

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

Review and updation of Mining Plan REPORT

Bangalore regional office

Mine file No : KNT/GLB/LST-54/BNG

Mine code : 38KAR10019

- (i) Name of the Inspecting : **A101**) **ARUN KUMAR**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Mr. K. Arunachalam - Mine Manager,
Official with
Designation
- (iv) Date of Inspection : 21/10/2019
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (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 & MOGLA
- Taluka : CHITTAPUR
- Post office : MALKHED ROAD
- Pin Code : 585211
- FAX No. : 040-23688754, orientmines@
- E-mail : chittapur.mines@orientceme
- 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

Manager
 Name : K. Arunachalam
 Qualification : BE Mining
 Appointment/ : 15/07/2015
 Termination date

6. Date of approval of Mining : MP modif under MCR 1960 28/09/2015
 Plan/Scheme of Mining : MP modif under 17(3) MCR 2016 12/01/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No Proposal	Nil	29 core bore hole with 1600 total meterage were drilled in FY 2017-18- No back logs
1b	Exploration over lease area for geological axis 1 or 2	G1 & G2	G1 - 401.25ha, G2- 52.98ha, G3 - 3.29 ha	61.48 ha is non-potential area. Entire potential mineralised area of 401.25ha is covered under G1 and 56.27ha falls under constraint area.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not Specified	Nil	Exploration carried out previously by M/s Holtec consultancy (P) ltd. At an expenditure of 55.06 Lakhs
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal	Nil	Entire potential area is covered under G1 stage as per approved modified plan dated 12.01.2018
1e	Balance reserve as on 01/04/20		162.45 mio t	As per annual returns submitted for the FY 2018-19
1f	General remarks of inspecting officers on geology, exploration etc			100 No's of Core bore holes with 5311.30 total meterage and 34 No's of DTH bore hole with 1302 total meterage drilled so far. Entire potential area is covered under G1 stage

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	Location of development proposed: E 728324 -728883 ,N 1893787-1894283	Actual Location of Development: E 728356-728860, N 1893720-1894190 & N1893890-N 1894100 ,E727377- E 727815	Violation issued for developing a new pit
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: 0.015	Actual production was less than the proposed production
2d	Quantity of topsoil generation in m3	81450 Tons	40940 tones	Nil
2e	Quantity of overburden generation in m3	No proposal	Nil	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development of the pit was carried as per the proposal.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit proposed	Development work had been carried out at..... which was not in proposal	Violation issued
3b	Quantity of ROM mineral production proposed	2.99 Million Tons	2.58 Million Tons	Less requirement of limestone from plant
3c	Recovery of sailable/usable mineral from ROM production	90% recovery proposed	100% recovery achieved	Working in below benches & no interestial clay
3d	Quantity of mineral reject generation	No proposal	Nil	No generation of mineral reject
3e	Grade of mineral rejects generation and threshold value declared.	No generation of mineral reject	Nil	Nil

3f	Quantity of sub grade mineral generation.	No generation of mineral reject	Nil	No generation of Sub grade
3g	Grade of sub grade mineral generation	No generation of mineral reject	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	No proposal for segregating from ROM	All excavated ROM is supplied to the crusher	Nil
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	Provision made for Deep hole drilling and blasting	Deep hole drilling and blasting is carried by as per proposal	152mm drill dia used, blasting carried out using AN/Slurry explosive in conjunction with NONEL
3k	Provision of mining machineries in mineral benches	Tippers in combination with excavator proposed	Excavators -4No's Tippers - 16 No's, Drill, water tanker and Dozer one each	Nil
3l	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	Nil
3m	Total area covered under excavation/pits	31.10 ha. proposed at the end of plan period	22.73 ha. Covered under opencast working.	Actual mining area is within the proposed limit
3n	Ore to OB ratio for the pit/mine during the year.	1 : 0.03	1: 0.015	Actual production was less than the proposed production

3o	Total area put in use under different heads at the end of year	Area under Mining - 30.10ha, Storage of top soil - 3.83ha, Waste dump site - 0.19ha, Mineral storage- 5.96ha, Infrastructure -0.60ha, Roads-5.46ha, Mineral separation plant-1.49ha Others - (Green Belt & Environment Protection)-10.66ha	Area under Mining - 22.73, Reclaimed and rehabilitated- 0.71ha, Waste disposal - 2.33ha, Occupied by plant, buildings, etc - 7.83 ha, Other purpose (Plantation and mineral stocks) - 13.80ha and Workdone under PMCP during year - 1.43 ha	Nil
3p	Production of ROM mineral during the last five year period as applicable	2014-15: Nil 2015-16: 1760000 2016-17: 2171000 2017-18: 3040000 2018-19: 2998125 (in tonnes)	2014-15: Nil 2015-16: 621947 2016-17: 2121251 2017-18: 2189772 2018-19: 2584207 (in tonnes)	Actual production is within the proposed limits
3q	General remarks of inspecting officers on method of mining etc.			Mining was carried using deep hole drilling & blasting in combination with tipper ,excavator combination. Violation issued for carrying out pit development work which was not in proposal.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of topsoil proposed	Separate dumping of topsoil carried out	Overburden considered as topsoil

4b	Location of topsoil, OB and mineral reject dumps	Location of top soil: E 728118 - 728325, N 1893557 - 1893734 & E 728673 - 728816, N 1893401 - 189323	Atual Location of top soil: E 728154 -728324, N 1893586 - 1893711 & E 728793 -728748, N 1893505- 1893431	West central part of ML area & South east corner of ML area(Near BP-H)
4c	Number of dumps within lease area and outside of lease area	Within ML - 02 Outside ML area - Nil	Within ML - 02 Outside ML area - Nil	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps proposed inside the UPL	Dumps located inside UPL	Entire area is mineralised and temporary dumping is proposed
4e	Number of active and alive dumps.	2 active dumps proposed	2 dumps are active	Nil
4f	Number of dead dumps.	No proposal	Nil	Nil
4g	Number of dumps established.	No proposal	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall or garland drain proposed	Retaining wall or garland drain constructed all along the dump	As proposed
4i	Length of Retaining wall or garland drain all along dumps	RW - 350 meters, Garland drain - 350 proposed	RW - 310 meters and Garland drain - 310 meters constructed	Stone pitching of 175 meters on either side of nalla bank carried in the previous year
4j	Number of settling ponds	No proposal	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management			Waste dump management is carried out as per approved mining plan

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No proposal	NA	Existing pit is not matured for back filling
5b	Area under backfilling of mined out area	Existing pit is not matured for back filling	NA	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Existing pit is not matured for back filling	NA	Nil
5d	Total area fully reclaimed and rehabilitated	Existing pit is not matured for back filling	NA	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Limestone persist in depth and pit is not matured for back filling more over there is no sufficient quantity of OB for back filling

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).	PMCP report to be submitted by 1st of july every year	PMCP report submitted	submitted on 20th June 2019, vide letter no.OCL/ILM/IBM/PMC P/8-19/01.
6b	Area available for rehabilitation (ha) .	No proposal	Nil	Nil
6c	afforestation done (ha).	1.50 ha.	4.30 ha.	Nil
6d	No. of saplings planted during the year	3750 No's saplings proosed	3963 No's saplings planted	Nil
6e	Cumulative no .of plants	Not specified	13122 No's	Nil
6f	Any other method of rehabilitation	No proposal	NA	Nil

6g	Cost incurred on watch and care during the year	Not specified	0.5 lakhs	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	No proposal	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No proposal	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	NA	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	1.50ha proposed with 3750 No of sapling	4.30 ha is covered under 3963 No's of sapling	Within 7.5 meters of barrier zone and bothside of nallah

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Plantation and afforestation is proposed	Plantation and afforestation is carried out	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Season wise environment monitoring of Air, Water, Noise and soil proposed	Season wise environment monitoring of Air, Water, Noise and soil carried out	Monitoring carried out by Cosmo Environment solution, Hospet and all environment parameters were observed to be within limits
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			The lessee had carried out PMCP activities as per the proposals.

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 their captive cement plant of 2.0 million tonnes clinker capacity	Nil
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	Cross Belt Analyser installed at conveyor belt
7c	Different grade of mineral sorted out at mines.	Direct ROM dispatched to crusher	Direct ROM dispatched to crusher having 1200 TPH capacity	Nil
7d	Any beneficiation process at mines	No proposal	Not applicable	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Beneficiation of Limestone is not required and entire Rom produced is being utilised with proper blending in their Cement plant

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Topsoil proposed to be stocked and utilised for plantation.	Topsoil is being stocked and utilised for plantation.	Nil
8b	Concurrent use or storage of topsoil	Concurrent use and storage of topsoil is proposed	Top soil is stocked at western centre of lease and South west side of ML area(Near BP-H)	Topsoil is concurrently used for plantation
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No proposal	Nil	There is no OB, Waste rock, Rejects and Fines
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 matured for back filling.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Nil	Backfilling proposed at the conceptual stage of mining
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	3750 no of sapling proposed within the ML	3960 no of saplings planted within ML with cumulative plantation of 13122 no of saplings	Nil
8g	Survival rate	80%	92%	Nil
8h	Water sprinkling on roads to control airborne dust	Water tanker sprinkler on haul road to control dust is proposed	Regular spraying of water is done to control fugitive dust emission	One water taker of 12KL is deployed along with 250 meters of fixed sprinklers
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around the mine is good as lessee had carried out afforestation and environmental protective measure as per the approved document.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted upto September 2019 A.R. submitted FY 2018-19	AR submitted on 24.06.2019	
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. Arjun Singh	Same mine officials were present during inspection	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under Mining - 22.73, Reclaimed and rehabilitated - 0.71ha, Waste disposal - 2.33ha, Occupied by plant, buildings, etc - 7.83 ha, Other purpose (Plantation and mineral stocks) - 13.80ha and Workdone under PMCP during year - 1.43 ha	Appears to be correct	
9d	Scrutiny of Annual return on afforestation	Within ML - 3963 No of sapling @ 92% of survival rate	Appears to be correct	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	No proposal and No generation of mineral rejects	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM - Opening stock - Nil, Production - 2584207 tonnes, Closing stock - Nil	Cement Grade ROM - Opening stock - 41524 tonnes, Production - 2584207 tonnes, Dispatch - 2561796 tonnes and Closing stock - 63935 tonnes	

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production - 157.97 Rs/Ton, Ex-mine price = Sale value = 157.97 Rs/ton	Appears to be correct as this is a captive mine.
9h	Scrutiny of Annual return on fixed assets	Rs. 16154133805 including land, industrial, plant and machinery	Appears to be correct.
9k	Scrutiny of Annual return on mining machineries	Excavators -4 No's, Tippers -16 no's, Drill machine, water tanker and dozer one each	Actual also same.

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(1)	03/12/2019			

Date :

(ARUN KUMAR)

Indian Bureau of Mines