



Three Kings Quarry
Air Quality Quarterly Report
September – November
2008

In compliance with: Permit 21875, conditions 26 & 27

Compiled By: Sari Eru, Environmental Coordinator

Date: 4 December 08

Introduction

This report details the air quality monitoring results for Winstone Aggregates Three Kings Quarry for the period Sept - Nov 08

This report is being prepared in accordance with Conditions 26 and 27 of Permit 21875. The conditions state:

“A summary of all monitoring results, including references where applicable to wind and rainfall data, and any remedial actions taken shall be submitted to the Manager at the end of each quarter”.

“A summary of the information recorded shall be submitted to the Manager at the end of each quarter.”

Details of the monitoring undertaken as part of the air permit are described below and actual monitoring results are presented in tables within the report or in the Appendices.

Daily Log

In accordance with Condition 26 (a) – (e) of the air permit a daily log of monitoring results is maintained on site. The log includes information about equipment malfunctions; visible dust emissions, water cart use and all relevant details relating to particulate monitoring.

September 08

Three Kings Quarry Summary monitoring results for the period Sept 08

Date	Day	daily average WS m/sec	daily average WD (degrees)	Daily Rain (mm)	Site TSP mg/m3 office	BAM FH62 mg/m-3 office	Site TSP mg/m3 North Boundary
1/09/2008	Monday	1.288	93.6	0.200		15.1	
2/09/2008	Tuesday	1.351	138.5	0.000		17.6	
3/09/2008	Wednesday	1.018	148.2	0.000	Error in machine	17.8	
4/09/2008	Thursday	1.090	171.2	0.000		14.6	
5/09/2008	Friday	2.008	185.0	3.000		15.3	
6/09/2008	Saturday	3.089	179.2	0.000	32.7	13	21.2
7/09/2008	Sunday	2.291	110.6	0.000		11.7	
8/09/2008	Monday	3.976	169.9	8.800		10.5	
9/09/2008	Tuesday	2.883	147.5	0.400	38.3	20.7	
10/09/2008	Wednesday	3.453	113.3	2.000		18.1	
11/09/2008	Thursday	4.086	127.1	4.200		18.8	
12/09/2008	Friday	2.150	69.4	2.600	29.6	12.9	26.4
13/09/2008	Saturday	2.125	60.5	0.200		9.9	
14/09/2008	Sunday	3.600	52.4	0.400		11.2	
15/09/2008	Monday	1.389	248.5	0.200		14.7	
16/09/2008	Tuesday	2.035	169.6	0.000	34.9	14.2	
17/09/2008	Wednesday	2.137	58.7	5.000		12.7	
18/09/2008	Thursday	2.898	162.7	1.800	28.8	12.1	19
19/09/2008	Friday	1.761	100.6	2.800		12.1	
20/09/2008	Saturday	0.913	227.6	0.200		13.4	
21/09/2008	Sunday	1.294	111.4	0.200	21.5	13.4	
22/09/2008	Monday	2.131	191.1	0.200		18.5	
23/09/2008	Tuesday	1.676	245.3	0.200		19.4	
24/09/2008	Wednesday	2.041	231.6	0.000	51	16.6	26.1
25/09/2008	Thursday	2.478	163.4	0.600		14	
26/09/2008	Friday	2.297	128.9	0.000		2.6	
27/09/2008	Saturday	2.217	269.8	0.400		Machine	
28/09/2008	Sunday	2.961	142.5	2.000		error	
29/09/2008	Monday	2.327	290.0	7.800	48.7	Machine	
30/09/2008	Tuesday	3.918	209.9	1.000		error	39.3

October 08

Three Kings Quarry Summary monitoring results for the period Oct 08

Date	Day	daily average WS m/sec	daily average WD (degrees)	Daily Rain (mm)	Site TSP mg/m3 office	BAM FH62 mg/m-3 office	Site TSP mg/m3 North Boundary
1/10/08	Wednesday	5.009	195.9	1.800	62.6	Error	
2/10/08	Thursday	4.666	166.0	0.600		24.8	
3/10/08	Friday	3.923	52.7	0.000		18.8	
4/10/08	Saturday	2.665	234.1	0.000	56.3	17.1	
5/10/08	Sunday	4.132	216.0	0.000		24.7	
6/10/08	Monday	2.880	234.7	10.400		13.4	
7/10/08	Tuesday	4.060	245.3	22.200	24.8	15.6	37
8/10/08	Wednesday	3.694	177.8	1.200		17.1	
9/10/08	Thursday	3.726	145.7	4.600	25.7	14.9	
10/10/08	Friday	3.677	127.1	0.400		13.6	
11/10/08	Saturday	3.798	137.1	0.400		12.7	
12/10/08	Sunday	1.337	153.6	0.000		15.3	
13/10/08	Monday	2.094	58.5	0.000	22.7	14	48.7
14/10/08	Tuesday	1.641	188.9	0.000		11.1	
15/10/08	Wednesday	2.497	164.7	0.200		16.8	
16/10/08	Thursday	2.874	311.2	2.000	24.6	13	
17/10/08	Friday	3.744	188.2	14.600		10.2	
18/10/08	Saturday	4.668	166.9	0.400	35	16.8	21.6
19/10/08	Sunday	2.674	125.1	0.800		10.6	
20/10/08	Monday	1.663	96.9	0.000		12	
21/10/08	Tuesday	0.855	104.6	0.000	No Run	14	
22/10/08	Wednesday	1.319	104.8	0.000		17.1	
23/10/08	Thursday	2.370	91.3	3.800		12.1	
24/10/08	Friday	3.304	115.5	17.000		14.8	20.5
25/10/08	Saturday	3.673	141.7	5.600	44.3	17.2	
26/10/08	Sunday	4.691	145.5	4.000		13.2	
27/10/08	Monday	1.398	40.7	0.000		17.9	
28/10/08	Tuesday	0.144	153.6	0.000		16.2	
29/10/08	Wednesday	1.507	175.8	1.600	32.4	16.5	33.4
30/10/08	Thursday	0.943	39.3	0.400		19.6	
31/10/08	Friday	0.010	28.7	0.000	57.4	19.2	

November 08

Three Kings Quarry Summary monitoring results for the period ending Nov 30 2008

Date	Day	daily average WS m/sec	daily average WD (degrees)	Daily Rain (mm)	Site TSP mg/m3 office	BAM FH62 mg/m-3 office	Site TSP mg/m3 North Boundary
1/11/2008	Sat	0.376	132.5	3.000		20.5	
2/11/2008	Sun	1.629	170.6	2.600		27.1	
3/11/2008	Mon	1.007	179.6	0.000	27.9	22.2	35.3
4/11/2008	Tue	2.691	137.2	0.800		16	
5/11/2008	Wed	2.816	82.5	12.600	37.6	17.4	32
6/11/2008	Thur	0.524	73.0	4.000		17.1	
7/11/2008	Fri	0.210	175.7	1.000		14.4	
8/11/2008	Sat	0.049	244.6	0.000	22.9	15.5	17.1
9/11/2008	Sun	0.101	206.1	0.000		15.5	
10/11/2008	Mon	0.003	221.9	0.000		15.7	
11/11/2008	Tue	0.003	188.1	0.000	28.4	18.2	55.3
12/11/2008	Wed	0.014	156.1	0.000		27.3	
13/11/2008	Thur	1.029	286.2	0.000		16.3	
14/11/2008	Fri	1.517	204.6	0.000	50.1	18.6	60
15/11/2008	Sat	0.061	128.8	0.000		15.1	
16/11/2008	Sun	2.951	159.0	0.000		16.3	
17/11/2008	Mon	4.064	189.0	2.200		21.5	
18/11/2008	Tue	4.181	203.8	0.400	66	comp error	26.2
19/11/2008	Wed	3.949	217.7	0.000			
20/11/2008	Thur	3.625	218.5	0.000	58.7	comp	63.4
21/11/2008	Fri	2.415	140.2	0.000		error	
22/11/2008	Sat	4.850	130.0	0.000		18.9	
23/11/2008	Sun	3.789	74.9	9.200		19.4	
24/11/2008	Mon	5.913	128.1	22.800		26	
25/11/2008	Tue	2.745	72.0	0.800		26.1	
26/11/2008	Wed	1.727	102.9	0.200		26.5	
27/11/2008	Thur	3.624	48.8	0.000		20.8	
28/11/2008	Fri	2.061	174.0	0.400		18.2	
29/11/2008	Sat	3.016	243.9	0.000		18.6	
30/11/2008	Sun	2.934	184.6	0.000		13.2	

**Daily Log Summary for Three Kings Quarry Site for the period
June - Aug 08**

(Condition 27, Air Permit 21875)

- a. No significant visible dust emissions from the quarry (outside the boundary) were recorded during the above period.
- b. TSP monitoring was carried as per TSP monitoring procedures documented in the site Air Quality Management Plan. No exceedances were encountered for this period.
- c. The water cart used 1104L during this period, made up of:

September: 14 loads, 168L
October: 29 loads, 348L
November: 49 loads, 588L
- d. The daily log sheet is dated and signed by the person entering the information.

Complaints:

There has been no complaints received for this period.

APPENDIX 1

Hi Vol vs. BAM Graphs to show relationships



