



Three Kings Quarry

Air Quality Quarterly Report

March 2012 - May 2012

In compliance with:

Permit 21875, conditions 26 & 27

Introduction

This report details the air quality monitoring results for Winstone Aggregates Three Kings Quarry for the period March 2012 – May 2012.

This report has been prepared in accordance with Conditions 26 and 27 of Permit 21875.

Condition 26 states:

That any results of total suspended particulate in ambient air monitoring showing exceedences of the prompts given in Condition 20 or specified in the TSP Monitoring Plan, shall be reported by facsimile to the Manager as soon as practicable. 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.

Condition 27 states:

That the Consent Holder shall record in a log all such information that is required to enable compliance with the conditions of this consent. The log shall record, on a daily basis, information including, but not limited to:

- (a) Any dust control equipment malfunctions and any remedial action taken;*
- (b) Any visible emissions of dust and the source;*
- (c) All relevant details relating to the total suspended particulate monitoring or other monitoring required by the TSP Monitoring Plan, to enable compliance with Conditions 19, 20 and 21;*
- (d) When a water cart was used and, if so, the frequency of use and the volume of water used;
and*
- (e) The date and time of the entry and the signature of the person entering the information.*

The log shall be made available on request, during operating hours, to an enforcement officer and shall be kept for the term of the consent. 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 attached to the report.

Summary of Monitoring Results

Summary tables of the monitoring results for each month of the reporting period are attached to this report. An overview of the quarter is provided below.

March 2012

All results within consented limits.

Data was not collected on 1st March 2012 at the Site TSP monitor located at the Office. The monitor was set to run but did not engage. The technical was consulted and the monitor's programming system was reset; there were no further issues in this regard. All other monitoring was completed as required on this day. The results from the TSP monitor located at the Northern Boundary and the BAM monitor located at the Office show results well within the trigger limit on this day. Taking into consideration the available data from this day including the onsite meteorological monitoring station it is considered that had the monitor run the results would have been below the trigger limit. Furthermore, the results from this TSP monitor for the rest of the month during similar meteorological conditions as 1st March 2012 show results within the consented limit.

April 2012

All results within consented limits.

As required by the amalgamated consent conditions (Permit Numbers 36221 / 36222 / 37770 / R/LUC/2009/743) which authorise the rehabilitation of the site, an additional BAM monitor has been installed on the southern boundary of site. The BAM monitor is housed within the small port-a-com unit which was installed prior to the 2nd April 2012 which was the date fill activities commenced. The monitor installed was a unit previously used on another one of our sites. During a check of the monitor our technician noted a serious malfunction with the unit. As such, a new unit was purchased and installed. However, as a result of the malfunction, the data held on the old monitor it is unable to be recovered. The Council compliance officer for the fill consents was notified of these details on 2nd May 2012. Results from the new BAM monitor are available from 26th April 2012 and have been included in the attached tables.

May 2012

All results within consented limits.

On 21st and 22nd May 2012 data was not available from the BAM monitor located on the southern boundary due to a power outage. However, the results available for the month of May 2012 indicate that had the monitor run the results would have been within the consented limits.

Daily Log

In accordance with Condition 27 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. A summary of the daily log is provided below.

- a. Over the last quarter all dust control equipment has functioned as required.
- b. No visible dust emissions (that went over or were over the boundary) were noted in the daily log for this period. Also no visible dust emissions from adjacent properties were recorded for this period.
- c. TSP monitoring was carried as per TSP monitoring procedures documented in the site Air Quality Management Plan. A summary of the results is provided above and the tabled results for this reporting period are attached to this report.
- d. The water cart used 1032m³ during this period, made up of:

MONTH	LOADS	VOLUME (m ³)
March 2012	33	396
April 2012	41	492
May 2012	12	144

- e. The daily log sheet is dated and signed by the person entering the information.

Complaints

There have been no complaints made directly to Three Kings Quarry regarding dust during the period of March 2012 to May 2012.

Next Reporting Period

The next quarterly report will be submitted in early September 2012. This report will cover the monitoring period of June to August 2012.

Monitoring Results for the Period March 2012

Date	Day	daily average WS (m/sec)	daily average WD (degrees)	Daily Rain (mm)	Site TSP Office (mg/m3)	BAM Office (mg/m-3)	Site TSP North Boundary (mg/m3)
1/03/2012	Thu	5.272	232.215	12.400	no data	32.2	44.3
2/03/2012	Fri	2.747	246.597	2.000		30.5	
3/03/2012	Sat	5.941	224.118	14.200		18.8	
4/03/2012	Sun	2.874	187.847	0.000	23.5	10.7	15.2
5/03/2012	Mon	1.327	145.191	0.000		16.9	
6/03/2012	Tue	1.906	109.007	0.000		12.6	
7/03/2012	Wed	1.770	157.587	12.400		13.6	
8/03/2012	Thu	2.581	150.670	3.200	15.8	6.9	19.2
9/03/2012	Fri	2.297	139.858	0.000		12.1	
10/03/2012	Sat	1.622	107.017	0.000	24.6	15.2	17.5
11/03/2012	Sun	2.731	121.976	12.600		6.5	
12/03/2012	Mon	4.442	209.899	11.800		17.2	
13/03/2012	Tue	4.168	183.115	0.000	50.9	22.6	34.3
14/03/2012	Wed	2.014	120.063	0.000		20.5	
15/03/2012	Thu	1.871	188.073	0.000		21.8	
16/03/2012	Fri	1.242	148.521	0.000	56.6	24.7	29.8
17/03/2012	Sat	3.355	91.528	0.000		19.4	
18/03/2012	Sun	2.640	103.924	0.000		19.6	
19/03/2012	Mon	3.564	158.667	39.400		4.6	
20/03/2012	Tue	3.471	161.698	11.200	10.3	4.4	12.8
21/03/2012	Wed	2.609	140.458	38.000		5.5	
22/03/2012	Thu	3.831	126.590	0.000	60.7	16.5	17.3
23/03/2012	Fri	1.703	190.514	0.400		12.9	
24/03/2012	Sat	3.231	108.569	5.000		10.5	
25/03/2012	Sun	4.521	185.139	9.600		15.5	
26/03/2012	Mon	4.292	207.462	0.000	58.9	20.2	35.1
27/03/2012	Tue	2.160	176.941	0.000		17.4	
28/03/2012	Wed	2.540	174.455	0.000		17.2	
29/03/2012	Thu	1.310	149.895	0.000	32.5	14.3	25
30/03/2012	Fri	1.747	124.042	0.000		15.7	
31/03/2012	Sat	1.959	115.045	0.000		19.2	

Monitoring Results for the Period April 2012

Date	Day	daily average WS (m/sec)	daily average WD (degrees)	Daily Rain (mm)	Site TSP Office (mg/m3)	BAM Office (mg/m-3)	Site TSP North Boundary (mg/m3)	BAM South Boundary (mg/m-3)
1/04/2012	Sun	2.657	112.556	0.200	16.6	32.2	14.8	
2/04/2012	Mon	3.237	127.729	0.800		30.5		
3/04/2012	Tue	4.075	141.049	0.000	38.6	18.8	59	
4/04/2012	Wed	3.749	151.094	0.000		10.7		
5/04/2012	Thu	2.928	137.944	0.000	23.3	16.9	33.4	
6/04/2012	Fri	2.018	134.368	0.000		12.6		
7/04/2012	Sat	1.453	152.063	0.000		13.6		
8/04/2012	Sun	3.200	194.097	0.000		6.9		
9/04/2012	Mon	3.090	202.566	0.000		12.1		
10/04/2012	Tue	1.334	211.535	0.000	no data	15.2	27.6	
11/04/2012	Wed	2.719	148.913	13.000		6.5		
12/04/2012	Thu	4.274	208.771	0.200	38	17.2	25.7	
13/04/2012	Fri	4.616	209.226	0.000		22.6		
14/04/2012	Sat	2.832	188.951	1.400		20.5		
15/04/2012	Sun	1.282	148.604	0.000		21.8		
16/04/2012	Mon	1.573	198.201	0.000	60.7	24.7	28.2	
17/04/2012	Tue	1.738	189.083	0.000		19.4		
18/04/2012	Wed	1.937	167.684	0.000	35.6	19.6	24.4	
19/04/2012	Thu	1.790	165.184	0.000		4.6		
20/04/2012	Fri	1.374	165.844	0.000		4.4		
21/04/2012	Sat	1.153	149.566	0.000	21.1	5.5	16.6	
22/04/2012	Sun	1.188	120.628	0.000		16.5		
23/04/2012	Mon	1.542	119.243	0.000		12.9		
24/04/2012	Tue	1.436	109.559	0.000		10.5		
25/04/2012	Wed	1.596	109.806	0.000	14.5	15.5	7.6	
26/04/2012	Thu	1.909	111.375	0.000		20.2		13.0
27/04/2012	Fri	3.739	184.080	9.200	29.3	17.4	19.8	15.4
28/04/2012	Sat	3.250	230.139	0.800		17.2		19.8
29/04/2012	Sun	1.713	251.373	0.400		14.3		13.7
30/04/2012	Mon	2.980	228.413	0.800		15.7		22.8

Monitoring Results for the Period May 2012

Date	Day	daily average WS (m/sec)	daily average WD (degrees)	Daily Rain (mm)	Site TSP Office (mg/m3)	BAM Office (mg/m-3)	Site TSP North Boundary (mg/m3)	BAM South Boundary (mg/m-3)
1/05/2012	Tue	3.360	203.038	0.000	40	18.1		20.2
2/05/2012	Wed	2.610	174.726	0.000		14.2		9.0
3/05/2012	Thu	1.739	158.094	0.000	29	14.1	36	11.9
4/05/2012	Fri	1.108	145.677	0.000		18.7		15.7
5/05/2012	Sat	1.068	131.361	0.000		14.6		13.2
6/05/2012	Sun	1.606	129.927	0.000	16	9.6		10.9
7/05/2012	Mon	2.071	118.122	0.000		11.2		10.0
8/05/2012	Tue	2.426	123.566	26.400	20	16.4	20	12.5
9/05/2012	Wed	1.444	135.962	21.400		15.9		13.2
10/05/2012	Thu	1.973	157.997	0.200		12.5		7.6
11/05/2012	Fri	4.106	207.354	0.200		12.7		11.3
12/05/2012	Sat	2.989	206.278	0.400	22	16.4		14.0
13/05/2012	Sun	2.531	231.587	0.200		15.6		12.9
14/05/2012	Mon	3.608	147.444	9.800		12.0		9.8
15/05/2012	Tue	2.838	234.215	15.400		14.6		11.5
16/05/2012	Wed	3.471	224.438	9.800	19	11.8	20	12.7
17/05/2012	Thu	3.954	211.708	1.400		19.1		19.6
18/05/2012	Fri	4.072	225.795	0.200		17.6		17.6
19/05/2012	Sat	3.039	223.674	2.600	23	14.9		16.3
20/05/2012	Sun	2.181	234.635	0.000		18.2		19.2
21/05/2012	Mon	1.139	229.722	0.000		30.8		no data
22/05/2012	Tue	0.968	152.163	0.000		19.6		no data
23/05/2012	Wed	1.079	155.309	0.000		21.3		28.0
24/05/2012	Thu	1.774	224.344	0.000		17.2		16.3
25/05/2012	Fri	2.368	236.181	0.000		16.0		13.8
26/05/2012	Sat	1.017	147.628	0.000		18.1		13.5
27/05/2012	Sun	3.561	106.962	1.200		12.4		10.3
28/05/2012	Mon	2.099	175.108	11.200		13.7		9.7
29/05/2012	Tue	3.479	182.225	0.200		14.7		16.6
30/05/2012	Wed	1.474	200.726	0.200		15.9		14.9
31/05/2012	Thu	3.143	192.340	0.600		19.9		17.9