

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

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/331/BNG

Mine code : 30KAR03011

- (i) Name of the Inspecting : **S006**) **SURESH PRASAD**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri. S S Narayan Murthy, Mines Manager & Shri. D Som
Official with
Designation
- (iv) Date of Inspection : 15/03/2022
- (v) Prev.inspection date : 05/09/2017

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
		MP review under 17(1) MCR 2016	03/12/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal.	Nil.	
1b	Exploration over lease area for geological axis 1 or 2	No proposal.	Nil.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal.	Not Applicable.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	27.58 Ha (5.78 Ha from G3 to G2 & 22.0 Ha from G2 to G1)	27.58 Ha (5.78 Ha from G3 to G2 & 22.00 Ha from G2 to G1)	
1e	Balance reserve as on 01/04/20		131.19 Million Tonnes (as on 01.04.2021)	
1f	General remarks of inspecting officers on geology, exploration etc			As observed during the inspection, it has advised to the lessee to explore some more depth of exploration for better confirmation of mineral deposit in some places.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	Location of development proposed: 2W pit: N 1665730 to 1665920 E 674450 to 674790 3E pit: N 1667550 to 1668200 E 673600 to 674050 SB pit: N 1663660 to 1665290 E 674900 to 675780	Development carried out: 2W pit: N:1665740 to 1666010 E:674470 to 674765 3E pit: N:1667670 to 1668090 E:673830 to 674055 SB pit: N:1664660 to 1665300 E:674890 to 675320	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB and mineral proposed.	Separate benches in OB and mineral maintained.	Max. no. of benches: Topsoil - Nil, OB - 8 benches & mineral -9 benches.
2c	Stripping ratio or ore to OB ratio	1:4.70	1:0.16	Not achieving the proposed stripping ratio due to less development work as carried out. Thus, Violation issued under rule 11(1) of MCDR, 2017.
2d	Quantity of topsoil generation in m3	No proposal.	Nil.	
2e	Quantity of overburden generation in m3	9451892 tonnes	86136 tones	Not achieved, the proposed stripping ratio due to less development work as carried out. Thus, Violation issued under rule 11(1).
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Not achieved, the proposed stripping ratio due to less development work as carried out. Thus, Violation issued under rule 11(1) of MCDR, 2017.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	5 pits proposed.	Production was carried out from 3 pits.	
3b	Quantity of ROM mineral production proposed	2007353 Tonnes	554463 Tonnes	
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Nil.
3d	Quantity of mineral reject generation	No proposal.	Nil.	
3e	Grade of mineral rejects generation and threshold value declared.	No proposal.	Nil.	Threshold value >45% Fe Normal Ore >35% Fe Siliceous Ore.
3f	Quantity of sub grade mineral generation.	No proposal.	Nil.	
3g	Grade of sub grade mineral generation	35% Fe to 55% Fe	35% Fe to 55 % Fe	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised method proposed for segregating from ROM.	Mechanised method adopted for segregating from ROM.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal.	No such beneficiation study carried out.	-
3j	Provision of drilling and blasting in mineral benches	Drilling & blasting proposed : Spacing -3.5-5.5 (depending on ore type) Burden ; 2.5 to 5.0 (depending on ore type) Ave. Bench Height :12	Drilling & blasting carried out : Spacing -3.5-5.5 (depending on ore type) Burden ; 2.5 to 5.0 (depending on ore type) Ave. Bench Height :12	-
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	Proposed maximum bench height 12 m & minimum bench width 12m to 15m.	Bench width & height not maintained at places of bench 6th, 7th & 8th of south block.	Violation issued under a rule 11(1) of MCDR, 2017.
3m	Total area covered under excavation/pits	Mining 224.41 Ha.	Mining 224.41 Ha.	
3n	Ore to OB ratio for the pit/mine during the year.	1:4.70	1:0.16	Violation issued.
3o	Total area put in use under different heads at the end of year	383.49 Ha	Mining 224.41 Ha. Reclaimed/Rehabilitated 8.03 Ha. Used for waste disposal 121.82 Ha. Occupied by plant, buildings, residential, welfare buildings & roads 27.5 Ha. Others 223.81 Ha	
3p	Production of ROM mineral during the last five year period as applicable	2016-17: 6000000 2017-18: 6000000 2018-19: 6000000 2019-20: 6000000 2020-21: 2000000	2016-17: 6009206 2017-18: 5999907 2018-19: 2012260 2019-20: Nil 2020-21: 554463	
3q	General remarks of inspecting officers on method of mining etc.			Observed that benches are not maintained as per the approved geometry at places of south blocks. Thus, violation issued.

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of OB proposed.	Actual dumping was carried out in dump AD2.	-

4b	Location of topsoil, OB and mineral reject dumps	1).Easting 673900-674600 Northing 1666400-1667500 2).Easting 675400 -676300 Northing 1666400-1665200	1).Easting 674000-674150 Northing 1666550-1666715	-
4c	Number of dumps within lease area and outside of lease area	Proposed WML : 03-Active dumps & 05 - In active dumps, OML: Nil.	WML : 03-Active dumps & 05 - In active dumps, OML: Nil.	All dumps are within lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	All OB dumps are proposed outside UPL.	All OB dumps are maintained outside UPL.	-
4e	Number of active and alive dumps.	03 Nos. of active & alive dumps proposed.	Same as proposed.	-
4f	Number of dead dumps.	05 Dumps.	Five inactive dead dumps are present in the area.	-
4g	Number of dumps established.	No proposal during the assessment year.	Nil.	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 & garland drain in majority of the dump as proposed.	-
4i	Length of Retaining wall or garland drain all along dumps	3060 m	1800 m	Less achieved as the development quantity has not achieved as approved. Hence, violation issued.
4j	Number of settling ponds	No proposal.	Nil.	
4k	Specific comments of inspecting officer on waste dump management			The development quantity has not achieved as proposed; hence violation issued.

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.	Yes.	Backfilling was carried out in mineral exhausted pit.	
5b	Area under backfilling of mined out area	18.70 Ha.	8.70 Ha. is reported as backfilled.	86136 Tons of material backfilled as per the AR submitted for FY 2020-21.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal.	No generation of topsoil.	-
5d	Total area fully reclaimed and rehabilitated	No proposal	8.70 Ha.	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Not achieved the proposed overburden quantity; hence backfilling area observed to be lagging.

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).	YES.	PMCP report submitted in time.	
6b	Area available for rehabilitation (ha) .	No proposal.	Not applicable.	86136 Tons of material backfilled as per the AR submitted for FY 2020-21.
6c	afforestation done (ha).	No proposal.	Nil.	-
6d	No. of saplings planted during the year	5000 Nos.(WML)	Nil.	-
6e	Cumulative no .of plants	150000 Nos. (WML)	Nil.	-

6f	Any other method of rehabilitation	No proposal.	Nil.	
6g	Cost incurred on watch and care during the year	No proposal.	Not applicable.	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal.	Not applicable.	86136 Tons of material backfilled as per the AR submitted for FY 2020-21
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 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.	Not applicable.	-
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.	Nil.	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Monitoring proposed in core zone and buffer zone.	Monitoring carried out for air, water, noise & buffer zone.	Monitoring carried out by M/s. Pragati Lab, Hyderabad.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Backfilling are mined out pits after exhaustion of minerals are proposed and are under process towards the PMCP compliances.

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 Fines ore based on the size is sorted out.	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical method proposed.	Lump ore and Fines ore based on the size is sorted out mechanically by mechanized method of screening.	-
7c	Different grade of mineral sorted out at mines.	No proposal.	Different grade of mineral sorted (Fe) at the mine: Below 55%, 55% - 58%, 58% - 60%, 60% - 62%, 62% - 65%, & above 65%	-
7d	Any beneficiation process at mines	No proposal.	No such beneficiation process carried out at the mine.	Sizing & screening done.

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Lump ore and Fines ore based on the size is sorted out mechanically by mechanized method of screening.
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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 topsoil.
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 overburden maintained.	-
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal.	Backfilling carried at mineral exhausted pit.	-
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal.	Backfilling is under progress to restore the land affected by mining operations.	-
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No proposal.	Nil.	
8g	Survival rate	85 %	85%	

8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed o haul roads.	Observed during the inspection that adequate measures for dust suppression on haul roads are not taken properly in the mine.	Violation issued under rule 40 of MCDR, 2017.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in and around the mine was observed to be maintained in some locations. However, some more attention is required to develop the other areas as well.

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 March 2020 submitted on 12.04.2021. A.R. for the year 2020-21 submitted on 01.07.2021.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Sri SURAJ KUMAR, Geologist: Sri D SOMASEKHAR REDDY, Manager: Sri S.S.NARAYANA MURTHY	Appears to be correct.	-

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) workings: 224.41 Ha. Used for waste disposal: 121.82 Ha. Area reclaimed/rehabilitated: 8.03 Ha. Occupied by plant, buildings, residential, welfare buildings & roads: 27.5 Ha. Other Purpose (Afforestation , Tailing Dam, Safety Zone and unused area: 223.81 Ha.	Appears to be correct.	-
9d	Scrutiny of Annual return on afforestation	Nil.	-	As the mine reopen on 18.02,2021 of the year 2020-21.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil.	Not applicable.	

9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM- Opening Stock: Tons, Production: Tons, Closing Stock: Tons, Grade-wise Ore- Lumps: Below 55% 3150 Tons, 55% to 58% 25765 Tons, 58% to 60% 44284 Tons, 60% to 62% 59659 Tons, 62% to 65% 28843 Tons. Fines: Below 55% - 10019 Tons, 55% to 58% - 101752 Tons, 58% to 60% - 155048 Tons, 60% to 62% - 111119 Tons, 62% to 65%- 12601 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:- 1903.75Rs./Ton. Ex. Mine Price: Lumps:- Below 55% 1240 Rs./Tons, 55% to 58% 4140.90 Rs./Tons, 58% to 60% 4713.43 Rs./Tons, 60% to 62% 5165.19 Rs./Tons & 62% to 65% 5659.50 Rs./Tons. Fines:- Below 55% 1039.00 Rs./Tons, 55% to 58% 2969.73 Rs./Tons, 58% to 60% 3618.70 Rs./Tons, 60% to 62% 4016.91 Rs./Tons & 62% to 65% 4396.45 Rs./Tons.	As per annual returns for the year 2020-21 the DMF, NMET & Royalty have not been furnished and accounted for arriving at the cost of production	Violation issued under rule 45(7) of MCDR 017.
9h	Scrutiny of Annual return on fixed assets	Rs. 1857590977 including land, building, plant and machinery.	Appears to be correct.	
9k	Scrutiny of Annual return on mining machineries	Excavator - 9 Nos. Dumper - 9 Nos. Drills - 6 Nos. Wheel loader - 3 Nos. Motor Grader - 2 Nos. Dozer - 7 Nos. Crane - 6 Nos.	Appears to be correct.	

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)	06/04/2022			
MCDR17	Rule 40	06/04/2022			
	Rule 45(7)	06/04/2022			

Date :**(SURESH PRASAD)**

Indian Bureau of Mines