MCDR INSPECTION REPORT

General

S N	Particulars	Details
1	File no	CG/BLDBR/LIME/38MPR28007
2	Name of the Mine	Rawan Limestone Mine
3	Total Lease Area (Ha) with breakup of Non-forest and forest land	420.953 Ha
4	Mine code	38MPR28007
5	Date of Inspection	16.10.2021
6	Name of official accompanying inspection	Rajoo Joshi Manager Mines & Ravindra Choudhari
7	IBM Registration Number under rule 45 of MCDR, 1988	IBM/447/2011
8	Name of the lessee, Address, phone, email and fax number	Ambuja Cements limited PO- rawan, Taluka Baloda Bazar District -Baloda Bazar Bhatapara ,Chhattisgarh Phone - 07727-220010-15 Fax - 07727-220004
9	Village	Rawan
10	Taluka/Mandal	Baloda Bazar
11	District	Baloda Bazar-Bhatapara
12	Pincode	493331
13	State	Chhattisgarh
14	Post office	Rawan
15	Nearest police station	Baloda Bazar
16	Nearest Railway station	Bhatapara
17	Date of Grant of Mining Lease	26.06.1981
18	Date of Execution	26.06.1981 to 25.06.2031
19	Date of opening of Mine	01.04.1984
20	Date of first Renewal, if applicable and its period & expiry	26.06.2001 to 25.06.2031
21	Date of second Renewal, if applicable and its period & expiry	Not applicable
22	Date of submission of renewal application if Mining Operations are continuing under deemed extension	Not applicable
23	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Neeraj Akhoury
24	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri Avnvs Murthy M/s Ambuja Cements Limited Po Rawan, District- Baloda Bazar-Bhatapara 07727-220010 bhataparaambuja@gmail.com
25	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri Rajoo Joshi M/s Ambuja Cements Limited Po Rawan, District Baloda Bazar-Bhatapara 07727-220010 rajoo.joshi@ambujacement.com

26	Name of the Mining Engineer & Geologist, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri Utkarsh Tripathi, B.Tech Mining, PO-Rawan, District Baloda Bazar Chhattisgarh 493331 07727-220010 utkarsh.tripathi@ambujacement.com DOA 29.05.2021
27	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Earlier geologist working left and Geologist not appointed
28	Date of Approval of Review of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Review of mining plan approved RMP 1255 dated 8/1/2021 for period of 2021-22 to 2025-26
29	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	राय / चूप / खयो / 35 / नाग / 2015 / 13–रायपुर / 263 Dated 04.08.2016
30	Mineral(s) granted in lease and proved for mining	Limestone
31	Method of Mining(Opencast, Underground)	Opencast Mining
32	Category (Fully Mechanised, Others or Manual)	Fully Mechanised
33	Captive/Non Captive	Captive for manufacturing of clinker & cement
34	EC limit	6.31 illion tones of limestone

Scientific Mining: Compliance of proposals of approved mining plan/Review of mining.

1.0 <u>Exploration</u>

S.N.	Item	Proposals yr 2020-21	Actual work	Remarks
1a	Backlog of previous year	No exploration proposal for the year 2020-21	NIL	
1b	Exploration over lease area for Geological axis 1 or 2.	NIL	NIL	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NIL	NIL	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	NIL	
1e	Balance reserves as on 01.04.2021	Total Mineral Reserve 59 MIOT Total Remaining Resources is 598.93 MIOT	Reserve -59 million tones and 657.93 million tones resources of 38.31 to 49.97 % Cao	All Exploration work is completed
1f	General remarks of inspecting officer on geology, exploration etc.	Complete lease area have been explored on 200m X 200m grid interval and reserve is sufficient for lease period.		

2.0 Development

S.N.	Item	Proposals year 2020-21	Actual work	Remarks
2a	Location of development w.r.t. lease area	EXCAVATION North Block 613800 to 615300 2397000 to 2397900 EXCAVATION South Block 613050 to 613450 2396200 to 2396500 EXCAVATION South Block 613850 to 614950 2395900 to 2396850	Mostly within proposed location.	Top benches need to be advance
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Provision made	Benches of 7 to 9m in limestone and 3 to 7m in Over burden	
2c	Stripping ratio or ore to OB ratio	1:0.043	1:0.0667	
2d	Quantity of topsoil generation in m^3	80000 Ton	144990 Ton	
2e	Quantity of overburden/waste generation in m^3	240000 Ton	3,39,430 tonnes	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.			

3.0 Exploitation

S.N.	Item	Proposals 2020-21	Actual work	Remarks
3a	Number of pits proposed for production	02	02	
3b	Quantity of Limestone production proposed	5480000 tonnes	5086126 tonnes	
3c	Recovery of salable/usable mineral from ROM production	99 %	99%	
3d	Quantity of mineral reject generation	4,40,000 t	80,273 t	
3e	Grade of mineral reject generation and threshold value declared	-	22 to 25 % CaO	
3f	Quantity of sub-grade mineral generation	NA	Used simultaneously by blending	
3g	Grade of sub-grade mineral generation	NA	Not stacked used by blending	
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	NIL	NIL	
3j	Provision of drilling & blasting in mineral benches	Drilling and blasting technique	Burden 3 to 5.5m and spacing 3.5 to 6.5 m with depth of 9 m and 115 mm dia holes Benches of 7 to 9m in limestone and 3 to 7m in	

			Over burden	
3k	Provision of mining machineries in mineral benches	Heavy earth moving machineries	Dumper of 60 and 90 tones and excavator of 6.5 Cum Bucket capacity are deployed	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Benches of 7 to 9m in limestone and 3 to 7m in Over burden	Suitable method	
3m	Total area covered under excavation/pits	211.78 Hectare	174.535 Hectare	
3n	Ore to OB ratio for the pit/mine during the year	1:0.043	1:0.0667	
3o	Total area put in use under different heads at the end of year	211 ha	205 ha	
3p	Production of ROM mineral during last five-year period, as applicable	2016-17 -6300000 TON 2017-18 -6300000 TON 2018-19 -6000000 TON 2019-20 -5500000 TON 2020-21 -5480000 TON	5244204 TON 5279965 TON 5382863 TON 5303551 TON 5086126 TON	
3q	General remarks of inspecting officer on method of mining etc.	Production of limestone during the year was within proposal of mining plan.		

4.0 Solid Waste Management-Dumping

S.N.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	As per Approved	As per Approved	
4b	Location of topsoil, OB & mineral reject dumps	Top Soil Over Burden Dump North block 613656 to 613818 2397288 to 2397388 South block 612599 to 612956 2396260 to 2396570 MINERAL REJECT South Block 612711.3 to 612945 2396571 to 2396845	As per proposals Existing OB dumps are Between grid line 612800 & 613600 2396400 & 23974100 Waste dump created within pit at central part of south block pit near approach haul road without excavating complete mineral at Grid 614000/2396300 MINERAL REJECT South Block 612725 to 612945 2396571 to 2396706	Violation being issued
4c	Number of dumps within lease area and outside lease area	All dump situated in lease area	Dump A to D are within south Zone. All dumps situated in lease area	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	All dump within UPL	All dump within UPL	
4e	Number of active & alive dumps	03	03	
4f	Number of dead dumps	01	01	
4g	Number of dumps stabilized	01	01	
4h	Whether Retaining wall or garland drain all along dumps are there	-	Garland drain all along the dump (approx 300 m)	
4i	Length of Retaining wall or garland drain all along dump	-	NIL	

4j	Number of settling ponds	-	NIL	
4k	Specific comments of inspecting officer on waste dump management	Waste generation compared to production is in small quantity and waste is properly stablished. Back filling area of around 3 ha has been stablished by Hydro seeding process.		

5.0 Solid Waste Management-Backfilling

S.N.	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	NIL	Back filling area of around 3 ha has been stabilised by Hydro seeding process.	
5b	Area under backfilling of mined out area	NIL	3 ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Proposed	Used	
5d	Total area fully reclaimed & rehabilitated	NIL	3 ha	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Waste generation compared to production is in small quantity and waste is properly stabilized. Back filling area of around 3 ha has been stabilised by Hydro seeding process.		

6.0 **Progressive Mine Closure Plan**

S.N.	Item	Proposals	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 Annexure-20.	Submitted	As given below	
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	i) NIL ii) 1.50 Hectare iii) 1500 iv) 8000 v) Nil vi) Rs. 2.66 Lakhs	i) NIL ii) 1.50 Hectare (infilling) iii) 1500 iv) 10163 v) Nil vi) Rs. 6.05 Lakhs	
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L *B * D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir	NA	NA	

	v) Any other specific means			
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	NA	Back filling area of around 3 ha has been stablished by Hydro seeding process.	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Implemented	Monitored regularly	
6f	General remarks of inspecting officer on PMCP compliance & progressive closure operations	PMCP proposal are being implemented as per approved proposal.		

7.0 **Mineral Conservation**

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	NA	Used simultaneously	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	NA	Different benches and face are operated to have required grade grade of limestone	
7c	Different grade of mineral sorted out at mines	NA	Different benches and face are operated to have required grade grade of limestone .	
7d	Any beneficiation process at mines	NA	Different benches and face are operated to have required grade of limestone .	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Complete limestone is of cement grade . Even subgrade above threshold Cao 34 % is used with high grade after blending and by operating different benches to achieve required raw mixed for clinker.		

8.0 **Environment**

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Given	As per approved proposals	
8b	Concurrent use or storage of topsoil	Plantation	Used for Plantation	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Implemented	Separate dumps for waste and top soils are maintained.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Nil	Matured area nearby main highway is being backfilled.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NA	Area is yet to mature for full scale back filling	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	Nil	Plantation over dumps and along main road passing through lease area done.	

8g	Survival rate	-	85%	
8h	Water sprinkling on roads to control airborne dust	Implemented	Done and monitored	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	General environment in mines and around mines are very good.		

9.0 **Compliance of Rule 45**

S.N.	Item	COMMENTS		Remarks
9a	Status of submission of Monthly and Annual returns	Submitted within times M.R. Submitted up to Sep 2021 A.R. Submitted up to 2020-21		
S.N.	Item		Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Provided		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Area under OC- 174.835 ha Dump-23.44 ha Rehabilated 18.60 ha	
9d	Scrutiny of Annual return on Afforestation	Submitted	1500 nos planted	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Submitted	80273 tonnes	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Submitted	Given closing stock 228.64 tonnes	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Submitted	RS 228.64 per tonnes cost of production	
9i	Scrutiny of Annual return on fixed assets	Submitted	Provided	
9k	Scrutiny of Annual return on mining machineries	Submitted	Given	

Machinery statement and performance is given as under.

	Equipment	Bucket cap	Output/ hr (t/hr)
1	komatsu /PC1250-7 20585	6.5 CU-M	500
2	komatsu /PC1250-7 20593	6.5 CU-M	500
3	komatsu /PC1250-7 20604	6.5 CU-M	500
4	komatsu /PC1250-8R 35337	6.5 CU-M	500
5	komatsu /PC1250-8R 35680	6.5 CU-M	500
6	komatsu /HD465-7 N10101 – 8 nos	55 tonnss	180

10.0 <u>Details</u> of violations observed during current inspection and compliance position of earlier violation pointed out:-

Earlier violation were found complied with and during this inspection following violation were pointed out for making mining more scientific.

13(2)	The benches in overburden have not been kept sufficiently in advance and their workings are interfering with the working of limestone benches at some places in mine.
14(4)	Waste overburden material is backfilled within working pit at central part of south block pit near approach haul road, without excavating complete limestone mineral from the place (at Grid 614000/2396300). Backfilling without complete extraction of limestone should be stopped.
46	when any new appointment of an agent, mining engineer, geologist or any person is made under sub-rule (1) of rule 55; or (b) when the employment of any such person is terminated or any such person leaves the said employment , notice in form H within fifteen days from the date of such appointment, termination, leaving shall be submitted to Regional Controller of Mines, IBM , as the case may be. Notice of appointment of Agent, Manger of mine have not been submitted to Regional Controller of Mines, IBM Raipur.
55	For the purpose of carrying out mining operations in accordance with MCDR 2017 rules a whole time Geologist has not been employed in the mines.

Star rating validated for the year 2020-21.

11.0 **<u>Cost</u>** of major mining head per tones as given below.

sn	Items	Cost Rs/T of Limestone	Cost Rs/T of Total material handling
1	Loading Cost	14.55	13.54
2	Transportation Cost	16.03	15.15
3	Blasting Cost	5.57	6.03
4	Drilling Cost	4.6	4.95

12.0 **<u>CSR</u>** work carried out in and around mines

sr	item	Amount in Lakhs year 2020-21
1	Water storage tanks, supply & irrigation support	14.87
2	Support to health & medical services , Covid assistance	16.92
3	Promotion of Hygienic and sanitation , public health	0.34
4	Support to skill development	23.58
5	Social livelihood support	19.39
6	Support to transportation and services	58.95
7	Others	1.20
	Total	135.25

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