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ACL/EMD/F-16/2023/ 2482

Dt.15.05.2023

The Director,
Ministry of Environment, Forest and Climate Change (MoEF&CC),
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 of **Vadnagar Limestone Mines** (S.No.44)

Ref.: Environmental Clearance Order No. J-11015/336/2007-IA-II (M) dated 14.01.2009

Sir,

We are pleased to submit herewith half yearly compliance status report (i.e. for the period of **(October'2022 to March'2023)** of Environmental Clearance Order No. J-11015/336/2007-IA-II(M) granted by MoEF&CC to ***Vadnagar Limestone Mining Project (S.No.44)*** of Ambuja Cements Ltd., located at village - Vadnagar, Taluka - Kodinar, District – Gir Somnath (Gujarat).

This is for your information and record please.

Thanking you,

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

Devendra Singh Chauhan
Head-Environment

Encl.: As above.

Copy to:

1) **The Central Pollution Control Board (CPCB)**, Privesh Bhavan, Atmajyoti Ashram Rd, Opp. VMC Ward Office No. 10, Subhanpura, Vadodara – 390023 (Gujarat).

2) **The Member Secretary, Gujarat Pollution Control Board (GPCB),** Paryavaran Bhavan, Sector-10-A, Gandhinagar-382010.

3) **The Regional Officer, Gujarat Pollution Control Board (GPCB),** Opp. Saint Anne's Church Station Road, Junagadh.

Ambuja Cements Limited
Unit : Ambujanagar
Tehsil : Kodinar, Dist : Gir Somnath (Gujarat)
PO : Ambujanagar – 362715
Ph : +91 (02795) 237025, 237372

CIN : L26942GJ1981PLC004717

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Ph +91 79-2555 5555
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MONITORING THE IMPLEMENTATION OF ENVIRONMENTAL SAFEGUARDS

Ministry of Environment, Forest and Climate Change

Regional Office (W), Bhopal

Monitoring Report

Part-I

DATA SHEET

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)	:	Gir Somnath
	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).	:	Sh. Devendra Singh Chauhan (Head - Environment) Ambuja Cements Ltd. PO Ambujanagar, Taluka : Kodinar, Pin- 362715 District: Gir Somnath (Gujarat). Tel: 02795-221137/232009/237403 Fax: 02795-220328/232032
	b) Address of Executive Project Engineer / Manager (with pincode / fax numbers.	:	Sh. Pravin Singh Mines Manager Ambuja Cements Ltd PO Ambujanagar-362715 Taluka Kodinar, District: Gir Somnath (Gujarat). Tel: 02795-232064
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 does 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 is undertaken regularly. • Dust suppression by water sprinkling on haul roads and in working area by water tanker. • Afforestation / Green belt development along haul road and lease periphery is being carried out. • Mined-out areas is being converted to pasture land, plantation and water reservoir as per approved mining plan. • Rural Development and Socio-economic activities is being undertaken in the project buffer zone area.
07	Breakup of the project area.		
	a) Submergence area (forest & non-forest)	:	Nil
	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 (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)		Not applicable
09	**Financial details** Project cost as originally planned and subsequent revised estimates and the year of price reference.	:	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.
	a) Allocation made for environmental management plans with item wise and year wise break-up.	:	***Capital Investment*** *Details of capital and Recurring expenditure for environmental protection measures are enclosed as under*

Expenditure incurred in Environment Management Plan Vadnagar (S.No. -44) Mines

A. Capital Invesstment for Environmental Monitoring :

S.No	Particulars	Cost (In Lacs)
1	Monitoring Equipments	37.08
2	Environment Laboratory	10
3	Others (Monitoring Van, DG Sets etc.	10
	Total (In Lacs INR)	57.08

B. Recurring Expenditure for the period of October'2022 to March'2023

S.No	Particulars	Cost (In Lacs)
1	Green belt development & Dust suppression	0.95
2	Manpower Cost *	13.15
3	House Keeping	1.93
4	Other Env. Protection (Environmental Monitoring)	1.26
5	Environment Awareness *	1.43
	Total (In Lacs INR)	18.71

* Expenditures are Common for All the Plants & Mines.

Ambuja Cement Foundation - Ambujanagar
Details for programme wise expenditure for the year October 2022 to March 2023

(Rs. In lakhs)

Sr.No	Programme	ACF - ACL	*Funds received through Government	** Funds 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	11.05	0.00				11.05
	B .Drinking Water Programme	2.75			3.30		6.05
2	Agriculture Development(Drip irrigation, Farm Forestry & Afforestation)	37.03			191.35	233.95	462.33
3	BCI	28.33	1.54	221.84	297.00	396.06	944.77
4	Krishi Vigyan Kendra (KVK) - Agriculture	1.87	133.47				135.34
5	Health & Sanitation	12.25			8.27		20.52
6	Education Programme	7.75					7.75
7	Women / Youth Development	21.15					21.15
8	Skill and Enterprunership Development Programme	38.78	38.83		26.74		104.35
9	Integrated Community Development Programme	81.21					81.21
10	Co-ordination & Administration Expenses						0.00
11	Capital Expenditure						0.00
	TOTAL	242.17	173.84	221.84	526.66	630.01	1794.52

	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.	:	5.0 Cr.
	e) Actual expenditure incurred on the environmental management plans so far.	:	9.107 Cr.
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	:	The project does not involve felling of trees.

	(such as submergence area of reservoir, approach roads), if any with quantitative information.		
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.	:	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.	:	12.10.2010 to 13.10.2010 **by Dr. A. Mehrotra Regional Office**, MOEF&CC, Bhopal
	b) Date of site visit for this monitoring report	: :	12.10.2010 to 13.10.2010
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 **Dated 18.11.2022 vide letter no. ACL/EMD/F-16/2022/2688**

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Compliance Status of Environment Clearance issued to Vadnagar Limestone Mining, Project (S.No.44) Vide MoEF&CC Letter No: J-11015/336/2007IA-II (M) dated 14.01.2009

S 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 has been obtained from Gujarat Pollution Control Board vide letter no. GPCB/ID-29258/CCA/JNG-547/20162 dtd 01.08.2012.
II	The project proponent shall not carry out pumping of groundwater.	• No pumping of ground water is being taken place.
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 Ground water 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 are being done by Ambuja Cement Foundation (ACF). A report about ACF & community development work done by ACF in surrounding areas is enclosed as **Under** and **Annexure -1**

Ambuja Cement Foundation - Ambujanagar
Details for programme wise expenditure for the year October 2022 to March 2023

(Rs. In lakhs)

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10	Co-ordination & Administration Expenses						0.00
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	TOTAL	**242.17**	**173.84**	**221.84**	**526.66**	**630.01**	**1794.52**

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. Green belt development is being done and is an ongoing process.
V	The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations.	• **Point noted & Complied.** • 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	• 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 is being collected into mined out pits. The drains are properly maintained and collected water is utilized for watering the mine area, Haul

AMBUJA CEMENTS LIMITED

	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.	roads, green belt development etc.
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.	• Total Open mine area is **88.4668 Hec.** • On higher benches plantation has been done and slope of higher benches are made gentler for easy accessibility by local people. Mined out area will be converted into water body. • Peripheral fencing with bella stone is provided along excavated area. Total 11765 meter brick wall, 9115 meter barbed wire and 7203.53 meter earthen bunds fencing have been done.
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 September 2021, 10.4485 ha area is covered under plantation and green belt development. Details of greenbelt/reclamation are enclosed as **(a) & (b)**

(a)

Greenbelt & Plantation Details till September'2022				
Total Lease Area (in ha)	**Opened up Area (in ha)**	**Planted Area (in Ha)**	**Pasture land (in Ha)**	**Water Body (in Ha)**
108.97	88.4668	10.4485	12.1889	39.5043

(b)

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	• Environment friendly Surface Miner machine is being used for mining. Surface miner has been provided with inbuilt facility of water sprinkling to suppress dust. • On all haul roads regular water sprinkling is being

	parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	done by water tankers. Photograph is enclosed as under (a).

- Ambient Air Quality at identified locations is being carried out regularly. AAQ monitoring report is enclosed as under (b).

Ambient Air Quality Monitoring Results (October 2022 - March 2023)

Average Ambient Air Quality Monitoring Results (October 2022 - March 2023)

Month	Eastern Boundary					D-Block Crusher					North Boundary				
	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-22	28.50	39.80	12.60	10.50	BDL	26.70	37.60	16.90	18.70	BDL	25.30	36.50	18.40	14.80	BDL
	26.20	40.10	12.50	10.50	BDL	24.60	39.80	12.30	13.60	BDL	21.80	35.60	10.60	18.70	BDL
Nov-22	23.90	40.20	12.20	9.80	BDL	25.40	38.40	13.40	11.20	BDL	24.60	37.40	15.20	15.40	BDL
	22.90	41.20	11.20	11.30	BDL	28.50	38.70	13.20	17.50	BDL	27.40	39.40	10.20	13.40	BDL
Dec-22	24.50	41.50	11.50	10.50	BDL	22.90	39.60	10.90	11.60	BDL	25.80	40.20	12.80	13.50	BDL
	23.40	42.50	10.90	12.40	BDL	27.60	40.60	11.50	15.70	BDL	28.90	37.50	14.80	16.50	BDL
Jan-23	23.50	42.30	10.90	11.20	BDL	22.70	37.60	11.20	13.60	BDL	29.20	35.80	16.20	12.20	BDL
	27.60	40.50	13.70	11.50	BDL	24.90	42.70	10.50	16.70	BDL	23.50	39.80	16.20	15.20	BDL
Feb-23	27.80	43.70	11.50	12.30	BDL	25.40	39.60	12.60	14.70	BDL	23.90	36.10	13.70	13.40	BDL
	26.30	41.30	14.10	12.10	BDL	27.50	43.50	15.20	17.50	BDL	28.30	42.70	17.50	16.30	BDL
Mar-23	26.50	38.50	12.50	13.20	BDL	24.90	36.90	17.30	14.10	BDL	25.10	39.20	16.50	15.30	BDL
	28.30	42.30	16.30	13.40	BDL	26.50	44.20	17.20	16.21	BDL	30.20	43.10	15.30	15.70	BDL

Month	Western Boundary					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)
Oct-22	23.40	34.80	14.60	17.60	BDL	28.70	38.10	13.70	16.20	BDL	29.50	36.90	17.50	10.80	BDL
	24.50	36.70	13.50	14.50	BDL	26.90	34.50	10.50	16.90	BDL	28.70	38.50	16.20	10.80	BDL
Nov-22	22.50	36.70	13.20	16.20	BDL	27.40	40.50	14.20	13.40	BDL	21.30	34.50	15.10	12.20	BDL
	30.50	35.70	11.50	16.20	BDL	26.40	37.60	11.30	15.20	BDL	30.20	34.30	12.40	12.20	BDL
Dec-22	27.60	41.70	15.70	17.90	BDL	24.10	39.70	11.90	15.80	BDL	28.60	37.60	12.70	13.70	BDL
	29.50	34.60	15.70	12.90	BDL	30.20	35.80	16.50	18.60	BDL	31.50	33.50	12.80	19.80	BDL
Jan-23	26.30	39.80	12.50	15.80	BDL	22.50	36.70	15.30	16.20	BDL	27.10	34.80	14.30	13.30	BDL
	28.70	37.50	12.70	13.50	BDL	22.50	36.80	15.60	12.60	BDL	26.70	34.50	13.20	15.40	BDL
Feb-23	28.70	37.40	14.50	16.10	BDL	26.10	35.80	15.80	15.70	BDL	29.50	39.10	16.20	16.30	BDL
	22.70	39.50	18.30	15.40	BDL	26.80	36.10	16.20	16.20	BDL	25.10	35.30	15.40	19.80	BDL
Mar-23	27.50	35.10	15.20	14.50	BDL	25.30	40.20	14.90	16.30	BDL	24.90	43.10	17.30	12.90	BDL
	26.40	40.10	19.20	16.30	BDL	25.70	37.80	15.30	17.50	BDL	29.10	36.20	16.10	11.50	BDL

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 Ambuja Cement Foundation (ACF). Details of water harvesting work & community development work done by ACF in surrounding area is enclosed as under

Ambuja Cement Foundation - Ambujanagar
Details for programme wise expenditure for the year October 2022 to March 2023

(Rs. In lakhs)

Sr.No	Programme	ACF - ACL	*Funds received through Government	** Funds from other Donors / Donor Agencies	***People's Contribution	****Direct Funding to Communities	Total Exp.
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1	Water Resource Mangement & Drinking Water Projects						
	a.Water Resource Devlopment	11.05	0.00				**11.05**
	B .Drinking Water Programme	2.75			3.30		**6.05**
2	Agriculture Development(Drip irrigation, Farm Forestry & Afforesation)	37.03			191.35	233.95	**462.33**
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9	Integrated Community Development Programme	81.21					**81.21**
10	Co-ordination & Administration Expenses						**0.00**
11	Capital Expenditure						**0.00**
	TOTAL	**242.17**	**173.84**	**221.84**	**526.66**	**630.01**	**1794.52**

Compliance Status of Environment Clearance issued to Vadnagar Limestone Mining, Project (S.No.44) Vide MoEF&CC Letter No: J-11015/336/2007IA-II (M) dated 14.01.2009

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.	• Complied. Water quality testing is carried out with the help of MoEF certified third party laboratory on Quarterly basis. Water levels are being recorded in open wells of buffer zone and piezometers are constructed in mines area core zone. • Data collected is being communicated regularly to CGWA, New Delhi, MoEF Regional office (SEZ) Bhopal, CGWB Regional Director Gandhinagar . • Ground water level & quality monitoring is being done regularly by establishing a network of ground water monitoring stations. Report is submitted to MoEF regional office Bhopal on six monthly basis. **Ground water level & quality monitoring reports are enclosed as under**

Jan-23 — Ground Water Quality Report of Gujarat Ambuja Limestone Mines - S.NO. 44

S.N.	Laboratory Ref.No.	IS 10600:2012 (S.R) Desirable	IS 10600:2012 (S.R) Permissible	Well Water W8	Well Water W9	Well Water W10	Well Water W11	Piezometers Pizometer-1	Piezometers Pizometer-2
	Source			W8	W9	W10	W11	Pizometer-1	Pizometer-2
	Village			VADNAGAR	VADNAGAR	VADNAGAR	VADNAGAR	VADNAGAR	VADNAGAR
	Taluka			KODINAR	KODINAR	KODINAR	KODINAR	KODINAR	KODINAR
	District			GIR-SOMNATH	GIR-SOMNATH	GIR-SOMNATH	GIR-SOMNATH	GIR-SOMNATH	GIR-SOMNATH
1	Color Hazen Units	5	15	2.08	2.08	2.08	2.08	3.12	3.12
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity NTU	1	5	1.50	1.25	1.59	1.81	1.58	0.92
5	pH at 25°C	6.5 to 8.5	No Relaxation	7.43	7.60	7.40	7.28	7.95	7.76
6	Dissolved Solids mg/l	500	2000	714	738	542	690	610	532
7	Total Hardness (as CaCO3) mg/l	200	600	328	360	208	204.00	332	368
8	Calcium (as Ca) mg/l	75	200	66	72	42	41	66	74
9	Magnessium (as Mg) mg/l	30	100	40	44	25	25	41	44
10	Chlorides (as Cl) mg/l	250	1000	200	192	176	224	128	48
11	Sulphates (as SO4) mg/l	200	400	53	58	34	33	54	59
12	Nitrates (as NO3) mg/l	45	No Relaxation	-	-	-	-	-	-
13	Fluorides (as F) mg/l	1	1.5	0.39	0.88	0.53	0.94	0.59	0.55
14	Alkalinity (as CaCO3) mg/l	200	600	180	394	212.00	288	296	360
	Water Level			**19.3**	**16.0**	**19.6**	**18.6**	**14.8**	**16.7**

Opinion for potability is given considering above 14 Test Parameters only

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 discharge to Shingoda & Somat river.
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.	• Vehicular emissions are being checked & monitored regularly. Detail of P.U.C certificate by **Somnath P.U.C center (Approved by : Veraval** transport commissionerate, Gujarat) is attached as under : • All vehicles used for transportation of raw materials are 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	• Crusher is provided with high efficient dust

ii	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.	extraction system i.e. Bag Filter. • Bag filters are 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 /ID-29258/CCA/JNG-547(2)/420905, Dated 06/10/2022 , **Consent Order No. AWH-121849.**
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 & operational at Ambujanagar. For the waste water generated from workshop, Oil and grease trap has been provided.
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 at our Occupational Health Centre.
xxi	Provision shall be made for the housing of construction labor 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 in place. The Condition is of during Construction/Start of Mining activity.
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 are being under taken. Copy of wildlife conservation plan has been submitted to MoEF & CC vide our submission dated **25.12.2010 vide letter no. ACL/EMD/F-16/2010/55924.**
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	• 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.
(B) General Conditions		
I	No change in technology and scope of working should be made without prior approval of the MoEF&CC.	• We are following the same mining practices through state of art Surface Miner as proposed. In case of any change in the mining technology and scope of working, we will take prior approval from Ministry of Environment, Forest & Climate Change.
ii	No change in the calendar plan including excavation, quantum of limestone, waste/ OB dumps should be made	• Point noted & being complied.
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.	• Eight ambient air quality monitoring locations have been identified as directed and are being monitored as per CPCB/SPCB guidelines. • **Ambient air quality monitoring reports are enclosed as under.**

Compliance Status of Environment Clearance issued to Vadnagar Limestone Mining, Project (S.No.44) Vide MoEF&CC Letter No: J-11015/336/2007IA-II (M) dated 14.01.2009

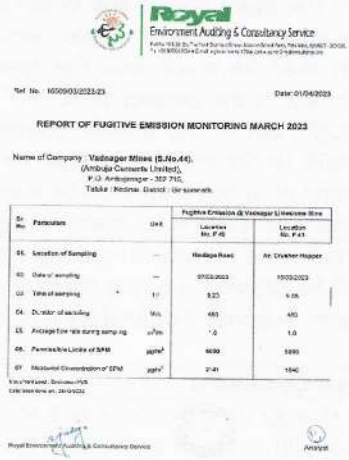
Ambient Air Quality Monitoring Results (October 2022 - March 2023)

Average Ambient Air Quality Monitoring Results (October 2022 - March 2023)

Month	Eastern Boundary					D-Block Crusher					North Boundary				
	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-22	28.50	39.80	12.60	10.50	BDL	26.70	37.60	16.90	18.70	BDL	25.30	36.50	18.40	14.80	BDL
	26.20	40.10	12.50	10.50	BDL	24.60	39.80	12.30	13.60	BDL	21.80	35.60	10.60	18.70	BDL
Nov-22	23.90	40.20	12.20	9.80	BDL	25.40	38.40	13.40	11.20	BDL	24.60	37.40	15.20	15.40	BDL
	22.90	41.20	11.20	11.30	BDL	28.50	38.70	13.20	17.50	BDL	27.40	39.40	10.20	13.40	BDL
Dec-22	24.50	41.50	11.50	10.50	BDL	22.90	39.60	10.90	11.60	BDL	25.80	40.20	12.80	13.50	BDL
	23.40	42.50	10.90	12.40	BDL	27.60	40.60	11.50	15.70	BDL	28.90	37.50	14.80	16.50	BDL
Jan-23	23.50	42.30	10.90	11.20	BDL	22.70	37.60	11.20	13.60	BDL	29.20	35.80	16.20	12.20	BDL
	27.60	40.50	13.70	11.50	BDL	24.90	42.70	10.50	16.70	BDL	23.50	39.80	16.20	15.20	BDL
Feb-23	27.80	43.70	11.50	12.30	BDL	25.40	39.60	12.60	14.70	BDL	23.90	36.10	13.70	13.40	BDL
	26.30	41.30	14.10	12.10	BDL	27.50	43.50	15.20	17.50	BDL	28.30	42.70	17.50	16.30	BDL
Mar-23	26.50	38.50	12.50	13.20	BDL	24.90	36.90	17.30	14.10	BDL	25.10	39.20	16.50	15.30	BDL
	28.30	42.30	15.30	13.40	BDL	26.50	44.20	17.20	16.21	BDL	30.20	43.10	15.30	15.70	BDL

Month	Western Boundary					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)
Oct-22	23.40	34.80	14.60	17.60	BDL	28.70	38.10	13.70	16.20	BDL	29.50	36.90	17.50	10.80	BDL
	24.50	36.70	13.50	14.50	BDL	26.90	34.50	10.50	16.90	BDL	28.70	38.50	16.20	10.80	BDL
Nov-22	22.50	36.70	13.20	16.20	BDL	27.40	40.50	14.20	13.40	BDL	21.30	34.50	15.10	12.20	BDL
	30.50	35.70	11.50	16.20	BDL	26.40	37.60	11.30	15.20	BDL	30.20	34.30	12.40	12.20	BDL
Dec-22	27.60	41.70	15.70	17.90	BDL	24.10	39.70	11.90	15.80	BDL	28.60	37.60	12.70	13.70	BDL
	29.50	34.60	15.70	12.90	BDL	30.20	35.80	16.50	18.60	BDL	31.50	33.50	12.80	19.80	BDL
Jan-23	26.30	39.80	12.50	15.80	BDL	22.50	36.70	15.30	16.20	BDL	27.10	34.80	14.30	13.30	BDL
	28.70	37.50	12.70	13.50	BDL	22.50	36.80	15.60	12.60	BDL	26.70	34.50	13.20	15.40	BDL
Feb-23	28.70	37.40	14.50	16.10	BDL	26.10	35.80	15.80	15.70	BDL	29.50	39.10	16.20	16.30	BDL
	22.70	39.50	18.30	15.40	BDL	26.80	36.10	16.20	16.20	BDL	25.10	35.30	15.40	19.80	BDL
Mar-23	27.50	35.10	15.20	14.50	BDL	25.30	40.20	14.90	16.30	BDL	24.90	43.10	17.30	12.90	BDL
	26.40	40.10	19.20	16.30	BDL	25.70	37.80	15.30	17.50	BDL	29.10	36.20	16.10	11.50	BDL

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 and complied.** • Our last submission was on **18.11.2022 vide letter No. ACL/EMD/F-16/2022/2688.**
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 tractor mounted water tankers. • **Fugitive dust emission report are enclosed as under.**
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 workers working in high noise areas are 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 reports are enclosed as under.**



Royal
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Ref. No. 1000903/2023/23 Date: 01/04/2023

REPORT OF FUGITIVE EMISSION MONITORING MARCH 2023

Name of Company : Vadnagar Mines (S.No.44),
(Ambuja Cements Limited),
P.O. Ambujanagar - 382 715,
Taluka : Kadinar, District : Gir somnath.

Sr. No.	Particulars	Unit	Fugitive Emission @ Vadnagar Limestone Mine	
			Location No. F-40	Location No. F-41
01.	Location of Sampling	—	Haulage Road	Nr. Crusher Hopper
02.	Date of sampling	—	07/03/2023	10/03/2023
03.	Time of sampling	Hr	9.25	9.05
04.	Duration of sampling	Min	480	480
05.	Average flow rate during sampling	m³/hr	1.0	1.0
06.	Permissible Limits of SPM	µgm³	5000	5000
07.	Measured Concentration of SPM	µgm³	2141	1840

Royal Environment Auditing & Consultancy Service

Analyst

(a)

Noise Level of HEMM - Vadnagar Mines (S.No.44) October-2022 - March-2023

Machine	Surface Miner			Loader			Dozer		
Month	Conditions	Noise Levels (dB) At 5m. distance Leq	Noise Levels (dB) At 10m. distance Leq	Conditions	Noise Levels (dB) At 5m. distance Leq	Noise Levels (dB) At 10m. distance Leq	Conditions	Noise Levels (dB) At 5m. distance Leq	Noise Levels (dB) At 10m. distance Leq
Oct-22	While mining	66	63	While Loading to tipper	70	68	While Dozing the material	69	61
Nov-22		63	60		75	73		69	61
Dec-22		66	64		74	68		67	64
Jan-23		63	63		71	62		73	71
Feb-23		63	63		66	63		71	61
Mar-23		71	68		68	63		71	61

Ambient Noise Level Monitoring - Vadnagar Mines (S.No.44) Oct-2022 to March-2023

Month	Noise Levels in dB(A)									
	Near Surface Miner		Haul road		mines offices		develpara village		Iochhved Village	
	Leq (Day)	Leq (Night)	Leq (Day)	Leq (Night)	Leq (Day)	Leq (Night)	Leq (Day)	Leq (Night)	Leq (Day)	Leq (Night)
Oct-22	72	69	68	60	61	57	55	47	48	39
Nov-22	68	63	68	58	58	59	51	47	49	43
Dec-22	64	60	64	62	59	54	53	52	54	48
Jan-23	64	59	63	56	59	54	48	41	48	46
Feb-23	63	60	64	59	58	52	54	49	52	50
Mar-23	63	62	60	60	56	50	51	49	52	49

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 treatment of waste water before discharge of any work shop effluents. Regular monitoring is carried out by GPCB approved third party **(M/s Royal Environment Auditing and Consultancy services, Rajkot)** report is enclosed below :

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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 under taken periodically to observe any contraction due to exposure to dust and take corrective measures if needed	• **Point noted and complied.** • Dust Masks, Safety Shoes, Safety Goggles & Helmet are provided to each & every personnel working in the mine area. Periodic Health check up is being done for personnel working in mines area. Work area monitoring for air borne dust is carried out regularly on monthly basis, monitoring results are enclosed as under:

Air Borne Dust Survey - Vadnagar Mines (S.No.44) October - 2022 to March - 2023

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)
Oct-22	06:00 - 14:00	Inside Cabin	0.38	Oct-22	06:00 - 14:00	Inside Cabin	0.33	Oct-22	06:00 - 14:00	Inside Cabin	0.34
Nov-22	14:00 - 22:00		0.4	Nov-22	14:00 - 22:00		0.31	Nov-22	14:00 - 22:00		0.36
Dec-22	06:00 - 14:00		0.35	Dec-22	06:00 - 14:00		0.3	Dec-22	06:00 - 14:00		0.33
Jan-23	14:00 - 22:00		0.43	Jan-23	14:00 - 22:00		0.36	Jan-23	14:00 - 22:00		0.39
Feb-23	06:00 - 14:00		0.36	Feb-23	06:00 - 14:00		0.31	Feb-23	06:00 - 14:00		0.39
Mar-23	14:00 - 22:00		0.33	Mar-23	14:00 - 22:00		0.37	Mar-23	14:00 - 22:00		0.41

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.	• **Complied.** • Environment Management Division (EMD) has already been set up with suitable qualified personnel. Head of environmental management cell directly reports to the Unit Head of the organization. EMD organization chart is enclosed as under.

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Compliance Status of Environment Clearance issued to Vadnagar Limestone Mining, Project (S.No.44) Vide MoEF&CC Letter No: J-11015/336/2007IA-II (M) dated 14.01.2009

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.	• **Complied.** • Details of capital and recurring expenditure for environmental protection measures are enclosed as under

Expenditure incurred in Environment Management Plan Vadnagar (S.No. -44) Mines

A. Capital Investment for Environmental Monitoring:

S.No	Particulars	Cost (In Lacs)
1	Monitoring Equipments	37.08
2	Environment Laboratory	10
3	Others (Monitoring Van, DG Sets etc.	10
	Total (In Lacs INR)	57.08

B. Recurring Expenditure for the period of October'2022 to March'2023

S.No	Particulars	Cost (In Lacs)
1	Green belt development & Dust suppression	0.95
2	Manpower Cost *	13.15
3	House Keeping	1.93
4	Other Env. Protection (Environmental Monitoring)	1.26
5	Environment Awareness *	1.43
	Total (In Lacs INR)	18.71

* Expenditures are Common for All the Plants & Mines.

Ambuja Cement Foundation - Ambujanagar
Details for programme wise expenditure for the year October to March 2023

(Rs. In lakhs)

Sr.No	Programme	ACF - ACL	*Funds received through Government	** Funds 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	11.05	0.00				11.05
	B .Drinking Water Programme	2.75			3.30		6.05
2	Agriculture Development(Drip irrigation, Farm Forestry & Afforesation)	37.03			191.35	233.95	462.33
3	BCI	28.33	1.54	221.84	297.00	396.06	944.77
4	Krishi Vigyan Kendra (KVK) - Agriculture	1.87	133.47				135.34
5	Health & Sanitation	12.25			8.27		20.52
6	Education Programme	7.75					7.75
7	Women / Youth Development	21.15					21.15
8	Skill and Enterprunership Development Programme	38.78	38.83		26.74		104.35
9	Integrated Community Development Programme	81.21					81.21
10	Co-ordination & Administration Expenses						0.00
11	Capital Expenditure						0.00
	TOTAL	242.17	173.84	221.84	526.66	630.01	1794.52

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 and complied.
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 and Complied.** • Full support and co-operation is being extended during the visit of officers from Ministry of Environment & Forest, CPCB as well as GPCB. • Project was monitored by **Dr. A. Mehrotra** (MOEF&CC, Regional Office, Bhopal) during 12.10.2010 to 13.10.2010
xiii	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.	• **Complied.** • **Half yearly compliance** status report is being regularly submitted and last submission was on **18.11.2022 vide letter No. ACL/EMD/F-16/2022/2688.**
xiv	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.	• **Complied.** • A copy of clearance letter has been marked to concern.
xv	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.	• **Complied.** • GPCB is the concern authority for the same.

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xvi	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&CC at www.envfor.nic.in	• **Complied.** • Advertisement was published in two local news papers. Copy of advertisement has been submitted to MoEF&CC on **25.12.2010 vide letter no. ACL/EMD/F16/2010/55924.**

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