

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

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/455/BNG

Mine code : 30KAR03160

- (i) Name of the Inspecting : **A101**) **ARUN KUMAR**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : J.Srikanth -Manager
Official with
Designation
- (iv) Date of Inspection : 25/07/2019
- (v) Prev.inspection date : 11/08/2015

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **RAMGAD ML 2547**
- (b) **Registration NO.** : **IBM/1010/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **KARNATAKA**
- District : **BELLARY**
- Village : **RAMGHAD POST**
- Taluka : **SANDUR**
- Post office : **RAMGHAD**
- Pin Code :
- FAX No. : **08392-240462 (F),**
- E-mail : **ztco2000@yahoo.com**
- Phone : **08392-240085 (O),984408500**
- (f) **Police Station** : **SANDUR**
- (g) **First opening date** : **01/01/2008**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **M/S.ZEENATH TRANSPORT COMPANY,**
24, ZEENATH HOUSE,COWL BAZAR,
BELLARY - 583102
3. (a) **Lease Number** : **KAR0262**
- (b) **Lease area** : **36.42**
- (c) **Period of lease** : **20**
- (d) **Date of Expiry** : **03/06/2021**
4. **Mineral worked** : **IRON ORE** **Main**

5. Name and Address of the

Lessee : ZEENATH TRANSPORT COMPANY
 ZEENATH HOUSE, COWL BAZAAR,
 BELLARY, BELLARY KARNATAKA
 Phone:40462,40085
 FAX :

Owner : SYED AHMED
 BELLARY KARNATAKA
 Phone: 08392 - 260225
 FAX : 08392- 240462

Mining Engineer

Name : GOVIND RAO,Full Time
 Qualification : B E MINING
 Appointment/ : 09/07/2018
 Termination date

Geologist

Name : T S CHALUVAMURTHY,Full Time
 Qualification : MSc GEOLOGY
 Appointment/ :
 Termination date

Manager

Name : J.SHRIKANT
 Qualification : FCC
 Appointment/ : 11/05/2009
 Termination date

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| 6. Date of approval of Mining Plan/Scheme of Mining | : | Modif.of approved Mining Plan | 02/04/2008 |
| | | Modif.approved Mining Scheme | 12/08/2010 |
| | | Mining Scheme rule 12 MCDR1988 | 06/12/2012 |
| | | MS modif under MCR 1960 | 21/08/2014 |
| | | Modif.of approved Mining Plan | 09/06/2016 |
| | | MP review under 17(1) MCR 2016 | 08/11/2016 |

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|-------------|-------------------------------|---|
| 1a | Backlog of previous year | No proposal | Nil | No backlogs.12 No. of core bore hole drilled during FY2017-18 |
| 1b | Exploration over lease area for geological axis 1 or 2 | G1 & G2 | G1 -7.47Ha G2-6.29 Ha | 19.86 Ha is mineralized area |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | No proposal | Nil | Exploratory drilling carried out by M/s MAPP drilling & Exploration Pvt Ltd.in the past.Apprx. 13.72 Lakhs spent on Exploration |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | - | G1 over the mineralized area. | - |
| 1e | Balance reserve as on 01/04/20 | | 8.17 Million Tons | As per Annual Returns 2018-19 |
| 1f | General remarks of inspecting officers on geology, exploration etc | | | So far 55 No. of Core bore holes has been drilled in the ML area, total meterage 2459.3 mtrs |

Development :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|---|--|--|
| 2a | Location of development w.r.t.lease area | Development proposed : N1668118 TO N1668362 , E660410 TO E660682 & N1667641 TO N1667804,E660967 TO E661140 | Actual Development carried out : N1668118 TO N1668362 , E660410 TO E660682 & N1667641 TO N1667804,E660967 TO E661140 | OB benches had not been advanced in between section L1-L1' to M-M' of the south western side of the lease. Violation pointed out |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Separate benches for OB and mineral proposed | Separate benches for OB and mineral maintained | - |

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| 2c | Stripping ratio or ore to OB ratio | 1 : 0.13 | 1 : 0.13 | No change |
| 2d | Quantity of topsoil generation in m3 | No proposal | Nil | No generation of top soil, as mining carried out in already broken up area. |
| 2e | Quantity of overburden generation in m3 | 60980 tons | 60580 tons | Bulk density :Iron ore - 2.7 tons/Cu.mtr, Lateritic Lumpy -2.2 tons/ Cu.mtr, Waste - 2.0 tons/Cu.mtr |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | | | OB benches had not been advanced in between section L1-L1' to M-M' of the south western side of the lease. Violation pointed out |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|-----------------------|-----------------------------------|---|
| 3a | Number of pit proposed for production | Single pit proposed | Working carried out in Single pit | App. Dimension of the pit: 1000 mtr(L) x 153 mtrs (W) x 60 Mtrs depth |
| 3b | Quantity of ROM mineral production proposed | 4,80,000 TONS | 4,79,820 TONS | With in the proposed limits |
| 3c | Recovery of sailable/usable mineral from ROM production | 95% recovery proposed | 95 % recovery | No change |
| 3d | Quantity of mineral reject generation | No proposal | Nil | - |
| 3e | Grade of mineral rejects generation and threshold value declared. | No proposal | Not applicable | - |
| 3f | Quantity of sub grade mineral generation. | No proposal | Nil | - |

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| 3g | Grade of sub grade mineral generation | No proposal | Not applicable | - |
| 3h | Manual / Mechanised method adopted for segregating from ROM | Mechanized method proposed for segregation of ROM | Mechanized method adopted for segregation of ROM | Dry crushing & screening |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | No proposal | No such study carried out | No wet beneficiation carried except crushing & screening of ROM |
| 3j | Provision of drilling and blasting in mineral benches | Drilling & blasting proposed | Drilling & blasting carried out for hard strata | 60 % of the total material handled is drilled & blasted using Slurry & Decord |
| 3k | Provision of mining machineries in mineral benches | Proposed mining machineries in mining:Excavator or -3 Nos.,Wheel loader - 2 Nos.,Drill - 1 Nos.,Tipper - 16 Nos.& Screen - 4 Nos. | Following mining machineries used :Excavator -3 Nos.,Wheel loader - 2 Nos.Drill - 1 Nos.Tipper - 15Nos.Screen - 2 Nos | No change |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Proposed bench Height-8 mt & Width- 8.0 - 10mt | Height-8 mt & Width- 8.0 - 10mt | Bench height & width Maintained |
| 3m | Total area covered under excavation/pits | 16.0 Ha at the end of plan period 2021-22 | Actual 14,56 Ha | - |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1 : 0.13 | 1 : 0.13 | No change |

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| 3o | Total area put in use under different heads at the end of year | Area under Mining - 16.0 Ha ,Dumping- 7.0 Ha,Sub grade Mineral/ore dump - 7.35 Ha,Infrastructure - 2.65 Ha,Green Belt - 3.55 Ha Protective measures - 1.607 Ha Others - 11.573 Ha | Area under Mining - 14.56 Ha ,Dumping- 6.1 Ha,Infrastructure - 2.65 Ha,Work done under PMCP - 6.6 Ha Others - 26.42 Ha (Stock yard & Green Belt) | - |
| 3p | Production of ROM mineral during the last five year period as applicable | 2014-15: 4,40,000 2015-16: 4,40,000 2016-17: 4,60,000 2017-18: 4,80,000 2018-19: 4,80,000 | 2014-15: 4,39,500 2015-16: 4,39,500 2016-17: 4,59,700 2017-18: 4,79,700 2018-19: 4,79,820 | All units in tons. Actual production is within in the proposed limits. |
| 3q | General remarks of inspecting officers on method of mining etc. | Working was carried out in single pit with stripping ratio of 1:0.13 with drilling & blastings & use of HEMM. | | |

Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|---|--|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | Separate waste dump proposed | Separate waste dump maintained | No generation of top soil and mineral rejects. |
| 4b | Location of topsoil, OB and mineral reject dumps | N 1667353 - 1667555,E 661302 - 661392 | N 1667386 -1667640 E 661109 - 661340 | Low grade ore generated is blended with high grade |
| 4c | Number of dumps within lease area and outside of lease area | Inside Mining lease -2 Nos. Out side Mining - NIL | Inside Mining lease -2 Nos. Out side Mining - NIL | One active dump and one inactive dump within ML. |

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| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Waste dump proposed out the UPL | Waste dump is located at about 50 mtrs away from the UPL | Both dumps are located out side the UPL |
| 4e | Number of active and alive dumps. | One active dump proposed | One active dump located at North Eastern side of the ML | - |
| 4f | Number of dead dumps. | One dead dump | One dead dump located at South western side of the ML | - |
| 4g | Number of dumps established. | One dead dump | One dead dump stabilized | Dead dump stabilized by plantation & coir matting. |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | Retaining Wall & Garland drain Proposed as per the approved R & R plan | Retaining Wall & Garland drain Maintained as per the approved R & R plan | - |
| 4i | Length of Retaining wall or garland drain all along dumps | No proposal | Retaining wall and garland drains are constructed as per the proposals in the previous years. | 2679 mtrs of R W and 2626 mtrs GD constructed. |
| 4j | Number of settling ponds | No proposals | 6 No. of Settling tanks constructed in the previous years | Condition is Good & Effective |
| 4k | Specific comments of inspecting officer on waste dump management | | | Waste dump management is satisfactory. One active dump and one inactive dump within ML. Retaining wall & garland drain constructed and maintained. |

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 | Nil | Mineral is not exhausted |
| 5b | Area under backfilling of mined out area | No proposal | Nil | No pit is matured for backfilling |

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| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | No proposal | Nil | No generation of top soil |
| 5d | Total area fully reclaimed and rehabilitated | No proposal | Nil | - |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | | | No backfilling proposed in the plan period and mineral persist at depth |

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). | Annual report on PMCP to be submitted on 1st July every year. | Submitted vide letter dated 07.06.2019 | |
| 6b | Area available for rehabilitation (ha) . | No proposal | Nil | - |
| 6c | afforestation done (ha). | Proposal 0.6 Ha. | 2.2 Ha plantation done on the slope of the inactive dump | 3.55 ha covered under safety zone |
| 6d | No. of saplings planted during the year | Safety zone= 250 saplings Inactive dump= 250 saplings | Safety zone= 400 saplings Inactive dump=400 saplings | Avenue (Out side ML area) =500 saplings, Total = 1300 saplings |
| 6e | Cumulative no .of plants | Not specified | With in the ML :Agave - 131000 Nos. Saplings - 87830 Seeds - 330 Kg | 5.55 Ha covered within ML area |
| 6f | Any other method of rehabilitation | No proposal | 0.3 Ha of dump slope covered with Coir matting | - |
| 6g | Cost incurred on watch and care during the year | Rs. 12500.00 | Rs. 20,000 for watch & ward | Rs.4,14,289 spent towards plantation, watering and after care. |

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| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D | No proposal | Nil | - |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | No proposal | Nil | - |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area | No proposal | Nil | - |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | No proposal | Nil | - |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v)any other specific means. | No proposal | Nil | - |
| 6m | Compliance of rehabilitation of waste land within lease (i)afforestation | No proposal | Nil | - |
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | No proposal | No waste land within ML | - |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | No proposal | Nil | - |

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| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Environmental monitoring proposed in core zone & buffer zone | Environmental monitoring carried out in core zone & buffer zone on monthly basis | All the parameters are within the permissible limit |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | | | PMCP activities as proposed are being carried out. Monthly monitoring of environmental parameters are done. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|---|---|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | ROM dispatched after crushing and screening as per proposal | ROM dispatched after crushing and screening as per proposal | Lumps-119104.96 Fines-260999.88 Total=380104.84 |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Mechanical method proposed for mineral sorting | Mechanical method adopted by dry crushing & screening | 2 units of dry crushing & screening plants |
| 7c | Different grade of mineral sorted out at mines. | 0-55% +55-58% 58-60% 60-62% 62-65% +65% | +55-58% 58-60% 60-62% 62-65% Are graded and dispatched. | - |
| 7d | Any beneficiation process at mines | No proposal | Nil | Only Dry process by mobile crusher & screening |
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | | | Mineral conservation is taken care. All the low grade minerals are blended with high grade to meet the market requiremnt. |

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

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| 8a | Separate removal and utilization of topsoil (Rule 32) | No proposal | Nil | No top soil generated during FY 2018-19 |
| 8b | Concurrent use or storage of topsoil | No proposal | Nil | - |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Proposed separate dump for waste /OB. | Separate dump for waste /OB maintained | 6 No. of terraces with 10 mtrs height in the active dump |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | No proposal | Not applicable | ore is not exhausted to restore the land. |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | No proposal | Mined out pit not was matured for back filling | 2.2 Ha of inactive dump (ID-1) is stabilized by afforestation with protective measures Viz., toe wall, Garland drains and silt settling tanks. |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | 500 No. of saplings proposed | 1300 saplings planted inside and out side ML area | So far 41360 saplings planted on old dumps and 23440 saplings planted in safety zone area |
| 8g | Survival rate | 80% | 80% | - |
| 8h | Water sprinkling on roads to control airborne dust | Water sprinkling proposed on roads to control airborne dust | Water sprinkling done regularly on roads to control airborne dust | 4 Water tankers each of 12 KL deployed. |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | | | Aesthetic beauty in and around the mine was good as lessee has carried out afforestation, water sprinkling and other environmental protective measures as per RMP |

Compliance of Rule 45:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|--|---------|
| 9a | Status of submission of Monthly and Annual returns | Monthly Returns submitted up to June 2019 Annual Returns submitted up to 2018-2019 | Annual Returns submitted on 27.6.2019 | |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Sri. J Srikanth - Mining Engineer cum Manager Sri. S. Srinivas - Geologist | Same mine officials were present during the course of inspection | |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Area under Mining - 14.56 Ha , Dumping- 6.1 Ha Infrastructure - 2.65 Ha Work done under PMCP - 6.6 Ha Others - 26.42 Ha (Stock yard & Green Belt) | Appears to be correct. | |
| 9d | Scrutiny of Annual return on afforestation | Within lease area= 800 saplings Outside lease Area = 500 saplings @ 80% survivalrate | Appears to be correct | |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | NIL | NIL | |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | ROM : O/s - 300.00Tons, production 479820 tons, C/s -300 tons Dump working O/s = C/s =300 tons | Appears to be correct | |

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| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Cost of Production =Rs.654.15/ton , Ex-mine price=Rs.2273.55/ton Sale value=Rs.2280.38/ton | Appears to be correct |
| 9h | Scrutiny of Annual return on fixed assets | Rs.2,92,49,875 .00 including plant machinery and transport equipment | Appears to be correct |
| 9k | Scrutiny of Annual return on mining machineries | Excavators - 3Nos. Wheel Loader - 2 Nos. Tippers - 15 Nos. Water tanker - 4 Nos. Crusher - 2 Nos | Appears to be correct |

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) | 02/08/2019 | 16/09/2019 | | | | |
| MCDR17 | Rule 19(1) | 02/08/2019 | 16/09/2019 | | | | |

Date :

(ARUN KUMAR)

Indian Bureau of Mines