

## MCDR INSPECTION REPORT 2021-22

### **General:**

Sl.No.	Particulars	Details
1	Name of the Mine	Bailadila Iron ore Mine, Deposit-14NMZ Mining Lease.
2	Date of Inspection:	26.12.2022
3	Name of Inspecting Officer	Sri. D. Upadhyay, Sr.ACOM
4	Name of official accompanying inspection	Sri. S.K Kochar, GM/Mines Manager Sri. Anil Kumar, DGM(Mining)/HoD Mines
5	Last date of Inspection & Officer	09.12.2021, Rudra Narayan Mishra, Sr. Mining Geologist
6	Total Lease Area (Ha) with breakup of non-forest and forest land	506.742 Hect, Completely Forest Diverted:242.624 Ha
7	Mine code	30MPR02002
8	IBM Registration Number under rule 45 of MCDR, 1988/2017	IBM/270/2011
9	Name of the Lease, Address, Phone, email, and fax number	M/s NMDC Ltd,10-3-311/A, Castle Hills Masab Tank,Hyderabad-500028,T.S Email: dirprod@nmdc.co.in Fax no: 040-27172569, Phone 040-23538713-21,23538723 & 23538767
10	Village	Kirandul
11	Taluka/Mandal	Bade Bachel,
12	District	South Bastar Dantewada
13	Pin code	494556
14	State	Chhattisgarh
15	Post Office	Kirandul
16	Nearest Police Station	Kirandul
17	Nearest Railway Station	Kirandul
18	Date of Grant of Mining Lease	07.12.1965
19	Date of Execution	07.12.1965
20	Weekly day of rest	Wednesday
21	Date of opening of Mine	Oct-1987
22	Date of First Renewal, if applicable and its period & expiry	F:3-124/94/12/2, dated 29.06.2002 Period-20years, Expiry-06.12.2015
23	Date of Second Renewal, if applicable and its period & expiry	As per section 8(A)8, the period of mining leases, including existing mining leases, of Government companies or corporations shall be such as may be prescribed by the Central Government. Accordingly, the lease period of Deposit-14 ML is extended till 11.09.2035 vide Govt of Chhattisgarh order No.: F:4-41/201/12 dated 17.12.2019
24	Date of submission of renewal application if Mining Operations are continuing under deemed extension	NA
25	Name of the Nominated Owner with Address, phone, email, fax number and	Shri Dilip Kumar Mohanty Director (Production)

	date of appointment	NMDC Ltd., Hyderabad - 500 028. dirprod@nmdc.co.in 040-23538706/07 DOA:08/10/2021
26	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri Vinay Kumar, Chief General Manager, NMDC Ltd, Kirandul, B.I.O.M. Kirandul Complex, Dantewada PIN-494556, Chhattisgarh, vinaykumar@nmdc.co.in Fax no: 07857-255227, Phone 07857-255222, Mobile No.: 9449871010 DOA:31.07.2022
27	Name of the Mine Manager with Address, phone, email, fax number and date of appointment in mines	Shri S.K Kochar, General Manager (Prod), NMDC Ltd, Kirandul, B.I.O.M. Kirandul Complex, Dantewada PIN-494556, Chhattisgarh, Fax no: 07857-255226, Phone 07857-255232 Mobile No.: 9449871025 DOA:31/07/2022
28	Name of the Mining Engineer, Qualification and total experience with address, phone, email, fax number and date of appointment in the mine	Shri Dhiren Bhusan, Dy. General Manager, B.Tech (Mining) FCC (R), Metal Experience: 22Years Approximately NMDC Ltd, Kirandul, B.I.O.M. Kirandul Complex, Dantewada Email: DHIRENBHUSHAN@nmdc.co.in Phone No.: 9449871008 PIN-494556, Chhattisgarh, DOA:22.02.2022
29	Whether Geologist and Mining Engineer appointment in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Yes
30	Date of Approval of Mine Plan/Modified Mine Plan with five-year period and specific condition in approval letter, if any.	Dantewada/Fe/MP-1216/2019/Raipur/547, Dt: 11.12.2019 FY:2020-21 to 2024-25
31	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five- year period and specific condition in approval letter, if any.	NA
32	Mineral(s) granted in lease and approved for Mining	Iron Ore
33	Method of Mining (Opencast, Underground)	Opencast
34	Category (Fully Mechanized, Others or Manual)	Fully Mechanized
35	Captive/Non-Captive	Non-Captive
36	Present EC Status	J-11015/483/2007-IA. II(M),01.12.2021
37	Status of Financial Assurance	Valid Till 01.04.2020-31.03.2025

## Scientific Mining: Compliance of proposals of approved Mining Plan/Review of Mining Plan:

### 1.0 Exploration:

S.N.	Item	Proposals (2021-22)	Actual Work (2021-22)	Remarks
1a	Backlog of previous year Proposals	47 nos. of Bore Holes of total 1665 meterage drilling.	26 nos. of Bore Holes of total 1603 meterage drilling.	Due to want of forest clearance proposed bore holes not completed.
1b	Exploration over lease area for Geological axis 1 or 2.	G1 level	G1 level	G1 level of exploration.
1c	Exploration Agency & Expenditure in Lakh Rupees during the year	Not specified.	In house drilling, Cost Expenditure Rs 132.35 Lakh	In house drilling, Cost Expenditure Rs 132.35 Lakh
1d	Balance area to be explored to bring Geological axis in 1 or 2.	46.12ha	About 26.52 ha area covered under G1 level of exploration.	About 26.52 ha area covered under G1 level of exploration.
1e	Balance reserves as on 01.04.2022	As per approved MP 231.776 mil.Tons	As on 01.04.2022 217.42 million tons	
1f	General remarks of Inspecting officer on geology, exploration etc.	About 118.91ha lease area is explored under G1 level of exploration.		

## **2.0 Development:**

S.N.	Item	Proposals (2021-22)	Actual Work (2021-22)	Remarks
2a	Location of Development w.r.t. lease area	E-2059400 – 2060815 N-524885-525450	E-2059400 – 2060815 N-524885-525450	Development is carried out within approved proposal
2b	Separate benches in topsoil overburden and mineral (Rule 15)	Separate benches in OB and Ore	Separate benches in OB and Ore are maintained as per proposal.	Separate benches in OB and Ore are maintained.
2c	Stripping ratio or ore to OB ratio	1:0.09cu.m/T	1:0.05	Due to irregular nature of deposit SR varies.
2d	Quantity of topsoil generation in m <sup>3</sup>	Not proposed	Nil	No top soil proposed.
2e	Quantity of overburden generation in m <sup>3</sup>	518519 m <sup>3</sup>	296297 m <sup>3</sup>	Due to less ROM production OB generated less.
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	Development is carried out within approved proposal		

## **3.0 Exploitation:**

S.N.	Item	Proposals (2021-22)	Actual Work (2021-22)	Remarks
3a	Number of pits proposed for	01	01	Working is in single

	production			pit as proposed.
3b	Quantity of ROM mineral production proposed	55,00,000T	5392246T	ROM production varies as per market demand.
3c	Recovery of Salable/usable mineral from ROM production	5480000T	5372246T	
3d	Quantity of mineral reject generation	NA	NA	Mineral reject is blended with High grade ore.
3e	Grade of mineral reject generation and threshold value declared	Fe = 52.00-55.00 & Threshold=45%Fe	Fe = 52.00-55.00 & Threshold=45%Fe	Fe = 52.00-55.00 & Threshold=45%Fe
3f	Quantity of sub-grade mineral generation	20000T	20000T	Mineral reject is blended with High grade ore.
3g	Grade of sub-grade mineral generation	Fe = 52.00-55.00 & Threshold=45%Fe	Fe = 52.00-55.00 & Threshold=45%Fe	Fe = 52.00-55.00 & Threshold=45%Fe
3h	Manual/Mechanized method adopted for segregation from ROM	Mechanized method	Mechanized method	Mechanized method
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Not proposed.	Dry crushing and screening is practiced.	Dry crushing and screening is practiced.
3j	Provision of drilling & blasting in mineral benches	Drilling and blasting is proposed,	Drilling and blasting is carried out as per proposal.	Drilling and blasting is carried out as per proposal.
3k	Provision of mining machineries in mineral benches	Shovel and dumper combination	Shovel and dumper combination	Excavator, Loader and Dumper are equipped to winning out the mineral.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	Bench height is suitably matched with the excavator.
3m	Total area covered under excavation /pits	132.488 Ha during plan period.	80.250 Ha as on 01.04.2022	80.250 Ha as on 01.04.2022
3n	Ore to OB ratio for the pit/mine during the year	1:0.09	1:0.05	Due to irregular nature of deposit SR varies.
3o	Total area put in use under different heads at the end of year	506.742ha during plan period.	242.624ha.	242.624ha. area put in use under different heads at the end of year
3p	Production of ROM mineral during last five-years period, as Applicable (tonne)	2017-18: 5500000	4672228	ROM production is within approved proposal.
		2018-19: 5500000	4439491	
		2019-20: 5500000	4375680	
		2020-21: 5500000	4583943	

		2021-22: 5500000	5392246	
3q	General remarks of inspecting officer on method of mining etc	The ROM production has been carried out from single pit as per proposal.		

#### **4.0 Solid Waste Management-Dumping:**

S.N.	Item	Proposals (2021-22)	Actual Work (2021-22)	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32,33)	Separate dumping of OB. Top soil not proposed.	Separate dumping of OB is maintained. Top soil not proposed.	Separate dumping of OB is maintained. Top soil not proposed.
4b	Location of topsoil, OB & mineral reject dumps	Dump: E - 525216 - 525192 N -2059351 - 2059467	E -525216 - 525192 N -2059351 - 2059467	As per proposal.
4c	Number of Dumps within lease area and outside lease area	01dump.	01dump	01dump
4d	Location of Dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL	Outside UPL	Outside UPL
4e	Number of Active & Alive dumps	01dump.	01dump	01dump
4f	Number of dead dumps	Not Proposed	Nil.	Nil.
4g	Number of dumps established	Not Proposed	Nil.	Nil.
4h	Whether Retaining wall or garland drain all along dumps are there	Yes	Yes	Retaining wall and garland drain are maintained.
4i	Length of Retaining wall or garland drain all along dump	150m Retaining wall	150m Retaining wall	150m Retaining wall maintained.
4j	Number of settling ponds	01	01	01settling pond
4k	Specific commends of inspecting officer on waste dump management	Separate dumping of OB is maintained. Retaining wall and garland drain are maintained along the dump.		

#### **5.0 Solid Waste Management-Backfilling:**

S.N.	Item	Proposals (2021-22)	Actual Work (2021-22)	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Not proposed	Nil	Nil
5b	Area under backfilling of mined out area	Not proposed	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mined	Not proposed	Nil	Nil

	out area (Rule 32)			
5d	Total area fully reclaimed & rehabilitated	Not proposed	Nil	Nil
5e	General remarks of inspecting officer on backfilling, reclamation etc	Area is not matured for reclamation and rehabilitation.		

### **6.0 Progressive Mine Closer Plan:**

S. N.	Item	Proposals (2021-22)	Actual Work (2021-22)	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly-Rule 26 (2)	Yes,30.06.2022		Annual report on PMCP submitted
6b	Management of worked/mined out benches			No bench matured
	Area available for rehabilitation (Ha)	Not proposed	Nil	Nil
	Afforestation done (ha)	Not proposed	Nil	Nil
	No. of saplings planted during the year	Not proposed	Nil	Nil
	Cumulative no. of plants	Not proposed	Nil	Nil
	Any other specific method of rehabilitation	Not proposed	Nil	Nil
	Cost incurred on watch & care during the year	Not specified.	About 7.5 lakh Cost incurred on watch & care during the year.	About 7.5 lakh Cost incurred on watch & care during the year.
6c	Compliance on reclamation and rehabilitation by backfilling Voids available for backfilling (L*B*D) Void filled by waste/tailings Afforestation on the backfilling Rehabilitation by making water reservoir Any other specific means	Not proposed	Nil	Nil
6d	Compliance of Rehabilitation of waste land within lease i. Afforestation ii. Area rehabilitation (ha) iii. Method of rehabilitation	2000 nos. of plantation in 1.0ha area	2500 nos. of plantation in 1.0ha area	2500 nos. of plantation in 1.0ha area
6e	Compliance of Environment monitoring (core zone & buffer zone)	Quarterly monitoring	Quarterly monitoring	Quarterly monitoring
6f	General remarks of inspecting officer on PMCP compliance & progressive closer operations	Area is not matured for reclamation and rehabilitation. Plantation is carried out as per proposal.		

### **7.0 Mineral Conservation:**

S.N.	Item	Proposals (2021-22)	Actual Work (2021-22)	Remarks
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7a	ROM mineral dispatch or grade wise sorting within lease area	Grade wise sorting	Grade wise sorting	Grade wise sorting is being practiced.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical	Mechanical
7c	Different grade of mineral sort out at mine	+45% Fe	+45% Fe	+45% Fe
7d	Any beneficiation process at mines	Not proposed	Dry crushing and screening is practiced.	Dry crushing and screening is practiced.
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Grade wise sorting is being practiced by crushing and screening.		

## **8.0 Environment:**

S.N.	Item	Proposals (2021-22)	Actual Work (2021-22)	Remarks
8a	Separate removal and utilization of topsoil (Rule32)	Not proposed	Nil.	Nil.
8b	Concurrent use or storage of topsoil	Not proposed	Nil.	Nil.
8c	Separate dumps for overburden waste rock, rejects and fines (Rule 33)	Separate dumping of OB.	Separate dumping of OB is maintained.	Separate dumping of OB is maintained..
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not proposed	Area is not matured for reclamation and rehabilitation.	Area is not matured for reclamation and rehabilitation.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not proposed	Area is not matured for reclamation and rehabilitation.	Area is not matured for reclamation and rehabilitation.
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	2000 nos. of plantation in 1.0ha area	3500 nos. of plantation in 1.0ha area	3500 nos. of plantation in 1.0ha area
8g	Survival rate	80%	80%	Survival rate 80%
8h	Water sprinkling on roads to control airborne dust	Water tanker	Water tanker used to control airborne dust	Water tanker used to control airborne dust
8i	General remarks of inspecting officer on aesthetic beauty in and around mine area	Aesthetic beauty in and around mines area is maintained by plantation.		

## 9.0 Compliance of Rule 45:

SN	Item	Comments		Remarks
9a	Status of submission of monthly and Annual returns	AR & MR submitted regularly		AR & MR submitted regularly
SN	Item	Details Given in A.R.	Observation of I/Officer	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer-17, Geologist-04 Surveyor-02 Administrative and technical Staff-83	Found in order.	Found in order.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Under O/c-80.250 Ha, Infrastructure-159.377 Ha, Safety Zone-2.997 Ha	Found in order.	Found in order.
9d	Scrutiny of Annual return on afforestation	2500	Found in order.	Found in order.
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	20,000, Fe=52%	Found in order.	Found in order.
9f	Scrutiny of Annual return on ROM stock and/or grade ore	RoM=51117 Lump Ore: 62-65=5936 +65= 35436 Fine Ore: 60-62 = 7573 62-65 = 197825 +65 = 40086	Found in order.	Found in order.
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production costs	Ex mine price: Lump: 62-65=6437.46 +65=7166 Fines: 60-62 = 5072.68 62-65=5605.50 +65 = 4838.86 Cost of Production=2776.83	Found in order.	Found in order.
9i	Scrutiny of Annual return on Fixed assets	Fixed assets Rs 1006380280	Fixed assets Rs 1006380280	Fixed assets Rs 1006380280
9k	Scrutiny of Annual return on mining Machineries	Provided in sec 5of AR	Found in order.	Found in order.

**10-** Details of violations observed during inspection and the compliance status.

No violations are pointed out during inspection.

Date: 08/02/2023

Signature:  
Name: (D. UPADHYAY)  
Designation: Sr. ACOM