

INDIAN BUREAU OF MINES
MINERALS DEVELOPMENT AND REGULATION DIVISION
MCDR Inspection Report
Goa Regional Office

- (i) Name of the Inspecting Officer and ID No. : (K07) KRISHNENDU CHATTERJEE
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine Official with Designation : S/shri Pavankumar Deshmukh- Mine Manager cum Mining Engineer, Rajib Banerjee - Geologist
- (iv) Date of Inspection : 17.12.2024
- (v) Prev. inspection date : 29.08.2023

PART-I: GENERAL INFORMATION

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1. (a) **Mine Name** : **Halki Limestone Mine; ML No. 2344-A**
- (b) IBM Registration Number under rule 45 of MCDR, 1988 : IBM/418/2011
- (c) Mine code : 38KAR26059
- (d) Type of Working (Opencast, Underground) : Opencast
- (e) Category (Fully Mechanized, Others or Manual) : Cat. A, Fully Mechanized
- (f) Captive/ Non captive : Captive
- (g) Postal Address
- Village : Halki
- Taluk/Mandal : Mudhol
- District : Bagalkot
- Pin code : 587122
- State : Karnataka
- Post office : Lokapur
- Nearest police station : Lokapur
- Nearest Railway station : Bagalkot
- 2 Address for correspondence : M/s J.K. Cement Ltd.
Muddapur Limestone Mine
JK Cement Works, Muddapur
Post-Muddapur, Taluk- Mudhol
District-Bagalkot, Karnataka 587 122
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3	(a)	Total Lease Area (Ha) with breakup of Non-forest and forest land	:	124.24 Ha. (Non-Forest)
	(b)	Date of Grant of Mining Lease	:	21.11.1978
	(c)	Date of Execution	:	29.08.2002
	(d)	Date of opening of Mine	:	30.01.2008
	(e)	Date of expiry	:	31.03.2030; as per MMDR Amendment Act, 2015
4		Mineral(s) granted in lease and proved for mining	:	Limestone
5	(a)	Name of the lessee, Address, phone, email and fax number	:	M/s J.K. Cement Ltd. JK Cement Works, Muddapur Post-Muddapur, Taluk- Mudhol District-Bagalkot, Karnataka 587122 Ph: (off) 8350-289607 Email ID: pavan.deshmukh@jkcement.com
	(b)	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	:	Shri Ajay Kumar Saraogi M/s J.K. Cement Ltd. Mail ID: ak.saraogi@jkcement.com Date of Appointment - 17.06.2020
	(c)	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	:	Mr. Vikram Singh JK Cement Works, Muddapur Post-Muddapur, Taluk- Mudhol District-Bagalkot, Karnataka 587122 Ph: 9606914665 Email: Vikram.Singh4@jkcement.com Date of Appointment: 10.06.2024
	(d)	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	:	Shri Pavankumar Deshmukh, B-36, Padam Nagar, Muddapur, Karnataka-587122 Ph: 9900272965 Mail: pavan.deshmukh@jkcement.com Date of Appointment: 03.02.2020
	(e)	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	:	Shri Pavankumar Deshmukh Ph: 9900272965 Mail: pavan.deshmukh@jkcement.com Date of Appointment: 03.02.2020 Total experience: 15 years
	(f)	Name of the Geologist, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	:	Shri Rajib Banerjee Padam Nagar Colony, Muddapur, Taluk-Mudhol, Karnataka-587122 Ph: 7022589551 Date of Appointment: 03.02.2020 Total experience: 10 years
6		Date of Approval of Mining Plan/Review of Mining Plan/	:	Review of Mining Plan

Modified Mining Plan with five-year period and specific condition in approval letter, if any.	RMP/MECH-04 (KNT)/GOA/2020-21 dated 18.11.2020 RMP Period: 2021-22 to 2025-26 Modification in the approved RMP RMP/MECH-04 (KNT)/GOA/2020-21 dated 26.08.2022 Mod. RMP Period: 2022-23 to 2025-26.
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PART - II: OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration:

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	
1b	Exploration over lease area for Geological axis 1 or 2.	No proposal	G1: 123.11 Ha. G2: 1.13 Ha.	Proved as Non mineralized: 10.56 Ha.
1c	Exploration Agency & Expenditure in lakh Rupees during the year	No proposal	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal	G2: 1.13 Ha.	Additional exploration proposed at G2 areas in F.Y 2025-26.
1e	Balance reserves as on <u>01.04.2024</u>		Total reserve of Limestone: 48.062 million tonnes.	Quality: +34 to 50% CaO.
1f	General remarks of inspecting officer on geology, exploration etc.	The mine is explored under G1 & G2 stages of exploration by 160 nos. of boreholes; total meterage drilled 9829.16 m. Additional exploration proposed by the lessee at G2 areas in F.Y 2025-26.		

Development:

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Pit-1 (N 1794400 to N 1793900; E 526000 to E 256750) Pit-2	No change in locations.	

		(N1793500 E528400).		
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separate benches in mineral proposed.	Maintained.	Overburden is associated with mineral bench.
2c	Stripping ratio or ore to OB ratio	1: 0.031	1: 0.041	
2d	Quantity of topsoil generation in m3	3,683	3,686	
2e	Quantity of overburden generation in m3	42,350	43,900	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Opencast, fully mechanized mining operation. No change in development locations was observed during the inspection.		

Exploitation:

Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	Two (02) nos. of Pits proposed.	Two nos. of Pits within the ML area.	
3b	Quantity of ROM mineral production proposed	2.0 million tonnes.	1.597 million tonnes production reported in F.Y 2023-24.	
3c	Recovery of salable/usable mineral from ROM production	97% proposed.	Approx. 96% achieved.	
3d	Quantity of mineral reject generation	No proposal	Nil	
3e	Grade of mineral reject generation and threshold value declared	No proposal	Nil	
3f	Quantity of sub-grade mineral generation	No proposal	Nil	

3g	Grade of sub-grade mineral generation	No proposal	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method proposed.	Mechanized mine.	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No proposal	Nil	
3j	Provision of drilling & blasting in mineral benches	Deep hole drilling & blasting proposed	Deep hole drilling & blasting carried out	Deep hole drilling is carried out by 115mm & blasting carried out by using ANFO, slurry explosives
3k	Provision of mining machineries in mineral benches	Proposal of HEMM like combination of shovel & Tipper combination	HEMM used. In Combination of backhoe & tippers, Drills, dozer, Rock breaker, water tanker are in use	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of bench: 8m & Width of bench: 10m	Bench height in OB & ore are practiced as proposed;	
3m	Total area covered under excavation/pits	34.64 Ha.	35.76 Ha.	
3n	Ore to OB ratio for the pit/mine during the year	1: 0.031	1: 0.041	Waste generation was slightly on higher side due to inconsistency

				of the deposit.
3o	Total area put in use under different heads at the end of year	Area under mining:34.64 Ha; Waste Dump:7.38 Ha. Infrastructure & Roads- 2.12 Ha	Area under mining:35.76 Ha; Waste Dump:7.30 Ha. Infrastructure & Roads- 1.70 Ha	
3p	Production of mineral last five-year period, as applicable	2019-20:2.0 MT 2020-21:2.0 MT 2021-22:1.5 MT 2022-23:2.0 MT 2023-24:2.0 MT	2019-20:1.15 MT 2020-21:1.35 MT 2021-22:1.49 MT 2022-23:1.52 MT 2023-24:1.59 MT	In Million tonnes (MT)
3q	General remarks of inspecting officer on method of mining etc.	Opencast, fully mechanized mining operation by using Hydraulic Excavator & Tipper combination. ROM is directly sent to the captive cement plant, located at Muddapur at a distance of 6 km from the ML area, where it is crushed. The ROM at plant is being blended at crusher site to meet the requirement of the captive cement plant.		

Solid Waste Management-Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dumping of top soil and OB waste proposed.	OB dumping carried out at Dump-1.	Top soil is separately stacked and utilized along the safety zone for plantation.
4b	Location of topsoil, OB & mineral reject dumps	Disposal of OB waste proposed at Dump-1.	OB dumping carried out at Dump-1.	Top soil utilized for plantation along the ML boundary.
4c	Number of dumps within lease area and outside lease area	01 no. within ML.	01 waste dump within the ML area.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL proposed.	Located outside UPL.	

4e	Number of active & alive dumps	01 active dump	01 active dump (Dump-1).
4f	Number of dead dumps	No proposal	Nil
4g	Number of dumps stabilized	No proposal	Nil
4h	Whether Retaining wall or garland drain all along dumps are there	Proposed.	Retaining wall and garland drain constructed along the toe of the waste dump.
4i	Length of Retaining wall or garland drain all along dump	245 m of Retaining wall & 155m Garland drain proposed.	245 m of Retaining wall & 155m Garland drain constructed.
4j	Number of settling ponds	No proposal	01 no. constructed.
4k	Specific comments of inspecting officer on waste dump management.	Top soil is being utilized for plantation purpose along the safety zone areas. OB waste is being disposed at Dump-1, located at western side of the ML area.	

Solid Waste Management-Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No proposal	Nil	
5b	Area under backfilling of mined out area	No proposal	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No proposal	Nil	

5d	Total area fully reclaimed & rehabilitated	No proposal	Nil
5e	General remarks of inspecting officer on backfilling, reclamation etc	Mine lease is not matured for rehabilitation by backfilling.	

Progressive Mine Closure Plan:

Sl.No.	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.	Proposed	Submitted along with the Annual Return.	
6b	Area available for rehabilitation (ha)	No proposal	Nil	
6c	Afforestation done (ha)	0.48 Ha.	0.54 Ha.	
6d	No. of saplings planted during the year	1200 nos.	1348 nos. within the ML area.	
6e	Cumulative no. of plants	No proposal	Apprx. 40,000 nos. within ML area.	
6f	Any other specific method of rehabilitation	No proposal	Nil	
6g	Cost incurred on watch & care during the year	Rs. 120,000/-	No change.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D)	No proposal	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings	No proposal	Not applicable	

6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area	No proposal	Not applicable
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Not applicable
6l	Compliance on reclamation and rehabilitation by backfilling (v) Any other specific means	No proposal	Not applicable
6m	Compliance of Rehabilitation of waste land within lease (i) Afforestation	No proposal	Not applicable
6n	Compliance of Rehabilitation of waste land within lease (ii) Area rehabilitated (ha)	No proposal	Not applicable
6o	Compliance of Rehabilitation of waste land within lease (iii) Method of rehabilitation	No proposal	Not applicable
6p	Compliance of Environmental monitoring (core zone & buffer zone)	Periodic monitoring Proposed.	Environmental monitoring is carried out periodically and parameters are found within stipulated limit
6q	General remarks of inspecting officer on PMCP compliance & progressive closure operations	PMCP compliance & progressive closure operations are found to be carried out as per the approved proposals.	

Mineral Conservation:

Sl.No.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM dispatch proposed directly to the captive plant	ROM is directly sent to the captive cement plant for crushing and blending as per requirement	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	No proposal	Not applicable at mine site level.	
7c	Different grade of mineral sorted out at mines	Proposed for all +34% CaO.	No change.	
7d	Any beneficiation process at mines	No proposal	Nil	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	The ROM is directly sent to the captive cement plant, located at a distance of 6 km from the ML area, where it is crushed. The ROM at plant is blended at the crusher to meet the requirement of the captive plant.		

Environment:

Sl.No.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	Top soil is separately removed and utilized for plantation.	300m top soil bund constructed along the ML boundary so far.
8b	Concurrent use or storage of topsoil	Concurrent use of top soil proposed.	Top soil is being utilized for plantation.	Top soil is being used for plantation along the safety barrier zone.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of top soil and OB proposed.	No change.	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Proposed during conceptual stage.	Not applicable as of now.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Not Applicable
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	Plantation of local Spices.	Plantation was carried out along the ML boundary and waste dump slopes.
8g	Survival rate	80 to 90% proposed.	Approx. 80%.
8h	Water sprinkling on roads to control airborne dust	Proposed by using water tanker.	water tankers arrangement for water sprinkling on mine roads have been made.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Aesthetic beauty in and around the mining area is good.	

Compliance of Rule 45:

Sl.No.	Item	COMMENTS	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to Jan. 2025 A.R. Submitted up to 2023-2024	Date of submission of AR was 29.06.2024.

S.N.	Item	Proposals	Actual work	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager & Mining Engineer: Shri Pavankumar Deshmukh Geologist: Shri Rajib Banerjee	Manager & Mining Engineer: Shri Pavankumar Deshmukh.	Notice of appointments in respect of Mining Engineer and Geologist

Geologist: Shri are
Rajib Banerjee. submitted.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under mining:35.76 Ha; Waste Dump:7.30 Ha. Infrastructure & Roads- 1.70 Ha	No change.
9d	Scrutiny of Annual return on afforestation	1348 nos. within the ML area.	Plantation was carried out along the ML boundary and waste dump slopes.
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Furnished as Nil	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stock: Nil Graded ore closing Stock of Cement grade Limestone: 85,849 tonnes.	Actual was also same at that time.
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex- Mine price reported as Rs. 254.93/tonne. Production cost: Rs. 254.93/tonne.	Limestone ROM is being utilized for captive cement consumption.
9i	Scrutiny of Annual return on fixed assets	Closing balance of the fixed assets has been reported.	Reported in AR.
9k	Scrutiny of Annual return on mining machineries	Dozer: 1 no. Back Hoe: 3 nos. Tipper: 16 nos. Pumps: 2 nos. Air Compressor: 1 nos. Blast Hole Drill: 2 nos. Water tanker: 1 no.	No change.

Details of violations observed during current inspection and compliance position of violation pointed out					
<u>Violation observed</u>			<u>Show cause position</u>		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on

(KRISHNENDU CHATTERJEE)
Indian Bureau of Mines