

# Ambuja Cement

## Monitored Key Parameters in Respect of Mining Projects

Ref. MOEF Circular No. J-20012/1/2006-IA.II(M) Dated 27/05/2009

For the Period: 15/07/10 to 30/07/10

Total Mines: IX

### MINE I

I. Static Information				
(i)	Name of the Mine	Rawan Limestone Mine		
(ii)	Area of Mine(Ha)	420.95 hectares		
(iii)	Minerals being produced	Limestone		
(iv)	Annual Production (MTPA)	6.31 Million Tonnes per annum		
(v)	Date of mine opening	01.04.1984		
(vi)	Lease validity	26.06.2021		
II. Dynamic Parameter				
(i)	<b>Ambient Air Quality in ug/M<sup>3</sup></b>			
	(Three Locations-1 in core & 2 in buffer zone with date of sampling)	27/7/2010	23/7/2010	28/7/2010
	Location :(Core Zone / Buffer Zone)	Core Zone	Buffer Zone	Buffer Zone
	<b>SPM</b>	43.2	49.31	43.84
	<b>RSPM</b>	22.72	22.59	20.23
	<b>NO<sub>x</sub></b>	9.34	6.36	6.19
(ii)	<b>Vibration Report</b> ( 1 or 2 locations)	Location with distance from blast site and habitation		Date & PPV(mm/s)
	<b>Location : 1</b>	SOUTH BLOCK (125 MTR)		28 th July & 2.19 MM/Sec
(iii)	<b>Quality of Discharge Water</b>			

		Mines Work Shop Outlet (01/04/2010)	Mining area run-off (01/04/2010)		
	<b>pH</b>	7.37	7.19		
	<b>TSS(mg/l)</b>	31	22		
	<b>TDS(mg/l)</b>	434	194		
	<b>DO(mg/l)</b>	3.2	5.3		
	<b>Greenbelt / Plantation</b>	Area Covered (Ha)	No of plants in ML area	No of plants outside ML area	Plantation density (No of plants/ha)
	During the year From Jan.2010 to July 31 st 2010	3.67	4401	9366	2500-4000
<b>(iv)</b>	Cumulative	32.81	106591	525224	

## MINE II

I.	Static Information				
(i)	Name of the Mine	<b>Kashlog Lime Stone Mines</b>			
(ii)	Area of Mine (Ha.)	488.06			
(iii)	Minerals being produced	Limestone and Shale			
(iv)	Annual Production (MTPA)	5.5			
(v)	Date of mine opening	May 1992			
(vi)	Lease validity	May 2012			
II.	Dynamic Parameter				
	Ambient Air Quality in µg/M3	At L/S Mines Dormitory	Rathoh Village	Chandi Village	Mangoo Village
	(Three Locations-1 in core & 2 in buffer zone with date of sampling)	23/07/2010	23/07/2010	23/07/2010	23/07/2010
(i)	Location : (Core Zone / Buffer Zone)	Core Zone	Buffer Zone	Buffer Zone	Buffer Zone
	SPM	142.15	151.21	120.15	132.10
	RSPM	69.38	65.72	51.18	59.26
	SO2	5.1	4.7	4.1	3.9
	NOx	7.6	8.3	6.8	7.1

	(ii)	Vibration Report			
		(1 or 2 locations)	Location with distance from blast site and habitation	Date & PPV (mm/s)	
		Location : 1	Chakhru village site 1300 MRL (140m)	17/07/2010 - 1.81	
		Location : 2	Haul Road at 1320 MRL (130m)	22/07/2010 - 2.29	
		Quality of Discharge Water			
			Mines Work Shop Outlet (23/07/2010) Oil & Grease Trap	Mining area run-off (Date of sampling Gyana Khad 23/07/2010 (V Notch)	
	(iii)	pH	8.0	7.1	
		TSS(mg/l)	68.4	20	
		TDS(mg/l)	-	240	
		DO(mg/l)	-	5.7	
		Greenbelt / Plantation			
	(iv)	Area Covered (Ha)	No. of plant in ML area	No. of plants outside ML area	Plantation density (No. of plants/ha)
		During the year	130	---	---
		Cumulative	40.11	23644	3869

### MINE III

I.	<b>Static Information</b>	
	(i)	Name of the Mine <b>Maratha Lime Stone Mines</b>
	(ii)	Area of Mine(Ha) 1509.2
	(iii)	Minerals being produced Lime Stone
	(iv)	Annual Production (MTPA) 4.2 MTPA
	(v)	Date of mine opening 17.07.2001

(vi)	Lease validity	03 Lease : ML I,MLII,MLIII 1. 880.31 Ha : 14.12.2020 2. 579.90 Ha : 31.12.2024 3. 49 Ha : 24.05.2036
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<b>II. Dynamic Parameter</b>						
<b>(i)</b>	<b>Ambient Air Quality in ug/M<sup>3</sup></b>			<b>Date of Sampling 16<sup>th</sup> to 31<sup>th</sup> July 2010 (Average Result)</b>		
	(Three Locations-1 and 2 in core & 3 to 5 in buffer zone with date of sampling)	I	II	III	IV	V
	Location :(Core Zone / Buffer Zone)	<b>L-Type Hostel</b>	<b>Batchlor Hostel</b>	<b>L.S.Crusher</b>	<b>Magazine Section</b>	<b>Water Pond</b>
	<b>SPM</b>	46.00	48.60	58.20	50.20	59.80
	<b>RSPM</b>	17.60	16.40	22.80	21.80	25.60
	<b>Nox</b>	14.63	14.51	14.84	14.77	14.21
<b>(ii)</b>	<b>Vibration Report</b>					
	( 1 or 2 locations)	Location with distance from blast site and habitation				Date & PPV(mm/s)
	<b>Location : 1</b>	C South Face, Minimate kept at a distance of 300 mtr from the blast site.				<b>19th July -10 :-</b> PPV - 1.59 mm/s
	<b>Location : 2</b>	B North face, Minimate kept at a distance of 300 mtr from the blast.				<b>28th July -10 :-</b> PPV - 0.57 mm/s
<b>(iii)</b>	<b>Quality of Discharge Water</b>					
		Mines Work Shop Outlet (Date of sampling) <b>24.07.2010</b>				Mining area run-off (Date of sampling)
	<b>pH</b>	8.4				-
	<b>TSS (mg/l)</b>	106.0				-
	<b>TDS (mg/l)</b>	212.0				-
	<b>DO (mg/l)</b>	4.3				-

	<b>Greenbelt / Plantation</b>	<b>Area Covered (Ha)</b>	<b>No of plants in ML area</b>	<b>No of plants outside ML area</b>	<b>Plantation density (No of plants/ha)</b>
	During the year ( 2009 )	1.5	5000.0	6070.0	
<b>(iv)</b>	Cumulative till date	108.4	271489.0	90129.0	2504.51

#### MINE IV

<b>I.</b>	<b>Static Information</b>							
(i)	Name of the Mine	<b>Sugala Limestone Mine</b>						
(ii)	Area of Mine(Ha)	417.3584						
(iii)	Minerals being produced	Limestone						
(iv)	Annual Production (Mine Capacity - MTPA)	1.29 MTPA						
(v)	Date of mine opening	02.11.2002						
(vi)	Lease validity	Sept 1, 2032						
<b>II.</b>	<b>Dynamic Parameter</b>							
(i)	Ambient Air Quality in ug/M <sup>3</sup> (Four Locations-1 in core & 5 in buffer zone with date of sampling)	Working Area	Sugala	Jagetiya	Chhachhar	Nagdala	Kansariya	
		<b>20.07.10</b>	<b>20.07.10</b>	<b>20.07.10</b>	<b>20.07.10</b>	<b>20.07.10</b>	<b>20.07.10</b>	
	SPM	37.2	48.9	37	28.8	33.3	32.8	
	RSPM	15.1	20.8	13.5	7.4	14.3	9.8	
	NOx	6.5	9	7.8	8.7	8.1	5.6	
(ii)	Vibration Report ( 1 or 2 locations)	Location with distance from blast site and habitation		Date & PPV(mm/s)				
		<b>Not applicable</b>						

		<b>as Surface Miner is being used for mining.</b>			
	Quality of Discharge Water	Common Central Work Shop Outlet (Date of sampling)		Mining area run-off	
		14.06.2010		Not Applicable	
	pH	7.82			
	TSS(mg/l)	78			
	TDS(mg/l)	1165			
(iii)	DO(mg/l)	6.5			
	Greenbelt / Plantation	Area Covered (Ha)	No of plants in ML area	No of plants outside ML area	Plantation density (No of plants/ha)
	During the year	1.55	1550	0	1000
(iv)	Cumulative	8.33	16194	3262	2336

#### MINE V

<b>Static Information</b>					
(i)	Name of the Mine	<b>Vadnagar Limestone Mine (S. No. 200/3p)</b>			
(ii)	Area of Mine(Ha)	85.3108			
(iii)	Minerals being produced	Limestone			
(iv)	Annual Production (Mine Capacity - MTPA)	1.5 MTPA			
(v)	Date of mine opening	05.09.2005			
(vi)	Lease validity	13th July 2035			
<b>Dynamic Parameter</b>					
(i)	Ambient Air Quality in ug/M <sup>3</sup> (Four Locations-1 in core & 3 in buffer zone with date of sampling)	Working Place	Vadnagar	Dudana	Icchvad
		<b>16.07.2010</b>	<b>16.07.2010</b>	<b>16.07.2010</b>	<b>16.07.2010</b>
	SPM	59.7	44.6	53.8	39
	RSPM	14.2	8.6	10.7	13.7
	NOx	4	6.8	4.2	6.8
(ii)	Vibration Report ( 1 or 2 locations)	Location with distance from blast site and habitation		Date & PPV(mm/s)	
		Not applicable		as Surface Miner is being used for mining.	

(iii)	Quality of Discharge Water	Common Central Work Shop Outlet (Date of sampling)		Mining area run-off	
		14.06.2010		Not Applicable	
	pH	7.82			
	TSS(mg/l)	78			
	TDS(mg/l)	1165			
	DO(mg/l)	6.5			
(iv)	Greenbelt / Plantation	Area Covered (Ha)	No plants in ML area	No of plants outside ML area	Plantation density (No of plants/ha)
	During the year	0.03	300	0	10000
	Cumulative	2.75	6599	0	2400

## MINE VI

Static Information					
(i)	Name of the Mine	<b>Solaj Limestone Mine</b>			
(ii)	Area of Mine(Ha)	200.8184			
(iii)	Minerals being produced	Limestone & Marl			
(iv)	Annual Production (Mine Capacity - MTPA)	Limestone-1.0 MTPA, Marl-0.4 MTPA			
(v)	Date of mine opening	05.12.1996			
(vi)	Lease validity	1st Feb 2026.			
Dynamic Parameter					
(i)	Ambient Air Quality in ug/M <sup>3</sup> (Four Locations-1 in core & 3 in buffer zone with date of sampling)	Working Place	Solaj	Khera	Moradia
		19.07.2010	19.07.2010	19.07.2010	19.07.2010
	SPM	47.2	36.1	42.4	50.2
	RSPM	18.4	11.2	17.7	19.1
	NOx	8.4	7.1	7.8	7.9
(ii)	Vibration Report ( 1 or 2 locations)	Location with distance from blast site and habitation		Date & PPV(mm/s)	
		Not applicable		as	
		Surface Miner is being used for mining.			

(iii)	Quality of Discharge Water	Common Central Work Shop Outlet (Date of sampling)		Mining area run-off	
		14.06.2010		Not Applicable	
	pH	7.82			
	TSS(mg/l)	78			
	TDS(mg/l)	1165			
	DO(mg/l)	6.5			
(iv)	Greenbelt / Plantation	Area Covered (Ha)	No of plants in ML area	No of plants outside ML area	Plantation density (No of plants/ha)
	During the year	2.106	2106	0	1000
	Cumulative	10.556	17233	0	1633

## MINE VII

I.	<b>Static Information</b>						
	(i)	Name of the Mine	<b>Pedhavada Limestone Mine</b>				
	(ii)	Area of Mine(Ha)	15.1737				
	(iii)	Minerals being produced	Limestone				
	(iv)	Annual Production (Mine Capacity - MTPA)	0.7 MTPA				
	(v)	Date of mine opening	01.08.2009				
	(vi)	Lease validity	5.1.2018				
II.	<b>Dynamic Parameter</b>						
	(i)	Ambient Air Quality in ug/M <sup>3</sup> (Four Locations-1 in core & 3 in buffer zone with date of sampling)	Working Place	Navagam	Anandpur	Moradia	
				<b>22.07.2010</b>	<b>22.07.2010</b>	<b>22.07.2010</b>	<b>22.07.2010</b>
			SPM	36.6	14.2	34.3	50.2
			RSPM	12.2	4.9	14.5	19.1
			NOx	6.8	8.9	6.5	7.9
	(ii)	Vibration Report ( 1 or 2 locations)	Location with distance from blast site and habitation		Date & PPV(mm/s)		
			Not applicable		as		
			Surface Miner is being used for mining.				

(iii)	Quality of Discharge Water	Common Central Work Shop Outlet (Date of sampling)	Mining area run-off		
		14.06.2010	Not Applicable		
	pH	7.82			
	TSS(mg/l)	78			
	TDS(mg/l)	1165			
	DO(mg/l)	6.5			
(iv)	Greenbelt / Plantation	Area Covered (Ha)	No of plants in ML area	No of plants outside ML area	Plantation density (No of plants/ha)
	During the year	0.5	400	0	800
	Cumulative	0.5	400	0	800

## MINE VIII

I.	<b>Static Information</b>							
	(i)	Name of the Mine	<b>RKBA Limestone Mine</b>					
	(ii)	Area of Mine(Ha)	310.329					
	(iii)	Minerals being produced	Limestone					
	(iv)	Annual Production (Mine Capacity - MTPA)	1.0 MTPA					
	(v)	Date of mine opening	04.10.2005					
	(vi)	Lease validity	5th Sept 2035.					
II.	<b>Dynamic Parameter</b>							
	(i)	Ambient Air Quality in ug/M <sup>3</sup> (Four Locations-1 in core & 4 in buffer zone with date of sampling)	Working Place	Rampara	Kukras	Anandpara	Bhetali	
			21.07.2010	21.07.2010	21.07.2010	21.07.2010	21.07.2010	
			SPM	37.5	47	30.6	40.2	24.1
			RSPM	13.6	12.3	10.1	9.1	6.8
			NOx	6.2	4.8	8.5	5.7	8.6
	(ii)	Vibration Report ( 1 or 2 locations)	Location with distance from blast site and habitation	Date & PPV(mm/s)				
Not applicable as Surface Miner is being used for mining.								

(iii)	Quality of Discharge Water	Common Central Work Shop Outlet (Date of sampling)	Mining area run-off		
		14.06.2010	Not Applicable		
	pH	7.82			
	TSS(mg/l)	78			
	TDS(mg/l)	1165			
	DO(mg/l)	6.5			
(iv)	Greenbelt / Plantation	Area Covered (Ha)	No of plants in ML area	No of plants outside ML area	Plantation density (No of plants/ha)
	During the year	1.18	1557	0	1319
	Cumulative	4.86	5450	0	1121

**MINE IX**

<b>I.</b>	<b>Static Information</b>				
	(i)	Name of the Mine	<b>Ras II Limestone Mines</b>		
	(ii)	Area of Mine(Ha)	803		
	(iii)	Minerals being produced	Limestone		
	(iv)	Annual Production (MTPA)	3.6 MTPA		
	(v)	Date of mine opening	31/12/1995		
	(vi)	Lease validity	20 Years		
<b>II.</b>	<b>Dynamic Parameter</b>				
	<b>(i)</b>	<b>Ambient Air Quality in ug/M<sup>3</sup></b>	At L/S Crushing & Screening CCR	Vill. Patan	Vill. Kerpura
		(Three Locations-1 in core & 2 in buffer zone with date of sampling)	21/07/2010	17/07/2010	26/07/2010
		Location :(Core Zone / Buffer Zone)	core Zone	Buffer Zone	Buffer Zone
		<b>SPM</b>	210.2	115.6	122.4
		<b>RSPM</b>	20.3	15.4	18.5
		<b>NOx</b>	8.5	7.5	8.0

<b>(ii)</b>	<b>Vibration Report</b>				
	( 1 or 2 locations)	Location with distance from blast site and habitation	Date & PPV(mm/s)		
	<b>Location : 1</b>	Eastern Ridge, Distance 300 mtr., Village distance 500 mtr. From Mines Boundary	22/07/10 & 0.561		
	<b>Location : 2</b>	Western Ridge, Distance 250 mtr.,Cement plant distance 1.5 KM & No village within 3 km. From mines boundary	17/07/10 & 3.45		
<b>(iii)</b>	<b>Quality of Discharge Water</b>				
		Mines Work Shop Outlet (10/07/10)	Mining area run-off (Date of sampling)		
	<b>pH</b>	7.6	-		
	<b>TSS(mg/l)</b>	78.9	-		
<b>(iv)</b>	<b>Greenbelt / Plantation</b>	Area Covered (Ha)	No of plants in ML area	No of plants outside ML area	Plantation density (No of plants/ha)
	During the year	5	13700	8000	5700
	Cumulative	75.45	123474	92189	31285