., 15m North of Spar Rd.	1400 to 1459	74	990
Inglis St., 15m North of Spar Rd.	1500 to 1559	106	990
Inglis St., 15m North of Spar Rd.	1600 to 1659	131	990

### VOC Monitoring

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