

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

MCDR INSPECTION REPORT

Gandhinagar regional office

Mine file No : RAJ/CHT/LST-3

Mine code : 38RAJ09003

- (i) Name of the Inspecting : **K018**) **DR A Z KHAN**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Shri Dilip Kumar Dhakar, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 16-JAN-24
- (v) Prev.inspection date : 08-JAN-24

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **MALIAKHERA**
- (b) **Registration NO.** : **IBM/418/2011**
- (c) **Category** : **A Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **RAJASTHAN**
- District : **CHITTORGARH**
- Village : **MALIAKHERA**
- Taluka : **NIMBAHERA**
- Post office : **PHALWA**
- Pin Code : **312617**
- FAX No. : **01477-220027**
- E-mail : **mines.nbh@jkcement.com**
- Phone : **01477-220087**
- (f) **Police Station** : **NIMBAHERA**
- (g) **First opening date** : **24-JUN-89**
- (h) **Weekly day of rest** : **WED**
2. **Address for correspondance** : **VILLAGE-NIMBAHERA**
POST-KAILASH NAGAR, Nimbahera
DISTT-CHITTORGARH (Raj.)
3. (a) **Lease Number** : **RAJ0007**
- (b) **Lease area** : **315.41**
- (c) **Period of lease** : **50**
- (d) **Date of Expiry** : **12-FEB-34**
4. **Mineral worked** : **LIMESTONE** **Main**

5. Name and Address of the

Lessee : J.K.Cement Works
Kailashnagar Nimbahera
CHITTORGARH RAJASTHAN
Phone:01477-220087
FAX :01477-220027

Owner : Ajay Kumar Saraogi
J.K. Cement Ltd Kamla
Tower, Kanpur KANPUR URBAN
UTTAR PRADESH
Phone: 0512 - 2311478
FAX : 0512 - 2364250

Agent : Manish Toshniwal
J K Cement Works Kailash
Nagar, Nimbahera
CHITTORGARH RAJASTHAN
Phone: 01477-20087,220562
FAX : 01477-20087,220

Mining Engineer

Name : Shri D K Dhakar, Full Time
Qualification : BE, FCC
Appointment/ : 01-MAR-19
Termination date

Geologist

Name : Rajneesh Kothari, Full Time
Qualification : M.sc.(Tech) Applied geology
Appointment/ : 13-MAY-15
Termination date

Manager

Name : D.K.Dhakar
Qualification : B.E
Appointment/ : 01-MAR-19
Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Modif. approved Mining Scheme	15-JAN-04
		Renewal under rule 22 MCR1960	01-OCT-04
		Mining Scheme rule 12 MCDR1988	03-MAR-09
		Renewal under rule 24 MCR1960	19-JAN-15
		Mining Scheme rule 12 MCDR1988	20-MAY-15
		MP modif under 17(3) MCR 2016	23-MAY-18
		MP modif under 17(3) MCR 2016	29-NOV-18
		MP review under 17(1) MCR 2016	25-NOV-19
		MP modif under 17(3) MCR 2016	24-NOV-20

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NIL	There was no backlog of previous years for exploration
1b	Exploration over lease area for geological axis 1 or 2	No proposal for the year 2022-23	None	Total area explored for Geological axis 1
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	There was no proposal of exploration during the year 2022-23 hence not applicable	None
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal	None	Total area is explored to G1 level of exploration by 2021-22.
1e	Balance reserve as on 01/04/20	No yearwise specific proposal	Reserve position as on 01.04.2023: Proved Mineral Reserve (111) - 91.215 Million Tonnes, Probable Mineral Reserve (122)- 68.213 Mill. Tons	No issue observed related to geology & exploration
1f	General remarks of inspecting officers on geology, exploration etc			No issue observed related to geology & exploration

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	<p>Bench I - Between ML 1-2 to ML 5-6 (NE), ML 5-6 to ML 7-8 (E),ML10-11 to ML12-13 (S, SW) . New Pit -ML 6-7 to ML 7-8 (E) (upto RL 428 mts.). Bench II - Between ML 0-1 to ML 5-6 (NE),ML 13 to ML 14 (S),ML 9-10 to ML 11-12 (SW),ML 4-5 to ML 8-9 (W),ML 0-1 to ML 3-4 (NW), (Upto RL 419 mts). Bench III - Between ML 1-2 to ML 5-6 (NE),ML 12-13 to ML 13-14 (S),ML 4-5 to ML 6-7 (W), ML 0-1 to ML 4-5 (NW) (Upto RL 410.0 mts.). Bench IV- Between ML 3-4 to ML 8-9 (N,E,S,W)(Upto RL 401.0). Bench V -NIL</p>	<p>"Bench I - Between ML 1-2 to ML 5-6 (NE) ML 5-6 to ML 7-8 (E) ML10-11 to ML12-13 (S, SW) New Pit Bench II - Between ML 0-1 to ML 5-6 (NE) Nil ML 9-10 to ML 12-13 (SW) ML 4-5 to ML 9-10 (W) (Upto RL 419 mts) Bench III - Between ML 1-2 to ML 7-8 (NE) Nil ML 4-5 to ML 9-10 (W) (Upto RL 410.0 mts.) Bench IV - Between ML 2-3 to ML 8-9 (N,E,W) (Upto RL 404.1 mts.) Bench V - ML 4-5 to ML 8-9 (Upto RL 398.2 mts.)</p>	<p>Mine development has not been carried out as per approved proposal and there was deviation for which violation of rule 11(1) of MCDR, 2017 has been pointed out during previous inspection</p>
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	<p>No proposal of benches in Top soil & overburden. In 5 Benches with Height 9.0 m + 0.5 & width 20-25 m was proposed</p>	<p>No benches in top soil having thickness 0.5-2.0m & OB. 5 Benches (9.0 + 0.5 m Height & Width 20- 25 m) in mineral observed</p>	None
2c	Stripping ratio or ore to OB ratio	1 : 0.038	1 : 0.013	Due to less Waste/OB generation
2d	Quantity of topsoil generation in m3	18531.47 Cu.m. (26,500 Tonnes)	18503.50 Cu.m. (26460 Tonnes)	None

2e	Quantity of overburden generation in m3	132867.13 Cu.m. (1,90,000 Tonnes)	45571.33 Cu.m. (65167 Tonnes)	5640 Tons of OB stacked as dump whereas 59527 Tons used for filling and road work
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Mine development has not been carried out as per approved proposal hence violation of rule 11(1) of MCDR, 2017 has been pointed out.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two	One	For deviation in development violation of rule 11(1) of MCDR, 2017 has been pointed out during previous inspection.
3b	Quantity of ROM mineral production proposed	50,200,58.68 Tonnes (Usable Limestone prod. 46,00,013.04 + Subgrade 4,20,045.64)	49,87,303.68 Tonnes (Usable Limestone - 45,96,961.68 + Subgrade - 3,90,342)	None
3c	Recovery of sailable/usable mineral from ROM production	Usable Limestone - 46,00,013.04 Tonnes	Usable Limestone - 45,96,961.68 Tonnes	None
3d	Quantity of mineral reject generation	No proposal	No mineral reject generation during the year 2022-23	None
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	No mineral reject generation during the year 2022-23	None
3f	Quantity of sub grade mineral generation.	4,20,045.64 Tonnes	3,90,342 Tonnes	None
3g	Grade of sub grade mineral generation	CaO -- 39.2 MgO -- 0.7	CaO -- 37.65 MgO -- 0.99	None

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised Method proposed	Mechanised Method adopted	None
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No beneficiation study proposed. Analysis of Borehole & Blast hole sample was proposed	No beneficiation study carried out during the year 2022-23. Blast hole samples analysed.	None
3j	Provision of drilling and blasting in mineral benches	Drilling by Nakoda Indus (4.5 inch dia), DTH drills holes will be blasted by explosive (Kelvex 600 and ANFO). proposed	Yes, drilling is done by Nakoda Indus (4.5 inch dia), DTH drills holes are blasted by explosive (Kelvex 600 and ANFO).	None
3k	Provision of mining machineries in mineral benches	Hyd. Excavator, Drill Mach., Dozer, Tipper proposed	Hyd. Excavator, Drill Mach., Dozer, Tipper used in mineral benches	None
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	OB- no proposal Mineral- 9.0 + 0.5 m Height proposed	OB- no benches in OB & in mineral bench height 9.0 + 0.5 m observed	None
3m	Total area covered under excavation/pits	No yearwise specific proposal	78.678 Hects.(As on 31.03.2023)	less area excavated due to less production
3n	Ore to OB ratio for the pit/mine during the year.	1 : 0.038	1 : 0.013	Less generation of waste/OB
3o	Total area put in use under different heads at the end of year	112.584 Hects.(upto 31.03.2023)	102.138 Hects.(upto 31.03.2023)	None

3p	Production of ROM mineral during the last five year period as applicable	2018-19 -- 1662055.98 Tons (Limestone) + 450012.535 Tons (Subgrade) = 2112068.515 Tons 2019-20 -- 3600000 Tons (Limestone) + 575000 Tons (Subgrade) = 4175000 Tons 2020-21 -- 3000000.58 Tons (Limestone) + 150003.38 Tons (Subgrade) = 3150003.96 Tons 2021-22 -- 4200068.01 Tons (Limestone) + 405051.0 Tons (Subgrade) = 4605119.01 Tons 2022-23 -- 4600013.04 Tons (Limestone) + 420045.64 Tons (Subgrade) = 5020058.68 Tons	2018-19 -- 1483506.92 Tons (Lst) + 202881.00 Tons (Sub-grade stacked) = 1686387.92 Tons 2019-20 -- 2447316.86 Tons (Lst) + 97700.0 Tons (Sub-grade stacked) = 2545016.86 Tons 2020-21 -- 2999392.58 Tons (Lst) + Nil (Sub-grade stacked) = 2999392.58 Tons 2021-22 -- 3633227.90 Tons (Lst) + 317649.019 Tons (Sub-grade stacked) = 3950876.919 Tons 2022-23 -- 4596961.68 Tons (Lst) + 390342 Tons (Sub-grade stacked) = 4987303.68 Tons	None
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3q	General remarks of inspecting officers on method of mining etc.	Open cast method of mining is being practiced. The method of mining is suitable for this type of deposit.
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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No proposal of top soil dumping, direct use in plantation. Interstitial clay/ Waste & Subgrade dumping proposal given.	Top soil is used in plantation area. OB(Interstitial clay)/ screen reject & Subgrade dumping has been carried out on proposed location.	None
4b	Location of topsoil, OB and mineral reject dumps	Top soil - in plantation area. Interburden (clay)/ Screen rejects/ Waste dump in South side between section line ML 22-23 Subgrade dump between ML 19 - ML 22-23 in SE side of Mining lease.	Top soil is used in plantation area Interburden (clay)/ Screen rejects/ Waste dump in South side between section line ML 22-23 Subgrade dump between ML 19 - ML 22-23 in SE side of Mining lease.	None
4c	Number of dumps within lease area and outside of lease area	Two dumps (Within lease) Subgrade dump -- 1 Nos. Interburden (clay)/ Waste dump -- 1 Nos	Two dumps (Within lease) Subgrade dump -- 1 Nos. Interburden (clay)/ Waste dump -- 1 Nos	None
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside of UPL	Outside of UPL	None
4e	Number of active and alive dumps.	Active dumps - 02 Nos. (one Subgrade dump & one Interburden (clay)/ Waste dump)	Active dumps -- 02 Nos. (one Subgrade dump & one Interburden (clay)/ Waste dump)	None
4f	Number of dead dumps.	No proposal	None	Nil
4g	Number of dumps established.	No proposal	None	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Garland drain proposed during the year 2022-23	Garland drain made during the year 2022-23	Nil

4i	Length of Retaining wall or garland drain all along dumps	400 m (Garland drain) & 800 m fencing proposed during the year 2022-23	401 m (Garland drain) & 800 m fencing carried out during the year 2022-23	Nil
4j	Number of settling ponds	No proposal	None	Nil
4k	Specific comments of inspecting officer on waste dump management			No issue related to waste dump management has been observed

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No backfilling proposed during the year 2022-23.	The pit is active hence no backfilling carried out during the year 2022-23	None
5b	Area under backfilling of mined out area	No proposal of backfilling during the year 2022-23	The pit is active hence no backfilling carried out during the year 2022-23	None
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of Top soil for plantation is proposed	Top soil used for plantation	None
5d	Total area fully reclaimed and rehabilitated	No proposal during the reporting year 2022-23	None	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.			The mining pit is active hence no backfilling & reclamation has been carried out during the reporting year 2022-23

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	PMCP report should be submitted before 1st July for the previous financial year	PMCP report for the year 2022-23 has been submitted within time limit.	None
6b	Area available for rehabilitation (ha) .	Proposed 3.0 Hects. for Afforestation	During the year 2022-23, Afforestation within lease has been carried out in 3.29 Hects area	None
6c	afforestation done (ha).	Proposed 3.0 Hects. for Afforestation	During the year 2022-23, Afforestation within lease has been carried out in 3.29 Hects area	None
6d	No. of saplings planted during the year	During the year 2022-23, plantation of 3000 Nos. of sapling proposed	During the year 2022-23, plantation of 10952 Nos of sapling carried out within lease area	None
6e	Cumulative no .of plants	No specific proposal	No. of plants within Lease -- 78068 Nos. No. of plants outside Lease -- 13779 Nos	None
6f	Any other method of rehabilitation	No other method proposed except plantation	No other method adopted except plantation	None
6g	Cost incurred on watch and care during the year	No specific proposal	Rs. 14.91 Lacs cost incurred during the year 2022-23 on watch & care	None
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	No proposal of backfilling	Mining pit is active hence no backfilling has been carried out during the reporting year 2022-23	None
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal of backfilling	Mining pit is active hence no backfilling has been carried out during the reporting year 2022-23	None
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No proposal of backfilling	Mining pit is active hence no backfilling has been carried out during the reporting year 2022-23	None

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal of backfilling	of Mining pit is active hence no backfilling or rehabilitation by making water reservoir has been carried out during the reporting year 2022-23	None
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No proposal of reclamation & rehabilitation by backfilling	of Mining pit is active hence no backfilling has been carried out during the reporting year 2022-23	None
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	Afforestation in 3.0 Hects. with 3000 plants	Afforestation done in 3.29 Hects with 10952 Nos. of plants within lease area.	None
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	3.0 Hects	3.29 Hects with in lease	None
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	By plantation	By plantation	None
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental Monitoring in Core & Buffer zone proposed	Environmental Monitoring in Core & Buffer zone has been carried out	None
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			No issue related to PMCP observed hence PMCP compliances may be consider satisfactory

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Proposed for dispatch of 4600013.04 Tonnes (119.12 LSF) usable Limestone for Cement manufacturing in captive cement plant & location Stacking of Subgrade material -- 420045.64 Tonnes (65.91 LSF)	4596961.68 Tonnes (118.26 LSF) usable Limestone dispatched for Cement manufacturing in captive cement plant & location 390342 Tonnes (56.14 LSF) Subgrade material stacked at the proposed location	None
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	None
7c	Different grade of mineral sorted out at mines.	4600013.04 Tonnes (119.12 LSF) usable Limestone & 420045.64 Tonnes of Subgrade mineral with CaO 39.2 & MgO 0.7	4596961.68 Tonnes (118.26 LSF) usable Limestone & 390342 Tonnes of Subgrade mineral with CaO -- 37.65 MgO -- 0.99	None
7d	Any beneficiation process at mines	No proposal	None	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No issue related to mineral conservation has been observed.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal and utilization of Top soil proposed	Top soil remove separately and spread over plantation site.	None

8b	Concurrent use or storage of topsoil	Concurrent use of Top soil for plantation proposed	Concurrent use of Top soil for plantation has been carried out	None
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for Interburden (clay)/ Waste & sub grade minerals proposed	Separate dumping of Interburden (clay)/ Waste & sub grade minerals has been carried out as per proposal	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	None	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal during the reporting year 2022-23 except plantation	Except plantation no other activities of phase restoration, reclamation & rehabilitation of land affected by mining has been carried out.	None
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	During the year 2022-23, 3000 Nos. of plants proposed covering 3.0 Hects. area.	During the year 2022-23, 10952 Nos. of sapling planted covering 3.29 Hects. area. The cumulative plantation as on 31.03.2023 was: Within Lease -- 78068 Nos. Outside Lease -- 13779 Nos.	None
8g	Survival rate	No specific proposal	95%	None
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul road to arrest fugitive dust proposed	Water sprinkling on haul road to arrest fugitive dust observed during inspection	None
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The general aesthetic beauty in and around mine area is satisfactory

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	As per rule 45 of MCDR,2017 monthly and annual returns to be submitted.	Monthly returns and Annual returns have been submitted timely.	None
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer - Sh. Dilip Kumar Dhakar Geologist - Sh. Rajneesh Kothari Manager - Sh. Dilip Kumar Dhakar	Found OK	None
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Details given in Annula Return	Seems to be correct.	None
9d	Scrutiny of Annual return on afforestation	Within lease - 10952 Nos given	Seems to be correct	None
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No mineral reject. Information of sub grade mineral given	Seems to be correct	None
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Deatils of ROM given in Annual Return	Seems to be correct	None
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost & Ex-Mine Price- Rs. 178.90/- per tonne	Seems to be correct	None
9h	Scrutiny of Annual return on fixed assets	Fixed assets value of Rs. 673422669/ given	Seems to b correct	None
9k	Scrutiny of Annual return on mining machineries	Details of Mining Machineries given in Annual Return	Seems to be correct	None

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed		Show couse position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

Date :

(DR A Z KHAN)

Indian Bureau of Mines