

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

**MCDR inspection REPORT
Jabalpur regional office**

Mine file No : MP/KTN/LST-101

Mine code : 38MPR18133

- (i) Name of the Inspecting : **G005**) **SANJAY M. GIRHE**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 11-FEB-20
- (v) Prev.inspection date : 07-FEB-19

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KACHGAWAN [7.42]**
- (b) **Registration NO.** :
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address
State : MADHYA PRADESH
District : KATNI
Village : KACHGAWA
Taluka : VIJRAOGARH
Post office : DIWAN SIDING
Pin Code :
FAX No. : N. A.
E-mail : N. A.
Phone : N. A.
- (f) Police Station :
- (g) First opening date :
- (h) Weekly day of rest : THU
2. Address for : M/S N.M.DUBASH STONE & LIME CO.PVT.LTD.
correspondance : STATION ROAD, P.O. MAIHAR,
DIST. SATNA (M.P.) 485771
3. (a) Lease Number : MPR1987
(b) Lease area : 7.42
(c) Period of lease : 40
(d) Date of Expiry : 05-SEP-20
4. Mineral worked : DOLOMITE Associated
LIMESTONE Main

5. Name and Address of the

Lessee : N.M.DUBASH STONE & LIME CO.PVT.LTD.
STATION ROAD P.O. MAIHAR
SATNA MADHYA PRADESH
Phone:N. A.
FAX :N. A.

Owner : N.M.DUBASH STONE & LIME CO.PVT.LTD.
STATION ROAD P.O. MAIHAR
SATNA MADHYA PRADESH
Phone: N. A.
FAX : N. A.

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	18-AUG-00
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	26-SEP-14
		Mining Scheme rule 12 MCDR1988	13-APR-15

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No exploration proposals during year 2018-19	No exploration carried out during the year 2018-19	Lessee needs to be proposed exploration during the years.
1b	Exploration over lease area for geological axis 1 or 2	No exploration proposals during year 2018-19 for G1/G2 levels	No exploration carried out during the approved plan period.	Mineralisation proved up to 28m by working pits.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No exploration proposals during year 2018-19	No exploration carried out	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No exploration was proposed for G1/G2 axis	Area explored under G1 level only 4.20 Ha by way of working pits. Rest area of 3.22 Ha falls under G3 level	4.20 hact area is proven up to depth of 25 to 28m and further depth to be proven by core bore hole.
1e	Balance reserve as on 01/04/20	Reserves in Tonnes Proved (111) -1215258 Resources in tonnes Feasibility (211): 1496625 The reserves/reso urces as on 1/4/2015 as per approved SOM dtd 13.04.2015	Reserves in Tonnes Proved (111) - 1134828 Resources in tonnes Feasibility (211): 1496625 Measured(331)- 2631453 The reserves/resources as on 1/4/2019 as per Annual Return	No detailed exploration carried out in mining lease area previously. Based on the mineralisation established in working pits reserves/resources have been estimated. Only proved mineralised area by working pits to be considered.

1f	General remarks of inspecting officers on geology, exploration etc	NA	NA	No detailed exploration carried out in mining lease area previously. Based on the mineralisation established in working pits reserves/resources have been estimated. Only proved mineralised area by working pits to be considered.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	It was proposed to merge Pit-3 & Pit-4 towards west by 04 production benches from 382mRL to 364mRL	Mine working was carried out as per the proposed locations. Minor deviation to less production.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	One separate top soil and separate four benches of 6mts heights were proposed in limestone	Separate bench observed for top soil. Bench height of 6 to 7m maintained in limestone for systematic mining.	
2c	Stripping ratio or ore to OB ratio	Proposed as 1:0.54	Achieved as 1:0.13	Due less generation OB/shale during the year
2d	Quantity of topsoil generation in m3	During the year 2018-19 total 8100 CuM proposed	During the year 2018-19 total 3115 CuM generated.	

2e	Quantity of overburden generation in m3	During the year 2018-19 total 12846 CuM inter-burden shale proposed to be generated	During the year 2018-19 total 7260 CuM generated	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	NA	There four working pits and its dimensions are- Pit-1 (45m x 40m x 5.0m depth), Pit-2 (136m x 85m x 25m depth) & Pit-3 (145m x 140m x 28m depth). Working pits very well developed w.r.t. type of deposit.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Working was proposed in two pits from 387mRL to 364mRL	Mine working was carried out in given two pits as per the proposals	Limestone mineralisation very well established in working pits
3b	Quantity of ROM mineral production proposed	96347 tonnes limestone production proposed in 2018-19	Limestone production of 52430 tonnes achieved in 2018-19.	Production details as per AR for 20418-19
3c	Recovery of sailable/usable mineral from ROM production	75% recovery of limestone from ROM	Achieved as per the proposals	About 25% of ROM generated as inter-burden waste.
3d	Quantity of mineral reject generation	Not Proposed	Nil	No mineral reject generation
3e	Grade of mineral rejects generation and threshold value declared.	Not Proposed	Nil	

3f	Quantity of sub grade mineral generation.	Not Proposed		Neither any proposals were given for subgrade limestone nor any generated during the year.
3g	Grade of sub grade mineral generation	Not Proposed	Nil	Not Proposed during the year
3h	Manual / Mechanised method adopted for segregating from ROM	Manual sizing & sorting proposed	Manual sizing & sorting carried out	Sorting & sizing being carried out for SMS & cement grade limestone
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not Proposed	Nil	Lessee is not having any plan for beneficiation study.
3j	Provision of drilling and blasting in mineral benches	Dia of 32mm shallow depth drilling & blasting is proposed	Drilling & blasting using wagon drill of 32mm dia carried out.	Jack hammer & Atlas Copco compressor LM-100-D75 was deployed
3k	Provision of mining machineries in mineral benches	L&T PC 200Excavator-1.20CuM, TATA Dumper, 10 T capacity-03 Nos Wagon Drill rods -32mm Water Tanker-5KL	L L&T PC 200Excavator-1.20CuM, TATA Dumper, 10 T capacity-03 Nos Wagon Drill rods -32mm Water Tanker-5KL	HEMM deployment proposed as per the capacity & targeted production.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height in OB/top soil & 6m proposed in limestone	At some extent bench height is not regular due to quality constraints	Proposed bench height is suitable as per the deposit
3m	Total area covered under excavation/pits	5.26 Ha area was proposed in approved SOM period i.e. 2015-16 to 2019-20	4.97Ha as per Annual Return,2018-19 as on 01.04.2019	

3n	Ore to OB ratio for the pit/mine during the year.	Proposed as 1:0.54	Achieved as 1:0.13	Total 7260 CuM inter-burden waste generated during the year
3o	Total area put in use under different heads at the end of year	As per the previous approved SOM dtd 13.04.2015 Pits-5.26 Ha Top soil storage-0.80 Ha Waste dumps-0.46 Ha Road - 0.10 Ha As on 01.04.2015.	As per the AR for the year 2018-19 Pits-4.96 Ha Waste dumps-0.80 Ha Infrastructure - 0.10 Ha As on 01.04.2019	No lateral excavation, production was carried out in already working pit.
3p	Production of ROM mineral during the last five year period as applicable	2015-16-: 45937 MT 2016-17-: 62415 MT 2017-18-: 75660 MT 2018-19-: 96347 MT	2015-16-: Nil 2016-17-: Nil 2017-18-: 28000 MT 2018-19-: 52430 MT	Production details as per annual return 2015-16 onwards
3q	General remarks of inspecting officers on method of mining etc.	NA	NA	Open cast mechanised working proposed by using Excavator & dumper combination with drilling & blasting using wagon drill. Three different working pits were developed & mineralisation proved up to approximate depth of 28mts .

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)	Separate top soil, mine waste for backfilling & dumping proposed	top soil, mine waste generated used for backfilling & some quantity was dumped at proposed locations.	Mine waste in the form of inter-burden shale.
4b	Location of topsoil, OB and mineral reject dumps	Top soil dump & mine waste proposed for backfilling as well as dumping towards eastern part of ML	Top soil dump & mine waste is dumped at earmarked locations	
4c	Number of dumps within lease area and outside of lease area	Two waste dumps & three top soil dumps towards eastern part of ML located	Two waste dumps & three top soil dumps towards eastern part of ML located	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Top soil & mine waste generated proposed to be dumped at South-Eastern part of lease area beyond UPL	Dumping carried out at earmarked locations	
4e	Number of active and alive dumps.	All the dump towards south-eastern are active dumps within lease area	Dump towards south-eastern are located within lease area. No dead dumps in the lease area.	
4f	Number of dead dumps.	Not Proposed	No dead dumps in the lease area	
4g	Number of dumps established.	Not Proposed	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	Not Proposed	Nil	
4i	Length of Retaining wall or garland drain all along dumps	Not Proposed	Nil	

4j	Number of settling ponds	Not Proposed	Nil	
4k	Specific comments of inspecting officer on waste dump management	NA	NA	Good amount of inter-burden waste and top soil generated in the past being dumped systematically at earmarked location. Some dumps have been merged.

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.	Backfilling in mineral exhausted pit- 4 was proposed for backfilling	Backfilling carried out as per the approved proposals	
5b	Area under backfilling of mined out area	3500 CuM area proposed for backfilling	Backfilling carried out by total 7260 CuM waste generated during the year.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of top soil for bund formation proposed	Work carried out as per proposals & bunds formed towards eastern part	
5d	Total area fully reclaimed and rehabilitated	NA	NA	Total backfilled area not mentioned in approved SOM
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	NA	Top soil & waste/inter-burden encountered in the lease area proposed for backfilling and bund formation purpose. During the year 2018-19 backfilling was proposed.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	To be submitted before 1st July of every year	Not submitted within time limit as per the provisions of Rule 26 of MCDR,2017	Violation under rule 26(2) of MCDR,2017 was issued.
6b	Area available for rehabilitation (ha) .	3500 M2 area was proposed under reclamation & rehabilitation	Not done	
6c	afforestation done (ha).	Not Proposed	500 saplings planted in ML area	
6d	No. of saplings planted during the year	Not Proposed	500 saplings planted in ML area	
6e	Cumulative no .of plants	NA	NA	Details not provided in approved SOM dtd 13.04.2015
6f	Any other method of rehabilitation	Backfilling proposed as one of method	Total 7260 CuM quantity backfilled during the year	
6g	Cost incurred on watch and care during the year	Not Proposed	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Total 12846 CuM waste proposed for backfilling	Backfilling carried out by 7290 CuM mine waste quantity	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Total 12846 CuM waste proposed for backfilling	Backfilling carried out by 7290 CuM mine waste quantity	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	Not Proposed	Nil	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Not Proposed	Nil	
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	Not Proposed	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	Not Proposed	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	Not Proposed	Nil	Most of the lease area is mineralised & no waste land
6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical Air, Water, Noise monitoring Proposed	Carried out as per the proposals	Analysis reports were provided during the inspection
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	NA	Scope of PMCP work are very well existed in the lease area as the limestone have been exhausted in some working pits. Very limited PMCP proposals were given in approved document.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	96347 MT proposed as total ROM production for despatch. Grade wise sorting proposed within lease area for SMS & rest cement grade limestone	68333 MT dispatched as SMS grade limestone and total 52430 MT production acheived	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Proposed as Manual as well as Mechanical means	Carried out Manual as well as Mechanical mineral sorting	
7c	Different grade of mineral sorted out at mines.	Sorting is being carried out for Steel plant grade limestone (CaO-48% (Min), SiO ₂ -3%(Max), Size-+10mm & -40mm Cement grade (CaO-40% Min, MgO-Up to 3% & SiO ₂ -10% Max Size -10mm	Sorting carried out as per the proposals	
7d	Any beneficiation process at mines	Not Proposed	No beneficiation process at mine	

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	NA	Mineral is being conserved by grade wise sorting in the lease area. Steel Plant grade limestone (CaO-48% (Min), SiO ₂ -3%(Max) proposed to be sell to the steel plants. Rest Cement grade (CaO-40% Min., MgO-Up to 3% for cement manufacturing industries
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate stacking & utilization proposed	Done as per the proposals	Stacking done at earmarked locations
8b	Concurrent use or storage of topsoil	Proposed for bund preparation & rest for stacking	Use & storage of top soil carried out as per the proposals	Total 8100 Cum top soil generation was proposed
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for OB not proposed. Concurrent use for backfilling proposed	Backfilling towards eastern side in Pit-4 carried out	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Proposed for backfilling purpose	Backfilling carried out as per the proposals	

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Reclamation by backfilling was proposed	Backfilling carried out as per the proposals	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No proposal of plantation given during the year 2018-19	500 saplings planted with 70% survival rate	
8g	Survival rate	No Proposals during the year	70% achieved during the year	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling is proposed by water tanker	Regular water sprinkling is done by water tanker	Water tanker of 5KL capacity is provided for the purpose
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	NA	NA	Aesthetic beauty in and around mine area is not much satisfactory as plantation not done up to that extent. More plantation needs to be carried out in lease area & accordingly proposals to be given ROMP/MP.

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. submitted upto- Jan-2020 A.R. submitted upto- 2018-19	Annual Return for the year 2018-19 submitted within time limit.	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Given	Shri Vinod Kumar Patel appointed as Mining Eng. & Shri Ratnesh Kumar Pandey as Geologist	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Opencast working- 4.97 Ha Waste dumping- 0.80 Ha Infrastructure - 0.10 Ha	
9d	Scrutiny of Annual return on afforestation	Given	500 Nos of saplings planted within & outside ML area	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not Given	No mineral reject generation	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	SMS Grade Limestone: O/S-22064 MT Production-52430 MT Despatch-68333 MT C/S-6160 MT	Cement grade limestone details not provided in AR 2018-19
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Ex-mine price: SMS Grade -Rs 386/MT	
9h	Scrutiny of Annual return on fixed assets	Given	No comments	
9k	Scrutiny of Annual return on mining machineries	Given	No comments	

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
MCDR17	Rule 11(4)	27-APR-20			
MCDR17	Rule 31(4)	27-APR-20			
MCDR17	Rule 45(1)	27-APR-20			
MCDR17	Rule 45(5) (a)	27-APR-20			

Date :

(SANJAY M. GIRHE)

Indian Bureau of Mines