

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

**MCDR inspection REPORT
Jabalpur regional office**

Mine file No : MP/SATNA/LST.344

Mine code : 38MPR35317

- (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 : 02-SEP-21
- (v) Prev.inspection date : 12-FEB-21

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SADHERA (291.792HA)**
- (b) **Registration NO.** : **IBM/15031/2013**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : MADHYA PRADESH
District : SATNA
Village : SADHERA
Taluka : MAIHAR
Post office : BHADANPUR
Pin Code : 485772
FAX No. : 02230384399
E-mail :
Phone : 02230383333
- (f) Police Station : MAIHAR
- (g) First opening date : 11-APR-13
- (h) Weekly day of rest : SUN
2. Address for :
correspondance
3. (a) Lease Number : MPR2424
- (b) Lease area : 363.44
- (c) Period of lease : 30
- (d) Date of Expiry : 29-JUL-40
4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : RELIANCE CEMENT CO.PVT.LTD.
H-BLOCK 1ST FLOOR DAKC,
KOPARKHAIRANE THANE BELAPUR
RD MUMBAI (SUBURBAN)
MAHARASHTRA
Phone:02230383333
FAX :02230384399

6. Date of approval of Mining
Plan/Scheme of Mining

: MP modif under MCR 1960	30-MAY-14
Mining Scheme rule 12 MCDR1988	17-MAR-15
Modif.approved Mining Scheme	06-JUN-16
MP modif under 17(3) MCR 2016	06-NOV-19
MP review under 17(1) MCR 2016	02-JUL-20
MP review under 17(1) MCR 2016	02-JUL-20

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Exploration was proposed by 10 nos. core drill boreholes during the year 2020-21	Total 08 core boreholes were drilled during the year	
1b	Exploration over lease area for geological axis 1 or 2	Exploration was proposed by 10 nos. core drill boreholes during the year 2020-21	Total 08 core boreholes were drilled during the year	Exploration carried out over mineralised area
1c	Exploration Agencies and Expenditure in lakh rupees during the year	RCCPL Pvt. Ltd.	Total expenditure incurred Rs. 1670500	In-house exploration rigs were deployed
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Entire mineralised area explored in G1 level	G1 - 250.1, G2 - 0 & Non Mineralized -113.34 ha
1e	Balance reserve as on 01/04/20	Reserves in Million Tonnes Proved(111) - 79.76 Resources in Million Tonnes Feasibility(211): 6.94 Pre-Feasibility(21): 7.23 As per previous approved ROMP dtd 02.07.2020	Reserves in Million Tonnes Proved(111) -76 Resources in Million Tonnes Feasibility(211): 6.94 Pre-Feasibility(221): 7.23 As per previous Annual Return for the year 2020-21	Final reserves after depletion of production carried out in plan period

1f	General remarks of inspecting officers on geology, exploration etc	Exploration proposals, sampling, chemical analysis were given	Exploration carried out during approved plan period	Limestone of ML area belongs to Rohtas formation of Vindhyan group. Detailed exploration carried for G1 level
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed at E474400-E474800 N2667732-N2668380 E475423-E475677 N2667815-N2668031	Excavation/development carried out over E474400-E474800 N2667732-N2668392 E475423-E475677 N2667815-N2668031	Working carried out at proposed locations
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	OB-1.5mts height Limestone benches I Bench - 9.5mtr II Bench- 9.5mtr III Bench-6 mtr	OB-1.5mts height Lst I Bench -9.5mtr II Bench-9.5mtr III Bench-6 mtr	Benches configuration maintatined as per proposals
2c	Stripping ratio or ore to OB ratio	Proposed as 1:0.07	Acheived as 1:0.063	Total OB generated as 221694 tonnes as per annual return
2d	Quantity of topsoil generation in m3	Proposed as 26000m3	Acheived as Up to 31March2021 as 12000M3	Top soil generated from proposed locations where excavation carried out
2e	Quantity of overburden generation in m3	397257m3	147796 m3	Separately stacked at earmarked locations.

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Systematic development & excavation proposals were given	Working carried out as per the proposals	There area total 04 nos. of working pits of different dimensions. Deep hole drilling, blasting being practised
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	In single Pit	Working carried out as per the proposals	
3b	Quantity of ROM mineral production proposed	5000000MT	3494282.82 MT	Systematic Inventory of production & despatches are being maintained at mine level
3c	Recovery of sailable/usable mineral from ROM production	Proposed during the year 95%	Acheived during the year 85.15%	
3d	Quantity of mineral reject generation	Proposed as 100000M3	Acheived as Nil	
3e	Grade of mineral rejects generation and threshold value declared.	<34% Cao >5% Mgo	No mineral rejects generated	
3f	Quantity of sub grade mineral generation.	Not Proposed	Nil	No sub-grade generation as entire recovered ROM fed to cement plant
3g	Grade of sub grade mineral generation	Not Proposed	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	Dedicated crusher 1600 TPH installed in ML area

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposals	Nil	Dedicated crusher 1600 TPH installed in ML area
3j	Provision of drilling and blasting in mineral benches	Deep hole drilling & blasting is proposed by Atlas Copco of 115m dia	Drilling & blasting carried out as per the proposals	
3k	Provision of mining machineries in mineral benches	Excavator BE1000 Hyd of 6.1CuM capacity L & T Dumpers 55 T capacity Air Compressor Atlas Copco of 115mm dia Water Tanker etc	Excavator BE1000 Hyd of 6.1CuM capacity L & T Dumpers 55 T capacity Air Compressor Atlas Copco of 115mm dia Water Tanker etc	HEMM proposals given as per annual production target
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Top soil thickness of 20cm & height of 9-10m in limestone benches proposed	Benches heights maintained as per the proposals	Benches height marked in updated surface plan
3m	Total area covered under excavation/pits	Total area proposed as 108.50 Ha as per approved ROMP for the period 2020-21 to 2024-25	Total area under excavation as 63.50 Ha as per annual return 2020-21	
3n	Ore to OB ratio for the pit/mine during the year.	01:0.07 Tonne/CuM	01:0.063 Tonne/CuM	Due to less OB generated during the reporting year

3o	Total area put in use under different heads at the end of year	As per the previous approved ROMP dtd 02.07.2020 Pits-108.50 Ha Top soil dumps-1.97Ha OB dumps-13.83Ha Infrastructure -2.79Ha Road-9.23Ha	As per the annual return for the year 2020-21 Pits-63.50 Ha OB dumps-9.14 Ha Infrastructure-11.52Ha Road-9.23Ha Other purpose-3.80Ha	
3p	Production of ROM mineral during the last five year period as applicable	2016-17 - 3.5 2017-18 - 3.5 2018 -19 - 3.5 2019 - 20 - 5.0 2020 - 21 - 5.0	2016-17-3.059 2017-18-3.118 2018-19- 3.487 2019-20-3.406 2020-21-3.494	Production figures are in Million Tonnes
3q	General remarks of inspecting officers on method of mining etc.	Entire mining proposals given in systematic manner	Mining operations carried out in accordance with approved ROMP	Production proposed for 2020-21&2021-22 5000000. EC is pending therefore production is restricted to 3500000MT.only

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate Topsoil dump and waste dumps are proposed	Separate Topsoil dump and waste dumps are being made.	Existing dumps locations marked on updated surface plan

4b	Location of topsoil, OB and mineral reject dumps	OB Dump (D1) E-474632- E-474956 to N-2667350 N-2667480 Top Soil Dump E-474930 E-474990 to N-2668900 N-2669037	OB Dump (D1) E-474632- E-474956 to N-2667350 N-2667480 Top Soil Dump E-474930 E-474990 to N-2668900 N-2669037	Existing dumps locations marked on updated surface plan
4c	Number of dumps within lease area and outside of lease area	4 Nos. Including topsoil Dump proposed inside the ML area	4 Nos. Including topsoil Dump proposed inside the ML area	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Waste Dumps are proposed away from UPL	Waste Dumps are being made separately away from the UPL	
4e	Number of active and alive dumps.	Presently 03 active dumps in ML area	Presently 03 active dumps in ML area	Locations marked over updated surface plan
4f	Number of dead dumps.	None of the dead dumps in ML area	None of the dead dumps in ML area	
4g	Number of dumps established.	No Proposals	None of dumps have been stabilised	
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall proved for OB dumps	Carried out as per the proposals	
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall was proposed	400X1X1 cum Retaining Wall Retaining Wall & Garland Drain	Cumulatative 2350X1X1 cum
4j	Number of settling ponds	Proposed as 02 nos.	Existing as 02 nos.	

4k	Specific comments of inspecting officer on waste dump management	NA	NA	Dumps management are carried out systematically as per the approved proposals of ROMP
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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.	No Proposals	Nil	Presently no area has been matured for reclamation/backfilling
5b	Area under backfilling of mined out area	No Proposals	Nil	Presently no area has been matured for reclamation/backfilling
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of top soil proposed	Top soil used concurrently	Utilized for plantation purpose
5d	Total area fully reclaimed and rehabilitated	No Proposals	Nil	Presently no area has been matured for reclamation/backfilling
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	NA	Presently no area has been matured for reclamation/backfilling.

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	Report sent on PMCP sheet on dated 08/05/2020	PMCP report was produced during site inspection

6b	Area available for rehabilitation (ha) .	No Proposals	Nil	No such area is matured/available presently for rehabilitation purpose
6c	afforestation done (ha).	Proposed over 2.0Ha	Plantation carried over 3.30 Ha	
6d	No. of saplings planted during the year	4000 saplings were proposed to be planted during 2020-21	Total 7500 saplings planted during the year	Plantation of different species carried out
6e	Cumulative no .of plants	NA	NA	Details not provided 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	Not Proposed	Nil	Presently no area has been matured for reclamation & rehabilitation
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not Proposed	Nil	Presently no area has been matured for reclamation & rehabilitation
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	Presently no area has been matured for reclamation & rehabilitation
6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical Air, Water, Noise monitoring Proposed	Yes, Compliances of environmental monitoring is being carried out.	Analysis reports were provided
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	NA	Limestone not exhausted in most of the working pits. Hence, present scope of Management of reclamation and rehabilitation by backfilling doesn't exist. Other PMCP works proposed in approved document

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	5000000 MT proposed as total ROM production for despatch. Grade wise sorting not proposed.	3487356 MT cement grade limestone dispatched/fed to the cement plant	No manual sizing & sorting is carried out
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	Crusher plant is installed in ML area
7c	Different grade of mineral sorted out at mines.	No Proposals	Nil	Entire recovered limestone from ROM being fed to the cement plant
7d	Any beneficiation process at mines .	Not Proposed	Nil	Dedicated crusher of 1600 TPH installed in ML area
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	NA	Limestone is being conserved systematically as entire recovered ROM being fed to the cement plant

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Top soil is separate removed & Utilization of top soil is proposed	Top soil is separate removed & utilization of top soil is being done	Top soil mostly of 20-30cm thickness encountered during mining operations & stacked separately
8b	Concurrent use or storage of topsoil	Concurrent use proposed	Being utilized concurrently	Less amount of top soil encountered during development
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of OB proposed	Dumping being carried out on earmarked locations	Marked on updated plans

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not Proposed	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed	Nil	Presently scope of reclamation & rehabilitation doesnot exists
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Given	Total cumulative 31196 nos. of sapling have been planted so far, out of this 22512 have been survived. In the year out of 7500 saplings have been planted during the year 2020-21.	Details of cumulative plantation being maintained at site
8g	Survival rate	Proposed as 85%	Achieved 80%	
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 3KL capacity is provided for the purpose
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	For environment protecion different measures have been given	Systematic OB management, massive plantation, etc undertaken during the year	Dedicated in-house ENv. Cell is established at mine site. Aesthetic beauty in and around mine area is very good as mass plantation work have been done in ML area.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	M.R. upto the month of Oct-2021 were submitted A.R. submitted upto- 2020-21	Online monthly as well as annual returns submitted within stipulated time	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Given	Shri Sudhakar Kumar appointed as Mining Eng. & Shri Bharat Sahasrabudhe as Geologist	Both Mining Eng. & Geologist were present during mine inspection
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Working Pits - 63.50Ha Waste Dumps-9.140Ha Infrastructure -11.524Ha Other purpose-3.80Ha	Land use pattern duly marked on updated surface plan
9d	Scrutiny of Annual return on afforestation	Given	Total 7500 saplings planted in ML area	Details of plantation being maintained at site
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not Given	No mineral rejects generated during the year 2020-21	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	Cement Grade: O/S-20002.52 MT Despatch-3487356 C/S-26928 MT	Production, dispatches inventory being maintained at mine site
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Ex-mine price: Cement Grade Limestone - Rs 168.18/MT	Ex-mine price furnished in respect of captive mine
9h	Scrutiny of Annual return on fixed assets	Given	Furnished as Rs 1409498099	Given details in respect of the mine, beneficiation plant, mine work-shop, power and water installation

9k	Scrutiny of Annual return on mining machineries	Given	Excavator BE1000 Hyd of 6.1CuM capacity L & T Dumpers 55 T capacity Air Compressor Atlas Copco of 115mm dia Water Tanker etc
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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 :

(SANJAY M. GIRHE)

Indian Bureau of Mines