

**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 : **CB01**) **Sh. Chandresh Bohra**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Sh. Dilip Kumar Dhakar, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 08-JAN-24
- (v) Prev.inspection date : 21-SEP-22

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 : VILLAGE-NIMBAHERA
correspondance : 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, Total area explored for G1	
1b	Exploration over lease area for geological axis 1 or 2	NA	NA	
1c	Exploration Agencies and 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 reserve as on 01/04/20		Proved (111) 91.215 million tonnes, Probable (122) 68.213 million tonnes	
1f	General remarks of inspecting officers on geology, exploration etc	NA	The present status of Geology and exploration may be considered as satisfactory.	

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	"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 mts.) Bench	"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 Nil 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) Nil (Upto RL 419 mts) Bench III - Between ML 1-2 to ML 7-8 (NE) Nil ML 4-5 to ML 9-10 (W) Nil (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.) "	VIOLATION RAISED UNDER RULE 11(1)
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2b	Separate benches in topsoil, overburden and minerals (Rule 15)	"Benches in Top soil - Nil (thickness 0.5 - 2.0 m), Overburden Benches - Nil, Mineral Limestone - 5 Benches (Height 9.0 m + 0.5, width 20-25 m) "	"Top soil - Nil, Overburden - Nil, Mineral Limestone - 5 Benches (9.0 + 0.5 m Height), Width 20- 25 m"	
2c	Stripping ratio or ore to OB ratio	1 : 0.038	1 : 0.013	OB in Tons / Ore in Tons
2d	Quantity of topsoil generation in m3	"18531.47 Cu.m. (26,500 Tonnes)"	"18503.50 Cu.m. (26460 Tonnes)"	
2e	Quantity of overburden generation in m3	"132867.13 Cu.m. (1,90,000 Tonnes)"	"45571.33 Cu.m. (65167 Tonnes generated, out of which 5640 Tons 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			EXCAVATION LOCATION WAS SLIGHTLY DEVIATED SO VIOLATION RAISED.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two	One	
3b	Quantity of ROM mineral production proposed	50,200,58.68 Tonnes (Limestone prod. 46,00,013.04 + Subgrade 4,20,045.64)	"49,87,303.68 Tonnes (Limestone prod. - 45,96,961.68 + Subgrade stacked- 3,90,342)"	
3c	Recovery of sailable/usable mineral from ROM production	46,00,013.04 Tonnes	45,96,961.68 Tonnes	

3d	Quantity of mineral reject generation	nIL	Nil
3e	Grade of mineral rejects generation and threshold value declared.	Nil	Nil
3f	Quantity of sub grade mineral generation.	4,20,045.64 Tonnes	3,90,342 Tonnes (Stacked)
3g	Grade of sub grade mineral generation	"CaO -- 39.2 MgO -- 0.7"	"CaO -- 37.65 MgO -- 0.99"
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised Method	Mechanised Method
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Borehole & Blast hole samples	Borehole & Blast hole samples
3j	Provision of drilling and blasting in mineral benches	"Drilling will be done by Nakoda Indus (4.5 inch dia), DTH drills holes will be blasted by explosive (Kelvex 600 and ANFO)."	"Yes, drilling is done by Nakoda Indus (4.5 inch dia), DTH drills holes are blasted by explosive (Kelvex 600 and ANFO)."
3k	Provision of mining machineries in mineral benches	Hyd. Excavator, Drill Mach., Dozer, Tipper	Hyd. Excavator, Drill Mach., Dozer, Tipper
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	"Limestone -- Yes Overburden -- No"	"Limestone -- Yes Overburden -- No"
3m	Total area covered under excavation/pits	83.752 Hects.(As on 31.03.2023)	78.678 Hects.(As on 31.03.2023)

3n	Ore to OB ratio for the pit/mine during the year.	1 : 0.038	1 : 0.013	
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)	
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) + (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 (Sub-grade stacked) = 3950876.919 Tons 2022-23 -- 4596961.68 Tons (Lst) + 390342 (Sub-grade stacked) = 4987303.68 Tons"	
3q	General remarks of inspecting officers on method of mining etc.			Development as per proposal

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	"Top soil - 26,500 Tons Interstitial clay/ Screen rejects / Waste -- 1,90,000 Tons Mineral Rejects as Subgrade- 4,20,045.64 Tons "	- "Top soil -- 26,460 Tons. Interstitial clay/ Screen rejects / Waste - 65,167 Tons generated, out of which 5,640 Tons stacked as dump whereas 59,527 Tons used for filling and road work. Mineral Rejects as Subgrade- 3,90342 Tons "	
4b	Location of topsoil, OB and mineral reject dumps	"Top soil - in plantation area. Interburden (clay)/ Screen rejects/ Waste generation in South side between section line ML 22-23 (E/W 461361 -- 461231) (N/S 2728402 -- 2728256) Subgrade dump between ML 19 - ML 22-23 in SE side of Mining lease. (E/W 461838 -- 461515) (N/S 2728680 -- 2728265)"	"Top soil is used in plantation area. Interburden (clay)/ Screen rejects/ Waste generation in South side between section line ML 22-23 (E/W 461318 -- 461231) (N/S 2728402 -- 2728302) Subgrade dump between ML 19 - ML 22-23 in SE side of Mining lease. (E/W 461835 -- 461572) (N/S 2728680 -- 2728263)"	"No stacking of top soil Stacking of Screen rejects is done on the area proposed during 2020-21, 2021-22 & 2022-23. Hence no deviation. Subgrade mineral is stacked on same location as proposed."

4c	Number of dumps within lease area and outside of lease area	"Two dumps (Within lease):-- Subgrade dump -- 1 Nos. Interburden (clay)/ Screen rejects/ Waste generation -- 1 Nos."	"Two dumps (Within lease) Subgrade dump -- 1 Nos. Interburden (clay)/ Screen rejects/ Waste generation -- 1 Nos."
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	"1 Nos. of Subgrade dump outside Ultimate pit limit & 1 Nos. of Interburden (clay)/ Screen rejects / Waste generation"	"1 Nos. of Subgrade dump outside Ultimate pit limit 1 Nos.-- Interburden (clay)/ Screen rejects/ Waste generation "
4e	Number of active and alive dumps.	Active dumps - 02 Nos. (one Subgrade dump & one Screen reject dump)	Active dumps -- 02 Nos. (one Subgrade dump & one Screen reject dump)
4f	Number of dead dumps.	Nil	Nil
4g	Number of dumps established.	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposed garland drain	Yes, garland drain is there
4i	Length of Retaining wall or garland drain all along dumps	400 m (Garland drain) & 800 m fencing	401 m (Garland drain) & 800 m fencing
4j	Number of settling ponds	Nil	Nil

4k	Specific comments of inspecting officer on waste dump management	Top soil is used for plantation area. No overburden is removed. Interburden as screen reject generated and stacked & Subgrade as mineral rejects generated during the year.
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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.			
5b	Area under backfilling of mined out area			
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)			
5d	Total area fully reclaimed and rehabilitated			
5e	General remarks of inspecting officers on backfilling and reclamation etc.			No backfilling proposed

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).	Afforestation -- 3000 Nos. of plants, Area -- 3.0 Hects.	"Yes and submitted in time. Afforestation -- Within lease --10952 Nos. of plants planted, Area covered -- 3.29 Hects. Outside lease -- Nil, Area covered -- Nil"
6b	Area available for rehabilitation (ha) .	3.0 Hects. (Afforestation)	3.29 Hects. (Afforestation within lease)
6c	afforestation done (ha).	3.0 Hects. (Afforestation)	3.29 Hects. (Afforestation within lease)
6d	No. of saplings planted during the year	3000 Nos.	10952 Nos.- within lease and Nil - outside lease.
6e	Cumulative no .of plants		"Within Lease -- 78068 Nos. Outside Lease -- 13779 Nos."
6f	Any other method of rehabilitation		Afforestation
6g	Cost incurred on watch and care during the year	Rs. 0.75 Lacs	Rs. 14.91 Lacs
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Nil	Nil

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Active mine and after life of the mine, it will be converted into water reservoir.	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	Active mine	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	3.0 Hects. (Afforestation)	3.29 Hects. (Afforestation within lease)	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	3.0 Hects. (Afforestation)	3.29 Hects. (Afforestation within lease)	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Afforestation	Afforestation	
6p	Compliance of environmental monitoring (core zone and buffer zone)		Yes , last compliance was sent on 13.01.2024 for the quarter October 2023 - December 2023.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Plantation done in area is more than proposed.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	"Usable Limestone for Cement manufacturing -- 4600013.04 Tonnes (119.12 LSF) & Stacking of Subgrade material -- 420045.64 Tonnes (65.91 LSF)"	"Limestone is for Cement manufacturing -- 4596961.68 Tonnes (118.26 LSF) & Subgrade material stacked -- 390342 Tonnes (56.14 LSF)"
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Yes. Mechanical	Yes. Mechanical
7c	Different grade of mineral sorted out at mines.	"Subgrade mineral CaO -- 39.2 MgO -- 0.7"	"Subgrade mineral CaO -- 37.65 MgO -- 0.99"
7d	Any beneficiation process at mines	Nil	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Subgrade mineral below 80 LSF is stacked separately.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Top soil -- 26,500 Tons	26460 Tons	
8b	Concurrent use or storage of topsoil	Top soil will be spread at proposed plantation area	Top soil spread over plantation site.	

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	1,90,000 Tons (Interburden (clay)/ Screen rejects/ Waste generation)	65,167 Tons generated, out of which 5,640 Tons stacked as dump whereas 59527 Tons used for filling and road work(Interburden (clay)/ Screen rejects/ Waste generation)	Stacking of Screen rejects is done on the area proposed during 2020-21, 2021-22 & 2022-23. Hence no deviation.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not sufficient overburden, waste rock. Therefore no proposal.	Not applicable	
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 and additional plantation done (Rule 41)	3000 Nos. of plants will be planted covering 3.0 Hects. area.	10952 Nos. of plants planted covering 3.29 Hects. area within lease during 2022 - 23, survival rate 95%.	
8g	Survival rate		"During 2022-23 -- 95% "	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul road to arrest fugitive dust.	It is followed and effective.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Plantation carried out in lease area is more than proposal.

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
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- 9a Status of "M.R.
 submission of Submitted upto
 Monthly and -- Submitted
 Annual returns on 04.01.2024
 for the month
 of December
 2023
 A.R. submitted
 upto --
 submitted on
 24.06.2023 for
 the year 2022
 - 23. "
- 9b Scrutiny of "Mining
 Annual return Engineer - Sh.
 for information Dilip Kumar
 on Mining Dhakar
 Engineer, Geologist -
 Geologist and Sh. Rajneesh
 Manager Kothari
 Manager - Sh.
 Dilip Kumar
 Dhakar"

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	" Proposed Actual (Ha.) (Ha.) Pit 83.752 78.678 Reclaimed Nil Nil Area Subgrade 13.23 8.74 Dump Screen rejects 0.943 0.92 dump/waste Roads 8.967 8.967 Infrastructure 3.903 3.903 Top soil 0.859 -- Others 0.93 0.93 (Embankment) "
9d	Scrutiny of Annual return on afforestation	"Proposed - 3000 Nos. (3.0 Ha.) Actual - Within lease - - 10952 Nos. (3.29 Ha.) & Outside lease -- Nil"
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	"Proposal - Nil Actual - Nil"

9f	Scrutiny of Annual return on ROM stock and/or graded ore	"During Year 2022-23 Opening Balance -- 1762140 Tons (Subgrade) Closing Balance -- 2152482 Tons (Subgrade)"
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	"Captive use Ex- Mine Price - Rs. 178.90/- per tonne"
9h	Scrutiny of Annual return on fixed assets	Fixed assets - Rs. 673422669/-
9k	Scrutiny of Annual return on mining machineries	Mining Machineries - Departmental

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

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

Date :

(Sh. Chandresh Bohra)

Indian Bureau of Mines