

Ambuja Cement

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-11015/336/2007-IA-II (M) dated 14.01.09

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-11015/336/2007-IA-II(M) granted by MoEF to **Vadnagar Limestone Mining Project (S.No.44)** of Ambuja Cements Ltd. , located at village - Vadnagar , 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.

Copy to:

- 1) Central Pollution Control Board
Western Zonal Office, Synergy House-II,
Subhanpura - Gorwa Road, Vadodara-390023 (Gujarat)
- 2) Member Secretary,
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector-10, Gandhinagar-382010
(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 : Open Cast (Limestone & Marl) Mining
- 02 Name of the project : Vadnagar Limestone Mining Project
(S.No 44 Lease)
- 03 Clearance letter(s) / OM no. and date : J-11015/336/2007.1A.II (M),
Dated 14.01.2009
- 04 Location :
- a) District(s) : Junagadh
- b) State(s) : Gujarat
- c) Latitude : 20° 51' 08" - 20° 52' 02"N
- d) Longitude : 70° 42' 08" - 70° 42' 56"E
- 05 Address for correspondence :
- a) Address of concerned Project Chief Engineer (with pincode & 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
- b) Address of Executive Project Engineer / Manager (with pincode / fax numbers). : Shri, Harendra Dayal
Manager (Mines)
Ambuja Cements Ltd
PO Ambujanagar-362715
Taluka Kodinar,
District Junagadh (Gujarat).
Tel: 02795-232064
Fax: 02795-232032/232028

- 06 Salient features
- a) of the project : Vadnagar Limestone Mining Lease (Survey No. 44) is located at a distance of about 4 Kms from the Cement Plants at Ambujanagar.
- :
- b) of the environmental management plans :
- ❖ Mining operations would not involve drilling & blasting. Limestone excavation is being carried out by Surface Miner supported by ripper dozer.
 - ❖ Regular monitoring of Environmental parameters is being undertaken as per the norms of MoEF and IBM.
 - ❖ Preventive maintenance of deployed HEMM will be undertaken regularly.
 - ❖ Dust suppression by water sprinkling on haul roads and in working area.
 - ❖ Afforestation / Green belt development along haul road and lease periphery.
 - ❖ Mined-out areas will be converted to pasture land, plantation and converted into water reservoir.
 - ❖ Rural Development and Socio-economic activities will be undertaken in the project buffer zone area.
- 07 Break up of the project area.
- a) Submergence area : Nil
(forest & non-forest)
- b) Others : 108.97 ha
(Government Waste Land)
- 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.

- a) SC, ST / Adivasis : Not applicable
b) Others : Not applicable

(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures if a survey is carried out give details & year of survey)

- 09 Financial details : Limestone raised from the mining lease area will partially supplement the requirements of existing cement units. As it is a captive mine for the Cement Plant, no separate project costing was prepared.
- Project cost as originally planned and subsequent revised estimates and the year of price reference.
- a) Allocation made for environmental management plans with item wise and year wise break-up. : **Capital Investment**
Mining Equipment Rs. 15 Lakhs
- Recurring Expenditure per year**
- | | | |
|---------------------------------|---|-----------------------|
| Plantation | - | 3.00 Lakhs |
| Environmental Monitoring | - | 1.00 Lakhs |
| Pollution Control | - | 5.00 Lakhs |
| Rural Development | - | 10.0 Lakhs |
| Total / Year (Recurring) | | Rs.19.00 Lakhs |
- b) Benefit cost ratio / Internal rate of return and the year of assessment. : No separate assessment made, as it is an integral part of the raw material source for the cement plants at Ambujanagar.
- c) Whether (c) includes the cost of environmental management as shown in the above. : Yes
- d) Actual expenditure incurred on the project so far. : 4.5 Crore
- e) Actual expenditure incurred on the environmental management plans so far. : 2.70 Crore

- 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.
- 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 felling of trees.
- 12 Status of construction
- a) Date of commencement (Actual and / or **planned**) : Existing project.
- b) Date of completion (Actual and / or **planned**). : Not applicable.
- 13 Reasons for the delay if the project is yet to start. : Project will be start after getting Consent to Operate from State Pollution Control Board. Consent to operate not received yet.
- 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 : 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.

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Compliance Status of Environment Clearance issued to Vadnagar Limestone Mining Project (S.No.44) vide MoEF Letter No : J-11015/336/2007IA-II (M) dated 14.01.2009		
Sr. No	Condition	Compliance Status
(A). Specific Conditions :		
i	The project proponent shall obtain fresh Consent to Establish from the Gujarat Pollution Control Board for capacity of 1.5 million TPA of limestone and 1.15 million TPA of marl and effectively implement all the conditions stipulated therein.	Complied. Fresh Consent to Establish have been obtained from Gujarat Pollution Control Board vide letter No. GPCB/ID-29258/CCA/JNG-547/20162 dated 01.08.2012.
ii	The project proponent shall not carry out pumping of groundwater.	Point noted and being complied.
iii	The project proponent shall practice suitable rainwater harvesting measures on long term basis and work out a detailed scheme for rainwater harvesting in consultation with the Central Groundwater Authority and submit a copy of the same to the Ministry of Environment and Forests and its Regional Office, Bhopal.	Water conservation measures to augment ground water resources in the area is being done by our Ambuja Cement Foundation (ACF). A glimpse about ACF & community development work done by ACF in surrounding areas is enclosed as Annexure I.
iv	The project proponent shall effectively implement the conditions made by the Chief Wildlife Warden and Principal Chief Conservator of Forests, Gandhinagar vide their letter No.WLP/301/32/A/3097-98/2007-08 dated 17.03.2008 restraining use of explosives, maintenance of clean environment (air, water and land) and regular spray of water in mining area and on transport road to keep air pollution under control and provision of a green belt of 25 m around the mine area.	Explosive is not being used at any phase of mining operation. Mining is being done by environment friendly surface mining technology. Regular maintenance of mining area is being done to keep mines environment clean. Regular sprinkling of water is being done to prevent fugitive dusting in mines area and on transport roads. Whereas regarding green belt of 100 meter, MoEF have ammended the said condition with 25 meter green belt.
v	The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations.	Point noted. At no stage of mining natural water course will be obstructed by mining activity
vi	Top soil, if any, shall be concurrently used for mine reclamation, plantation and green belt development.	As this is renewed lease. No top soil will be generated during mining operation. If any, shall be used for mines reclamation and plantation & green belt development.
vii	Catch drains and siltation ponds of appropriate size should be constructed for the working pit to arrest flow of silt and sediment directly into the rivers and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after the monsoon and maintained properly. Garland drain (size, gradient and length) shall be constructed for the mine pit to prevent run off of water and flow of sediments directly into the rivers and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) 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. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.	To collect surface run-off and arrest silt and sediment flow from the soil & mineral stacks, 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 collected water utilized for watering the mine area, roads, green belt development etc.

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Sr. No	Condition	Compliance Status
viii	The void left unfilled in an area of 56.0 ha shall be converted in to water body. The higher benches of excavated void/mining pit shall be terraced and plantation done to stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area.	On higher benches plantation has been done and slope of higher benches made gentle for easy accessibility by local people. Peripheral fencing of bella stone is provided along excavated area. Mined out area will be converted in to water body.
ix	Dimension of the retaining wall at the toe of over burden benches within the mine to check run-off and siltation should be based on the rain fall data.	No overburden benches. Hence not applicable.
x	Plantation shall be raised in an area of 54.5 ha including a 7.5m wide statutory barrier all around the mining lease, reclaimed and rehabilitated areas, around water body, roads etc. and in an area of 3.7 ha. outside the mine lease by planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 1500 trees per hectare.	Till March 2014 3.3031 ha. area is covered under plantation and green belt development. Details of greenbelt/reclamation is enclosed as Annexure -II.
xi	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	Environment friendly Surface Miner machine is being used for mining. Surface miner have 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. Ambient Air Quality at identified locations is being carried out regularly. AAQ monitoring report is enclosed as Annexure VII.
xii	The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	Rainwater harvesting measures to augment ground water resources in the area has been done by our Ambuja Cement Foundation (ACF). Details of water harvesting work & community development work done by ACF in surrounding area is enclosed as Annexure - I.
xiii	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year, pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office, Bhopal, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted and ingress of saline water is taking place due to the mining activity, necessary corrective measures shall be carried out.	Regular monitoring of ground water level and quality is being carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers. Ground water level and water quality monitoring report enclosed as Annexure -III. Preliminary study on ground water in Vadnagar limestone mine (S.No.44) & its buffer zone has been conducted by Ground Water and Mineral Investigation Consultancy Centre (P) Ltd., Jaipur. Copy of report has been already submitted to MoEF vide our submission on 25.12.2010 vide letter no. ACL/EMD/F-16/2010/55924.
xiv	Appropriate mitigative measures shall be taken to prevent pollution of the Shingoda River and the Shom River in consultation with the State Pollution Control Board.	Point noted. Shingoda river is located in buffer zone of mines at 2.2 Km from mine lease boundary and Somat river is located at beyond 2.0 Km from mine lease boundary. There will be no any discharge to Shingoda & Somat river.

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Sr. No	Condition	Compliance Status
xv	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral from mine face to the conveyor. The vehicles shall be covered with a tarpaulin and shall not be overloaded.	Point noted and complied. Vehicle emission is being regularly checked. Regular maintenance of all the vehicle is being done. All vehicles used for transportation of raw materials is being covered properly.
xvi	Drilling and blasting operation shall not be carried out.	Mining is being done using fully mechanized Surface Miner Machine.
xvii	Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	Crusher is provided with high efficient dust extraction system i.e. Bag Filter. Bag filter is being regularly maintained and operated.
xviii	Consent to operate shall be obtained from the State Pollution Control Board prior to start of enhanced production from the mine .	Fresh Consent to Operate have been obtained from Gujarat Pollution Control Board vide letter No.GPCB/CCA/JNG-547/ID-29258/122850 dated 30.08.2012.
xix	Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and the wastewater generated during mining operation.	Sewage treatment plant has already been installed at ambujanagar & under operation. For the waste water generated from workshop, Oil and grease trap has been provided.No waste water generation during mining.
xx	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Pre-placement medical examination and periodical medical examination of the worker engaged is being regularly carried out by team of doctors of our Occupation Health Centre.
xxi	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	All the required infrastructures are exist. Hence not applicable.
xxii	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely lion if any, peacock etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the wildlife conservation plan so prepared specific to the project site shall be effectively implemented. A copy of action plan shall be submitted to the Ministry of Environment and Forests and its Regional Office, Bhopal.	All the precautionary measures as per submitted action plan is being under taken. Copy of wildlife conservation plan has been submitted to MoEF vide our submission dated 25.12.2010 vide letter no. ACL/EMD/F-16/2010/55924.

Compliance Status of Environment Clearance issued to Vadnagar Limestone Mining Project (S.No.44) vide MoEF Letter No : J-11015/336/2007IA-II (M) dated 14.01.2009		
Sr. No	Condition	Compliance Status
xxiii	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval	Point Noted & will be Complied.
(B) General Conditions		
i	No change in technology and scope of working should be made without prior approval of the MoEF	Point noted.
ii	No change in the calendar plan including excavation, quantum of limestone, waste/ OB dumps should be made	Point noted.
iii	4 Ambient Air Quality monitoring stations should be established in the core zone as well as buffer zone for RSPM,SPM, SO ₂ & Nox monitoring. Location of the stations should be decided based on meteorological data, topographical features and environmentally and ecologically sensitive target and frequency of monitoring should be undertaken with the SPCB	Four ambient air quality monitoring locations have been identified as directed and is being monitored as per CPCB/SPCB guidelines. Ambient air quality monitoring report enclosed as Annexure - VII .
iv	Data on environmental quality should be regularly submitted to the Ministry including its regional office at Bhopal and SPCB / CPCB once in six months	Point Noted & being complied. Our last submission was on 23.11.2013 vide letter no.ACL/EMD/F-16/2013.
v	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Environment friendly Surface Miner machine is being used for mining. Surface miner 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.
vi	Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM etc should be provided with ear plugs / muffs	All the worker working in high noise areas is being provided with ear plug/ear muffs. Regular ambient noise monitoring as well as HEMM noise monitoring is being carried out. ambient noise monitoring as well as HEMM noise monitoring report enclosed as Annexure - V & VI .
vii	Industrial waste water (workshop and waste water from mine) should be properly collected, treated so as to confirm to the standards prescribed under GSR 422(E) dated 19.05.1993 & 31.12.1993 or as amended from time to time. Oil and grease trap should be installed before discharge of work shop effluents.	Point noted and complied. Oil and grease trap has been installed at workshop for discharge of work shop effluents. Regular monitoring is carried out by M/s Royal Consultants, Rajkot , report is enclosed as Annexure-VIII .
viii	Personnel working in dusty areas should wear protective respirator devices and they should also be provided with adequate training and information and safety & health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contraction due to exposure to dust and take corrective measures if needed	Personnel working in mines is being provided with dust masks,safety shoes, safety goggle & Helmet. Occupational health surveillance programme of the workers is undertaken periodically by our Occupational Health Centre.

Compliance Status of Environment Clearance issued to Vadnagar Limestone Mining Project (S.No.44) vide MoEF Letter No : J-11015/336/2007IA-II (M) dated 14.01.2009		
Sr. No	Condition	Compliance Status
ix	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	Environmental Management Division (EMD) has already been set up with suitable qualified personnel. Head of environmental management cell directly report to the Unit Head (Jt. President) of the organisation.EMD organisation chart is enclosed as Annexure X .
x	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Bhopal.	Point noted. Details of capital and recurring expenditure for environmental protection measures are enclosed as Annexure IX .
xi	The project authorities should inform to the regional office located at Bhopal 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
xii	The regional office of this Ministry located at Bhopal shall monitor compliance of the stipulated environmental conditions. The project authority should extend full cooperation to the officer(s) of the regional offices by furnishing the requisite data / information / monitoring reports	Point noted. Project was monitored by Dr. A. Mehrotra (Regional Office, Bhopal) during 12.10.10 to 13.10.10
xiv	The project proponent shall submit six monthly report on the status of compliance of stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office, Bhopal, the respective Zonal Office of Central Pollution Control Board , the State Pollution Control Board.The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically.It shall simultaneously be sent to the regional office of the Ministry of Environment and Forests, Bhopal, the respective Zonal Office of the Central Pollution Control Board and the State Pollution Control Board.	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.
xv	A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	A copy of clearance letter has been marked to concerned.
xvi	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/Tehsildar's Office for 30 days.	GPCB is the concern authority for the same.
xvii	The project authorities should advertise atleast in two local news papers widely circulated around the project one of which shall be in the vernacular language of the locality concerned within 7 days of issuance of the clearance letter informing that the project has been accorded EC and a copy of the clearance letter is available with the SPCB and may also be seen at the website of MoEF at www.envfor.nic.in	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/F16/2010/55924.

Ambuja Cement Foundation - Ambujanagar
Details for programme wise expenditure for the year 2013-14

(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 Development	40.16	17.57				57.73
	B .Drinking Water Programme	37.83	-	13.55	46.29	-	97.67
	c. Salinity Prevention (KVI III)	81.61		52.60	90.93	90.01	315.15
2	Agriculture Development(Farm Forestry & Afforestation)	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			-		1.93
9	Capacity Building & Training Programmes	0.21	-		-		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
	TOTAL	410.93	123.16	137.21	323.19	278.64	1,273.13

ANNEXURE 2

Vadnagar 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)
108.97	88.2296	3.3031	10.7049	0

Annexure 3

Ground Water Quality Report of Gujarat Ambuja Limestone Mines-S.NO. 44

August'2013

S.N.	Ref.No.	IS 10500:2012 (S.R)		Well Water		
		Desirable	Permissible	W8	W10	W13
	Source			W8	W10	W13
	Village			VADNAGAR	VADNAGAR	VADNAGAR
	Taluka			KODINAR	KODINAR	KODINAR
	District			JUNAGADH	JUNAGADH	JUNAGADH
1	Color Hazen Units	5	15	C.L.	C.L.	C.L.
2	Odour	Agreeable	Agreeable	U.O.	U.O.	U.O.
3	Turbidity NTU	1	5	00	00	00
4	Dissolved Solids mg/l	500	2000	620	844	896
5	pH	6.5 to 8.5	6.5 to 8.5	8.34	8.38	8.33
6	Total Hardness (as CaCO3) mg/l	200	600	280	400	420
7	Calcium (as Ca) mg/l	75	200	54	80	67
8	Magnesium (as Mg) mg/l	30	100	55	49	61
9	Chlorides (as Cl) mg/l	250	1000	160	208	224
10	Sulphates (as SO4) mg/l	200	400	56	80	84
11	Nitrates (as NO3) mg/l	45	45	20.64	28.51	32.46
12	Fluorides (as F) mg/l	1	1.5	1.2	0.99	
13	Alkalinity (as CaCO3) mg/l	200	600			
»	Water level in mtr. from ground level	---	---			

Ground Water Quality Report of Gujarat Ambuja Limestone Mines-S.NO. 44

January'-2014

S.N.	Ref.No.	IS 10500:2012 (S.R)		Well Water		
		Desirable	Permissible	W8	W10	W13
	Source			W8	W10	W13
	Village			VADNAGAR	VADNAGAR	VADNAGAR
	Taluka			KODINAR	KODINAR	KODINAR
	District			JUNAGADH	JUNAGADH	JUNAGADH
1	Color Hazen Units	5	15	C.L.	C.L.	C.L.
2	Odour	Agreeable	Agreeable	U.O.	U.O.	U.O.
3	Turbidity NTU	1	5	00	0.0	0.0
4	Dissolved Solids mg/l	500	2000	692	796	870
5	pH	6.5 to 8.5	6.5 to 8.5	8.4	8.39	8.32
6	Total Hardness (as CaCO3) mg/l	200	600	296	404	340
7	Calcium (as Ca) mg/l	75	200	64	83	70
8	Magnesium (as Mg) mg/l	30	100	33	47	39
9	Chlorides (as Cl) mg/l	250	1000	172	180	244
10	Sulphates (as SO4) mg/l	200	400	52	69	58
11	Nitrates (as NO3) mg/l	45	45	34.43	37.77	25.94
12	Fluorides (as F) mg/l	1	1.5	0.64	0.86	1.3
13	Alkalinity (as CaCO3) mg/l	200	600	336	320	400
»	Water level in mtr. from ground level	---	---			

Air Borne Dust Survey - Vadnagar Mines (S.No.44) Oct-2013 March-2014

<i>Machine : Surface Miner</i>				<i>Machine : Dozer</i>				<i>Machine : Loader</i>			
Date	Period	Location	RSPM (mg/m3)	Date	Period	Location	RSPM (mg/m3)	Date	Period	Location	RSPM (mg/m3)
24-Oct-13	0600 - 1400	Inside Cabin	0.21	25-Oct-13	0600 - 1400	Inside Cabin	0.24	26-Oct-13	0600 - 1400	Inside Cabin	0.29
28-Nov-13	0600 - 1400		0.25	29-Nov-13	0600 - 1400		0.29	30-Nov-13	0600 - 1400		0.22
5-Dec-13	0600 - 1400		0.31	6-Dec-13	0600 - 1400		0.26	7-Dec-13	0600 - 1400		0.24
8-Jan-14	0600 - 1400		0.24	9-Jan-14	0600 - 1400		0.29	10-Jan-14	0600 - 1400		0.23
20-Feb-14	0600 - 1400		0.25	21-Feb-14	0600 - 1400		0.28	22-Feb-14	0600 - 1400		0.24
3-Mar-14	0600 - 1400		0.26	4-Mar-14	0600 - 1400		0.29	5-Mar-14	0600 - 1400		0.27

Annexure 5

Ambient Noise Level Monitoring - Vadnagar Mines (S.No.44) Oct-13 March-2014

Month	Noise Levels in dB(A)									
	Near Surface Miner		Hoad road		mines offices		develpara village		Icchhved Village	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Oct-13	75	78	39	42	38	44	40	43	46	49
Nov-13	76	79	40	50	39	43	45	50	43	46
Dec-13	73	78	42	46	35	39	40	42	39	42
Jan-14	76	79	43	46	40	45	47	50	40	43
Feb-14	72	75	40	45	42	46	40	44	39	42
Mar-14	76	79	39	44	35	38	39	42	36	40

Annexure 6

Noise Level of HEMM - Vadnagar Mines (S.No.44) Oct-2013- March-2014

Machine	Surface Miner					Loader					Dozer					
	Month	Conditions	Noise Levels (dB)				Conditions	Noise Levels (dB)				Conditions	Noise Levels (dB)			
			At 5m. distance		At 10m. distance			At 5m. distance		At 10m. distance			At 5m. distance		At 10m. distance	
			Min	Max	Min	Max		Min	Max	Min	Max		Min	Max	Min	Max
Oct-13	While mining	67	71	38	43	While loading to tipper	55	60	40	43	While dozing the material	42	46	44	48	
Nov-13	While mining	69	72	40	45	While loading to tipper	55	56	44	49	While dozing the material	43	47	43	46	
Dec-13	While mining	50	55	50	60	While loading to tipper	65	69	40	44	While dozing the material	43	48	57	60	
Jan-14	While mining	40	46	39	41	While loading to tipper	49	52	50	53	While dozing the material	55	59	45	50	
Feb-14	While mining	42	44	39	42	While loading to tipper	40	53	38	43	While dozing the material	50	54	41	46	
Mar-14	While mining	40	43	38	40	While loading to tipper	50	53	35	38	While dozing the material	50	56	40	43	

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

Month	Average Ambient Air Quality Monitoring Results																			
	Working place					D-Block Crusher					Devalpara Village					Inchhavad Village				
	PM2.5 (µg/m3)	PM10 (µg/m3)	SO2 (µg/m3)	NOx (µg/m3)	CO (mg/m3)	PM2.5 (µg/m3)	PM10 (µg/m3)	SO2 (µg/m3)	NOx (µg/m3)	CO (mg/m3)	PM2.5 (µg/m3)	PM10 (µg/m3)	SO2 (µg/m3)	NOx (µg/m3)	CO (mg/m3)	PM2.5 (µg/m3)	PM10 (µg/m3)	SO2 (µg/m3)	NOx (µg/m3)	CO (mg/m3)
Oct. 2013	24.00	43.00	13.60	16.50	0.40	25.00	44.00	12.10	17.70	0.30	22.00	37.00	13.20	18.50	0.30	22.00	40.00	11.40	15.70	0.40
	25.00	45.00	11.60	16.70	0.50	27.00	41.00	10.80	18.50	0.40	24.00	43.00	12.40	17.30	0.50	22.00	46.00	11.90	16.50	0.30
Nov.2013	28.00	43.00	12.30	17.80	0.40	29.00	46.00	11.80	16.20	0.30	27.00	47.00	10.60	18.60	0.40	22.00	46.00	11.90	16.50	0.30
	26.00	40.00	12.30	15.60	0.50	27.00	41.00	11.50	16.20	0.40	23.00	39.00	12.60	16.80	0.40	25.00	42.00	12.90	16.80	0.50
Dec.2013	23.00	42.00	11.20	16.60	0.30	25.00	44.00	12.30	17.50	0.50	25.00	41.00	11.70	17.20	0.50	26.00	39.00	12.50	17.30	0.40
	26.00	48.00	11.40	16.60	0.50	25.00	43.00	12.50	17.70	0.40	29.00	42.00	12.20	17.20	0.50	24.00	49.00	12.60	17.90	0.40
Jan. 2014	26.00	45.00	12.20	16.90	0.50	28.00	48.00	12.80	17.30	0.30	29.00	43.00	11.30	17.60	0.40	26.00	39.00	12.50	17.30	0.40
	24.00	45.00	12.20	17.10	0.30	28.00	41.00	12.90	16.80	0.50	31.00	44.00	13.40	17.70	0.30	27.00	46.00	13.80	18.30	0.30
Feb. 2014	26.00	45.00	12.20	16.90	0.50	28.00	48.00	12.80	17.30	0.30	29.00	43.00	11.30	17.60	0.40	26.00	39.00	12.50	17.30	0.40
	28.00	41.00	11.40	16.60	0.50	29.00	43.00	12.20	17.20	0.40	32.00	39.00	12.50	16.50	0.40	21.00	32.00	11.40	17.40	
March 2014	26.00	45.00	12.20	16.90	0.50	28.00	48.00	12.80	17.30	0.30	29.00	43.00	11.30	17.60	0.40	26.00	39.00	12.50	17.30	0.40
	26.00	45.00	10.20	11.40	0.30	27.00	48.00	13.50	16.50	0.50	30.00	42.00	11.40	17.40	0.50	25.00	35.00	12.60	16.30	0.40
Minimum	23	40	10.2	11.4	0.3	25	41	10.8	16.2	0.3	22	37	10.6	16.5	0.3	21	32	11.4	15.7	0.3
Maximum	28	48	13.6	17.8	0.5	29	48	13.5	18.5	0.5	32	47	13.4	18.6	0.5	27	49	13.8	18.3	0.5
Average	25.67	43.92	11.90	16.30	0.43	27.17	44.58	12.33	17.18	0.38	27.50	41.92	11.99	17.50	0.42	24.33	41.00	12.38	17.05	0.38



Royal

Environment Auditing & Consultancy Service

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Ref. No. : 77/03/2013-14

Date: 18/03/2014

REPORT OF WASTE WATER ANALYSIS

Name of company : Ambuja Cements Limited,
P.O. Ambujanagar - 362 715.
Taluka : Kodinar, District : Junagadh.

Source of Sample : Treated Workshop Effluent
Date of Sample collection: 12/03/2014

Sr. Parameters No.	Units	Prescribed Limits	Results
01 pH	pH Units	---	7.11
02 TDS	mg/l	---	446
03 Total Suspended Solids	mg/l	---	38
04 Dissolved Oxygen	mg/l	---	5
05 Oil & Grease	mg/l	---	5.7
06 BOD (3 days at 27 c)	mg/l	---	16
07 COD	mg/l	---	38
08 Residual Chlorine	mg/l	---	---



Royal Environment Auditing & Consultancy Service


Analyst

(A) Capital Investment for Environmental Monitoring :

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

Total : Rs. 57.08 Lakh

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

(1) Green belt development & dust suppression	: 25.26 Lakh
(2) Manpower cost*	: 10.70 Lakh
(3) House Keeping	: 0.74 Lakh
(4) Other Env. Protection (Environmental Monitoring)	: 0.47 Lakh
(5) Environmental Awareness*	: 0.16 Lakh

Total : Rs. 37.33 Lakh

*Expenditures 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 :

Ambuja Cement Foundation - Ambujanagar							
Details for programme wise expenditure for the year 2013-14							
							(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			-		1.93
9	Capacity Building &Training Programmes	0.21	-		-		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
	TOTAL	410.93	123.16	137.21	323.19	278.64	1,273.13

Annexure X [ORGANISATION CHART]

