

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

MCDR INSPECTION REPORT

Nagpur regional office

Mine file No : MAH/YTL/LST-70/NGP

Mine code : 38MSH26047

- (i) Name of the Inspecting : **M017**) **ASHISH MISHRA**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Krishna Kumar Rathore, GM (Mines)
Official with
Designation
- (iv) Date of Inspection : 11/02/2019
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **MUKUTBAN LIMESTONE AND DO**
- (b) **Registration NO.** : **IBM/15031/2013**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : MAHARASHTRA
District : YEOTMAL
Village :
Taluka : ZARIJAMANI
Post office : MUKUTBAN
Pin Code : 445319
FAX No. :
E-mail :
Phone :
- (f) Police Station :
- (g) First opening date : 11/06/2018
- (h) Weekly day of rest : SUN
2. Address for :
correspondance :
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 RELIANCE CEMENT CO.PVT.LTD.
YEOTMAL MAHARASHTRA
Phone:
FAX :

Manager

Name : SHRI KRISHNA KUMAR RATHOD
Qualification : MINING ENGINEERING
Appointment/ : 10/01/2018
Termination date

6. Date of approval of Mining : Fresh under rule 22 MCR1960 07/07/2009
Plan/Scheme of Mining

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--------------------------|-----------|-------------|---|
| 1a | Backlog of previous year | Nil | Nil | Lease was executed on 15/06/2016 and registered on 17/06/2016. Hence, Mining Plan proposal period shall be 2016-17 to 2020-21. In the approved Mining Plan for the area, there are no exploration proposals for first 2 years. There are exploration proposals for drilling 30 boreholes in the area 3rd year onwards (9 in 3rd year, 10 in 4th year and 11 in 5th year). Date of opening for the mine - 11.06.2018. As on the date of inspection of mine, 58 core boreholes have been drilled by the lessee. |

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| 1b | Exploration over lease area for geological axis 1 or 2 | G-1 & G-2, Exploration was carried out by DGM, Maharashtra through Regional Mapping and exploration in the Mukutban Block which was started in 1964-65. overall 125 boreholes were drilled with total meterage of about 3700 m over a grid of 400 m initially which was reduced to 100 m in the potentially mineralized part. Proposed exploration is in form of 9, 10 and 11 boreholes in 3rd, 4th and 5th year respectively as per the approved mining plan. 2017-18 is 2nd year as per the executed lease deed. | As per the approved Mining Plan for the area. | Future exploration is proposed and is being carried out to cover entire mineralized area under G-1. Exploration in the non-forest part of the lease has been completed as on the date of inspection. Final clearance is awaited for Forest part of the lease area (467.45 ha). |
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| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | Nil | Nil | DGM, Maharashtra has explored the area in 1964-65. Total 125 nos. of boreholes covering a total meterage of about 3700m have been drilled in the Mukutban area (Source: Approved Mining Plan). Afterwards, as on date of inspection, lessee has drilled 58 boreholes, all in the non-forest land (as Forest Clearance is awaited, no bore holes could be drilled in the Forest Part), with 2060 m drilling meterage and 1861 sample's analysis. Expenditure on part of the lessee as on date is Rs 58.69/- lakhs. |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | Complete area is proposed to be explored in detail from 3rd year, i.e. 2018-19 onwards. | As on the date of inspection, non-forest part has been explored under G-1. Forest part of 467.45 ha is yet to be explored in detail. | Exploration in the forest area is informed to be carried out after getting necessary clearances from MoEFCC. |
| 1e | Balance reserve as on 01/04/20 | | As on 01.04.2018, 111-35.963 MT 121 & 122- 4.14 MT 221 & 222- 10.86 MT 331- 7.0 MT (Dolomite) Total: 57.963 MT (As per the approved Mining Plan) | |

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| 1f | General remarks of inspecting officers on geology, exploration etc | Date of Lease Execution: 15/06/2016 Date of Opening of the Mine: 11/06/2018 | Mine has not opened in the year 2017-18. Afterwards, in the year 2018-19, lessee has drilled 58 core bore holes with 2060 m meterage. With this exploration, almost complete non-forest area has been covered under detailed exploration. Geologically, non-forest area is having low grade limestone or dolomite with high overburden and production cannot be commenced from the area till forest clearance is granted as forest part is having good grade with outcropping deposit. |
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Development :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|-------------|--|
| 2a | Location of development w.r.t.lease area | As per the approved Mining Plan in the NE part of the lease area that is Non-forest land falling between sectional grid lines (as per the approved MP) W5 to E6 and N00 to N11. | Nil | Mine has started working after 11.06.2018. As on the date of inspection, approximately 4.5 ha area has been excavated for top soil / overburden removal for 1.5m - 3.0 m depth in the non-forest part of the area as proposed in the approved Mining Plan. |

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| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Yes, in first year of the operations, soil and OB removal with approximately 10 m bench height is proposed. For mineral Limestone, it is proposed to keep bench height variable from 3.0 m to 10.0 m depending upon the thickness of the deposit. | Nil | As on the date of inspection, only top soil removal was mainly done for 1.5-3 m depth with very less quantum of overburden encountered in between. Separate benches have been maintained in top soil and overburden. No mineral has been encountered as on the date of inspection. |
| 2c | Stripping ratio or ore to OB ratio | Not applicable as mainly top soil/ overburden is proposed to be removed in first two years and only Limestone is proposed to be excavated in the rest 3 years period of the approved Mining Plan. | Nil | |
| 2d | Quantity of topsoil generation in m3 | 1.57 million cuM in first two years and Nil from 3rd year onwards. | Nil | As on the date of inspection, around 122106 cuM top soil has been excavated and the work is under progress. |
| 2e | Quantity of overburden generation in m3 | Approximately 17450 cuM in the first two years and Nil from 3rd year onwards. | Nil | Very small quantum of overburden generated was observed during site inspection. generated overburden has been dumped separately nearby top soil dumps and has also been utilized in the construction of retaining wall. |

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| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | As per the bore hole logs verified during site inspection, top soil and overburden cover in the non-forest area is very high. Also, geologically the area is not very promising as it is having only low grade limestone/dolomite . Development in the forest area can be commenced only after getting necessary clearances from MoEFCC. Hence, in the present circumstances, development is adequate in the area as on date. However, there was no development till the year 2017-18. |
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Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
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| 3a | Number of pit proposed for production | Two pits are proposed to be dug in first 5 years of the mining plan period. | Nil as on 31.03.2018 | One pit has been developed with top soil removal only which is under progress as on the date of inspection. |
| 3b | Quantity of ROM mineral production proposed | 1st Year (2016-17)- Nil 2nd Year (2017-18)- 5 Lakh T | Nil as on date. | |
| 3c | Recovery of sailable/usable mineral from ROM production | 100% recovery (blending by operating multiple faces) | Not applicable as no production has been carried out till date. | |
| 3d | Quantity of mineral reject generation | Nil | Nil | |

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| 3e | Grade of mineral rejects generation and threshold value declared. | Not applicable | Nil | |
| 3f | Quantity of sub grade mineral generation. | Nil | Nil | |
| 3g | Grade of sub grade mineral generation | Not applicable | Nil | |
| 3h | Manual / Mechanised method adopted for segregating from ROM | Mechanical crushing and blending of ROM. | Nil | |
| 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 | Yes, Drilling is proposed with 115 mm dia drills and blasting is proposed by using slurry explosives in cartridge form. | Nil | Top soil has been excavated by using backhoe without any explosive. |
| 3k | Provision of mining machineries in mineral benches | Yes | Nil as in the year 2017-18 | Top soil excavation has been carried out in the year 2018-19 by using backhoe and tippers. |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Yes | Nil for the year 2017-18 | Presently, one top soil bench has been maintained having 1.5 m to 3.0 m depth. |

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| 3m | Total area covered under excavation/pits | 55.59 ha area is proposed to be covered under excavation/pits in the 5 years proposal period of the approved mining plan. | Nil | Approximately 4.50 ha area is covered under excavated pit. |
| 3n | Ore to OB ratio for the pit/mine during the year. | Approximately 1:1.92 for 2nd year (2017-18) | Nil | |
| 3o | Total area put in use under different heads at the end of year | At the end of 5 years proposal period of the approved Mining Plan, area under: Excavation-55.59 ha Top Soil stack-25.50 ha Overburden/Waste Dumps-1.60 ha Infrastructure -0.05 ha Roads-1.71 ha Railways-2.0 ha Green belt-4.13 ha Plant-0.05 ha Nallah-1.20 ha Total-91.83 ha | Nil | Presently, as on the date of inspection, area covered under pit is approximately 4.50 ha, area covered under top soil stack is approximately 1.25 ha and area covered under overburden/waste dump is 0.2 ha. Apart from this, one office, roads and green belt has been developed. |
| 3p | Production of ROM mineral during the last five year period as applicable | Not applicable as the case is for fresh Mining Plan and lease is executed in June'2016 | Not applicable | |

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

Method of mining proposed is category A fully mechanized. In the 5th year of the approved Mining Plan, proposed production is 3.75 MT of Limestone. Hence, method of mining is suitable as per the geology, occurrence of mineral and capital expenditure.

Solid Waste Management - Dumping:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|--|---------------------------|--|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | Yes, three separate dumps, 2 for top soil and one for overburden/waste is proposed. | Nil for the year 2017-18 | As on date, separate dumping of top soil and generated overburden/waste has been carried out. The two dumps have also been separated with retaining wall in between. |
| 4b | Location of topsoil, OB and mineral reject dumps | As per the approved mining plan, One Soil Dump is proposed in the NE part between Sectional grids W2 to E2 and N6 to N10, other top soil dump is proposed at W4 to W8 and N6 to S2. OB dump is proposed at W00 to W2 and N4 to N6. | Nil for the year 2017-18. | |

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| 4c | Number of dumps within lease area and outside of lease area | Two top soil dumps and one overburden/waste dump | Nil for the year 2017-18 | One top soil dump and one small overburden/waste dump in the NE part of the lease area as per the proposals in the approved MP. |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Not applicable | Not applicable | |
| 4e | Number of active and alive dumps. | Two top soil dumps and one overburden/waste dump active. | Nil for the year 2017-18 | One top soil and one overburden/waste dump are active as on date. |
| 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. | Yes | Nil for the year 2017-18 | Yes, garland drains and retaining wall are available all along the dumps as well as along the lease boundary in the present working area. |
| 4i | Length of Retaining wall or garland drain all along dumps | Upto 2017-18: Garland Drain-1120 m Retaining Wall-400 m | Nil upto 2017-18 | As on the date of inspection, approximately, 750 m retaining wall and 1500 m garland drain is constructed and construction is still in progress. |
| 4j | Number of settling ponds | One | Nil | |
| 4k | Specific comments of inspecting officer on waste dump management | | | Presently very small quantum of overburden/waste is encountered that is dumped separately within the lease area. Dumps are bound by garland drains and retaining walls. |

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 such proposals till conceptual stage. After complete exhaustion of mineral in the pits, it is proposed for backfilling and reclamation. | Nil | |
| 5b | Area under backfilling of mined out area | Nil | Nil | |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | No such proposals | Nil | |
| 5d | Total area fully reclaimed and rehabilitated | Nil | Nil | |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | | | No comments as no backfilling is proposed or carried out. |

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). | Not applicable for 2017-18 as mine is opened on 11.06.2018 | Not applicable | |
| 6b | Area available for rehabilitation (ha) . | Nil | Nil | |
| 6c | afforestation done (ha). | Upto 2nd Year (2017-18)- 1.0 ha | Nil | |

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| 6d | No. of saplings planted during the year | Upto 2017-18: 3000 saplings | Nil | As on date of inspection, 3500 various varieties of saplings were planted all along the haul roads and outside the lease area in the adjoining land owned by lessee. This plantation was carried out in 2018-19 year, hence upto 2017-18, position is reported as Nil. |
| 6e | Cumulative no .of plants | 3000 saplings for 2017-18 | Nil | As on date of inspection, 3500 various varieties of saplings were planted all along the haul roads and outside the lease area in the adjoining land owned by lessee. |
| 6f | Any other method of rehabilitation | No such proposals | Nil | |
| 6g | Cost incurred on watch and care during the year | Rs 520000/- for the year 2017-18 | Nil for the year 2017-18 | |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x 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 | |

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| 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 | 1.0 ha of waste land is proposed to be converted into green belt | Nil for the year 2017-18 | |
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | 1.0 ha | Nil | |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | Plantation | Nil | |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Yes, ambient air, water, noise and ground vibration for core and buffer zones are proposed to be monitored regularly | Nil for the year 2017-18 | Air, Water, Noise and ground vibration reports for the year 2018-19 as on the date of inspection were checked and found that the parameters analysed are within the prescribed norms. |

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| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | PMCP work for the year 2017-18 is Nil as the mine has opened in June'2018. As on the date of inspection, it was found that lessee has done plantations alongside the haul road and adjoining land owned by him. Protective works alongside the dumps and all along the lease boundary near the working area has been done by construction of garland drains and retaining walls. Monitoring of various environmental parameters is being carried out as per the guidelines. | Few suggestions on air, water and noise sampling locations were given to the lessee which include monitoring of air as per the predominant wind direction, monitoring of water in the upstream and down stream directions and invariable monitoring of noise in the nearby villages. |
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Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|-------------|------------------------------------|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Graded ore dispatch to the Captive Cement Plant after crushing and blending. | Nil | |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Mechanical Crushing | Nil | Plant is under installation stage. |
| 7c | Different grade of mineral sorted out at mines. | Cement Grade Limestone | Nil | |
| 7d | Any beneficiation process at mines | No such proposals | Nil | |

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

Mineral conservation is a crucial issue for the mine as high grade as well as outcropping ore is available in the forest part whereas in the non-forest part, mainly low grade ore or dolomite or ore with high overburden is available. hence working multiple faces for on-site blending should be done in the area. As presently plant is under installation, no production has been carried out and this aspect may be dealt with at the time when mine starts production after getting clearances from MoEFCC.

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---------------------|--------------------------|--|
| 8a | Separate removal and utilization of topsoil (Rule 32) | Yes | Nil for the year 2017-18 | As on date of inspection, it was found that top soil has been separately excavated and stacked for future usage. |
| 8b | Concurrent use or storage of topsoil | Storage of top soil | Nil for the year 2017-18 | As on date of inspection, it was found that top soil has been separately excavated and stacked for future usage. |

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| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | No such proposals as only OB/ Waste shall be generated and no mineral rejects/fines are proposed to be generated. | Nil | |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | No such proposals till conceptual stage | 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) | Yes | Yes | |
| 8g | Survival rate | | Nil | 80% survival of the plantation carried out in the year 2018-19 was observed. |
| 8h | Water sprinkling on roads to control airborne dust | Yes, for the purpose, 2 water sprinklers with 12 kL capacity is proposed under extent of mechanization | Nil for the year 2017-18 | As on date of inspection, one water tanker with 10 kL capacity was operating for water sprinkling over the haul roads in the working area. |

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| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | Top soil is being stacked separately for future usage for plantaion/green belt development. The mine has opened recently and 3500 saplings with 80% survival have been planted by the lessee in and around the lease area. Thus being so, aesthetic beauty in and around the lease area is satisfactory. |
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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 returns submitted online upto January'2019 Annual Return submitted online for 2017-18 | Information in the Annual return submitted is Nil as the mine has started working since June'2018 |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Mining Engineer: Mr. Ashish Kulkarni Geologist: Mr.Sumant Dhanodkar Manager: Mr. Krishnakumar Rathod | All the officials were present at the time of inspection of the mine. Further, the information is same as provided in the notice of opening/Form K. Hence, may be considered as correct. | |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Nil | Correct information as mine started working in June'2018 | |
| 9d | Scrutiny of Annual return on afforestation | Nil | Correct information as mine started working in June'2018 | |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | Nil | Correct information as mine started working in June'2018 and no production has been carried out till date. | |

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| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | Nil | Correct information as mine started working in June'2018 and no production has been carried out till date. | |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Nil | Correct information as mine started working in June'2018 and no production has been carried out till date. | |
| 9h | Scrutiny of Annual return on fixed assets | Nil | Value may be furnished for the land for which lessee was suggested to make necessary corrections. | Information in the Annual return submitted is Nil as the mine has started working since June'2018 |
| 9k | Scrutiny of Annual return on mining machineries | Nil | Information in the Annual return submitted is Nil as the mine has started working since June'2018 | |

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 :**(ASHISH MISHRA)**

Indian Bureau of Mines