INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

MCDR inspection REPORT

Bangalore regional office

Mine file No: KNT/GLB/LST-54/BNG Mine code: 38KAR10019

(i) Name of the Inspecting : \$006) SURESH PRASAD

Officer and ID No.

(ii) Designation : Regional Controller Mines

(iii) Accompaning mine : Sri. K. Arunachalam-Mine Manager, Mr. Amarnath Reddy-

Official with Designation

(iv) Date of Inspection : 11/03/2023
(v) Prev.inspection date : 05/08/2021

PART-I : GENERAL INFORMATION

. (a) Mine Name : ITAGI LIMESTONE MINE

(b) Registration NO. : IBM/20026/2015

(c) Category : A Fully Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : KARNATAKA
District : GULBARGA
Village : ITAGI & M

Village : ITAGI & MOGLA
Taluka : CHITTAPUR
Post office : MALKHED ROAD

Pin Code : 585211

 FAX No.
 : 040-23688754, orientmines@g

 E-mail
 : chittapur.mines@orientcemen

 Phone
 : 040-23688600 08474-236710

(f) Police Station : CHITTAPUR
(g) First opening date : 12/08/2015

(h) Weekly day of rest : SUN

2. Address for : M/S ORIENT CEMENT LIMITED,

correspondance Village: Itagi and Mogla, Post: Malkhed,

Taluk: Chittapur, District: Gulbarga-585211

3. (a) Lease Number :

(b) Lease area
(c) Period of lease
:

(d) Date of Expiry

4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : M/S ORIENT CEMENT LIMITED

5-9-22/57/D, 2nd & 3rd Floor, G P Birla Centre, Adarsh nagar Hyderabad HYDERABAD ANDHRA PRADESH

Phone: 040-23688600 FAX : 040-23688754

Owner : DESH DEEPAK KHETRAPAL

M/S ORIENT CEMENT LIMITED 5-9-22/57/D, 2nd & 3rd FLOOR, ADARSH NAGAR, HYDERABAD HYDERABAD

TELANGANA
Phone:
FAX:

Agent : Satybrata Sharma

M/s Orient Cement Limited Village-Itagi Tq-_Chittapur

GULBARGA KARNATAKA Phone: 08474-236716

FAX :

Mining Engineer

Name : M. Amarnath Reddy, Full Time

Qualification : BE (Mining) Appointment/ : 24/09/2015

Termination date

Geologist

Name : BANGARU VINOD KUMAR, Full Time

Qualification : M.Sc GEOLOGY Appointment/ : 19/04/2021

Termination date

Manager

Name : K. Arunachalam

Qualification : BE Mining
Appointment/ : 15/07/2015

Termination date

6. Date of approval of Mining : Fresh under rule 22 MCR1960 03/12/2012 MP modif under MCR 1960 28/09/2015 MP modif under 17(3) MCR 2016 12/01/2018 MP review under 17(1) MCR 2016 15/11/2019

MP modif under 17(3) MCR 2016 13/04/2022

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	N.A	G1: 408.46 Ha G2: 98.49 Ha G3: 12.05 Ha Total: 519.0 Ha	Bore holes are proposed only to upgrade the G1 at both lateral and vertical extension in accordance with the MEMC rule 2015, proposed in the Modified Mining Plan, letter vide no: 279/1060/2012/BNG/194 dated on 13/04/2022.
1b	Exploration over lease area for geological axis or 2	N.A	G1: 408.46 Ha G2: 98.49 Ha G3: 12.05 Ha Total: 519.0 Ha	Bore holes are proposed only to upgrade the G1 at both lateral and vertical extension in accordance with the MEMC rule 2015, proposed in the Modified Mining Plan , letter vide no: 279/1060/2012/BNG/194 dated on 13/04/2022.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	N.A	G1: 408.46 Ha G2: 98.49 Ha G3: 12.05 Ha Total: 519.0 Ha	Bore holes are proposed only to upgrade the G1 at both lateral and vertical extension in accordance with the MEMC rule 2015, proposed in the Modified Mining Plan, letter vide no: 279/1060/2012/BNG/194 dated on 13/04/2022.

1d	Balance area to be explored to bring Geological axis in 1 or 2	N.A	G1: 408.46 Ha G2: 98.49 Ha G3: 12.05 Ha Total: 519.0 Ha	Bore holes are proposed only to upgrade the G1 at both lateral and vertical extension in accordance with the MEMC rule 2015, proposed in the Modified Mining Plan , letter vide no: 279/1060/2012/BNG/194 dated on 13/04/2022.
1e	Balance reserve as on 01/04/20		176885731 M.T	Balance reserve as per the annual return H8-2022
1f	General remarks of inspecting officers on geology, exploration etc			The entire potential Mineralized area of Mining lease area is explored under G1 level exploration. However to upgrade the G1 both lateral and vertical extent in accordance with the MEMC rule 2015 exploratory boreholes during 2022-2023 was proposed and completed drilling 21 holes over 2100m.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Pit - 1: 728312-729011 1893630- 1894390 Pit - 2: E 728489 728568 N 1893500 1893570	Pit-1: E 728356 729090 N 1893650 1894490 Pit -2: E 728491 728535 N 1893530 1893560	There is slight deviation in location of development reportedly due to land acquisition issues. Violation issued.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches proposed in topsoil and Mineral.	Separate benches maintained in topsoil and mineral.	Topsoil - 1 bench and Mineral - 5 benches.

2c	Stripping ratio or ore to OB ratio	1:0.03	1:0.027	Appears to be correct as per the AR filed for 2021-2022.
2d	Quantity of topsoil generation in m3	·	7031.40m3	Appears to be correct as per the AR filed for 2021-2022.
2e	Quantity of overburden generation in m3	•	24460.22 m3	Appears to be correct as per the AR filed for 2021-2022.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			There is slight deviation in location of development in Pit No.01 reportedly due to land acquisition issues. Violation issued. No proposed development in Pit No.2 is carried out.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 pits proposed.	1 Pit is being operated.	1 pit is converted as water harvesting pit-2
3b	Quantity of ROM mineral production proposed	2999325 MT	ROM: 2343231.06M. T	78% of the proposed production achieved reportedly due to COVID and market demand issues.
3с	Recovery of sailable/usable mineral from ROM production	90%	100%	
3d	Quantity of mineral reject generation	-	-	
3e	Grade of mineral rejects generation and threshold value declared.	mineral reject: CaO ? 40%; MgO ? 5%	No mineral reject generated during the reporting year.	Entire ROM produced is consumed in cement production.
		Threshold Value CaO 34% & MgO 5%		

3f	Quantity of sub grade mineral generation.	No proposal	No proposal	No generation of Sub grade.
3g	Grade of sub grade mineral generation	No proposal	Not applicable	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	No proposal for segregating from ROM.	All excavated ROM is supplied to the crusher and Cement plant.	No grade wise segregation of ROM is proposed. Entire ROM is sent Double rotor impact crusher with 1200 TPH, Feed Size : 1m X 1m Output : -50mm and then to Cement plant.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	No such beneficiation study carried out.	Nil
3j	Provision of drilling and blasting in mineral benches		Deep hole drilling and blasting is being carried as per proposal.	152mm drill dia used, blasting carried out using AN/Slurry explosive in conjunction with NONEL in mineral benches.
3k	Provision of mining machineries in mineral benches	Tippers in combination with excavator proposed.	Excavators -3No's Tippers - 15 No's, Drill, water tankers, Rock breaker, Compactor and Dozer.	Mining machineries proposed are deployed.
31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height in mineral is 8m.	Bench height 7-8 meters and Width of bench 20-25 meters. In over burden (Top soil) height 0.5m - 1.0m.	Height of the benches are as per the proposals.

Total area covered under excavation/pits

49.88 Ha (At 32.48 Ha the end of the plan period)

Ore to OB ratio 1:0.03 3n for the pit/mine during the year.

30

Total area put in use under different heads at the end of year

current (0/C) Workings:

49.88Ha

Used for waste :1.95 Ha disposal :4.78Ha

Occupied by plant, buildings, welfare buildings

&roads :9.06

Other Purpose (Plantation, Mineral Stock, Environment Works Like Stone Pitching On Nala Banks, Garland Drains, Harvesting

Pit) :30.93 Ha

1:0.027

Covered under Covered under current (O/C)

Workings: 32.480Ha

Used for waste disposal

:21.95 Ha

Occupied by plant, buildings, residential, welfare buildings &roads :9.060 Ha

Other Purpose (Plantation, Mineral Stock, Environment Works Like Stone Pitching On Nala Banks, Garland Drains, Harvesting Pit)

It is reported that Norther Side area working increased due to heavy monsoon in the period of 2021-22(June-September) and bottom three benches were submerged in water. To have the continuous mining operation the top two benches were operated. However, the northern side developed benches are falling within the proposed plan period of workings.

The variation is negligible.

However For the Year 2022-23, it was proposed develop and produce Limestone over an excavation of 38.16 Ha pit. But an excavation over 38.56 Ha has been carried out till date the date of inspection with only 55% of proposed development which is found not convincing. Also it was proposed to utilize an area of 9.06 Ha for plant, building and Roads. But it is observed to have utilized 12.56 Ha for the same which is above the approved proposals of Land use pattern. Violation issued.

3p Production of ROM mineral during the last five year period 18:3040000 as applicable

2016-17:2171000 2017-2018-19: 2998125 2019-20:2998775 2020-21:

2998650 2021-22:2999325 (intons)

2016-17:2121251 2017-18:2189772 2018-19:2584207 2019-20:2656315 2020-21: 2346850 2021-22: 2343231.06

(intons)

3q General remarks of inspecting officers on method of mining etc.

Method of Mining is by open pit mechanized operations. During the year 2021-2022 mining is carried out as per the proposals. However For the Year 2022-23, it was proposed develop and produce Limestone over an excavation of 38.16 Ha pit. But an excavation over 38.56 Ha has been carried out till date the date of inspection with only 55% of proposed development which is found not convincing. Also it was proposed to utilize an area of 9.06 Ha for plant, building and Roads. But it is observed to have

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	1 1	for topsoil,	s Separate OB dumps are maintained at the respective locations.	Separate benches for Top soil, OB and mineral maintained.

4b	Location of topsoil, OB and mineral reject dumps	Topsoil: N 1893654 - N 1893702 E 727952 - E 727996 Overburden dump-1: N 1893660 - N 1893717 E 728151 - E 728282 Overburden dump-2: N 1893829 - N 1893829 - N 1893895 E 727354 - E 727594 Overburden dump-3:N 1894145 - N 1894292 E 728904 - E 729105 Mineral Reject dump: N 1893538 - N 1893728 E 727736 - E 727940	TS dump: - Overburden dump-1:N 1893660 - N 1893717 E 728151 - E 728282 Overburden dump-2: N 1893829 - N 1893895 E 727354 - E 727594 Overburden dump-3: N 1894145 - N 1894292 E 728904 - E 729105 Mineral Reject dump: No mineral reject has been generated.	It has been observed that the top soil is being stored for a long period. It is advised the top soil generated should not be stored for long period and needs to be concurrently utilized for plantation as proposed. Violation issued.
4c	Number of dumps within lease area and outside of lease area	Outside ML	Within ML: OB dumps : 03 Outside ML area - Nil.	Mineral Reject Dump (MR-1) within ML, which is generated from plant construction.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps proposed inside the UPL.	Dumps located inside UPL.	Entire area is mineralized and temporary dumping is proposed with proposals to rehandle in future for backfilling of mined out pit.
4e	Number of active and alive dumps.	-	ldump is active.	Violation issued for long period storage of Top soil.
4f	Number of dead dumps.	01	01	Removing of OB dump 04 is located at South East corner of the ML area is proposed to remove in the reporting year, and is under progress even during 2022-2023.

4g	Number of dumps established.	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	Construction of the toe wall and Garland drain along the top soil dump is proposed.	N 1893637-N1893683 E 727924 - E 727965	It was observed that the top soil is being stored for a long period in a small dump. It is advised the top soil generated should not be stored for long period and needs to be concurrently utilized for plantation as proposed. Violation issued.
4i	Length of Retaining wall or garland drain all along dumps	200m of toe wall and 300m of Garland drain proposed along the top soil dump.	N 1893637-N1893683 E 727924 - E 727965	During the RY no topsoil dump is formed, as the entire generated top soil is concurrently used for plantation, thus toe wall & Garland drain are not constructed.
4j	Number of settling ponds	Nil	Nil	
4k	Specific comments of inspecting officer on waste dump management			Waste dump management is carried out as per the proposals which are stabilized by way of plantation, engineering structures like garland drains etc in the past.

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 proposal	Not applicable	Existing pit is not matured for back filling. Mineral exists at depth.

5b	Area under backfilling of mined out area	No proposal	Not applicable	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Topsoil proposed to be utilized for plantation purpose.	Topsoil utilized for plantation and bund making purpose.	It was observed that the top soil is being stored for a long period in a small dump. It is advised the top soil generated should not be stored for long period and needs to be concurrently utilized for plantation as proposed. Violation issued.
5d	Total area fully reclaimed and rehabilitated	No proposal	Not applicable	
5e 	General remarks of inspecting officers on backfilling and reclamation etc.			No part of the Mine pit is matured for backfilling and mineral exists at depth.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
ба	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	PMCP report to be submitted by every year 1st of July.	PMCP report submitted on 23.04.2022	PMCP report submitted within the stipulated time.

6b	Area available for rehabilitation (ha) .			The mining is an active pit, and thus worked out benches are not available. However For the year 2022-23, it was proposed to do afforestation over 2.98 Ha with 7433 saplings. But only 1.27 Ha with 2300 saplings had been afforested till the date of inspection with the financial year 2022-23 almost ending. Violation issued.
6c	afforestation done (ha).	1.50ha	1.51на	Within 7.5 meters of barrier zone, Gap plantation and at Nala safety zone.
6d	No. of saplings planted during the year	3750	3871	Within 7.5 meters of barrier zone, Gap plantation and at Nala safety zone.
6e	Cumulative no .of plants	7750	10597	Appears to be correct.
6f	Any other method of rehabilitation	-	_	
6g	Cost incurred on watch and care during the year	Rs. 15,50,000/-	Rs. 21,07,400/- Maintaining of existing plants by watering with 2 No's of 4KL water tankers, installation of drip system& watch and care.	Appears to be correct.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D		Not Applicable	The mining area is an active pit, and thus worked out benches are not available.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not Applicable	Not Applicable	The mining area is an active pit, and thus worked out benches are not available.

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	Not Applicable	Not Applicable	The mining area is an active pit, and thus worked out benches are not available.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Applicable	Not Applicable	The mining area is an active pit, and thus worked out benches are not available.
61	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not Applicable	Not Applicable	The mining area is an active pit, and thus worked out benches are not available.
бm	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Not Applicable	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Not Applicable	
60	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Not Applicable	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Season wise environment monitoring of Air, Water, Noise and soil proposed.	<pre>monitoring of Air, Water, Noise and soil carried out.</pre>	Monitoring carried out by Cosmo Environment solution, Hospet and all environment parameters were observed to be within limits and report are submitted to IBM in every quarter.

6q General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.

PMCP compliance for the year 2021-2022 is as per the proposals. However for the year 2022-23, it was proposed to do afforestation over 2.98 Ha with 7433 saplings. But only 1.27 Ha with 2300 saplings had been afforested till the date of inspection with the financial year 2022-23 almost ending. Violation issued.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Direct ROM proposed to dispatch to the captive cement plant	Direct ROM dispatched to our captive cement plant of 2.0 Milliontons per annum of clinker capacity	Double rotor impact crusher with 1200 TPH, Feed Size : 1m X 1m Output : -50mm
7b	Method of grade- wise mineral sorting i.e. manual or mechanical.	No grade wise sorting proposed	All the blasted material is transported to crusher for further sizing	The entire ROM produced is consumed in cement manufacturing and no grade-wise mineral sorting is proposed.
7c	Different grade of mineral sorted out at mines.	Direct ROM dispatched to crusher	Direct ROM dispatched to crusher having 1200 TPH capacity	The entire ROM produced is consumed in cement manufacturing and no grade-wise mineral sorting is proposed.
7d	Any beneficiation process at mines	No proposal	Not applicable	No proposals of beneficiation.

7e General remarks
of inspecting
officer on
Mineral
conservation and
beneficiation
issues

The entire ROM produced is consumed in cement manufacturing thereby Mineral Conservation aspect is taken care of and no beneficiation is required.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	proposed to be	Topsoil is being stocked and utilized for plantation.	It was observed that the top soil is being stored for a long period in a small dump. It is advised the top soil generated should not be stored for long period and needs to be concurrently utilized for plantation as proposed. Violation issued.
8b	Concurrent use or storage of topsoil	11950 m3 of top is proposed to Concurrent use and storage.	7031.40m3m3 of Topsoil is concurrently used for plantation at 7.5m safety zone and afforestation area.	Topsoil is concurrently used for plantation. However, It was observed that the top soil is being stored for a long period in a small dump. It is advised the top soil generated should not be stored for long period and needs to be concurrently utilized for plantation as proposed. Violation issued.

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)		24460.22 m3 of overburden and 13039 m3 (23471.M.T) of waste generated from MR-1 is handled and spread in OD-3 for plantation purpose.	Waste dumps: OD-1, OD-3, OD-4 & M.R - 2(NIL)
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	Limestone is not exhausted and pit is not matured for back filling.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Nil	Limestone is not exhausted and pit is not matured for back filling.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	3750 no of sapling proposed within the ML. For the plan period 7750.	3871 no. of saplings planted within ML with cumulative plantation of 10597 no of saplings.	For the year 2021-2022 plantation is carried out as proposed. However, for the year 2022-23, it was proposed to do afforestation over 2.98 Ha with 7433 saplings. However only 1.27 Ha with 2300 saplings have been afforested till date with the financial year 2022-23 almost ending
8g	Survival rate	-	94%	Overall Survival rate is 79%

8h	Water sprinkling on roads to control airborne dust	sprinkler on	Regular spraying of water is done to control fugitive dust emission through permanent sprinklers are laid along the main haulage road. In addition to that 4KL - 2 No's water tankersare being used for internal roads.	Water sprinkling on roads to control airborne dust is done.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in and around the mines is good and is being maintained.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		M.R. Submitted up to March - 2022 on 9.04.2022. A.R Submitted for FY 2021-22on 28.06.2021.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mine Manager - Mr. K. Arunachalam, Mine Engineer - Mr. M. Amarnath Reddy and Mine Geologist - Mr. Bangaru Vinod Kumar.	The statutory officials were present during the inspection.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.		Covered under current (O/C) Workings: 32.480Ha Used for waste disposal: 1.95 Ha Occupied by plant, buildings, residential, welfare buildings &roads: 9.060 Ha Other Purpose (Plantation, Mineral Stock, Environment Works Like Stone Pitching On Nala Banks, Garland Drains, Harvesting Pit): 21.95 Ha	Submitted on 28.06.2022

9d	Scrutiny of Annual return on afforestation		Total plantation done for R.Y - 3871 No of sapling @ 94% of survival rate	Submitted on 28.06.2022
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)		Nil	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	•		
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost		Average cost of production Rs. 197.88/M.T	
9h	Scrutiny of Annual return on fixed assets		Submitted on 28.06.2022	Part-II A: Capital Structure: 2. Source of Finance (as at the end of the year) (in ?) is not given and reflected as '0'. Violation issued.
9k	Scrutiny of Annual return on mining machineries	Excavators - 3No's, Tippers -15 no's, Drill machine, Rock Breaker, Water tanker, Dozer, Soil compactor one and 2 100HP capacity of submersible electrical pumps.	The proposed mining machineries are deployed in the mine.	

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

Violation	n observed	Show couse position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on
MCDR17 Rule 11(1)	28/03/2023		
Rule 45(7)(i)(a)	28/03/2023		

Date: (SURESH PRASAD)

Indian Bureau of Mines