

## INSPECTION REPORT

### 1.0 GENERAL

S.No.	Particulars	Details
1	Name of the Mine	Gujarat Ambuja Limestone Mine (Survey No.44)
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Non-Forest:108.9700 hectares Forest: Nil
3	Mine code	38GUJ2008
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/447/2011
5	Name of the lessee, Address, phone, email and fax number	M/s Ambuja Cements Limited (formally M/s Gujarat Ambuja Cements Limited) M/s Ambuja Cements Limited At & PO: Ambujanagar, Taluka: Kodinar District: Gir Somnath, State:Gujarat- 362 715 <b>Tel.:</b> (02795) 221137, 232009 <b>Fax:</b> (02795) 220328, 232032 <b>e.mail id.</b> <a href="mailto:md.office@ambujacement.com">md.office@ambujacement.com</a>
6	Village	Vadnagar
7	Taluka/Mandal	Kodinar
8	District	Gir-Somnath
9	Pin code	362 725
10	State	Gujarat
11	Post office	Vadnagar
12	Nearest police station	Kodinar
13	Nearest Railway station	Somnath & Veraval
14	Date of Grant of Mining Lease	10 <sup>th</sup> January, 1985 (vide Letter No. MCR-1584 (G-29)Gol-14CHH
15	Date of Execution	16 April,1985
16	Date of opening of Mine	30 <sup>th</sup> January, 1986
17	Date of first Renewal, if applicable and its period & expiry	After expiry of 20 years Lease period (w.e.f. 16/04/1985 to 15/04/2005), the ML {(108.9700ha) Survey No.44} is renewed for a period of 30 years (w.e.f. 16/04/2005 to 15/04/2035) vide GOG Order No. MCR-102011-1770-CHH.1, dated: 02/07/2015.
18	Date of second Renewal, if applicable and its period & expiry	Not applicable.
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	Not Applicable.
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	<b>Shri Ajay Kapur</b> (Managing Director & CEO) M/s Ambuja Cements Ltd. Elegant Business Park, MIDC Cross Road 'B', Off Andheri – Kurla Road, Andheri (East), Mumbai-400 059. <b>Tel.:</b> 022 4066700 <b>Fax:</b> – 022 30827790 <b>e.mail id.</b> <a href="mailto:md.office@ambujacement.com">md.office@ambujacement.com</a> <b>Date of appointment:</b> 01/08/2013

21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	<b>Shri S Ramarao</b> M/s Ambuja Cements Limited At & PO: Ambujanagar, Taluka: Kodinar District: Gir Somnath, State:Gujarat- 362 715 <b>Tel.:</b> (02795) 221137, 232009 <b>Fax:</b> (02795) 220328, 232032 <b>e.mail id.</b> <a href="mailto:ramarao.sukuru@ambujacement.com">ramarao.sukuru@ambujacement.com</a> <b>Date of appointment:</b> 01/05/2013
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	<b>Rajesh Chaubey</b> M/s Ambuja Cements Limited At & PO: Ambujanagar, Taluka: Kodinar District: Gir Somnath, State:Gujarat- 362 715 <b>Tel.:</b> (02795) 237211 <b>Fax:</b> (02795) 220328, 232032 <b>e.mail id.</b> <a href="mailto:rajesh.chaubey@ambujacement.com">rajesh.chaubey@ambujacement.com</a> <b>Date of appointment:</b> 18/08/2015
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	<b>Rajesh Chaubey</b> M/s Ambuja Cements Limited At & PO: Ambujanagar, Taluka: Kodinar District: Gir Somnath, State:Gujarat- 362 715 <b>Tel.:</b> (02795) 237211 <b>Fax:</b> (02795) 220328, 232032 <b>e.mail id.</b> <a href="mailto:rajesh.chaubey@ambujacement.com">rajesh.chaubey@ambujacement.com</a> <b>Date of appointment:</b> 18/08/2015
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	<b>Ajay Kumar Jain</b> M/s Ambuja Cements Limited At & PO: Ambujanagar, Taluka: Kodinar District: Gir Somnath, State:Gujarat- 362 715 <b>Tel.:</b> (02795) 237200 <b>Fax:</b> (02795) 220328, 232032 <b>e.mail id.</b> <a href="mailto:ajayku.jain@ambujacement.com">ajayku.jain@ambujacement.com</a> <b>Date of appointment:</b> 29/09/2015
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	The Mining Plan alongwith Progressive Mine Closure Plan was approved vide IBM, Ajmer Letter No.682 (23) (370) /2005-Udp, dated 01-04-2005 for the renewal of Mining Lease for five years period, without any special condition.
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	The Scheme of Mining along with Progressive Mine Closure Plan under reference was approved vide IBM, Udaipur Letter No.682 (23) (MS-538) /2009-MCCM (N), Udp, dated 24-05-2010 for five years period, with following conditions. (i) Submit copy of EIA – EMP (approved by MoEF) <b>--- Copy of EIA-EMP Submitted accordingly.</b> (ii) Submit Cadastral Map on the scale of 1:3960 (iii) Submit Geo-reference Map/Plan (Prepared with the help of DGPS. (iv)Submit soft copy of high resolution satellite image obtained from CARTOSAT-2 satellite LISS-IV sensor on the scale of cadastral map. <b>----- Preparation of Maps/Plans as per Conditions (ii, iii &amp; iv) are under process.</b>

		The Scheme of Mining along with Progressive Mine Closure Plan under reference was approved vide IBM, Udaipur Letter No.682 (23) (MS-538) /2009-MCCM (N), Udp, dated 13-05-2015 for five years period, without any special condition.
27	Mineral(s) granted in lease and proved for mining	Limestone and Marl. Applicant intends to mine Limestone & Marl.
28	Method of Mining(Open cast, Underground)	Open cast
29	Category (Fully Mechanised, Others or Manual)	Fully Mechanised
30	Captive/Non Captive	Captive

Scientific Mining: Compliance of proposals of approved mining plan/scheme of mining. –

#### Exploration

S. No	Item	Proposals (2016-17)	Actual work	Remarks
1a	Backlog of previous year	The deposit has been adequately explored therefore; further exploration has not been planned.	The gamut of exploration carried out from 1984 to 2003, boreholes have been drilled at almost every 100m grid interval to obtain data both along and across strike. First phase drilling carried out in 1984-85 includes 46 borehole with total metreage of 662.70m and <b>20 DTH holes amounting to 141.0m</b> . To increase the confidence level of the second band limestone quality as well as quantity, 782.80m of drilling in 24 boreholes were drilled in second phase of drilling in the year 1992. Additional 28 boreholes were drilled in the area as third and final phase of drilling with a cumulative metreage of 405.45m. The data generated was utilized to confirm the behaviour of second band and to increase the confidence level of reserve re-assessment and the drilling was taken up during May-June, 2003.	<b>Level of Exploration: G1-</b> (Detailed Exploration)
1b	Exploration over lease area for Geological axis 1 or 2.			
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	<b>Exploration Agency:</b> The State Directorate of Geology and Mining has carried out preliminary prospecting work on regional scale in Junagadh region. Detailed prospecting was done by Fortune Exploration (Goa) in 1984. Subsequent explorations for infilling data were carried out by Mineral Resource department of M/s Ambuja Cements Limited, Ambujanagar with help of following agencies. Shivraj Diamond Core Drilling, Saurashtra University Road, Opp. PanchayatNagar, Archana Park, "Nijanand Sagar" Rajkot-360005 (Gujarat).Maruti Borewell, Diamond Core Drilling Contractor, At Vishal Hadmatiya, Taluka Besan, District Junagadh (Gujarat). <b>Expenditure:</b>	

			Expenditure incurred in various prospecting operations: Rs.26,46,100/-	
1d	Balance area to be explored to bring Geological axis in 1 or 2		Total area / deposit have been adequately explored.	
1e	Balance reserves as on 01.04.2017 (in million tonnes)	<b>Limestone:</b> <b>111:1.284</b>  <b>121: 0.77</b>	<b>Marl:</b> <b>111:4.097</b>  <b>121: 0.725</b>	
1f	General remarks of inspecting officer on geology, exploration etc.	NIL		

### 2.0 Development

S.No.	Item	Proposals(2016-17)	Actual work	Remarks
2a	Location of development w.r.t. lease area	<b>Location-V (N19.20 – N22.60 &amp; E17.50 – E21). Production of Limestone (Second Band):</b> Production of Limestone shall be achieved by formation of benches at 13.50 – 9.10mRL. <b>Production of Marl:</b> Production of Marl shall be achieved by formation of benches at 12.50 – 10.90mRL.	Lagging in production achieved due to- (i) Part of the area (working pits) proposed in second to fifth years periods were submerged under collected rain water. <b>Pit No.-5</b> {Grid lines N10 to N13 & E22 to E23} are developed all-around and levelled down up to 12.00 to 13.00mRL for exploitation of L/s & Marl.	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Not Proposed.	Entire proposed area is limestone/Marl.	
2c	Stripping ratio or ore to OB ratio	Not proposed	NIL	
2d	Quantity of topsoil generation in m3	Not proposed	NIL	
2e	Quantity of overburden generation in m3	Not proposed	NIL	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.			

### 3.0 Exploitation

S.No.	Item	Proposals (2016-17)	Actual work	Remarks
3a	Number of pits proposed for production	One Pit (Location-V) was proposed for production.	Lagging in production achievement due to:- (i) Part of the area (working pits) propose under submergence.	

			<b>Pit No.-5</b> {between grid lines N10 to N13 & E22 to E23)} are developed all-around and levelled down up to 12.00 to 13.00mRL for exploitation of Lst & Marl.	
3b	Quantity of ROM mineral production proposed (in tonnes)	<b>Limestone:</b> 609400 <b>Marl:</b> 49960 tonnes	<b>Limestone:</b> 126378 <b>Marl:</b> 24668	
3c	Recovery of saleable / usable mineral from ROM production	Estimated recovery of saleable/useable mineral from ROM is 100%	Done as proposed	
3d	Quantity of mineral reject generation	Not proposed	Entire L/s & Marl is being utilised.	
3e	Grade of mineral reject generation and threshold value declared	Not proposed	Entire L/s & Marl is being utilised.	
3f	Quantity of sub-grade mineral generation	Not proposed	Entire L/s & Marl is being utilised.	
3g	Grade of sub-grade mineral generation	Not proposed	Entire L/s & Marl is being utilised.	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject.	Not Proposed	NIL	
3j	Provision of drilling & blasting in mineral benches	Not proposed	NIL	
3k	Provision of mining machineries in mineral benches	Surface Miner (200 & 275 TPH), Hydraulic Excavator (0.96 m <sup>3</sup> & 4.0 m <sup>3</sup> bucket), Front End Loader (3.5 to 5.0 m <sup>3</sup> ) Tippers, MAN Tip-tailors & AMW (30 tonnes) respectively.	Proposed HEMM is using.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Not Proposed	Bench height maintained.	
3m	Total area covered under excavation/pits	Out of 88.23ha total excavated area, part of the area of Pit No.1 & 5 was proposed during	During 2016-17 part of the excavated area of Pit No. 1 & 5 was utilised.	

		2016-17.		
3n	Ore to OB ratio for the pit/mine during the year	Not Proposed	NIL	
3o	Total area put in use under different heads at the end of year	Pit-90.6296ha Waste/reject-0.000ha Others-18.3404ha	Pit-88.2296ha Waste/reject-0.000ha Others-20.7404ha	
3p	Production of ROM mineral during last five-year period, as applicable  <b>(in million tonnes)</b>	<b>Proposal (Limestone):</b> Yr-(2010-11)=0.468 Yr- (2011-12)=0.440 Yr- (2012-13)=0.526 Yr-(2013-14)=0.628 Yr- (2014-15)=0.354 <b>Total:2.4160</b>	<b>Compliance Position (Limestone):</b> Yr-(2010-11)=0.0282 Yr- (2011-12)=0.4468 Yr- (2012-13)=0.5234 Yr- (2013-14)=0.9047 Yr- (2014-15)=0.5487 <b>Total:2.4518</b>	
		<b>Proposal (Marl):</b> Yr-(2010-11)=0.367 Yr- (2011-12)=0.370 Yr- (2012-13)=0.323 Yr- (2013-14)=0.450 Yr- (2014-15)=0.243 <b>Total:1.7530</b>	<b>Compliance (Marl):</b> Yr-(2010-11)=0.0897 Yr- (2011-12)=0.3573 Yr- (2012-13)=0.3229 Yr-(2013-14)=0.2468 Yr- (2014-15)=0.0102 <b>Total:1.6484</b>	
		five years implementation period (2010-11 to 2014-15) <b>101.5% Limestone &amp; 94% Marl</b> is achieved against the target set in the approved mining plan. <b>Due to requirement of high grade Limestone, more production {0.0358 million tonnes (1.5%)} was achieved than proposal made under approved Plan.</b>		
3q	General remarks of inspecting officer on method of mining etc.			

#### 4.0 Solid Waste Management-Dumping

S. No	Item	Proposals (2016-17)	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Not Proposed	NIL	No OB/MR generated
4b	Location of topsoil, OB & mineral reject dumps	Not Proposed	NIL	
4c	Number of dumps within lease area and outside lease area	Not Proposed	NIL	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable	Not applicable	
4e	Number of active & alive dumps	Not applicable	NIL	
4f	Number of dead dumps	NA	Not applicable	
4g	Number of dumps stabilized	NA	NIL	
4h	Whether Retaining wall or garland drain all along dumps are there	NA	Not applicable	
4i	Length of Retaining wall or	NA	NIL	

	garland drain all along dump			
4j	Number of settling ponds	NA	Not applicable	
4k	Specific comments of inspecting officer	NIL		

### 5.0 Solid Waste Management-Backfilling

S. No	Item	Proposals (2016-17)	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	NA	NIL	
5b	Area under backfilling of mined out area	Not proposed	No action was required.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Not proposed	NIL	
5d	Total area fully reclaimed & rehabilitated	NA	NIL	
5e	General remarks of inspecting officer on backfilling, reclamation etc	It is anticipated that after fully exploitation of mineral, mined out Pits shall be reclaimed by means of Agro-farming/water reservoir.		

### 6.0 Progressive Mine Closure Plan

S. No	Item	Proposals (2016-17)	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E (2). Details should be given in the format as given in item No. 8.3 of PMCP (approved on last occasion.	Progressive Mine Closure Plan is furnished in tabular form under <b>Item-8.3</b>	Protective & rehabilitative work carried out as envisaged in the approved Mine Closure Plan is submitted in stipulated time bound manner.	
6b	Management of worked/mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year.	<b>Proposal:</b> (i) Nil (ii) 3.0000 ha (iii) 3000 (iv) 16357 (v) Nil (vi) Rs.3,30,000/-	<b>Actual:</b> (i) Nil (ii) 1.2539 ha (iii) 1938 (iv) 15295 (v) Nil (vi) <b>Rs. 32.013/- lac</b> including site restoration, watch & care	

6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	No Proposal	No action was required.	
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6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	No Proposal	No action was required.	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Environment monitoring (air quality, water quality and noise level) in core zone & buffer zone shall be done by Environment Department of M/s Ambuja Cements Limited, Ambujanagar regularly every year.	Monitoring of Air & Noise level is being done regularly in core zone & buffer zone  Recurring Expenditure is Rs. 10.77 Lakh (Environment Protection & Environment Monitoring)	
6f	General remarks of inspecting officer on PMCP compliance & progressive	NIL		

### **7.0 Mineral Conservation**

S.No	Item	Proposals (2016-17)	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area ( <b>in tonnes</b> )	Limestone: <b>6,09,400</b> Marl: 5,45,515 (from Marl Stock)	Limestone: <b>1,33,178</b> Marl: <b>78,800</b> (from Marl stocks)	Entire ROM of limestone & marl is being utilised by proper blending.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	NA	NIL	
7c	Different grade of mineral sorted out at mines	NA	NIL	
7d	Any beneficiation process at mines	NA	NIL	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues			



## 8.0 Environment

S.No.	Item	Proposals (2016-17)	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Area devoid of top soil, but efforts shall be made to recover even thin layer of intercalated soil.	It is properly implemented.	
8b	Concurrent use or storage of topsoil	Topsoil shall be concurrently utilized in Plantation if any.	Topsoil is concurrently utilized in Plantation if any.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No Proposal	Not applicable	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No Proposal	NIL	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc).	No Proposal	No action was required.	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	3,000 numbers of saplings over an area of 3.0 hectares. <b>Location:</b> 7.5 mtr wide statutory barrier all around the mining lease & 25m wide in the excavated area, etc.	Total 1938 number of samplings is planted over an area of 1.2539ha (Survival Rate: 60%). <b>Cumulative:</b> No. of sapling Planted: <b>15295</b> Total Restored area: <b>8.2664ha.</b>	
8g	Survival rate	Survival Rate: 60%	No. of saplings survived: <b>9177 (@ 60%),</b>	
8h	Water sprinkling on roads to control airborne dust	Proposals have been made for water sprinkling on haul road.	Water sprinkling on haul road is regularly carried out.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are			

## 9.0 Compliance of Rule 45

S.No.	Item	COMMENTS	Remarks
	Status of submission of Online Monthly and Annual returns	M.R.Submitted up to till date A.R.submitted up to till date	The party is regular in submission of online periodical return till date.

S.No.	Item	Details GIVEN in A.R. ( 2016-17)	Observation of I/Officer /Actual reported in Returns	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	ME & Geologist as per MCDR, 2017 is appointed & given.	--	Party has been submitted the online annual return in IBM website on 19.6.2017
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under O/C- 88.23Ha, Reclaimed- 20.45Ha, Infrasture- 13.65Ha, PMC- 1.25Ha	--	
9d	Scrutiny of Annual return on afforestation	Afforestation-1938 nos., Survival-70%	Plantation done within 7.5m of statutory barrier.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Not Given	Not generated, entire MR/Sub grade is being utilised.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	L/S-O/S 7653, Dispatch-133178, C/S-853.0 Marl-O/S 617716, Dispatch-78800, C/S-563584.	--	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex Mine- L/s- 135.33Rs/T Marl-108.93 Rs/T	--	
9i	Scrutiny of Annual return on fixed assets	Given in AR	--	
9k	Scrutiny of Annual return on mining machineries	Given as Proposed	--	

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:- Presently no significant violation observed for the year.