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MEMORANDUM

TO	Dawn MacNeil, STPA	**FILE NO.**	S-1257-12
FROM	Dianne Theriault	**SHIFT:**	0730 to 1730
TEL	(902) 539-3012	**CC:**	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	22nd January, 2009		Terry Smith, ALL-TECH
		STPA NO.	**TP2-0090**

SUBJECT: 21st January, 2009, Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Material Processing Facility
FINAL REPORT

Attached is a summary of Real-time particulate (as PM_{10}) results for air monitoring performed on the 21st of January, 2009. Colin 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 cloudy with sunny periods
- Temperature: approximately -6°C
- Wind Direction: Northwest to Northeast

Comments: *ALL-TECH was on-Site at 0730 hours and sampling began as soon as there was site activity, but was put on standby between 0845 and 1100 hours due to precipitation. Air monitoring was performed during AECOM`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 Colin 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 – Material Processing Facility
21st January, 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 70m Southeast of Sydney Railway Building	0800	155	7	Northwest	Upwind	Background	No observations seen to affect sampling integrity
2 30m West of Inglis Street, Spar Road intersection	0800	155	4	Northwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 30m West of Inglis Street, Spar Road intersection	0835	155	2	Northwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
4 40 m Northeast of North Pond main gate	1045	155	6	Northeast	Upwind	Background	No observations seen to affect sampling integrity
5 90m Northeast of Ferry Street bridge	1045	155	6	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
6 40 m Northeast of North Pond main gate	1100	155	4	Northeast	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
7 90m Northeast of Ferry Street bridge	1100	155	9	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
8 90m Northeast of Ferry Street bridge	1125	155	8	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
9 40 m Northeast of North Pond main gate	1200	155	4	Northeast	Upwind	Background	No observations seen to affect sampling integrity
10 90m Northeast of Ferry Street bridge	1200	155	5	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
11 90m Northeast of Ferry Street bridge	1220	155	7	Northeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 40 m Northeast of North Pond main gate	1300	155	4	Northeast	Upwind	Background	No observations seen to affect sampling integrity
13 90m Northeast of Ferry Street bridge	1300	155	59	Northeast	Downwind	Machine moving material	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 90m Northeast of Ferry Street bridge	1315	155	7	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
15 40 m Northeast of North Pond main gate	1400	155	5	Northeast	Upwind	Background	No observations seen to affect sampling integrity
16 90m Northeast of Ferry Street bridge	1400	155	7	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
17 90m Northeast of Ferry Street bridge	1430	155	8	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
18 40 m Northeast of North Pond main gate	1500	155	5	Northeast	Upwind	Background	No observations seen to affect sampling integrity
19 90m Northeast of Ferry Street bridge	1500	155	7	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
20 90m Northeast of Ferry Street bridge	1545	155	8	Northeast	Downwind	Machine moving material	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 40 m Northeast of North Pond main gate	1600	155	6	Northeast	Upwind	Background	No observations seen to affect sampling integrity
22 90m Northeast of Ferry Street bridge	1600	155	9	Northeast	Downwind	Machine moving material	No observations seen to affect sampling integrity
23 90m Northeast of Ferry Street bridge	1645	155	8	Northeast	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 ($\mu g/m^3$)
30m West of Inglis Street, Spar Road intersection	0800 to 0859	3	990
90m Northeast of Ferry Street bridge	1000 to 1059	9	990
90m Northeast of Ferry Street bridge	1100 to 1159	18	990
90m Northeast of Ferry Street bridge	1200 to 1259	24	990
90m Northeast of Ferry Street bridge	1300 to 1359	57	990
90m Northeast of Ferry Street bridge	1400 to 1459	65	990
90m Northeast of Ferry Street bridge	1500 to 1559	73	990
90m Northeast of Ferry Street bridge	1600 to 1659	82	990

VOC Monitoring

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