

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

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/294/BNG

Mine code : 30KAR03045

- (i) Name of the Inspecting : **M003**) **G C MEENA**
Officer and ID No.
- (ii) Designation : Regional Controller Mines
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 11/07/2019
- (v) Prev.inspection date : 06/06/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **NARAYANAPURA**
- (b) **Registration NO.** : **IBM/6557/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address :
State : KARNATAKA
District : BELLARY
Village : NARAYANAPURA
Taluka : SANDUR
Post office : DEOGIRI
Pin Code :
FAX No. : 08394-225786 (O), 944812548
E-mail : narayanmines1602@gmail.com
Phone : 08394-225786 (O), 944812548
- (f) Police Station : HOSPET
- (g) First opening date :
- (h) Weekly day of rest : SUN
2. Address for : NARAYAN MINES PVT LTD
correspondance NO.602,A/15,18TH CROSS,SADASHIVNAGAR,
BANGALORE-560080
3. (a) Lease Number : KAR0209
- (b) Lease area : 109.27
- (c) Period of lease : 20
- (d) Date of Expiry : 22/01/1997
4. Mineral worked : IRON ORE Main
MANGANESE ORE Associated

5. Name and Address of the

Lessee : NARAYAN MINES PVT LTD
 # 4/269, PATEL NAGAR,
 HOSPET, BELLARY KARNATAKA
 Phone:28301
 FAX :

Owner : NARAYAN MINES PVT LTD
 BELLARY KARNATAKA
 Phone: 28301
 FAX :

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| 6. Date of approval of Mining | : | Existing rule 11 MCDR1988 | 05/02/1991 |
| Plan/Scheme of Mining | | Renewal under rule 22 MCR1960 | 14/09/1998 |
| | | Renewal under rule 24 MCR1960 | 23/06/2006 |
| | | MP review under 17(1) MCR 2016 | 02/01/2017 |
| | | MP modif under 17(3) MCR 2016 | 12/10/2017 |
| | | MP modif under 17(3) MCR 2016 | 17/07/2018 |
| | | FMCP under 23C(1) | 24/10/2018 |
| | | MP modif under 17(3) MCR 2016 | 08/01/2019 |
| | | MP modif under 17(3) MCR 2016 | 21/02/2019 |
| | | FMCP under 23C(1) | 01/05/2019 |

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|---|---|--|
| 1a | Backlog of previous year | 22 nos. of RC holes proposed during 2018-19 | 24 nos. of RC boreholes drilled during F.Y. 2018-19 (up to 31.01.2019) to satisfy rule 12(4A) of MCDR (amendment) 2018. | Total meterage achieved by drilled holes were 1006m during 2018-19. |
| 1b | Exploration over lease area for geological axis 1 or 2 | G1 and G2 | Mineralized zone explored under G1 and G2 stage. | |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | Not specified | Chithanya Geo Lynx, Hospet - 583201 Total Expenditure was 40.24 lakhs. | |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | No proposal | NIL | Mineralized zone covering 43.30 ha. was completely explored. |
| 1e | Balance reserve as on 01/04/20 | NO PROPOSAL | 22.9 million tonnes of iron ore(including siliceous iron ore) 0.488 million tones of manganese ore. | As on 31.01.2019. |
| 1f | General remarks of inspecting officers on geology, exploration etc | | | So far, 63 nos. of RC boreholes were drilled in the ML area with cumulative depth of 2814 m. 13 DTH holes with cumulative depth of 544 m were also drilled by the lessee. Apart from RC and DTH bore holes, 51 nos of trail pits were made in mineralized zone, varying depths from 1m to 4m. |

Development :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
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| 2a | Location of development w.r.t.lease area | Iron Ore N 1658700 - 1657400; E 677600 - 678800 (RL: 936 - 894) Manganese N 1658600 - 1658300; E 677600 - 677400 (RL: 936 - 930) | Development of Iron ore & Manganese were as per proposal | Development were carried in between section line C-C'' to G-G' and P-P' to S-S' for iron ore. From section line A-A' to D-D' for manganese ore. |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Top soil- Nil Separate benches in Over Burden & mineral proposed | Separate benches in Over Burden & mineral bench maintained. | |
| 2c | Stripping ratio or ore to OB ratio | 1:1.38(iron ore) 1:1.15(manganese ore) | 1:1.29(iron ore) 1: 1.88 (manganese ore) | |
| 2d | Quantity of topsoil generation in m3 | No proposal | nil | |
| 2e | Quantity of overburden generation in m3 | 582,455 m3 | 509,890 m3 | Up to 31.01.2019 |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | | | Development of iron and manganese ore was found to be carried out in accordance with the approved proposals. |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|---|---|
| 3a | Number of pit proposed for production | One pit each in Iron Ore & Manganese | Actual working in one pit each for iron ore & for manganese | Float ore has been worked out previously. |
| 3b | Quantity of ROM mineral production proposed | 1.112 million tonnes of Iron Ore 7600 Tons of Mn Ore | 790,000 tons of Iron Ore 3400 tons of Mn Ore | Up to 31.01.2019 |

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| 3c | Recovery of sailable/usable mineral from ROM production | 100% recovery of ROM | 100% recovery of ROM | |
| 3d | Quantity of mineral reject generation | No proposal | NIL | |
| 3e | Grade of mineral rejects generation and threshold value declared. | No proposal | NA | |
| 3f | Quantity of sub grade mineral generation. | No proposal | NIL | |
| 3g | Grade of sub grade mineral generation | No proposal | NA | |
| 3h | Manual / Mechanised method adopted for segregating from ROM | Mechanized method proposed for iron and manganese ore | Mechanized method | Dry crushing & screening adopted. |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | No proposal | NIL | |
| 3j | Provision of drilling and blasting in mineral benches | Yes, Provision of drilling & Blasting proposed | Drilling and blasting is used whenever required to loosen the hard material. | About 25% material of the total handling requires blasting with Spacing - 3 mts, Burden- 2.5 mts, Depth- 7- mts |
| 3k | Provision of mining machineries in mineral benches | Yes, Provision of mining machineries in mineral benches proposed. | Machineries like Excavators-9 nos., Wheel Loaders-5 nos. of 1.5 Cum ,Tipper- 20 nos. of 16 tonnes, Water tankers 8 nos. of 8000 liters deployed. | |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Bench Height-7 mts and Width 8 mts in Ore and Waste | Bench Height-7 mts and Width 8 mts in Ore and Waste maintained | |

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| 3m | Total area covered under excavation/pits | 37.50 ha | 37.50 ha | |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1:1.38(iron ore) 1:1.15(mangane se ore) | 1:1.29(iron ore) 1: 1.88 (manganese ore) | Up to 31.01.2019 for 2018-19. |
| 3o | Total area put in use under different heads at the end of year | 79.84 Ha. | 79.84 Ha. | Un-used area 27.67 Ha. |
| 3p | Production of ROM mineral during the last five year period as applicable | Iron ore 2016-17: 156000 2017-18: 626000 2018-19: 626000 2018-19: 1112000 Manganese 2016-17: 1900 2017-18: 7600 2018-19: 7600 (in tones) | Iron ore 2016-17: 156000 2017-18: 626000 2018-19*: 790,000 Manganese ore 2016-17: 1900 2017-18: 7600 2018-19*: 3400 (*for 2018-19, production up to 31.01.2019 has been furnished) | Actual Production not exceeding the planned production. |
| 3q | General remarks of inspecting officers on method of mining etc. | | | Exploitation of ore was as per proposal with machineries deployed in waste & mineral benches. About 25% material of the total handling was blasted to achieve the desired production. Actual production found within the proposed limits. |

Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|--|--|---------|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | Top Soil-No Proposal OB-Dumping of waste separately | Top Soil- Not Applicable. OB Dumping of waste carried out in embarked area. | |

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| 4b | Location of topsoil, OB and mineral reject dumps | Over burden dumps: N 1657700 - 1 657900 E 678100 - 678300 | Dumping carried out in the year marked place. | |
| 4c | Number of dumps within lease area and outside of lease area | 12 dumps within lease. Outside lease- Nil | One active dump and 11 inactive dumps within lease. Outside lease- Nil | |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Active Dumping proposed outside the UPL | Actual Dumping area was outside UPL | |
| 4e | Number of active and alive dumps. | One active dump. | One active dump. | Extent of active dump 0.79 Ha. |
| 4f | Number of dead dumps. | 11 nos. inactive dumps | 11 nos. inactive dumps | |
| 4g | Number of dumps established. | No proposals | NA | |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | Yes , Proposed | RW constructed | |
| 4i | Length of Retaining wall or garland drain all along dumps | Proposed as per the approved R & R Plan. | 125 m of retaining wall & 127m of garland drain constructed during 2018-19. | So far, 1310m of retaining wall and 1312m of garland drain constructed by the lessee within ML area along ID1, ID2 , ID3 and ID11. |
| 4j | Number of settling ponds | No proposal | NIL | 3 nos. of settling tanks constructed so far. |
| 4k | Specific comments of inspecting officer on waste dump management | | | 11 nos. of small inactive dumps and one active dump were present in the ML area. Active dumping was carried out as per the approved proposal. |

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 | |
| 5b | Area under backfilling of mined out area | No Proposal | NA | |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | No Proposal | NA | |
| 5d | Total area fully reclaimed and rehabilitated | No Proposal | NA | |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | | | There was no proposal for backfilling in the plan period. None of the areas of mined out pits were matured for backfilling due to occurrence of mineral at depth. |

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). | Proposed | Submitted for F.Y. 2017-18. | |
| 6b | Area available for rehabilitation (ha) . | No proposal | NIL | |
| 6c | afforestation done (ha). | 0.45 Ha. | 0.81 Ha. as on 31.01.2019. | |
| 6d | No. of saplings planted during the year | 1100 nos. | 800 nos. (as on 31.01.2019) during 2018-19. | |

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| 6e | Cumulative no .of plants | No proposals | 16400 nos. so far | 15000 saplings were planted during R&R work. 800 saplings were planted during the year 2018-19. |
| 6f | Any other method of rehabilitation | No proposal | NIL | |
| 6g | Cost incurred on watch and care during the year | Rs. 1.12 lakh | Rs. 1.0 lakh during 2018-19 | |
| 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 | No waste land within ML. | |

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| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | No proposal | NIL | |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | No proposal | No proposal | |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Environmental Monitoring proposed in the core & buffer Zone | Environmental monitoring done in the core & buffer Zone. | Parameters within the prescribed limits |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | | | PMCP activities were carried out as per the approved plan and plantation done, construction of retaining wall and garland drains were in place. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|------------|---|---------|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Proposed | ROM Mineral dispatched after crushing and dry screening | |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Mechanized | Mechanical means used for sorting of iron ore mineral, for manganese ore sorting method was manual. | |

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| 7c | Different grade of mineral sorted out at mines. | Fe Fines - Grade +45% Fe Size -10 mm Fe CLO - Grade +58% Fe Size +10 - 30/40 mm Fe Lumps Grade +45% Fe Size +40mm Mn Ore Grade +10Mn% , Size +10mm | Different grade of mineral sorted out at mines was observed to be as per proposal. |
| 7d | Any beneficiation process at mines | No proposal | Nil except dry crushing and screening. |
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | | Grade wise sorting & sizing done within the lease area as planned using crusher and screening arrangement. |

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|-------------------------------------|---|---------------------------|
| 8a | Separate removal and utilization of topsoil (Rule 32) | No proposal | NIL | |
| 8b | Concurrent use or storage of topsoil | No proposal | NIL | No generation of top soil |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Yes , Separate dump for OB proposed | Overburden disposed separately | |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | No proposal | Mining pits were not matuted for restoration. | |

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| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | No proposal | NA | |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | Proposed. | 800 saplings were planted during the year 2018-19. 15000 saplings were planted during R&R work. | |
| 8g | Survival rate | Not specified. | 70 to 80% within ML. | |
| 8h | Water sprinkling on roads to control airborne dust | Proposed | Dust suppression carried out by deploying water tankers and daily spraying of water in and around the mine area | |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | | | The aesthetic beauty in and around mine was good as lessee had carried out afforestation and other environmental protective measures as per approved 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 Oct.- 2019 Annual returns submitted up to FY 2018 - 19. | | |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Buppu Lowa Raju Manager, CH Venkatahasubbaiah Geologist. | | |

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| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | OC WORKING - 40.23 HA Dump -5.82ha Infrastructure - 8.69 ha Other - 52.77 ha |
| 9d | Scrutiny of Annual return on afforestation | WML - 3000 @ 60% OML - NIL |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | NIL |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | Stock at mines head ROM - 568000 tonnes |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Ex mine price - Fines - 60- 62% fe Rs 2261.2/- 62-65% fe - Rs 2284 /- Lumps Below 55% - Rs1614.73/- 55- below 58 - Rs2230/- 58-60 - Rs 2263/- Production cost - Rs 1604/- |
| 9h | Scrutiny of Annual return on fixed assets | Value of fixed assets - Rs 5253974/- |
| 9k | Scrutiny of Annual return on mining machineries | Back Hoe -10 Wheel Loader - 7 Dumper - 20 Crusher - 1 Jeep/Tractor - 6 Water Tanker - 8 Blast hole drill - 1 Others - 4 |

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 :

(G C MEENA)

Indian Bureau of Mines