

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1100-24
FROM	Grant Harrigan	SHIFT:	0630 to 1130
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	8 th April, 2008		Terry Smith, ALL-TECH
		STPA NO.	CP-0109

**SUBJECT: 28th March, 2008, (Revised) Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Cooling Pond
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 28th of March, 2008. Reggie Peters 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:

- Overcast
- Temperature: approximately 1°C (data unavailable from Environment Canada)
- Wind Direction: Southwest

Comments: ALL-TECH was on-Site at 0630 and sampling began as soon as there was Site activity. Air monitoring was performed during EarthTech's construction activities.

The downwind location had two exceedances. The first exceedance occurred at 0745 with an average of 463 µg/m³, and the second exceedance occurred at 0800 with an average of 1410 µg/m³. ALL-TECH contacted EarthTech to inform them following both exceedances and activity was subsequently halted. ALL-TECH performed continuous sampling for one hour following the exceedances. Due to an exceedance in the Dust Budget, explained below, Site activities were discontinued for the day. ALL-TECH remained on standby until 1130 to ensure site activity was completed for the day.

Budget (at 0900):

$990\mu\text{g}/\text{m}^3 > (\text{Budget to that point}) + (\text{Highest reading that day} \times 1\text{hr}) + (33\mu\text{g}/\text{m}^3 \times \text{remaining work hours})$
 $990\mu\text{g}/\text{m}^3 > (658\mu\text{g}/\text{m}^3) + (1410) + (33\mu\text{g}/\text{m}^3 \times 7\text{hr})$
 $990\mu\text{g}/\text{m}^3 > (2068\mu\text{g}/\text{m}^3) + (231\mu\text{g}/\text{m}^3)$
 $990\mu\text{g}/\text{m}^3 < (2299\mu\text{g}/\text{m}^3)$

All upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were well 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), TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Tyler Rowe and reviewed by Grant Harrigan and Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



Grant Harrigan, B.Tech
Environmental Technologist
ALL-TECH Environmental Services Cape Breton Ltd.

Copied via e-mail:

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Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Cooling Pond
28th March, 2008

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 40m Northeast of intersection of Terminal Road and Inglis Street	0700	155	15	Southwest	Upwind	Background	No observations seen to effect sampling integrity
2 30m Northwest of STPA office	0715	155	16	Southwest	Downwind	No activity observed on-Site	No observations seen to effect sampling integrity
3 30m Northwest of STPA office	0745	155	463	Southwest	Downwind	Excavators moving materials	Heavy dust from Site
4 40m Northeast of intersection of Terminal Road and Inglis Street	0800	155	15	Southwest	Upwind	Background	No observations seen to effect sampling integrity
5 30m Northwest of STPA office	0800	155	1410	Southwest	Downwind	Excavators moving materials	Heavy dust from Site
6 40m Northeast of intersection of Terminal Road and Inglis Street	0815	155	16	Southwest	Upwind	Background	No observations seen to effect sampling integrity
7 30m Northwest of STPA office	0815	155	122	Southwest	Downwind	Excavators moving materials	Heavy dust from Site

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
8 40m Northeast of intersection of Terminal Road and Inglis Street	0830	155	18	Southwest	Upwind	Background	No observations seen to effect sampling integrity
9 30m Northwest of STPA office	0830	155	80	Southwest	Downwind	Trucks dumping material	No observations seen to effect sampling integrity
10 40m Northeast of intersection of Terminal Road and Inglis Street	0845	155	20	Southwest	Upwind	Background	No observations seen to effect sampling integrity
11 30m Northwest of STPA office	0845	155	61	Southwest	Downwind	Trucks dumping material	No observations seen to effect sampling integrity
12 40m Northeast of intersection of Terminal Road and Inglis Street	0900	155	19	Southwest	Upwind	Background	No observations seen to effect sampling integrity
13 30m Northwest of STPA office	0915	155	37	Southwest	Downwind	Excavators moving materials	No observations seen to effect 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 ($\mu\text{g}/\text{m}^3$)
30m Northwest of STPA office	0700 to 0759	240	990
30m Northwest of STPA office	0800 to 0859	658	990
30m Northwest of STPA office	0900 to 0959	695	990

VOC Monitoring

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