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

## MCDR inspection REPORT

## Jabalpur regional office

**Mine file No :** MP/SATNA/LST-66 **Mine code : 38MPR35113**

(i) Name of the Inspecting Officer and ID No. : **P012 ) MITHELESH PUROHIT**

(ii) Designation : Assistant Controller Mine

(iii) Accompaning mine Official with Designation :

(iv) Date of Inspection : 13-FEB-17

(v) Prev.inspection date : 15-MAR-16

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **TILOURA (193.252 HA)**

**(b) Registration NO.** :

(c) Category : A Fully Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : MADHYA PRADESH
District : SATNA
Village : TILOURA,SIRMILLI
Taluka : MAIHAR
Post office : TILOURA
Pin Code : 485772
FAX No. : N. A.
E-mail : N. A.
Phone : N. A.

(f) Police Station :

(g) First opening date :

(h) Weekly day of rest : SUN

2. Address for correspondance : M/S MAIHAR CEMENT
P.O. SARLA NAGAR, MAIHAR,
DIST. SANTA (M.P.) 485772

3. (a) Lease Number : MPR0426
(b) Lease area : 193.25
(c) Period of lease :
(d) Date of Expiry : 31-MAR-30

4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : MAIHAR CEMENT
P.O. SARLA NAGAR,MAIHAR
SATNA MADHYA PRADESH
Phone:07601-32043,32067,32068
FAX :07674-322306,0761-321881

Owner : CENTURY TEXTILES & INDUSTRIES LTD.
CENTUARY BHAWAN, DR.ANNI
BESENT ROAD, BAMBAY
AHMEDNAGAR MAHARASHTRA
Phone: 022-4300351
FAX : 022-4309491

Mining Engineer
Name : DEVESH GHULEY,Full Time
Qualification : B.E.(MINING)
Appointment/ Termination date :

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

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|---|---|
| Renewal under rule 22 MCR1960 | 11-APR-94 |
| Mining Scheme rule 12 MCDR1988 | 03-SEP-01 |
| Mining Scheme rule 12 MCDR1988 | 06-JUN-06 |
| Mining Scheme rule 12 MCDR1988 | 29-JUL-10 |
| Mining Scheme rule 12 MCDR1988 | 07-APR-15 |
| Renewal under rule 24 MCR1960 | 06-MAY-15 |

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|---|---|---|---|---|
| 1a | Backlog of previous year | It was proposed to drill 18 and 23 number of bore holes during the year 2015-16 and 2016-17 | Total 41 number of boreholes have been drilled during the year 2015-16 and 2016-17. | |
| 1b | Exploration over lease area for geological axis 1 or 2 | The lease area is covered under category of G1 and G2 | The lease area is under G1 and G2 category | |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | NA | Total 12.56 Lacs has been spend over exploratory drilling during the year 2016-17 | |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | NIL | The entire lease area is under G1 and G2 category. | |
| 1e | Balance reserve as on 01/04/20 | Proposed balance reserve as on 1.4.2016 39.52 MT | Actual balance reserve as on 1.4.2016 39.25 MT | |
| 1f | General remarks of inspecting officers on geology, exploration etc | Exploration was proposed during the year 2015-16 and 2016-17. The limestone band has gentle with existence of Reject stone in the lease area. | Exploration has been done as per proposal in the lease area. | |

## Development :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|---|---|---|---|---|
| 2a | Location of development w.r.t.lease area | It was proposed to extend the existing pit upto 318 MRL with lateral expansion | The pit bottom MRL is 320 MRL. However the lateral expansion is lagging in the lease area. | The reported mineral production aproxx half of the approved capacity in the mining scheme. |

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| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Seperate benches proposed in soil and OB and mineral. In Central block Topsoilbench-(336-335m) OB-1 bench (335-330m) L1-(330-324m) L2 -(324-318m) | In Central block Topsoilbench-(336-335m) OB-1 bench (335-330m) L1-(330-324m) L2 -(324-320m) | limestone production less due to low demond from capative cement plant. |
| 2c | Stripping ratio or ore to OB ratio | 1:0.85 for the year 2015-16 and 1:0.85 for the year 2016-17 | Actual 1:0.80 and 1:0.74 for the year 201-16 and 2016-17 (till date of inspection) respectively | |
| 2d | Quantity of topsoil generation in m3 | 1860 for the year 2015-16 | 980 for the year 2015-16 | |
| 2e | Quantity of overburden generation in m3 | 18600 for the year 2015-16 | actual 26200 for the year 2015-16 | |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | Lateral and deepning of the pit in the Central block. | Less lateral development of the pit due to less mineral production. | |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|---|---|---|---|---|
| 3a | Number of pit proposed for production | One pit i.e Central block pit was proposed for production. | Mineral production was done from the Central Block. | |
| 3b | Quantity of ROM mineral production proposed | Proposal of 500000 tonnes for the year 2015-16 | Actual mineral production of 263454 tonnes | |
| 3c | Recovery of sailable/usable mineral from ROM production | 100% | 100% | |

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| 3d | Quantity of mineral reject generation | Proposed 18100 MT for the year 2015-16 | Actual 14819 MT for the year 2015-16 |
| 3e | Grade of mineral rejects generation and threshold value declared. | below 34 % CaO& above 6.5% MgO | below 34 % CaO& above 6.5% MgO |
| 3f | Quantity of sub grade mineral generation. | Proposed 50000MT for the year 2015-16 | Actual 13470 MT for the year 2015-16 |
| 3g | Grade of sub grade mineral generation | between 38 to 34 % CaO & between 4 to 5.5% MgO | below 34 % CaO & above 5.5% MgO |
| 3h | Manual / Mechanised method adopted for segregating from ROM | No segregation proposed. | No segregation done. |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | None proposed. | None done |
| 3j | Provision of drilling and blasting in mineral benches | Proposed. | Done. |
| 3k | Provision of mining machineries in mineral benches | Proposed | done |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | 5m in overburden 6m in Limestone | 5m in overburden 6m in limestone |
| 3m | Total area covered under excavation/pits | 35.48 ha | 19.062 |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1:0.85 | 1:0.80 |
| 3o | Total area put in use under different heads at the end of year | 58.07 as per approved document at the end of the proposal period. | 24.78 at the end of year 2015-16 |

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| 3p | Production of ROM mineral during the last five year period as applicable | Proposed production during the year 2011-12, 2012-13, 2013-14, 2014-15,2015-16 is 5 Lac MT, 5 Lac MT, 5 Lac MT, 5 Lac MT, 5 Lac MT respectively. | Proposed production during the year 2011-12, 2012-13, 2013-14, 2014-15,2015-16 is 354806 MT, 324373 MT, 368970 MT, 304156 MT, 263454 MT. |
| 3q | General remarks of inspecting officers on method of mining etc. | Open cast method of mining is being practiced. | Open cast method of mining is being practiced. |

Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|---|---|---|---|---|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | Stacking of topsoil, OB and mineral reject. | Stacking of topsoil, OB and mineral reject. | |
| 4b | Location of topsoil, OB and mineral reject dumps | Waste dumping proposed on west of the existing pit | Waste dumping done on west of the existing pit | |
| 4c | Number of dumps within lease area and outside of lease area | Proposed total four number of waste dumps in the lease area | Total four waste dumps exists inside the lease area. | |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Inside the ultimate pit limit as backfilling shall start when the pit reaches the mined out position. | Inside the ultimate pit. | |
| 4e | Number of active and alive dumps. | one active and 3 inactive dumps | One active dump and 3 inactive dumps. | |
| 4f | Number of dead dumps. | 3 | 3 | |
| 4g | Number of dumps established. | 2 | 2 | |

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| 4h | Whether Retaining wall or garland drain all along dumps are there. | Yes | grarland drain prepared of length 100meters. |
| 4i | Length of Retaining wall or garland drain all along dumps | 100 meters | 100 Meters |
| 4j | Number of settling ponds | NIL | NIL |
| 4k | Specific comments of inspecting officer on waste dump management | One waste dump is active on the west of the existing working pit. | One waste dump is active on the west of the existing working pit having progression towards the north east. |

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 mined out area in the lease. | No mined out area in the lease. | |
| 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) | Proposal for use of top soil used in the plantation | Top soil used in the plantation | |
| 5d | Total area fully reclaimed and rehabilitated | NIL | NIL | |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | No backfilling proposal as no mined out area. | No backilling carried out. | |

Progressive Mine Clousre Plan:

| Sl.No. | Item | Propasals | Actual work | Remarks |
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| 6a | Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2). | Report to be submitted under rule 23E(2) of mcdr 1988 | Report not submitted on time. | Violation of rule 23E(2) of MCDR 1988 issued. |
| 6b | Area available for rehabilitation (ha) . | NIL | NIL | |
| 6c | afforestation done (ha). | 0.2 hect | 0.2 hect | |
| 6d | No. of saplings planted during the year | 400 | 550 | |
| 6e | Cumulative no .of plants | NA | 4980 plants | |
| 6f | Any other method of rehabilitation | None | NOne | |
| 6g | Cost incurred on watch and care during the year | 11320 Rs | 15565 Rs | |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D | NA | NA | |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | None | None | |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area | None | None | |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | None | None | |

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|---|---|---|---|
| 6l | Compliance on reclamation and rehabilitation by backfilling (v)any other specific means. | None | None |
| 6m | Compliance of rehabilitation of waste land within lease (i)afforestation | 0.2 hect | 0.2 hect |
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | 0.2 hect | 0.2 hect |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | 0.2 hect | 0.2 hect |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Proposed. | Done. Four monitoring stations in core and buffer zone established. |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | Plantation proposed. | Plantation is being done as per proposal. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|---|---|---|---|---|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Proposal for ROM dispatch. | ROM is being dispatched. | |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Mechanical | Mechanical | |
| 7c | Different grade of mineral sorted out at mines. | ROM is dispatched. | ROM is dispatched. | |

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| 7d | Any beneficiation process at mines . | None proposed. | None seen at the mine. |
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | ROM is dispatched to the Captive Cement Plant. | ROM is dispatched to the Captive Cement Plant. |

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|---|---|---|---|---|
| 8a | Separate removal and utilization of topsoil (Rule 32) | Proposed. | Top soil used in plantation | |
| 8b | Concurrent use or storage of topsoil | Concurrent use. | Used in Plantation | |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Seperate dumping for overburden | Seperated dumping done for overburden. | |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | NA | NA | |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Not proposed during the plan period. | Not done | |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | NA | Total 4980 plants planted and 4.54 hect of land under plantation. | |
| 8g | Survival rate | 80% | 80% | |

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| 8h | Water sprinkling on roads to control airborne dust | Proposed | Done |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | The general aesthetic beauty of the mine area is good and the mine area is surrounded by agri fields. | The general aesthetic beauty of the mine area is good and the mine area is surrounded by agri fields. |

Compliance of Rule 45:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|---|---|---|---|---|
| 9a | Status of submission of Monthly and Annual returns | AR submitted till year 2015-16 and MR submitted till date of inspection | AR and MR submitted | |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Manager Shri S.S. Sarna Mining Engineer in charge Shri D.S. Pandey | No appointment of Geologist | Violation of rule 42(1)(c)(i) of MCDR 1988 issued to the party. |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Area put to use as per submitted annual return 25.965 hect | The area put to use on field matches with the return filed. | |
| 9d | Scrutiny of Annual return on afforestation | total 550 trees plantes with 99% survival rate. | The survival rate seems less. | |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | 29403 MT of mineral reject as per filed annual return 2015-16 | The mineral reject is below 34%Cao and above 6.5% Mgo . It is dumped in ob Stacks. | |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Ex mine 352.24 Rs/tonne | Ex mine price is equal to cost of production. | |
| 9h | Scrutiny of Annual return on fixed assets | Value of Fixed Assets (in .) 22658466 | Electrical installation, weighbridge setup | |

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|---|---|---|---|
| 9k | Scrutiny of Annual return on mining machineries | SHOVEL (HYDRAULIC) 1.600 CUM 2 Non Electrical Opencast<br>DOZER 380.000 HP 1 Non Electrical Opencast<br>TIPPER 14.000 CUM 8 Non Electrical Opencast<br>WATER TANKER 15000.000 LITRE 1 Non Electrical Opencast<br>BLAST HOST DRILL 115.000 MM 1 Non Electrical Opencast | Machinary as per return filed. |

**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 |
| Rule 13(1) | 27-FEB-17 | 11-APR-17 | | | |
| Rule 23E(2) | 27-FEB-17 | 11-APR-17 | | | |
| Rule 42(1)(C)(I) | 27-FEB-17 | 21-JUL-17 | | | |

**Date :**

(**MITHELESH PUROHIT**)

Indian Bureau of Mines