

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

Inspection under SDF for star rating of mines REPORT

Bangalore regional office

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

Mine code : 30KAR03045

- (i) Name of the Inspecting : **A101**) **ARUN KUMAR**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 15/11/2018
- (v) Prev.inspection date :

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 correspondance** : **NARAYAN MINES PVT LTD**
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 :

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

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	-
1b	Exploration over lease area for geological axis 1 or 2	It was proposed to drill 32 RC bore holes to a total depth of 1685mt.	A total of 17 no's of RC bore holes were drilled for a depth of 716 meters as a part of exploration during 2017-18. Apart from these lessee has sunk 11 no's of trail pits of 2m X 2m X 3m	Mineralized zone has been explored For G1 axis.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Chithanya Geo Lynx, Hospet - 583201	Chithanya Geo Lynx, Hospet - 583201 29 lakhs	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Mineralized zone covering 43.30 ha has been explored.
1e	Balance reserve as on 01/04/20	-	13217347MT as on 01/04/2018	As per annual return
1f	General remarks of inspecting officers on geology, exploration etc			17 no's of RC bore holes were drilled .Total Meterage of 716 meters during 2017- 18. Apart from RC bore holes, 11 no's of trail pits of 2m X 2m X 3m were made 43.30 Ha have been explored in Mineralized zone.

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 AA'to N-N'& P-P'to S-S'
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	1:0.09	1:0.09	-
2d	Quantity of topsoil generation in m3	No proposal	NA	-
2e	Quantity of overburden generation in m3	35,500 M3	35,500 M3	B.D=2
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development of Iron Ore & Manganese were carried out as per the proposal in between section line A-A'to N-N'& P-P'to S-S'.Stripping ratio of 1:0.09 maintained in Iron ore.

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 & Manganese	Float ore had been worked out previously.
3b	Quantity of ROM mineral production proposed	626000 tons of Iron Ore 7600 Tons of Mn Ore	626000 tons of Iron Ore 7600 Tons of Mn Ore	-

3c	Recovery of sailable/usable mineral from ROM production	626000 tons of Iron Ore 7600 Tons of Mn Ore	626000 tons of Iron Ore 7600 Tons of Mn Ore	-
3d	Quantity of mineral reject generation	No proposal	NA	-
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 ore	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	Machineries like Excavators-7 No's- 1.0 Cum, Wheel Loaders-5 numbers- 1.5 Cum, Tipper- 16 tonnes-15 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	-
3m	Total area covered under excavation/pits	43.30 ha	43.30 ha	-

3n	Ore to OB ratio for the pit/mine during the year.	1:0.09	1:0.09	-
3o	Total area put in use under different heads at the end of year	Mining area - 43.30 ha Dumping area - 21.40 ha Mineral stocks - 7.70 Infrastructure, roads - 4.43 ha Afforestation - 3.38 Ha Crushing and screening plants - 4.26 Ha Biodiversity area - 10.55 ha	Mining area - 40.23 ha Dumping area - 2.7 ha Infrastructure, roads - 8.64 ha Others- 55.94	-
3p	Production of ROM mineral during the last five year period as applicable	Iron ore 2016-17: 156000 2017-18: 626000 Manganese 2016-17: 1900 2017-18: 7600	Iron ore 2016-17: 156000 2017-18: 626000 Manganese 2016-17: 1900 2017-18: 7600	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	OB Dumping of waste carried out in embarked area	-

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	One dump Within lease. Outside lease- Nil	One dump Within lease. Outside lease- Nil	-
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dump proposed outside the UPL	Actual Dumping area was observed outside the UPL	-
4e	Number of active and alive dumps.	One	One	-
4f	Number of dead dumps.	No proposal	Nil	-
4g	Number of dumps established.	No proposal	Nil	-
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	Toe Wall 346 Mts and 350 Mts Garland	Toe Wall 344 Mts and 380 Mts Garland	-
4j	Number of settling ponds	No proposal	Nil	-
4k	Specific comments of inspecting officer on waste dump management			Waste dump was carried out in the year marked place with 3 no of terracing. Only one OB dump was observed situated outside the UPL

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	-

5b	Area under backfilling of mined out area	No Proposal	Nil	-
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No Proposal	Nil	-
5d	Total area fully reclaimed and rehabilitated	No Proposal	Nil	-
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 Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	-	Submitted on time	-
6b	Area available for rehabilitation (ha) .	No proposal	Nil	-
6c	afforestation done (ha).	No proposal	3.38 Ha	-
6d	No. of saplings planted during the year	500 Nos	800 No	-
6e	Cumulative no .of plants	No proposal	15800 No	-
6f	Any other method of rehabilitation	No proposal	Nil	-
6g	Cost incurred on watch and care during the year	No proposal	Nil	-

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	nil	-
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Work carried out as per R&R	-

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	Grade wise sorting done within the lease area	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanised	Mechanical means used for sorting of iron ore mineral	Dry process crushing & screening plant for size separation
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	-
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	No generation of top soil
8b	Concurrent use or storage of topsoil	No proposal	nil	-
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes, Separate dump for OB proposed	Overburden dumped separately	-
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	-
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Nil	-
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	available	800 saplings were planted during the year 2017-18. 15000 saplings were planted during R&R work.	Afforestation with in ML area 3.38 ha safety zone.
8g	Survival rate	NA	60%	-
8h	Water sprinkling on roads to control airborne dust	Yes, proposed	Yes, 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			Plantations have been done in the lease area. Five water tankers deployed for suppression of dust. Greenery is maintained in & around the lease area.

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-2018 Annual returns submitted up to FY 2017 -18.	AR submitted on 28.06.2018
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager - V. Lowa Raju Geologist - Dr. Ch.VenkataSubbaiah	Manager - V. Lowa Raju Geologist - Dr. Ch.VenkataSubbaiah Mining Engineer: K Vishnu Teja Reddy	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining area - 40.23 ha Dumping area - 2.7 ha Infrastructure , roads - 8.64 ha Others- 55.94	Appears to be correct	
9d	Scrutiny of Annual return on afforestation	800saplings @60% survival ,within mining lease area	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 : OB-100000 Tons Production: 626000 Tons Dump workings: OB& CB=1065000 Tons	Appears to be correct	-
9g	Scrutiny of Annual return on sale value, Ex-Mine price and production cost	Sale value :Rs.3091/ton Ex-Mine price- Rs.2538/ton Cost of production: Rs.1605/ton	Appears to be correct	
9h	Scrutiny of Annual return on fixed assets	Rs. 6180742	Appears to be correct	

9k	Scrutiny of Annual return on mining machineries	Excavators-7 Wheel Loaders- 6 Tipper-20 (16 tonnes) Water Tanker-5 Drill-1	Appears to be correct	-
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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
MCDR17 Rule 11(1)	11/12/2018				
MCDR17 Rule 46(c)	11/12/2018				

Date :

(ARUN KUMAR)

Indian Bureau of Mines