

**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/331/BNG

Mine code : 30KAR03011

- (i) Name of the Inspecting : **A101**) **ARUN KUMAR**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri. Sanjay Kumar Kochar, Dy.G.M (Mining), Shri. D So
Official with
Designation
- (iv) Date of Inspection : 27/11/2019
- (v) Prev.inspection date : 11/10/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **DONIMALAI**
- (b) **Registration NO.** : **IBM/270/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **KARNATAKA**
- District : **BELLARY**
- Village : **DONIMALA TOWNSHIP**
- Taluka : **SANDUR**
- Post office : **DONIMALAI TOWNSHIP**
- Pin Code : **583118**
- FAX No. : **08395-274687**
- E-mail : **diommining@nmdc.co.in, kior**
- Phone : **08395-274649,274624, 94498'**
- (f) **Police Station** : **SANDUR**
- (g) **First opening date** : **18/10/1972**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **SRI.SATPATHY, DIRECTOR(PRODUCTION)**
correspondance : **NMDC LTD, MASAB TANK, HYDERABAD,**
: **ANDHRAPRADESH - 500028. P-040- 23538711**
3. (a) **Lease Number** : **KAR0211**
- (b) **Lease area** : **608**
- (c) **Period of lease** : **20**
- (d) **Date of Expiry** : **03/11/2008**
4. **Mineral worked** : **IRON ORE** **Main**

5. Name and Address of the

Lessee : NATIONAL MINERAL DEV. CORPN. LTD
 10-3-311/A, CASTLE HILLS,
 MASAB TANK, HYDERABAD
 TELANGANA
 Phone:3538706
 FAX :3538705

Owner : SATPATHY
 10-3-311/A, KHANIJ BHAVAN,
 CASTLE HILLS, MASAB TANK,
 HYDERABAD HYDERABAD ANDHRA
 PRADESH
 Phone: 04023538752
 FAX : 08395274649

Agent : B SAHOO
 NMDC LIMITED PO DONIMALAI
 BELLARY KARNATAKA
 Phone:
 FAX : 08395274624

Mining Engineer

Name : S.K.JAIN,Full Time
 Qualification : BE MINING
 Appointment/ :
 Termination date

Mining Engineer

Name : C.B.P.SINHA,Full Time
 Qualification : B.E.MINING
 Appointment/ :
 Termination date

Geologist

Name : D.N.SHIVASHANKARAPPA,,Full Time
 Qualification : M.SC GEOLOGY
 Appointment/ : 01/12/2008
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 22 MCR1960	05/06/1989
		Mining Scheme rule 12 MCDR1988	25/07/1995
		Renewal under rule 22 MCR1960	29/05/2000
		Mining Scheme rule 12 MCDR1988	20/10/2004
		Modif.approved Mining Scheme	16/03/2007
		Renewal under rule 22 MCR1960	18/08/2008
		Mining Scheme rule 12 MCDR1988	18/09/2012
		MS modif under MCR 1960	17/02/2014
		MP modif under 17(3) MCR 2016	08/09/2016
		MP modif under 17(3) MCR 2016	16/05/2017

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	14 Boreholes proposed	10 Boreholes, total meterage -1456 Mts at 100 X100 Mts grid interval	4 Boreholes pending as the mines was stopped on 04.11.2018
1b	Exploration over lease area for geological axis 1 or 2	G-1,G-2 & G-3	G-1=51.5 Ha,G-2=55 Ha,G-3=42 Ha. 148.50 Ha is mineralized as per last approved RMP.	26 Ha. of G3 area was proposed, whereas 15 Ha. have been explored further to convert G3 to G1 level.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Exploration proposed to be carried out In house.	Exploration carried in house	Approx. 184 lakhs spent on exploration.
1d	Balance area to be explored to bring Geological axis in 1 or 2	G-1,G-2 & G-3	10.13 Ha from G2 to G1 & 8.23 Ha from G3 to G1 level	Nil
1e	Balance reserve as on 01/04/20	Nil	131 Million Tons	As per AR submitted for FY 2018-19
1f	General remarks of inspecting officers on geology, exploration etc			10 Boreholes, total meterage - 1456 Mts at 100 X100 Mts grid interval were drilled covering 15 Ha. Mine was stopped on 04.11.2018 for non renewal of lease. Matter is pending in the court

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	South Block:N79995-81420,E80390-81065, BMMX: N78960-80080,E80805-81360, 2E: N82235-82450,E80135-80365, 3E:N83775-84755,E79085-79650, 3W:N82235-82450,E80135-80365	South Block:N80000-81600,E80300-81100, BMMX: N79100-80000,E80900-81400, 2E: N82500-82800,E80200-80400, 3 E:N83900-84700,E79200-79600, 3W:N83800-84000,E79200-79300, 2W: N82100-82700,E79900-80200	2w deposit was supposed to be exhausted in 2017-18
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB & mineral proposed	Separate benches in OB & mineral maintained	Max-No of benches: Top Soil-Nil,OB-3 benches & mineral & OB-8 benches
2c	Stripping ratio or ore to OB ratio	1:2.92	1:1.06	BD(t/CuM): Ore-3.415,OB-2.62
2d	Quantity of topsoil generation in m3	No proposal	Nil	Nil
2e	Quantity of overburden generation in m3	1,75,00,000 Tons	21,46,712 Tons	Only 12 % of the proposed development was actually carried out.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Minimum development was carried out in the reporting year. Mine was stopped on 04.11.2018 for non renewal of lease. Matter is pending in the court.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	5 pits proposed	Production was carried out from 6 pits.	2w deposit which was supposed to be exhausted in 2017-18, has been worked in the reporting year.

3b	Quantity of ROM mineral production proposed	6000000 Tons	2012260 Tons	Mine was stopped on 04.11.2018
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Nil
3d	Quantity of mineral reject generation	No proposal	Nil	No generation of mineral reject
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	Not applicable	Nil
3f	Quantity of sub grade mineral generation.	The Sub grade generated was proposed to be blended with high grade	225729 of subgrade mineral was blended with high grade	Blended at mine face & at crushing unit
3g	Grade of sub grade mineral generation	45% -55% Fe	45% -55% Fe	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised method adopted	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	No beneficiation study carried out	Nil
3j	Provision of drilling and blasting in mineral benches	Drilling & Blasting proposed in OB & Ore	Drilling & Blasting was carried out in OB & Ore	Drill hole is done by 6 inch rotary drills
3k	Provision of mining machineries in mineral benches	Deployment of machineries proposed	HEMM deployed for extraction of ore & OB	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height-12 Mts ,Bench width-12-15 Mts	At many places the bench height appeared to be more and width less than the proposal	Wash off due to heavy rains and mine has not been working since Nov.2018.
3m	Total area covered under excavation/pits	212.90 Ha at the end of plan period	224.410 Ha as per AR submitted	mine has not been working since Nov.2018.

3n	Ore to OB ratio for the pit/mine during the year.	1:2.92	1:1.06	Nil
3o	Total area put in use under different heads at the end of year	Pits : 212.90 Ha.Dumps:169.5 0 Ha.,Infrastruc ture-6.5 Ha, Roads : 21.00 Ha.Tailing Pond-13.15 Ha,Green belt- 13.42 Ha,afforestati on-133.91 Ha at the end of plan period	- Covered under current (O/C) workings: 224.410 Ha,-Used for waste disposal :121.820 Ha,- Area reclaimed/Rehabilitated: 8.03 Ha,- Occupied by plants, buildings, residential, welfare buildings & roads : 27.5 Ha.,- Other purposes (Afforestation, tailing dam, safety zone, unused area) : 223.81 Ha.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2014-15: 5000000 2015-16: 4500000 2016-17: 6000000 2017- 18:6000000 2018- 19:6000000 (in tonnes)	2014-15: 5249000 2015-16: 6031000 2016-17: 6009206 2017-18:5999907 2018-19:2012260 (in tonnes)	mine has not been working since Nov.2018.
3q	General remarks of inspecting officers on method of mining etc.			Opencast mining with drilling & blasting adopted. No working since 04.11.2018 for non renewal of lease. Matter is pending in the court.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of OB proposed in dumps AD1,AD3,PD1,PD2,PD3	Actual dumping was carried in dump AD2	Nil

4b	Location of topsoil, OB and mineral reject dumps	AD1 - N 82800-83800, E 79400-80000 AD3 - N 80400-81900, E 79800-80600 PD1 - N 80200-81000, E 81100-81800 PD2 - N 80900-81500, E 79700-80200 PD3 - N 84250-84900, E 78800-79100	AD2 - N 80300 - 81800, E 80600 - 81700	-
4c	Number of dumps within lease area and outside of lease area	With Mining Lease-08 Dumps, Outside ML area- Nil	With Mining Lease-08 Dumps, Outside ML area-	-
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	All dumps proposed outside UPL	All dumps are outside UPL	-
4e	Number of active and alive dumps.	03 No of active & alive dumps proposed	Same as proposed	-
4f	Number of dead dumps.	05 Dumps	Same as proposed. Five inactive dead dump present in the area	-
4g	Number of dumps established.	05 dumps	05 dumps	Stabilized by plantation & coir matting
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall and garland drain proposed all along dumps	Partially constructed retaining wall & GD in majority of the dumps as proposed	Mine stopped on 04.11.2018
4i	Length of Retaining wall or garland drain all along dumps	1260 mt	704 m	Mine stopped on 04.11.2018
4j	Number of settling ponds	39500 Cu M	Brushwood check dam proposed is not constructed	-
4k	Specific comments of inspecting officer on waste dump management			No working since 04.11.2018 for non renewal of lease. Matter is pending in the court.

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.	Backfilling proposed on full extraction of mineral	Backfilling was carried out in BF3 exhausted pit	-
5b	Area under backfilling of mined out area	17.71 Ha.	8.03 Ha is reported as backfilled	1704410 Tons of material backfilled as per the returns submitted
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	No generation of top soil	-
5d	Total area fully reclaimed and rehabilitated	8.3 Ha	8.3 Ha	Area backfilled & stabilized, south block behind canteen
5e	General remarks of inspecting officers on backfilling and reclamation etc.			No working since 04.11.2018 for non renewal of lease. Matter is pending in the court.

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).	To be submitted by 1st July every year	PMCP report submitted in time	AR submitted on 09.11.2019
6b	Area available for rehabilitation (ha) .	No proposal	Nil	-
6c	afforestation done (ha).	25Ha.	18 Ha.	-
6d	No. of saplings planted during the year	40000 (Within mine lease)	47000 (Within mine lease)	-
6e	Cumulative no .of plants	145000 No of saplings	4.76 lakhs (Within mine lease) 3.23 lakhs (Outside mining lease)	-

6f	Any other method of rehabilitation	Backfilling proposed	Backfilling carried out	-
6g	Cost incurred on watch and care during the year	129.94 Lakhs	28.38 lakhs	Strengthening and Gap plantation
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	BF3 -Area 17.9 Ha.Volume 4.67 M m3	BF3 -Area 17.9 Ha.Volume 4.67 M m3	-
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Backfilling by 3.0 MT of waste proposed	Backfilling by 1.7 MT of waste done	-
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	Afforestation carried ,2000 saplings planted	-
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No proposal	1.00 Ha covered by plantation	-

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)	monitoring proposed in core zone & buffer zone	monitoring carried out for air, water, noise & soil in core zone & buffer zone	Monitoring carried out by Pragati Lab, Hyderabad
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP activities was carried out in line with the proposal .No working since 04.11.2018 for non renewal of lease. Matter is pending in the court.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	All the blasted material was proposed to be sent to crusher & thereafter screening	Lump Ore and Fine Ore based on size is sorted out	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical method proposed	Lump Ore and Fine Ore based on size is sorted out mechanically by mechanized method of screening.	-
7c	Different grade of mineral sorted out at mines.	Lump:+10 -40mm & Fines -10mm proposed	Mineral sorted as per proposal	-
7d	Any beneficiation process at mines	No proposal	No beneficiation process adopted at mines	Sizing & screening done

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral conservation & mineral beneficiation is taken care.No working since 04.11.2018 for non renewal of lease. Matter is pending in the court
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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)	Separate dumps proposed	Separate dumps for overburden maintained	-
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfilling proposed	Backfilling carried out after exhausting the mineral in BF3	8.03 Ha is reported as backfilled
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Backfilling proposed to restore the land affected by mining operations	Backfilling was in progress In BF3 to restore the land affected by mining operations	-
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Available	Plantation carried out in all. 4.76 lakhs (within lease) & 3.23 lakhs (outside lease)	-
8g	Survival rate	80% survival rate proposed	80% survival rate	As per annual returns

8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed on haul roads	Water sprinkling was carried out on haul roads to control airborne dust	-
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in and around the mine was maintained. Huge plantation done over the years

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to Oct' 2019 A.R. Submitted up to 2018-2019	AR submitted on 29.06.2019	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Shri Sanjay Kumar Kochar (Mining Engineer) Shri D Somasekhar Reddy (Geologist) Shri Suresh Kumar Jain (Mines Manager)	Mining Engineer & Geologist were present during the course of inspection	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	- Covered under current (O/C) workings: 224.410 Ha -Used for waste disposal :121.820 Ha -Area reclaimed/Rehabilitated: 8.03 Ha - Occupied by plants, buildings, residential, welfare buildings & roads : 27.5 Ha. - Other purposes (Afforestation , tailing dam, safety zone, unused area) : 223.81 Ha.	Appears to be correct
9d	Scrutiny of Annual return on afforestation	Trees planted inside lease boundary is 47000 with 85% survival rate.	Apperas 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 Stock: OS- 127019 Tons, Production- 2012260 Tons, CS-134745.470 Tons	Appears to be correct

- 9g Scrutiny of Ex Mine Price: Appears to be correct
Annual return on Fines 2872.67
sale value, Ex. Rs/Ton
Mine price and Lump 3463.66
production cost Rs/Ton
Sale value :
Fines 2872.67
Rs/Ton
Lump 3463.66
Rs/Ton
Cost of
production:
Rs.2121.81 per
Ton
- 9h Scrutiny of Rs. Appears to be correct
Annual return on 154,00,77,554
fixed assets including
land,
building,
machinery,
plant and
transportation
machinery.
- 9k Scrutiny of Excavator - 9 Appears to be correct
Annual return on nos.
mining Dumper 100T- 9
machineries nos.
Drills -6 nos.
Wheel loader -
3 nos.
Motor Grader -
2 nos.
Dozer - 8 nos.
-

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

Date :**(ARUN KUMAR)**

Indian Bureau of Mines