

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

Mining Plan Modification REPORT

Bangalore regional office

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

Mine code : 30KAR03045

- (i) Name of the Inspecting : **278**) **KRISHNENDU CHATTERJEE**
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine : Shri V. Lova Raju, Manager Mines.
Official with
Designation
- (iv) Date of Inspection : 12/02/2019
- (v) Prev.inspection date : 06/09/2017

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 : MANGANESE ORE Associated
IRON ORE Main

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
		MP modif under 17(3) MCR 2016	08/01/2019

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 & 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)	Up to 31.01.2019
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

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	Not applicable	
3f	Quantity of sub grade mineral generation.	No proposal	Nil	
3g	Grade of sub grade mineral generation	No proposal	Not applicable.	
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	

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(manganese 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: 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.	
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 proposal	Not applicable.	
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
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No Proposal	Not applicable.	
5b	Area under backfilling of mined out area	No Proposal	Not applicable	

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No Proposal	Not applicable.
5d	Total area fully reclaimed and rehabilitated	No Proposal	Not applicable.
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.	
6e	Cumulative no .of plants	No proposal	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.
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	Nil

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.	
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.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Not applicable.	
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
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9a	Status of submission of Monthly and Annual returns	Monthly returns submitted up to Mar.- 2019 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. Lova Raju Geologist - Dr. Ch. Venkata Subbaiah	Manager - V. Lova Raju Geologist - Dr. Ch. Venkata Subbaiah 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	Mining area - 37.50 ha Dumping area - 2.7 ha Infrastructure- 0.13 ha Roads - 4.30 ha Green belt- 3.38 ha
9d	Scrutiny of Annual return on afforestation	800 saplings , 60% survival ,within mining lease area	Apperas to be correct
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	No mineral reject generation in 2017-18
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM 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 Excavators-7 Appears to be correct
Annual return on Wheel Loaders-
mining 6
machineries Tipper-20 (16
 tonnes)
 Water Tanker-5
 Drill machine-
 1

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 :**(KRISHNENDU CHATTERJEE)**

Indian Bureau of Mines