INDIAN BUREAU OF MINES
MINERALS DEVELOPMEMT AND REGULATION DIVISION

MCDR inspection REPORT

Jabalpur regional office

Mine file No : MP/KTN/LST-209 **Mine code : 38MPR47040**

(i) Name of the Inspecting Officer and ID No. : **GQ05) SANJAY M. GIRHE**

(ii) Designation : Regional Mining Geologist

(iii) Accompaning mine Official with Designation :

(iv) Date of Inspection : 22-FEB-21

(v) Prev.inspection date : 24-DEC-19

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **BADARI**

(b) Registration NO. :

(c) Category : A Fully Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : MADHYA PRADESH
District : KATNI
Village :
Taluka :
Post office :
Pin Code :
FAX No. : N. A.
E-mail : N. A.
Phone : N. A.

(f) Police Station :

(g) First opening date : 30-NOV-92

(h) Weekly day of rest : SUN

2. Address for correspondance : SHRI ASHOK KUMAR DUBEY
NADI PAR, KATNI (M.P.) 483501

3. (a) Lease Number : MPR0603
(b) Lease area : 10.25
(c) Period of lease : 10
(d) Date of Expiry :

4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : ASHOK KUMAR DUBEY
& SMT.SUNITA & VIDHYA DEVI
DUBEY NADI PAR, KATNI
MADHYA PRADESH
Phone:N. A.
FAX :N. A.

Owner : ASHOK KUMAR DUBEY
& SMT.SUNITA & VIDHYA DEVI
DUBEY, NADI PAR KATNI
MADHYA PRADESH
Phone: N. A.
FAX : N. A.

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 24 MCR1960	24-JAN-06
		Mining Scheme rule 12 MCDR1988	26-FEB-08
		Mining Scheme rule 12 MCDR1988	06-JUN-12
		MP review under 17(1) MCR 2016	16-DEC-16

PART – II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	During the approved plan period one Core borehole & one DTH borehole was proposed at quarry floor at 356mRL.	No exploration carried out during the year 2019-20.	Violation under rule 11(1) of MCDR,17 issued. Mineralisation proved up to 51m by single working pit.
1b	Exploration over lease area for geological axis 1 or 2	Not Proposed for G1/G2 level	Nil	Mineralisation proved up to 51m by single working pit.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	During the approved plan period one Core borehole & one DTH borehole was proposed at quarry floor at 356mRL.	Not carried out	Violation under rule 11(1) of MCDR,17 issued.
1d	Balance area to be explored to bring Geological axis in 1 or 2	During the approved plan period one Core borehole & one DTH borehole was proposed at quarry floor at 356mRL.	Area explored under G1 level about 8.62 & G2 level of 1.62 Ha by way of working pits.	8.62 hact area is proven up to depth of 51mts and further depth to be proven by DTH bore hole.
1e	Balance reserve as on 01/04/20	Reserves in Tonnes Proved (111) -1149316 MT Resources Feasibility(221): 2406600 MT The balance reserves as on 1/4/2016 as per approved ROMP	Reserves in Tonnes Proved (111) -911310 MT Resources Feasibility (221): 2406600MT The balance reserves as on 1/4/2020 as per Annual return.	No additional reserves estimation done.

1f	General remarks of inspecting officers on geology, exploration etc	NA	NA	Most of the lease area is explored by way of working pit up to 51m and very small area is about to explore in G1 level. In past no systematic exploration was carried out.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	It was proposed to work in between E455960 to E456100N & 2657820 to 2657890 in 6 to 7 working benches from 357mRL to 324mRL	Mine working was carried out as per the proposed locations.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No separate top soil and OB benches proposed during the year. Separate benches were proposed for mineral.	No separate benches observed for OB. Bench height of 6 to 7m maintained in limestone for systematic mining.	Most of the working lease is devoid of top soil. Sufficient development work carried out.
2c	Stripping ratio or ore to OB ratio	Proposed as 1:0.43 tonne/CuM	1:52 tonne/CuM	Total 41350 OB generated during the year 2019-20
2d	Quantity of topsoil generation in m3	No Proposed	Nil	
2e	Quantity of overburden generation in m3	20644 M3 Proposed during the year 2019-20	41350 M3 OB generated during the year 2019-20	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	NA	There is single working pit in the central part of lease area with broken up area of about 9.50Ha and about 51mt working depth.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Working was proposed in single pit from 357mRL to 324mRL	Mine working were carried out in given single pit	High grade limestone of BF grade being despatched to the steel industries
3b	Quantity of ROM mineral production proposed	120425 MT proposed in 2019-20	79061MT (Achieved in 2019-20)	
3c	Recovery of sailable/usable mineral from ROM production	Not Proposed	70% Achieved	About 30% generated as inter-burden waste from ROM.
3d	Quantity of mineral reject generation	Not Proposed	18000 CuM generated during the year 2019-20	Details as per AR 2019-20
3e	Grade of mineral rejects generation and threshold value declared.	Not Proposed	No mineral reject generation was proposed but still reported in AR 2019-20 & grade also mentioned incorrectly as <30% CaO.	
3f	Quantity of sub grade mineral generation.	Not Proposed	Nil	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 BF 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	Small dia 32mm shallow depth drilling & blasting is proposed by Jack hammer	Drilling & blasting using jack hammer carried out Small dia 32mm shallow depth.	
3k	Provision of mining machineries in mineral benches	L&T PC Excavator-1.2CuM, 210HP, TATA Dumper, 10 T capacity-05 Nos Jack Hammer with Drill rods -32mm Water Tanker-5KL Water pump with Diesel engine	L&T PC Excavator-1.2CuM, 210HP, TATA Dumper, 10 T capacity-05 Nos Jack Hammer with Drill rods -32mm Water Tanker-5KL Water pump with Diesel engine	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	No OB bench height is proposed bench height of 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	9.51 Ha area was proposed in approved ROMP period i.e. 2017-18 to 2021-22	9.51Ha as on 01.04.2020 as per Annual Return,2019-20	During approved ROMP period 2017-18 to 2021-22, no additional area was proposed for ROM excavation.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.43 Tonn/CuM	1:52 Tonn/CuM	Total 41350 OB/inter-burden generated during the year

3o	Total area put in use under different heads at the end of year	As per the previous approved MP Pits-9.51Ha Top soil storage-0.12Ha Mineral Storage-0.28Ha Road-0.05Ha As on 01.04.2016	Pits-9.51Ha OB/IB waste-0.4Ha Infrastructure-0.05Ha Green belt-0.130Ha As on 01.04.2020 as Annual Return, 2019-20	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-:74157 MT 2016-17-:29156 MT 2017-18-: 91991MT 2018-19-: 103000 MT 2019-20-: 120425 MT	2015-16-: 73700 MT 2016-17-: 29000 MT 2017-18-: 79975 MT 2018-19-: 79400 MT 2019-20-: 79081MT	Production details as per annual returns from 2015-16 to 2019-20
3q	General remarks of inspecting officers on method of mining etc.	NA	NA	Open cast fully mechanised working proposed by using Excavator & dumper combination with drilling & blasting using jack hammer. One big centralised working pit is developed & mineralisation proved up to depth of 51mts.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No top soil generation was proposed. Separate dumping of inter-burden was proposed	OB/Inter-burden generated dumped at proposed locations	OB in the form of inter-burden, no OB generation was proposed.

4b	Location of topsoil, OB and mineral reject dumps	OB/waste generated proposed to be dumped at south-west of quarry-2	Dumping carried out as per proposals	
4c	Number of dumps within lease area and outside of lease area	Total 03 dumps within lease area	Total 03 dumps within lease area	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	OB/waste generated proposed to be dumped at south-west of quarry-2 beyond grid N2657800	OB/waste generated proposed to be dumped at south-west of quarry-2 beyond grid N2657800	At present three old waste dumps are existing towards southern & western part. One pit located as eastern side.
4e	Number of active and alive dumps.	At Present two OB and mineral reject dumps in the lease area. One dead dump also existing in lease area	At Present two OB and mineral reject dumps in the lease area. One dead dump also existing in lease area	
4f	Number of dead dumps.	One number of old dump existing towards of north-eastern part of lease area	One number of old dump existing towards of north-eastern part of 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	The waste is inter-bedded shale with clay pockets. This inter-burden waste proposed for backfilling purpose.

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.	Most of quarry-1 mined out area was proposed to backfilled by 79121 CuM waste material	In quarry-1 mineral is fully exhausted in some part which has been backfilling.	Cumulative quantity backfilled as on 01.04.2019 reported as 342250 CuM
5b	Area under backfilling of mined out area	Total 4800 Sq.M area was proposed for backfilling	Details of backfilled area not available	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not Proposed	Nil	No top soil generation was proposed during the year
5d	Total area fully reclaimed and rehabilitated	4800 Sq.M area was proposed for backfilling	Cumulative 342250 CuM waste material backfilled as on date	Total backfilled area's details not furnished in approved document
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	NA	Waste/inter-burden encountered in the lease area. No top soil generation is proposed. Generated inter-burden/waste being utilized for reclamation & rehabilitation purpose. Hence, scope of reclamation by backfilling is very well existed.

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	Violation of rule 26(2) of MCDR,17 issued.
6b	Area available for rehabilitation (ha) .	Not Proposed	Not Done	Management of worked out benches itself proposed under backfilling
6c	afforestation done (ha).	4800 Sq.M area was proposed for backfilling	Backfilling carried out as per the proposals by total 41350 CuM waste material	Limestone fully exhausted in quarry-1 in some part
6d	No. of saplings planted during the year	Not Proposed	Nil	Rehabilitation not proposed over waste land
6e	Cumulative no .of plants	NA	NA	Information not furnished in approved document
6f	Any other method of rehabilitation	Not Proposed	Nil	
6g	Cost incurred on watch and care during the year	NA	NA	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NA	NA	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	4800 Sq.M area was proposed for backfilling	Backfilling carried out as per the proposals by total 41350 CuM waste material	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation 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	
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 is very well existed in the lease area as in some part of existing limestone is fully exhausted. Further, scope of management of worked out benches also existed.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	120425 MT proposed as total ROM production for despatch. Grade wise sorting proposed within lease area for high grade BF & rest non-plant cement grade limestone.	77057.420 MT dispatched as BF grade limestone. Closing stock of 2448.42MT at mine head of BF grade	No cement grade limestone despatch during the year
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Sizing & sorting is proposed by manually	Sizing & sorting is carried out manually	
7c	Different grade of mineral sorted out at mines.	BF grade and cement grade limestone proposed to be sorted.	Sorting carried out as per the given proposals	Entire ROM is sorted grade wise & utilised in steel Plants & in lime kiln for manufacturing of industrial lime & rest low grade for cement industries.
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. Limestone having 48% CaO (Min) & 3% MgO (Max), SiO-3% (Max) proposed to be sorted for steel Plants and rest non-plant grade (NPG) limestone proposed to be sell to the nearby cement plants.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil generation & utilization proposed	Nil	
8b	Concurrent use or storage of topsoil	Not Proposed	Nil	No generation of top soil proposed during the year.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	OB generated proposed for backfilling in south west & also in south of Quarry-2 beyond grid N2657800	Worked out as per given proposals	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Use of overburden proposed for backfilling purpose	Backfilling carried out as per proposals	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Mineral exhausted pits proposed for restoration, reclamation and rehabilitation by backfilling means	Restoring, reclamation & rehabilitation of land to its original use is carried out by backfilling.	Backfilling done by 41350 CuM OB & cumulative backfilling by 342250 CuM.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	250 saplings proposed to be planted during the year	150 Nos. of saplings within lease area & 100 no outside ML area planted	Survival rate of 80% achieved during the year.
8g	Survival rate	80 % proposed	80 % acheived	
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. Hence, it was instructed to propose more nos. of sapling/year.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. submitted upto- December- 2020 A.R. submitted upto- 2019-20	Mionthly return for January-2021 was not submitted within time limit	Violation of Rule 45(5)(b) of MCDR,2017 pointed out & V/L was issued.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Given	Geologist & mining eng were appointed.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Excavated Pits-9.510Ha Waste dumps-0.40Ha Infrastructure-0.50Ha Green Belt-0.130Ha	
9d	Scrutiny of Annual return on afforestation	Given	250 saplings planted within & outside lease area	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Given	18000 Tonnes generated during the year	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	BF Grade limestone : O/S-444.84 MT Despatch-77057 MT C/S-2448.42MT	

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Ex-mine price: BF grade limestone –Rs 325/MT
9h	Scrutiny of Annual return on fixed assets	Given	Nil
9k	Scrutiny of Annual return on mining machineries	Given	Nil

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
MCDR17 Rule 11(1)	19-APR-21				
MCDR17 Rule 26(2)	19-APR-21				
MCDR17 Rule 45(1)	19-APR-21				
MCDR17 Rule 45(5)(k	19-APR-21				

Date :

(**SANJAY M. GIRHE**)

Indian Bureau of Mines