

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

MCDR INSPECTION REPORT

Nagpur regional office

Mine file No : MAH/YTL/LST-63/NGP

Mine code : 38MSH26039

- (i) Name of the Inspecting : **M017**) **ASHISH MISHRA**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri D. K. Singh, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 30/08/2019
- (v) Prev.inspection date : 21/09/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **ADEGAON (9.97H)**
- (b) **Registration NO.** :
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address
State : MAHARASHTRA
District : YEOTMAL
Village : Adegaon
Taluka : Zari
Post office : Adegaon
Pin Code : 445319
FAX No. :
E-mail :
Phone :
- (f) Police Station :
- (g) First opening date : 23/05/2006
- (h) Weekly day of rest :
2. Address for : 49/5, Nehru Nagar (E),
correspondance At & P.O. Bhilai,
Distt. Durg
3. (a) Lease Number : MSH0293
(b) Lease area : 9.97
(c) Period of lease : 50
(d) Date of Expiry : 30/06/2053
4. Mineral worked : DOLOMITE Associated
LIMESTONE Main

5. Name and Address of the

Lessee : SHRI T.R. MISHRA
 49/5, Nehru Nagar (E), At &
 P.O. Bhilai, Distt. Durg
 DURG CHHATTISGARH
 Phone:
 FAX :

Owner : SHRI T.R. MISHRA
 49/5, Nehru Nagar (E), At &
 P.O. Bhilai, Distt. Durg
 DURG CHHATTISGARH
 Phone:
 FAX :

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	30/04/2003
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	07/05/2009
		Modif.approved Mining Scheme	31/10/2012
		Mining Scheme rule 12 MCDR1988	29/08/2016
		MP modif under MCR 1960	27/12/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil for the year 2018-19	The area has already been proved upto G-1 level through 19 boreholes and several trial pits, wherein mainly Dolomite occurrence has been proved. Limestone is occurring in small bands which is being kept separate. Dolomitic Limestone is being consumed after blending with Dolomite.
1b	Exploration over lease area for geological axis 1 or 2	G-1	Limestone is proved upto G-1 level.	Limestone is occurring in approximately 1.89 ha area as outcrop in the northern part. Alongwith this, it is also occurring in bands in the Doloite Zone which has been entirely proved upto G-1 level.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil for the year	Nil for the year	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Entire area is proved upto G-1 level.
1e	Balance reserve as on 01/04/20	Balance reserves for Limestone as on 01.04.2019 is given under Actual Work details.	121-46664 T Total: 46664 T	

1f	General remarks of inspecting officers on geology, exploration etc	Geologically the area is having very less occurrence of Limestone in form of bands/layers having 3-4 m thickness in top layer mostly and rest being Dolomite. In Northern part of the lease area, there are few outcrops of Limestone but that also is limited to 3-4 m thickness. Exploration has been done in detail to prove the deposit upto approximately 30 m in general and upto 47 m at few locations. Depth continuity is proposed to be proved in future upon reaching the pit bottom.
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Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	In between grids N300 to N350 and E100 to E200 (Local grid) alongwith recovery of Limestone/grading of ROM stack of Limestone located at N150 to N200 & E300 to E400 (Local grid)	Nil	No development or production of Limestone due to no demands.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	As Limestone is mostly outcropping, there is very thin layer of clay is occurring in the lease area which is proposed to be used for plantation after sorting of Limestone. Siliceous and clayey material is interbanded with the mineral, hence separate benches is not possible, instead the material which is approximately 30% of the total excavation is proposed to be kept separate after sorting of mineral.	Nil	No development or production of Limestone due to no demands.
2c	Stripping ratio or ore to OB ratio	Ore:OB ratio proposed is 1:0.67 (Out of total excavation, 60% is Limestone, rest is waste)	Nil	No development or production of Limestone due to no demands.
2d	Quantity of topsoil generation in m3	Clayey Material (available soil) is proposed to be generated in the tune of 60 cum	Nil	No development or production of Limestone due to no demands.
2e	Quantity of overburden generation in m3	Waste/ Overburden to be generated in 2018-19: 444 cum	Nil	No development or production of Limestone due to no demands.

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Type of the deposit is Dolomite and Limestone interbanded with bands of Siliceous and Clayey material. Dolomite is mainly worked in the pit located at N2192200 to N2192600 & E280600 to E280900 with approximate depth of workings upto 30 m (water logged beyond 10 m-12 m depth as on the date on inspection). As Limestone has very less occurrence in the area, and due to low demand, development for Limestone is in form of two benches of 1.5 m each (top layer) which may be considered as satisfactory.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One Pit for Limestone (One existing pit for Dolomite)	Nil	
3b	Quantity of ROM mineral production proposed	2018-19: 1890 T Limestone	2018-19: Nil	No development or production of Limestone due to no demands.

3c	Recovery of sailable/usable mineral from ROM production	Recovery of usable mineral (Limestone) from the total excavation is reported as 60%. Limestone recovery is 100% and no generation of sub-grade or mineral rejects is proposed.	As per the proposals.	
3d	Quantity of mineral reject generation	Nil	Nil	Threshold value is >34% Cao and <4% MgO, available Limestone is having quality of ~54% CaO and 0.3-1% MgO. Hence, no proposals for mineral reject generation/grade.
3e	Grade of mineral rejects generation and threshold value declared.	Threshold value is >34% Cao and <4% MgO, available Limestone is having quality of ~54% CaO and 0.3-1% MgO. Hence, no proposals for mineral reject generation/grade.	Nil	
3f	Quantity of sub grade mineral generation.	Nil	Nil	
3g	Grade of sub grade mineral generation	Nil	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual sorting	Manual sorting of total excavated material to recover Limestone.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposals	Nil	

3j	Provision of drilling and blasting in mineral benches	34 mm diameter Nil jackhammer drills are proposed to be used for formation of 1.5 m benches in Limestone. Blasting is proposed to be carried out by government authorized vendors.	No development or production of Limestone due to no demands.
3k	Provision of mining machineries in mineral benches	Nil, blasted Nil material is proposed to be sorted manually and transported to the mineral stack through trucks. Waste/clay soil is transported through trucks to earmarked locations.	No development or production of Limestone due to no demands.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of Nil benches for Limestone is proposed as 1.5 m which is suitable for manual operations. Further, it is also suitable as per the occurrence to obtain optimum recovery of Limestone from the excavated material.	No development or production of Limestone for the year 2018-19 due to no demands. However, top benches have been formed of 1.5 m bench height in the dolomite bearing areas to recover Limestone separately.

3m	Total area covered under excavation/pits	For Limestone, Nil for Limestone. there is no separate pit existing, however, developing one pit in between grids N300 to N350 and E100 to E200 (Local grid) was proposed in the years 2016-17 to 2018-19. Dolomite pit is having approximately 2.85 ha area at location N2192200 to N2192600 & E280600 to E280900.		
3n	Ore to OB ratio for the pit/mine during the year.	Ore:OB ratio proposed is 1:0.67 (Out of total excavation, 60% is Limestone, rest is waste)	Nil	No development or production of Limestone due to no demands.
3o	Total area put in use under different heads at the end of year	Total area put to use under different heads as on 01.04.2019 is the actual work details.	Area under pits: 2.85 ha Area under Waste Dumps: 0.71 ha Area under infrastructure/roads: 0.24 ha Area under Plant and Mineral Storage: 0.40 ha Total Area: 4.2 ha	Apart from this, area under plantation is 0.5 ha in the southern and south-western part of the lease area within 7.5 m non-mining zone.

3p	Production of ROM mineral during the last five year period as applicable	2017-18: 1890 T 2016-17: 1890 T 2015-16: 1890 T 2014-15: No proposals for Limestone 2013-14: No proposals for Limestone	2017-18: 910 T 2016-17: Nil 2015-16: 1570 T 2014-15: 500.56 T 2013-14: Nil	For 2014-15, mining plan document was submitted in this office, but the same could not be approved as Dolomite was declared as minor mineral by the Govt. of India. The document was subsequently approved by the State Government. No additional pit as proposed was developed for Limestone and the production of Limestone is incidental to Dolomite production (from the upper layer containing Limestone band). Method of mining is manual for Limestone in the year 2018-19, and as per the occurrence of the Limestone in the area, method of mining is suitable for getting optimum recovery. Further, as on the date of inspection, mechanization has been changed to Category A, as the document has been subsequently prepared for Major and Minor mineral co-occurrence.
3q	General remarks of inspecting officers on method of mining etc.			

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)	As Limestone is mostly outcropping, there is very thin layer of clay is occurring in the lease area which is proposed to be used for plantation after sorting of Limestone. Siliceous and clayey material is interbanded with the mineral, hence separate benches is not possible, instead the material which is approximately 30% of the total excavation is proposed to be kept separate after sorting of mineral.	Nil for the year 2018-19 for Limestone.	No development or production of Limestone due to no demands.
4b	Location of topsoil, OB and mineral reject dumps	Soil: Nil Overburden/Waste: One mian dump at N70 to N180 & E400 to E550 (local grid), several small dumps besides the pit at location N200 to N320 & E200 to E500 (all pertaining to minor mineral Dolomite) Waste from Limestone is proposed to be dumped at N280 to N310 and E80 to E100 Mineral Rejects: Nil	As per the proposals for minor mineral, Nil for Limestone	

4c	Number of dumps within lease area and outside of lease area	All dumps within the lease area (for minor mineral)	As per the proposals	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps for minor mineral are proposed within the pit limits as entire lease area is mineralized.	As per the proposals	
4e	Number of active and alive dumps.	One active dump for Limestone	Nil	
4f	Number of dead dumps.	Nil	Nil	
4g	Number of dumps established.	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	Garland drain are proposed to be built around the dumps proposed for Limestone	Nil	No development or production of Limestone due to no demands.
4i	Length of Retaining wall or garland drain all along dumps	25 m garland drain around Limestone waste dump	Nil	No development or production of Limestone due to no demands.
4j	Number of settling ponds	No such proposals	Nil	

4k	Specific comments of inspecting officer on waste dump management	Waste dump management proposals were satisfactory as waste material was proposed to be kept separate at eramarked location. Garland drain of approximately 25 m around the toe of the dump towards the lease boundary side was also proposed. However, as no development or production from Limestone pit has taken place, actual work is Nil. The same may subsequently be checked in the course of regular inspections.
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Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No backfilling is proposed	Nil	
5b	Area under backfilling of mined out area	No such proposals	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No such proposals/No top soil available	Nil	
5d	Total area fully reclaimed and rehabilitated	No such proposals	Nil	

5e	General remarks of inspecting officers on backfilling and reclamation etc.	Backfilling cannot be envisaged as mineral (Dolomite) included in the lease deed is occurring beyond the explored limits. The area may be converted into water reservoir at conceptual stage.
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Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	PMCP report need to be submitted before 1st July every year to furnish details of PMCP work carried out during previous year	No such report submitted	The report was obtained during site inspection and hence, no violation was given.
6b	Area available for rehabilitation (ha) .	No such proposals	Nil	Only available area is 7.5 m non-mining zone for plantation purpose.
6c	afforestation done (ha).	0.002 ha in 2018-19	0.01 ha in the year 2018-19	Overall, 0.5 ha area within 7.5 m non-mining zone in South and SW part has been covered under plantation.
6d	No. of saplings planted during the year	20 saplings	100 saplings	
6e	Cumulative no .of plants	Approximately 200	500 Saplings	
6f	Any other method of rehabilitation	No such proposals	Nil	

6g	Cost incurred on watch and care during the year	No specific proposals, expenditure over environment monitoring, plantation need to be covered.	Rs 34000/- approximately
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No such proposals	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No such proposals	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No such proposals	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No such proposals	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No such proposals	Nil
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	It is proposed to plant 20 saplings in the southern/ southwestern part of the lease area	100 saplings have been planted.

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.002 ha	0.01 ha
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Green belt development	Green belt development
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environment monitoring is proposed and being carried out in the core as well as buffer zone for Air, Water, Noise and Ground Water (3 stations each for air, water and noise-4 season i.e. quarterly monitoring, Ground water monitoring at 1-2 locations, once in a year).	As per the proposals

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Plantation is the main activity undertaken under PMCP. Plantation work has been carried out at the proposed locations as well as existing plantation is available near the weigh bridge. Total area covered under plantation is around 0.5 ha. To enhance survival, fencing of plantation is being practiced as seen during the site inspection. Environment monitoring is also being carried out regularly and the analysis report is within the permissible standards.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorted mineral is being dispatched from the lease area.	As per the proposals, grade-wise sorted mineral was dispatched in the past. ROM stock for Limestone is also available which is proposed to be graded prior to dispatch. For the year 2018-19, dispatch of Limestone is Nil.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual sorting	Manual sorting is being practiced. For the year 2018-19, the information is Nil as no production/sorting of Limestone was carried out.	
7c	Different grade of mineral sorted out at mines.	Cement Grade Limestone	As per the proposals	

7d	Any beneficiation process at mines .	No such proposals	Nil	There is one crusher located at northern part of the lease area which is mainly being used for crushing of minor mineral Dolomite for consuming in the lessee owned plant.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral conservational aspects are satisfactory as Limestone is occurring in thin bands lying above Dolomite (minor mineral) in the area which is proposed to be excavated and sorted through manual workings to obtain optimum recovery. Further, as Limestone and Dolomite, both are occurring in the area, high magnesia Limestone is being consumed alongwith Dolomite after blending.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil available	Nil	
8b	Concurrent use or storage of topsoil	No such proposals	Nil	Clayey material occurring in the top layer or inetrbands is proposed to be used for plantation purpose.

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	As Limestone is mostly outcropping, there is very thin layer of clay is occurring in the lease area which is proposed to be used for plantation after sorting of Limestone. Siliceous and clayey material is interbanded with the mineral, hence separate benches is not possible, instead the material which is approximately 30% of the total excavation is proposed to be kept separate after sorting of mineral.	As per the proposals
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposals	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No such proposals	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Baseline information is given in the mining plan regarding existence of plantation prior to the commencement of mining operations in the area. Further, as per the last approved mining plan document, 20 saplings per year is proposed to be planted in the area (2016-17 to 2018-19).	Additional plantation carried out is approximately 500 saplings in the southern and south western part of the lease area	
8g	Survival rate	80%	50%	Survival kept low due to damage by cattles and scarcity of water. To deal with this, drip irrigation is being used near weigh bridge area, and fencing of plantation is being practiced (as seen during site inspection).
8h	Water sprinkling on roads to control airborne dust	Yes, water sprinkling is proposed to be done through small water tanker. Also, main haul road near weigh bridge is equipped with water mist spray to control air borne dust.	As per the proposals	

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Aesthetic beauty in and around the area is satisfactory apart from normal degradation due to active mining in the area. Plantation is being carried out by the lessee for aesthetic improvements alongwith efforts for survival of the plantation carried out.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly return is required to be submitted online before 10th of every month for preceeding month Annual return is required to be submitted online before 1st July of every year for preceeding year	Monthly return submitted upto July'2019 Annual return submitted upto 2018-19	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Shri D. K. Singh Geologist: Outsourced Manager: Shri D. K. Singh	As per the category of the mine in the year 2018-19, part time Geologist was appointed.	It was suggested to mention the name of the Geologist so appointed in the submitted return instead of mentioning 'Outsourced'.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under opencast workings: 2.85 ha Area under Waste Dumps: 0.71 ha Area under Infrastructure : 0.24 ha Other: 0.4 ha	Correct information has been provided.	Lessee was suggested to mention the area under PMCP works carried out during each year also.
9d	Scrutiny of Annual return on afforestation	Number of trees planted during the year: 100 Survival rate in percentage: 50%	Complete information has been provided. Area where Plantation was carried out, was verified in the field during inspection.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Correct information furnished	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	For Limestone- ROM: (a) Opencast workings: Opening Stock- 385.89 T, Production- Nil, Closing Stock- 385.90 T (b) Dump Workings: Opening stock- 26.13 T, Production- Nil, Closing Stock- 26.13 T Graded Ore: (Cement Grade Limestone) Opening Stock- 412.02 T, Production- Nil, Dispatch- Nil, Closing Stock- 412.02 T	Complete and correct information furnished	

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value: Nil (Nil dispatch) Ex-mine price: Rs 450/- per T Cost of production: Rs 36.53/- per T	As no dispatch has occurred, lessee was advised to mention last available ASP in the Ex-mine Price column. Cost of production has been considered as per the depreciation only, but as the production is Nil, it was advised to get the same corrected.	Being minor errors and nil production and dispatch for Limestone, no violation was issued, instead, it was advised to get the errors corrected by getting the returns referred back.
9h	Scrutiny of Annual return on fixed assets	Value of fixed assets: Rs 10209042/- Depreciation and estimated market value for plan, infrastructures, buildings etc. has been furnished.	Complete information provided.	
9k	Scrutiny of Annual return on mining machineries	No machinery except 'Air Compressor'.	As per the extent of mechanization given in the approved mining plan document for Limestone, correct information has been furnished.	

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

Date :

(ASHISH MISHRA)

Indian Bureau of Mines