

**INDIAN BUREAU OF MINES
MINERALS DEVELOPMENT AND REGULATION DIVISION
MCDR Inspection REPORT
Jabalpur Regional office**

Mine code:38MPR35352

(i)	Name of Inspecting officer	:	Mr. Madhavrao Sabre,
(ii)	Designation	:	Sr. Mining Geologist, RO Jabalpur
(iii)	Accompanying mine official with Designation	:	Mr. Dinesh Dixit (HOD Mines) & Mr.M.K.Sen.(Mining Engineer)
(iv)	Date of Inspection	:	30.07.2024
(v)	Previous Inspection date	:	17.03.2023

PART-I: GENERAL INFORMATION

1	(a)	Mine Name	:	Pagara Jhiriya Limestone Mine
	(b)	Registration Number	:	IBM/929/2011
	(c)	Category	:	A, Fully Mechanized
	(d)	Type of Working	:	Opencast
	(e)	Postal address	:	
		State	:	Madhya Pradesh
		District	:	Satna
		Village	:	Pagara, Jhiriya Kothar, Jhiriya Koparihan & Jhiriya Bajpaien
		Taluka	:	Rampur Baghelan
		Post Office	:	Jhiriya Koparihan
		Pin code	:	485115
		Fax	:	
		email	:	Email Id: v.karthikeyan@dalmiacement.com
		Phone No	:	Tel: (+91 11)23465100
	(f)	Police Station	:	Tala
	(g)	First Opening date	:	30.07.2021
	(h)	Weekly day of rest	:	Sunday
2	Address for Correspondence		:	1 st Floor, Viswanath Tower, Ward No 17, Near Sunshine Hotel, Rewa Road, Kripalpur, Satna, MP-485001.
3	(a)	Lease Area	:	395.965 Ha
	(b)	Period of lease	:	50 Years
	(c)	Date of Expiry	:	05.11.2065
4	Mineral Worked (Main)		:	Limestone
5	Name of address of the Lessee with Phone, email and fax number		:	Dalmia Cement (Bharat) Ltd. Regd.Office- Dalmiapuram 621651 (Tamil Nadu) Corporate Office- Dalmia Cement (Bharat) Ltd, 11 th & 12 th floors, Hansalaya Building, 15 Barakhamba Road, New Delhi-110001. Tel:(+91 11) 23465100 Email Id: v.karthikeyan@dalmiacement.com

Name of address of the Owner/Nominated Owner with Phone, email, fax number and Date of appointment	:	Mr. Thyagrajan Venkatesan, Rajendra, 4 th Floor No.1,2 nd Street, Prithvi Avenue, Abhirampuram, Chennai-600018 Email Id: t.venkatesan@dalmiacement.com Phone No: 044-40902112 Date of Appointment- 09.08.2012
Name of address of the Agent with Phone, email, fax number and Date of appointment	:	Mr. V Karthikeyan, Dalmia Cement (Bharat) Ltd. Regd. Office- Dalmiapuram 621651 (Tamil Nadu) Corporate Office- Dalmia Cement (Bharat) Ltd, 11 th & 12 th Floors, Hansalaya Building, 15 Barakhamba Road, New Delhi- 110001 Tel: (+91 11) 23465100 Email Id: v.karthikeyan@dalmiacement.com Date of Appointment: 06.09.2020
Name of address of the Manager with Phone, email, fax number and Date of appointment	:	Mr. Mrinal Kanti Sen, 1 st Floor, Viswanath Tower, Ward No 17, Near Sunshine Hotel, Rewa Road, Kripalpur, Satna, MP-485001 Tel:+917987712783 , EmailId:Sen.Mrinal@dalmiacement.com Date of Appointment: 02.08.2021
Mining Engineer Name Qualification Date of Appointment	:	Mr. Mrinal Kanti Sen, Diploma in Mining Engineering with 20 Years of Experience and having First Class Manager Certificate (R) under MMR 1961. Date of Appointment: 10.05.2022
Geologist Name Qualification, Date of Appointment	:	Mr. Harshal Natthuji Jaya Sawai, M.Sc. Geology 09.01.2023
6	Date of approval of Mining Plan/Review of Mining Plan etc.	MP/Satna/Limestone/RMP-26/2019-20 dated 23/01/2020 proposal period 2020-21 to 2024-25

PART- II: OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration: (2023-24)

S. No	Item	Proposals	Actual Work	Remarks
1a	Backlog of previous year	Nil	Nil	
1b	Exploration over lease area for Geological axis 1 or 2	Nil	Nil	
1c	Exploration Agency & Expenditure in Lakh Rupees during the year	Not Applicable	Not Applicable	
1d	Balance area to be explored to bring the Geological axis in 1 or 2.	Nil	Nil	
1e	Balance reserves as on 01.04.2023	<u>Reserve in Tonnes</u>	<u>Reserve in Tonnes</u> Proved (111)- 63.20 Million Tonnes <u>Resources</u> Pre- Feasibility (221): 32.92 Million <u>Tonnes</u> Pre-Feasibility (222): 55.09 Million <u>Tonnes</u> Measured (331): 96.12 Million Tonnes <u>Indicated (332): 55.09 Million Tonnes</u> <u>As Per Geological Report which was submitted in July 2020.</u>	Entire mineralize area has been explored fully as per UNFC guidelines to G1 level of exploration.

1f	General remarks of Inspecting officer on geology, exploration etc.	<p>The limestone of the lease area belongs to Bhandar group of Vindhyan super group. The area around Jamuna village occupied by Nagod limestone of Bhandar Group. The limestone in these parts is mainly of stramatolitic type with a nodular look. The Nagod limestone formation of Bhandar Group is sandwiched between the underlain Simrawal/Ganurgarh Shale and overlain by Sirbu Shale. The limestone bands of good quality cement grade broadly occur in two horizons, namely upper grey limestone and lower grey limestone and separated by shale band. The general Stratigraphic sequence of the lease area is given below.</p> <p>General Stratigraphic Sequence of the Lease Area: Recent: Alluvium/ Top Soil. Bhandar Group: Faint Grey to Light green Shale, weathered at some places. Grey to dark grey Limestone with intercalation of Shale. Grey Shale. Dark Grey Limestone. The average thickness of the limestone horizon within the lease is 19.63 meters . The limestone shows alternating layers, band and lenses of chemical and inferior grade varieties. The distribution of the two types does not exhibit any regular pattern.</p>
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Development (2023-24)

S.N.	Item	Proposals	Actual Work	Remarks
2a	Location of Development w.r.t. lease area	N2704000- N2704400/E520600- E521000	N2704270-2704430 E520600 -520770	Pits not developed as per proposal violation pointed out.
2b	Separate benches in topsoil overburden and mineral (Rule 15)	Top Soil: 1 Bench Limestone: 2 Benches	Topsoil: 1 Bench Limestone: 1 Bench	-
2c	Stripping ratio or ore to OB ratio	1:0.38	1:0.38	Violation pointed.
2d	Quantity of topsoil generation in m3	Nil	-	Less quantity produced so violation pointed.
2e	Quantity of overburden generation in m3	175000	72.2	violation pointed for deviation.
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	Pit not developed as per proposal, Nil OB produced, Top soil produced was also very less in comparison to proposal so violation pointed.		

3. Exploitation FY (2023-24)

S. N.	Item	Proposals	Actual Work	Remarks
3a	Number of pits proposed for production	One	One	
3b	Quantity of ROM mineral production proposed	1156251 Tonnes	285 Tonnes	Violation pointed for deviation.
3c	Recovery of Salable/usable minerals from ROM production	100 %	100 %	
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral reject generation and threshold value declared	Not Applicable	Not Applicable	
3f	Quantity of sub-grade mineral generation	Not Applicable	Not Applicable	Nil
3g	Grade of sub-grade mineral generation	Not Applicable	Not Applicable	Nil

3h	Manual/Mechanized method adopted for segregation from ROM	Mechanized	Manual		
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Nil	Nil	-do-	
3j	Provision of drilling & blasting in mineral benches	Deep Hole Drilling & Blasting (110 mm dia & 6.5 m depth)	Nil	-do-	
3k	Provision of mining machineries in mineral benches	Hydraulic Excavators- 2 Nos Dumper/Tipper 35 Ton- 5 No Drill machine 100 mm- 1 No Rock Breaker 80 Ton- 1 No Dozer 270 HP – 1 No Road Grader – 1 No Water Sprinkler – 1 No Diesel Tanker -1 No Explosive Van – 1 No Weigh Bridge – 1 No Diesel Pump- 1 No			
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	-do-	
3m	Total area covered under excavation /pits (Ha.)	6.52	0.632		
3n	Ore to OB ratio for the pit/mine during the year	1:0.38	1:0.38		
3o	Total area put in use under different heads at the end of year	6.520 Ha	3.258		
3p	Production of ROM mineral during last five-years period, as Applicable	2021-22	200000	1095	Violation pointed for deviation in production.
		2022-23	650000	760	
		2023-24	1156251	285	
		Total	2006251	2140	
3q	General remarks of inspecting officer on method of mining etc.	Mining operations are in nascent stage. Violation pointed for less production and development.			

4. Solid Waste Management-Dumping (2023-24)

S.N.	Item	Proposals	Actual Work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32,33)	Yes	Nil	No OB produced for which violation pointed.
4b	Location of topsoil, OB & mineral reject dumps	E519000-E519600, N2704000-N2704400	Nil	No mineral reject produced during the

				year.
4c	Number of Dumps within lease area and outside lease area	Nil	Nil	
4d	Location of Dumps w.r.t. ultimate pit limit (Rule 16)	Nil	Nil	
4e	Number of Active & Alive dumps	Nil	Nil	
4f	Number of dead dumps	Nil	Nil	
4g	Number of dumps stabilized	Not Proposed	Not proposed in review of mining plan for period 2023-24.	
4h	Whether Retaining wall or garland drain all along dumps are there	Nil	Nil	
4i	Length of Retaining wall or garland drain all along dump	Retaining Wall – Nil Garland Drain - Nil	Retaining Wall – Nil Garland Drain - Nil	No proposal in 2023-24
4j	Number of settling ponds	Nil	Nil	
4k	Specific comments of inspecting officer on waste dump management	No OB was produced during the year 2023-24 for which violation pointed.		

5. Solid Waste Management-Backfilling (2023-24)

S.N.	Item	Proposals	Actual Work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Nil	Nil	Full extraction of mineral yet to be achieved , so backfilling yet to start.
5b	Area under backfilling of mined out area	Nil	Nil	-do-
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Nil	Nil	-do-
5d	Total area fully reclaimed & rehabilitated (Ha)	Nil	Nil	-do-
5e	General remarks of inspecting officer on backfilling, reclamation etc	Full extraction of mineral yet to be achieved , so backfilling yet to start.		

6. Progressive Mine Closure Plan (2023-24)

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	To be submitted before 1 st July of every year.	Yes, submitted.	PMCP has been submitted for period 2023-24 on 25.06.2024 .
6b	Area available for rehabilitation (Ha)	Nil	Nil	
6c	Afforestation done (ha)	Nil	0.156	
6d	No. of saplings planted during the year	Nil	300	

6e	Cumulative no. of plants	25000	1040	
6f	Any other specific method of rehabilitation	Nil	Nil	
6g	Cost incurred on watch & care during the year	Nil	110000	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L X B X D).	Not in Proposal in 2023-24	Nil	Delay in Land Purchase and Plant Erection.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings.	Nil	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area.	No Proposal in 2023-24	Nil	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir.	No Proposal in 2023-24	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v) Any other specific means	No Proposal in 2023-24	Nil	
6m	Compliance of Rehabilitation of waste land within lease (i) Afforestation	Nil	Nil	
6n	Compliance of Rehabilitation of waste land within lease (ii) Area rehabilitated (ha) Method of rehabilitation	Nil Nil	Nil Nil	No proposal in 2023-24.
6o	Compliance of Rehabilitation of waste land within lease (iii) Method of rehabilitation	Nil	Nil	No proposal in 2023-24.
6p	Compliance of Environment monitoring (core zone & buffer zone)	Yes	Yes	Done regularly
6q	General remarks of inspecting officer on PMCP compliance & progressive closer operations	During the year 300 sapling planted. Cumulative 1040 saplings planted.		

7. Mineral Conservation (2023-24)

S.N.	Item	Proposals	Actual Work	Remarks
7a	ROM mineral dispatch or grade wise sorting within lease area	1156251	91.980	Violation pointed for less production.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Manual	
7c	Different grade of mineral sort out at mine	Proper blending	Nil	
7d	Any beneficiation process at mines	Nil	Nil	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Violation pointed for less production.		

8. Environment (2023-24)

S.N.	Item	Proposals	Actual Work	Remarks
8a	Separate removal and utilization of topsoil (Rule32)	Nil	72.2 Cum used for storage	.
8b	Concurrent use or storage of topsoil	Use- Nil Storage-152732.78 Cum	Use- Nil Storage-971.2 Cum	Usage in Plantation and

				protective bund.
8c	Separate dumps for overburden waste rock, rejects and fines (Rule 33)	Yes	Nil	
8d	Use of overburden, waste rock, rejects and fines dump for restoring the land to its original use	Nil	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal in 2023-24	Nil	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	Nil	Plantation over 0.156 Ha with 300 Nos of saplings planted	
8g	Survival rate	80%	80%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling is proposed by Water Tanker	Complied	
8i	General remarks of inspecting officer on aesthetic beauty in and around mine area	Till date 1040 saplings planted. Top soil used for protective bund and in plantation.		

9. Compliance of Rule 45 (2023-24)

S.N.	Item	Comments	Remarks
9a	Status of submission of monthly and Annual returns	Submitted in stipulated time.	Submitted on 14.06.2024
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Yes furnished.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under Current Opencast Working- 0.632(Ha). Road, building, Plant – 2.470 Area under PMCP- 0.156 Ha.	
9d	Scrutiny of Annual return on afforestation	300 Saplings planted.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Nil	
9f	Scrutiny of Annual return on ROM stock and/or grade ore	Stock of 1770.360 MT ROM.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production costs	Ex Mine price Rs 408.87 /-	
9i	Scrutiny of Annual return on Fixed assets	215651956 is the value of fixed assets at end of 2023-24 as provided in Annual return.	
9k	Scrutiny of Annual return on mining Machineries	Hydraulic Excavators- 1 Nos Dumper/Tipper 14 CuM- 3 No Drill machine 100 mm- 1 No Rock Breaker 20 Ton- 1 No Back Hoe Loader – 1 No Water Sprinkler – 1 No	

Violation Pointed:

Rule 11(1) of MCDR 2017

1. Only 285 tonnes of Limestone production is raised during 2023-24 against the proposed 11,56,251 tonnes .
2. 72.2 m3 Overburden is generated against the proposal of 175000 m3, thereby distorting the stripping ratio.
3. It was proposed to produce 637500 m3 of top soil during the year, but nil top soil was produced.

4. It was proposed that height of 5 m and width of 15 m will be maintained in Limestone, but no such benching was observed in the lease area.
5. Stripping ratio proposed was not maintained.
6. Pit was not developed in proposal area for year 2023-24.

Rule 45(7) of MCDR 2017

It was reported that 285 Tonnes of limestone was produced and 91.980 Tonnes of limestone was dispatched during the year 2023-24. But no machinery was reported in Part V(6).