

REGD. A/D

ACL/EMD/F-16/2014/

25.05.2014

The Director (s),

Ministry of Environment & Forest (MoEF), Regional Office, Western Region, "Kendriya Paryavaran Bhavan" Link Road No.3, Ravi Shankar Nagar, Bhopal – 462016, (M.P.)

Sub.: Six Monthly Compliance Status Report of Environmental Clearance.

Ref.: Environmental Clearance Order No. J-11015/6/2000-IA-II (M) dated 20.06.2002

Sir,

We are pleased to submit herewith half yearly compliance status report (i.e. for the period of October'13 to March'14) of Environmental Clearance Order No. J-11015/6/2000-IA-II(M) granted by MoEF to **Sugala Limestone Mines** of Ambuja Cements Ltd. located at village – Sugala & Jagatiya, Taluka - Kodinar, District – Junagadh (Gujarat). We are also enclosing here with CD containing soft copy of the same.

In case of further clarification/information require, we shall be please to provide the same.

Thanking you,

Yours Faithfully, For **Ambuja Cements Ltd.**

Dr. Anand K. Rai HOD (Environment)

Encl.: As above.

- Central Pollution Control Board Western Zonal Office, Synergy House-II, Subhanpura - Gorwa Road, Vadodara-390023 (Gujarat)
- Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhavan, Sector-10-A,Gandhinagar-382010 Ambuja Cements Limited

(Unit : Ambujanagar)

Regd. Office : P.O. Ambujanagar - 362715, Tal : Kodinar, Dist. : Junagadh, Gujarat. Phone : (02795) 221137, 232009, Fax : (02795) 220328, 232032

MONITORING THE IMPLEMENTATION OF ENVIRONMENTAL SAFEGUARDS

Ministry of Environment & Forests Regional Office (W), Bhopal Monitoring Report Part-I

DATA SHEET

Date: 25.05.2014

01	Project type	:	Mining
02	Name of the project	:	Sugala Limestone Mining Project
03	Clearance letter(s) / OM no. and date	:	J-11015/6/2000 – IA,II (M), dated 20.06.2002
04	Location		
	a) District(s)	:	Junagadh
	b) State(s)	:	Gujarat
	c) Latitude	:	20° 52' 45" – 20° 54' 45"
	d) Longitude	:	70° 45' 30" – 70° 46' 45"
05	Address for correspondence	:	
	a) Address of concerned Project Chief Engineer (with pin code & telephone / telex / fax numbers).	:	Shri, Dinkar Dashora Agent of Mines Ambuja Cements Ltd. PO : Ambujanagar , Taluka - Kodinar District : Junagadh (Gujarat) Pin : 362715 Tel: -02795-237205 Fax: 02795 - 220328/232032
06	 b) Address of Executive Project Engineer / Manager (with pincode / fax numbers. Salient features 	:	Sh. Deepak Dhurde, Manager (Mines), Ambuja Cements Ltd PO :Ambujanagar , Taluka - Kodinar District : Junagadh (Gujarat) Pin. : 362715 Tel: 02795-237217 Fax: 02795 - 220328/232032
UO	a) of the project	:	Ambuja Cements Ltd. has cement manufacturing plant at Ambujanagar in Kodinar Taluka of Junagadh District. Limestone is the main raw materials for the cement plants. The materials are being exploited from company's own captive mines i.e. Sugala Limestone Mine.

	Sugala is located at a distance of about 18 kms in NNE direction with respect to cement plant. The rated capacity of the limestone is 1.29 MTPA.		
	b) of the environmental management plans	:	 Mining operations do not involve drilling and blasting for material raising. Limestone excavation being carried out by Surface Miner & Ripper Dozer
			 * Regular monitoring of environmental parameters are carried out as per the norms evolved by MoEF and IBM.
			 Preventive maintenance of deployed HEMM being undertaken on regular basis.
			 Dust suppression by water sprinkling on haul roads and in working area.
			 * Afforestation / Green belt development along haul road near office building and lease periphery is being implemented.
			* Mined-out areas would be converted to plantation / agri-farm and water reservoirs as envisaged in the mining plan partial reclaiming already done.
			* Socio-economic improvement measures are being undertaken in the project buffer zone as envisaged.
07	Break up of the project area.		
	a) Submergence area (forest & non-forest)	:	Not applicable
	b) Private Land Govt. Land	:	414.8493 ha 2.5091 ha
08	Break up of the project affected population with enumeration of those losing houses / dwelling units only, agricultural land only, both dwelling units & agricultural land & landless labourers / artisan.	:	There are no houses in the core zone area, hence not applicable.
	a) SC, ST / Adivasis	:	Not applicable
	b) Others	:	Not applicable

09	Financial details	:	
	 Project cost as originally planned and subsequent revised estimates and the year of price reference. 	:	Limestones raised from Sugala area partially supplement the requirements of existing cement units. As it is a captive mine for the existing cement plants, no separate project costing was made.
	 Allocation made for environmental management plans with item wise and year wise break-up. 		Pl. refer Annexure VII
	c) Benefit cost ratio / Internal rate of return and the year of assessment.	:	No separate assessment made, as it is a captive mine.
	 d) Whether (c) includes the cost of environmental management as shown in the choice 	:	Not applicable.
	e) Actual expenditure incurred on the project so far.	:	Rs. 7.61 Crores.
	f) Actual expenditure incurred on the environmental management plans so far.	:	Rs. 5.77 Crores
10	Forest land requirement.		
	 a) The status of approval for diversion of forest land for non-forestry use 	:	The project area does not comprise of any forest land hence not applicable.
	b) The status of clearing felling	:	Not applicable
	c) The status of compensatory afforestation, if any	;	Not applicable
	 d) Comments on the viability & sustainability of compensatory afforestation programme in the light of actual field experience so far. 	:	Not applicable
11	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads), if any with quantitative information.	:	The project does not involve clear felling.

12	Status of construction.	:	
	a)Date of commencement (Actual and / or planned)	:	2 nd November 2002
	b)Date of completion (Actual and / or planned).	:	Continued
13	Reasons for the delay if the project is yet to start.	:	Not applicable.
14	Dates of site visits	:	
	a) The dates on which the project was monitored by the Regional Office on previous occasions, if any.	:	12.10.10 to 13.10.10 by Dr. A. Mehrotra Regional Office, Bhopal
	 b) Date of site visit for this monitoring report 	g :	12.10.10 to 13.10.10
15	Details of correspondence with project authorities for obtaining action plans / information on status of compliance to safeguards other than the routine letters for logistic support for site visits).		Half yearly compliance status report is being regularly submitted and last submission was on 23.11.2013 vide letter no.ACL/EMD/F-16/2013.

	Compliance Status of Environment Clearance issued to Sugala Limestone Mines							
	vide MoEF Letter No : J-11015/6/2	000-IA, II (M) dated 20 [™] June, 2002						
S.No.	Conditions	Compliance Status						
i i	Mining activities including transportation of material from the mine site should be carried out only during day time (6 a.m. to 6 p.m.).	Mining activities including transportation of material from the mine site is being carried out only during day time (6 a.m. to 6 p.m.) only.						
ii	Company should contribute for development of fodder plots in the nearby reserve forests areas.	ACL jointly with Forest Dept. have developed 9.0 ha. of fodder plot in at Sabdharvidi, Jamvala. Photographs with details of fodder plot developed has been already submitted to MoEF vide our submission dated 25.12.2010 vide letter no.ACL/EMD/F-16/2010/55926.						
iii	Prior permission from the Forest Department / concerned authorities should be taken for cutting of trees for any mining activity in the lease area.	Permission has been obtained from Mamlatdar, Kodinar for cutting of trees in mine lease area. Copy of permission granted by Mamlatdar has been already submitted to MoEF vide our submission dated 25.12.2010 vide letter no.ACL/EMD/F-16/2010 /55926.						
iv	A 250 m wide corridor along the nearest bank of singoda river should be kept undisturbed.	Point noted and being complied. Corridor along the nearest bank of singoda river has been kept undisturbed.						
v	Fencing (other than barbed wire) all around the lease area should be provided.	Boundary wall of bela stone has been constructed around the opened up lease area.						
vi (a)	In the eventuality of any drought in the area, the project authorities should take prior approval of the Central Ground Water Authority for dewatering the mine and Ministry of Environment & Forest should be kept informed.	Point noted & will be complied if drought conditions prevail in future.						
vi (b)	In case of depletion of water in the wells of nearby villages, the project authorities should provide water supply free of cost to the villagers.	Point noted & will be supplied if required.						
vii	Construction of check dam(s) in the shingoda river and also release of mine water discharge should be undertaken with prior approval of Chief Wild Life Warden (CWLW), Government of Gujarat to ensure undisturbed movement of lions through the Shingoda river bed, which is an established migratory route for lions and other animals.	So far we have constructed 06 nos. of Check dams on river Shingoda and 01 No. of tidal regulator at Muldwarka. All the check dam constructed on shingoda river is located in down stream from mine lease boundry on singoda river. All the checkdam has been constructed under partnership with Govt. of Gujarat. Permission granted by Govt. of Gujarat, has been already submitted to MoEF vide our last submission on 25.12.2010 vide letter no.ACL/EMD/F-16/2010/55926.List of checkdam constructed is enclosed as Annexure I						
viii	Top soil should be properly stacked at earmarked dump site(s) with adequate measures and should be used for reclamation and rehabilitation of mined out areas.	Top soil generated during mining operation is being stacked at designated area and being used for mines reclamation and green belt development.						

	Compliance Status of Environment Clearance issued to Sugala Limestone Mines								
	vide MoEF Letter No : J-11015/6/2	000-IA, II (M) dated 20 th June, 2002							
S.No.	Conditions	Compliance Status							
ix	Catch dams and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows soil and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted and maintained. Garland drain (Size, gradient & length) and sump capacity should be designed keeping 50 % safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.	To collect surface run-off and arrest silt and sediment flow from the soil & mineral stacks, garland drain along with settling pond is constructed along the toe of the stacks, ultimately drain water collected into mined out pit. The drains are properly maintained and water so collected is utilized for agrifarming.							
x	A green belt of adequate width all around the ML area should be developed by planting the native plant species in consultation with local DFO/ Agriculture Department. At least 2000 plant species / ha. Should be planted. Plantation should also be raised along the roads, canal, dump sites etc.	Regular interactions are being carried out with agriculture university & forest dept. for plantation /afforestation. Even forest dept. is using sapling from our nursery for tree plantation. Details of mines reclamation enclosed as Annexure II .							
xi	The North block of the mine should be fully converted to agricultural farms; the middle block should also be converted to agricultural farms/orchards and partly for water harvesting. Southern block of the mine should be converted to reservoir for water storage. Efforts should be made to backfill the worked out areas concurrently to the extent possible.	Suggested scheme partly implemented to the mined out blocks, as per approved mining plan /mining scheme.							
xii	A detailed mine decommissioning plan should be submitted to the Ministry of Environment & Forests 5 years in advance for approval.	Point noted and will be complied.							
xiii	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring should be done four times a year – pre- monsoon (April/May), monsoon (August), post-monsoon (November), and winter (January). Data thus collected should be sent at regular intervals to MoEF & the Central Ground Water Authority.	Ground water level & quality monitoring is being done regularly by establishing a network of ground water monitoring stations (existing wells and installing new piezometers). Report is submitted to MoEF regional office Bhopal on six monthly basis.Ground water level & quality monitoring report is enclosed as Annexure VI .							
xiv	Digital processing of the entire lease area using remote sensing technique should be carried out regularly once in three years for monitoring land use pattern and physiographic of the area and report submitted to the Ministry and its Regional Office at Bhopal.	Land use pattern report is conducted by RRSC Jodhpur (June-13). Report has been already submitted to MoEF vide our submission dated 10.04.2014 vide letter no.ACL/EMD/F- 16/2014/329/73120.							
XV	Vehicular emissions should be kept under control and regularly monitored.	Vehicular emissions is being checked & monitored regularly.							

	Compliance Status of Environment Clearance issued to Sugala Limestone Mines								
C No	Vide MOEF Letter No : J-11015/6/2	Compliance Status							
S.NO.									
i	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Point noted and being complied.							
ii	No change in the calendar plan including excavation, quantum limestone and marl, waste / OB dumps should be made.	Point noted and being complied.							
iii	Five ambient air quality monitoring stations should be established in the core zone as well as buffer zone for SPM, RPM, SO_2 , NOx and CO monitoring. Location of the ambient air quality stations should be decided on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultations with the State Pollution Control Board.	Five ambient air quality monitoring stations have been established in core & buffer zone. Ambient air quality monitoring results for the period of Oct, 2013 to March'2014 is enclosed as Annexure VII . The location of the monitoring stations is finalised in consultation with GPCB and renowned consultant Sh. B Padmanabh Murthy, Professor of JNU and former Director of IMD Met-Dept.							
iv	Data on ambient air quality should be regularly submitted to the Ministry including its Regional Office at Bhopal and the State Pollution control Board/ Central Pollution Control Board once in six months.	Half yearly ambient air quality monitoring report is being regularly submitted to MoEF, our last submission was on 23.11.2013 vide letter no.ACL/EMD/F-16/2013.Ambient air quality monitoring results for the period of Oct' 2013 to March'2014 is enclosed as Annexure VII .							
V	Adequate measures for control of fugitive emissions should be taken during drilling and blasting operations, loading and transportations of minerals etc.	Environment friendly Surface Miner machine is being used for mining. Which has been provided with inbuilt facility of water sprinkling to suppress dust generated during mining. On all haul roads regular water sprinkling is being done by water tankers. Monitoring results of Air borne dust survey is enclosed as Annexure III .							
vi	Adequate measures should be taken for control of noise levels below 85 dB (A) in the work environment.	All the worker working in high noise areas has been provided with ear plug/ear muffs. Ambient noise monitoring as well as HEMM noise monitoring report is enclosed as Annexure IV & V.							
vii	Personnel working in dusty areas should wear protective respiratory device and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contraction due to exposures of dust and corrective measures, if needed.	Personnel working in mines is provided with dust masks, safety shoes, safety goggle & Helmet. Occupational health surveillance programme of the workers is being undertaken periodically by our Occupational Health Centre.							
viii	The fund earmarked for Environmental protection measures should be kept in separate account and not diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment & Forests.	Details of capital and recurring expenditure for environmental protection measures are enclosed as Annexure VIII.							

	Compliance Status of Environment Clearance issued to Sugala Limestone Mines								
	vide MoEF Letter No : J-11015/6/2	2000-IA, II (M) dated 20 th June, 2002							
S.No.	Conditions	Compliance Status							
ix	The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated Environmental safeguards. The project authority should send one set of EIA/	Point noted. Project was monitored by Dr. A. Mehrotra (Regional Office, Bhopal) during 12.10.10 to 13.10.10.							
x	The project authority should inform to the Regional Office located at Bhopal as well as to the Ministry of Environment & Forests regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Point noted.							
xi	The State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry	GPCB is the concern authority for the same.							
xii	The Project authorities should advertise at least in two Local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the Ministry of Environment & Forests at http://envfor.nic.in.and a copy of this ministry at Bhopal.	Advertisement was published in two local news paper. Copy of advertisement has been submitted to MoEF on 25.12.2010 vide letter no. ACL/EMD/F16/2010/55926.							
3	The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Point Noted							
4	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance.	Point Noted							
5	The above conditions will be enforced, inter alia, under the provisions of the Water (Prevention & Control of Pollution) Act 1974, the Air (Prevention & Control of Pollution) Act 1981, the Environment (Protection) Act 1986, and the public Liability Insurance Act 1991 along with their amendments and rules.	Point Noted							

Annexure – I

Details of Check dams across River Shingoda

Sr. No.	Name of Village	Type of Structure	Year of Construction	Total Cost Rs. In Lacs	Storage Capacity in MCFT
1	Ronaj	Construction of Check dam	2002	35.17	6.31
2	Dudana (Fruit Nursery)	Check dam height raising	2001	7.1	3.51
3	Chhachhar	Construction of Check dam	2004	12.06	6.2
4	Dudana	Construction of Check dam	2004	47.62	5.25
5	Kodinar (Kubeshwar)	Construction of Check dam	2004	23.1	4.17
6	Muldwarka	Construction of Tidal Regulator	2009	79.58	57.64
7	Ronaj (Bhekheshwar Dam)	Dam , Under construction	Start in 2009	840	35.0

ANNEXURE II

SUGALA MINES Greenbelt & Plantation Details till March 2014									
Total Lease Area (in ha)	Opened up Area (in Ha)	Planted Area (in Ha)	Pasture land (in Ha)	Water Body (in Ha)					
417.3584	134.5000	10.2541	20.0000	0.0					

Annexure - III

Air Borne Dust Survey - Sugala Mines (Oct-2013 March-2014)

Machine : Surface Miner				Machine : Dozer				Machine : Loader			
Date	Period	Location	RSPM (mg/m3)	Date	Period	Location	RSPM (mg/m3)	Date	Period	Location	RSPM (mg/m3)
21-Oct-13	0600 - 1400		0.24	22-Oct-13	0600 - 1400		0.28	23-Oct-13	0600 - 1400		0.26
7-Nov-13	0600 - 1400	bin	0.27	8-Nov-13	0600 - 1400	bin	0.25	9-Nov-13	0600 - 1400	bin	0.24
6-Dec-13	0600 - 1400	Ca	0.26	7-Dec-13	0600 - 1400	င္ခ	0.24	8-Dec-13	0600 - 1400	Ca	0.27
1-Jan-14	0600 - 1400	ide	0.22	2-Jan-14	0600 - 1400	ide	0.26	3-Jan-14	0600 - 1400	ide	0.24
17-Feb-14	0600 - 1400	lns	0.25	18-Feb-14	0600 - 1400	lns	0.29	19-Feb-14	0600 - 1400	lns	0.22
6-Mar-14	0600 - 1400		0.25	7-Mar-14	0600 - 1400		0.29	8-Mar-14	0600 - 1400		0.28

Annexure - IV

	Ambient Noise Level Monitoring - Sugala Mines (Oct-2013 March-2014)										
Month	Noise Levels in dB(A)										
wonth	Near Surface	e Miner	Haul road		Mines Office		Sugala Village		Chidivav Village		
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
Oct-13	77	79	42	45	40	43	40	42	34	39	
Nov-13	73	78	41	44	39	44	40	44	36	41	
Dec-13	71	75	39	47	42	44	38	46	39	43	
Jan-14	74	79	43	47	44	45	39	42	35	44	
Feb-14	70	74	40	44	46	49	40	43	41	46	
Mar-14	72	76	41	45	42	46	38	41	36	40	

Annexure - V

				Noise Le	vel of HE	EMM - Sugala Mine	s (Oct-20	13 Marc	h-2014)									
Machine		Surface	Miner				Loader				Dozer							
Month	Conditions	Noise Levels (dB)				Conditions		Noise Leve	els (dB)		Conditions	Noise Levels (dB)						
Monar	Conditions	At 5m. d	distance	At 10m. distance			At 5m. d	istance	At 10m. c	listance	Conditionio	At 5m. distance		At 10m. distance				
		Min	Max	Min	Max		Min	Max	Min	Max		Min	Max	Min	Max			
Oct-13	While dozing the material	62	64	40	45	While loading to tipper	55	58	40	45	While mining	40	45	40	44			
Nov-13	While dozing the material	66	69	41	46	While loading to tipper	57	62	41	44	While mining	45	56	41	45			
Dec-13	While dozing the material	62	68	39	44	While loading to tipper	54	64	38	46	While mining	48	52	42	48			
Jan-14	While dozing the material	59	64	39	45	While loading to tipper	59	61	39	42	While mining	47	55	40	46			
Feb-14	While dozing the material55604045		While loading to tipper	60	63	42	46	While mining	48	52	43	48						
Mar-14	While dozing the material	42	While loading to tipper	57	60	40	44	While mining	50	57	48	52						

Annexure - VI

Aug-'2013

S.N.	Ref.No.	IS 1050	0:1991 (F.R)				Crow	nd Water		on ort of (Sugala Mi		2012)				Piezometers		
		Desirable	Permissible				Grou	nu water		eport of a	Sugala Mil	nes (Aug-	2013)				Plezor	neters	
	Source			W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	1	2	
	Village			SUGALA	SUGALA	SUGALA	SUGALA	SUGALA	SUGALA	SUGALA	SUGALA	SUGALA							
	Taluka			KODINAR	KODINAR	KODINAR	KODINAR	KODINAR	KODINAR	KODINAR	KODINAR	KODINAR							
	District			JUNAGADH	JUNAGADH	JUNAGADH	JUNAGADH	JUNAGADH	JUNAGADH	JUNAGADH	JUNAGADH	JUNAGADH							
1	Color Hazen Units	5	25	C.L.	C.L.	C.L.	C.L.	C.L.	C.L.	C.L.	C.L.	C.L.							
2	Odour	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	
3	Turbidity NTU	5	10	1	0	1	1	0	0	1	0	1	0	0	0	0	0	0	
4	Dissolved Solids mg/l	500	2000	650	490	316	350	490	850	636	516	682	600	634	342	752	382	288	
5	рН	6.5 to 8.5		8.41	7.89	8.13	8.19	7.88	7.89	8.19	7.83	7.78	7.72	7.99	7.98	8.23	8.08	7.9	
6	Total Hardness (as CaCO3) mg/l	300	600	340	256	108	168	248	380	252	280	320	280	260	184	332	172	140	
7	Calcium (as Ca mg/l	75	200	64	51	24	33	48	74	49	54	61	56	50	35	66	32	19	
8	Magnessium (as Mg) mg/l	30	100	44	31	11	21	31	47	31	35	41	34	33	23	40	22	22	
9	Chlorides (as Cl) mg/l	250	1000	120	100	108	80	108	180	180	100	140	140	184	64	180	96	60	
10	Sulphates (as SO4) mg/l	200	400	68	51	21	34	50	76	50	56	64	56	52	34	66	34	28	
11	Nitrates (as NO3) mg/l	45	100	38.78	11.06	2.91	7.01	8.24	100.85	40.5	6.95	66.41	32.68	23.32	5.86	61.77	11.03	7.15	
12	Fluorides (as F) mg/l	1	1.5	0.77	0.52	0.69	0.6	0.77	1.4	2.1	1.5	0.66	1.4	1.7	0.4	0.32	0.21	0.83	
13	Alkalinity (as CaCO3) mg/l	200	600	248	240	104	160	256	280	176	280	248	240	272	160	248	160	120	
»	Water level in mtr. from ground																		
	level																		

Jan" 2014

S.N.	Ref.No.	IS 10500	IS 10500:1991 (F.R)				Crow	nd Water		anart of C	Sugala Mi	noo (Aug	2012)			Disease	
		Desirable	Permissible	1			Grou	nu water		eport of a	bugala ivil	nes (Aug-	2013)			Plezon	neters
	Source			W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W13	1	
	Village			SUGALA	SUGALA	SUGALA	SUGALA	SUGALA	SUGALA	SUGALA							
	Taluka			KODINAR	KODINAR	KODINAR	KODINAR	KODINAR	KODINAR	KODINAR							
	District			JUNAGADH	JUNAGADH	JUNAGADH	JUNAGADH	JUNAGADH	JUNAGADH	JUNAGADH							
1	Color Hazen Units	5	25	C.L.	C.L.	C.L.	C.L.	C.L.	C.L.	C.L.							
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	
3	Turbidity NTU	5	10	0	0	0	0	0	0	0	0	0	0	0	0	0.2	
4	Dissolved Solids mg/l	500	2000	630	516	476	494	514	626	612	490	488	610	766	858	344	
5	рН	6.5 to 8.5	No Relaxation	8.41	8.37	8.3	8.36	8.22	8.47	8.35	8.4	8.36	8.39	8.45	8.4	8.26	
6	Total Hardness (as CaCO3) mg/l	300	600	400	328	272	300	326	340	360	260	246	316	276	256	192	
7	Calcium (as Ca mg/l	75	200	83	68	59	62	68	70	75	56	52	65	54	51	38	
8	Magnessium (as Mg) mg/l	30	100	46	37	30	34	37	39	41	29	27	36	34	31	23	
9	Chlorides (as Cl) mg/l	250	1000	76	64	76	64	64	112	84	88	96	104	232	336	60	
10	Sulphates (as SO4) mg/l	200	400	68	56	48	52	56	58	62	46	43	54	48	45	34	
11	Nitrates (as NO3) mg/l	45	No Relaxation	26.15	15.2	20.08	24.3	14.48	38.76	42.09	6.78	34.92	42.15	29.78	8.62	6.25	
12	Fluorides (as F) mg/l	1	1.5	0.68	0.81	1.4	1.2	0.77	1.2	1.4	1.3	0.6	1	1.4	0.33	0.21	
13	Alkalinity (as CaCO3) mg/l	200	600	280	240	168	284	288	320	340	284	200	336	320	280	112	
»	Water level in mtr. from ground level																

Annexure - VII

Ambient Air Quality Monitoring Results (Oct 2013 - March 2014)

Ambient Air Quality Monitoring Results																														
Month		Working Place Sugala Village						Jagatiya Village			Chhachhar Village				Nagadala Village					Kansariya Village										
	PM2.5	PM10	SO2	NOx	CO	PM2.5	PM10	SO2	NOx	CO	PM2.5	PM10	SO2	NOx	CO	PM2.5	PM10	SO2	NOx	CO	PM2.5	PM10	SO2	NOx	CO	PM 2.5	PM 10	SO2	NOx	CO
Unit >	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(mg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(mg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(mg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(mg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(mg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(mg/m3)
Oct. 2013	29.00	45.00	11.50	16.60	0.50	25.00	41.00	12.80	17.40	0.30	28.00	46.00	13.70	18.10	0.40	24.00	42.00	11.50	16.70	0.50	28.00	46.00	12.10	18.60	0.40	30.00	45.00	12.80	19.70	0.40
	29.00	48.00	11.10	16.70	0.50	27.00	41.00	12.40	17.80	0.40	28.00	43.00	12.80	17.30	0.30	25.00	45.00	12.60	17.50	0.40	26.00	47.00	11.70	19.70	0.40	27.00	42.00	11.90	17.10	0.50
Nov.2013	27.00	50.00	12.70	17.30	0.40	29.00	46.00	13.20	16.90	0.50	30.00	48.00	13.80	16.40	0.40	29.00	43.00	11.30	16.10	0.50	31.00	49.00	11.10	18.60	0.30	32.00	46.00	12.60	16.70	0.40
	26.00	41.00	12.30	15.40	0.30	23.00	44.00	11.70	16.60	0.50	26.00	43.00	12.20	17.30	0.20	27.00	39.00	12.40	16.20	0.30	25.00	41.00	11.80	17.30	0.50	24.00	42.00	11.70	17.80	0.30
Dec.2013	22.00	43.00	11.20	16.50	0.20	21.00	46.00	12.50	17.90	0.30	24.00	45.00	13.60	16.40	0.40	24.00	42.00	11.70	17.50	0.50	22.00	38.00	12.30	16.80	0.40	21.00	39.00	12.10	16.50	0.40
	25.00	46.00	13.70	16.50	0.50	26.00	42.00	12.80	17.70	0.30	27.00	45.00	12.20	17.50	0.50	25.00	40.00	12.10	17.40	0.40	29.00	44.00	13.40	16.50	0.50	30.00	41.00	13.60	16.10	0.30
Jan. 2014	24.00	41.00	12.20	16.10	0.50	26.00	43.00	13.70	16.80	0.40	27.00	40.00	12.40	17.30	0.20	28.00	39.00	12.50	16.60	0.30	26.00	41.00	12.80	16.10	0.50	25.00	43.00	11.40	17.60	0.50
	29.00	41.00	12.50	16.10	0.30	30.00	45.00	13.20	17.20	0.40	24.00	49.00	12.90	17.90	0.30	28.00	42.00	11.70	16.40	0.30	31.00	46.00	12.50	17.80	0.40	33.00	45.00	12.10	17.30	0.50
Feb. 2014	28.00	44.00	11.40	17.20	0.40	29.00	48.00	12.70	16.20	0.30	30.00	46.00	11.70	17.80	0.50	31.00	42.00	11.40	16.40	0.50	29.00	45.00	12.20	17.70	0.40	28.00	48.00	11.80	16.40	0.30
	25.00	43.00	11.20	17.10	0.40	28.00	41.00	12.40	16.50	0.50	26.00	42.00	11.60	16.70	0.40	22.00	45.00	12.20	17.40	0.40	26.00	41.00	13.50	18.90	0.50	31.00	43.00	13.70	16.50	0.30
March 2014	25.00	41.00	12.10	16.50	0.50	27.00	43.00	11.70	16.80	0.40	28.00	42.00	11.20	17.10	0.30	28.00	45.00	12.30	17.30	0.40	31.00	42.00	11.30	16.40	0.50	30.00	46.00	12.70	17.70	0.40
	23.00	45.00	12.30	16.20	0.50	26.00	46.00	11.50	17.40	0.40	28.00	42.00	11.90	17.90	0.30	24.00	47.00	11.20	16.10	0.50	28.00	45.00	12.60	17.30	0.30	27.00	42.00	12.10	17.80	0.50
Minimum	22.00	41.00	11.10	15.40	0.20	21.00	41.00	11.50	16.20	0.30	24.00	40.00	11.20	16.40	0.20	22.00	39.00	11.20	16.10	0.30	22.00	38.00	11.10	16.10	0.30	21.00	39.00	11.40	16.10	0.30
Maximum	29.00	50.00	13.70	17.30	0.50	30.00	48.00	13.70	17.90	0.50	30.00	49.00	13.80	18.10	0.50	31.00	47.00	12.60	17.50	0.50	31.00	49.00	13.50	19.70	0.50	33.00	48.00	13.70	19.70	0.50
Average	26.00	44.00	12.02	16.52	0.42	26.42	43.83	12.55	17.10	0.39	27.17	44.25	12.50	17.31	0.35	26.25	42.58	11.91	16.80	0.42	27.67	43.75	12.28	17.64	0.43	28.17	43.50	12.38	17.27	0.40

(A) Capital Investment for Environmental Monitoring :

	Total : Rs. 57.08 Lakh
(3) Others (Monitoring Van & DG sets)	: 10.00 Lakh
(2) Environmental Laboratory	: 10.00 Lakh
(1) Monitoring Equipments	: 37.08 Lakh

(B) Recurring expenditure for the period of Oct'13 to March'14 :

(1) Green belt development & dust suppression	:	9.96 Lakh
(2) Manpower Cost*	:	10.70 Lakh
(3) House Keeping	:	0.74 Lakh
(4) Other Env. Protection (Environmental Monitoring)	:	1.28 Lakh
(5) Environmental Awareness*	:	0.16 Lakh

Total : Rs. 22.84 Lakh

*Expenditures are common for all the plants & mines.

(C) Community Development expenditure by Ambuja : Rs. 12.73 Crore Cement Foundation**

** Community development expenditure is common for all plant & mines at Ambujanagar for the period of April'2013 to March'2014. Programme wise Expenditure Details for the year 2013-2014 is as below :

	Ambu	ja Cement Found	ation - Ambuja	nagar			
	Details for prog	ramme wise exp	enditure for th	e year 2013-14	ļ.		
							(Rs. In lakhs)
Sr.No	Programme	Funds from ACF Resources	*Funds received through Government	from other Donors / Donor Agencies	***People's Contribution	****Direct Funding to Communities	Total Exp.
	GUJARAT - Kodinar						-
1	Water Resource Mangement & Drinking Water Projects						-
	a.Water Resource Devlopment	40.16	17.57				57.73
	B .Drinking Water Programme	37.83	-	13.55	46.29	-	97.67
	c. Salinity Prevention (KVY III)	81.61		52.60	90.93	90.01	315.15
2	Agriculture Development(Farm Forestry &Afforesation)	38.36		16.88	145.03	186.33	386.60
3	Better Cotton Initiative (BCI)	0.54		38.21	1.85	2.30	42.90
4	Krishi Vigyan Kendra (KVK)	16.84	105.59		-		122.43
5	Animal Husbandry Programme	0.44	-		-		0.44
6	Health & Sanitation Programme	12.78			15.31	-	28.09
7	Skill and Enterprunership Development Programme	26.79		15.97	23.78		66.54
8	Village Knowledge Centre & Anganwadi exp	1.93			1		1.93
9	Capacity Building & Training Programmes	0.21	-		12		0.21
10	Women / Youth Development	6.82					6.82
11	Integrated Community Development Programme	80.89					80.89
12	Co-ordination & Administration Expenses	63.65					63.65
13	Capital Expenditure	2.08					2.08
1	TOTAL	410.93	123.16	137.21	323.19	278.64	1,273.13