

MCDR INSPECTION REPORT INSPECTED ON 23.08.2021

General

Sl. No.	Particular	Details
1	Name of Mine	Deposit 5
2	Total Lease Area (Ha) with breakup of non-forest and forest land	540.05 Ha of forest land
3	Mine code	30MPR02005
4	IBM Registration Number under rule 99 of MCDR, 1999	IBM/270/2011
5	Name of the lessee, Address, phone, email and fax number	NMDC Ltd, 10-3-311/A, Castle hills, Masab tank, Hyderabad Ph.no: 040-23538704 e-mail: nmdchyd@hd1.vsnl.net fax:040-23538705
6	Village	Bacheli
7	Taluka/Mandal	Bacheli
8	District	South Bastar-Dantewada
9	Pincode	494553
10	State	Chhattisgarh
11	Post Office	Bacheli
12	Nearest Police Station	Bacheli
13	Nearest Railway Station	Bacheli
14	Date of Grant of Mining Lease	11.02.1965
15	Date of Execution	11.09.1965
16	Date of opening of Mine	27.01.1968
17	Date of first Renewal, if applicable and its period & expiry	11.09.1995 20 yrs& 10.09.2015
18	Date of Second Renewal, if applicable and its period & expiry	10.01.2020 20 yrs& 10.09.2035
19	Date of submission of renewal application if Mining Operation are continuing under deemed extension	NA
20	Name of Nominated Owner with Address, phone, email, fax number and date of appointment	P.K. SATPATHY Director Production NMDC Ltd, 10-3-311/A, Castle hills, Masab tank, Hyderabad Ph.no: 040-23538704 e-mail: nmdchyd@hd1.vsnl.net fax:040-23538705 Date of appointment:13.12.2014
21	Name of the Mines Agent with Address, phone, email, fax number and date of appointment	P.K. Majumdar Chief General Manager BIOM, Bacheli complex, Ph.no: 07857 230323 e-mail:pranab@nmdc.co.in fax: 07857 - 230423 dateof appointment:28.06.2021
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines.	K.C.Gupta General Manager (Min) BIOM, Bacheli complex, Ph.no: 07857 230223 e-mail:guptakc@nmdc.co.in fax: 07857 230423 date of appointment:04.12.2019
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, e mail, fax number and date of appointment in mine	S.N. SINGH Qualification: M.Tech Total experience:30years BIOM, Bacheli complex Ph.no:09480849212 e-mail: snsingh@nmdc.co.in date of appointment: 18-04-2019
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57 of MCDR, 2017.	Dr. DEBASISH MONDAL Qualification: M.Sc, Ph.D Total experience: 11 years BIOM Bacheli Complex Mo.no. 9479094709 Email: dmondal@nmdc.co.in Date of appointment: 08.07.2011
25	Date of approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	16.12.2019
26	Date of approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	NA
27	Mineral(s) granted in lease and proved for mining	Hematite

28	Method of Mining (Opencast, Underground)	Opencast
29	Category (Fully Mechanised, Other or Manual)	Fully Mechanised & category "A"
30	Captive/ Non-Captive	Non-Captive

Scientific Mining: Compliance of proposals of approved mining Plan/Scheme of Mining. (Duplication of information in existing TMIS data sheets and draft write up has been avoided.)

Exploration

S.N.	Item	Proposals	Actual Work	Remarks
1a	Backlog of previous year (2020-21)	19 boreholes of meterage 2320mtrs	43 boreholes of meterage 4900.5mtrs	
1b	Exploration over lease area for Geological axis 1 or 2	8.24 ha	11.25 ha	Total mineralised area is 261.70 Ha, out of which 111.54 Ha area have been explored at G1 & G2 Level.
1c	Exploration Agency & Expenditure in lakh Rupees during the year 2020-21	NMDC Rs5.45crores	NMDC Rs. 6.13 crores	Drilling cost Rs. 12514/m (approximately)
1d	Balance area to be explored to bring Geological axis in 1 or 2		150.16 hectare	
1e	Balance reserves		272.686 MT (As on 01.04.2021)	
1f	General remarks of inspecting officer on geology, exploration etc.	Exploration has been carried out as proposed.		

Development

S.N.	Item	Proposals	Actual Work	Remarks
2a	Location of development w.r.t. lease area	Bench MRL: S1020 S1032, S1044, S1092 S1104, S1116 C1128, C1140 C1152, C1176, C1188	Bench MRL: S1128, S1116, S1044, S1032, S1020,C1152,C1140, C1128	
2b	Separate benches in topsoil, overburden and mineral (Rule 13 of MCDR, 2017)	Topsoil: NIL OB: 04 Mineral: 11	Topsoil: NIL OB: 01 Mineral: 8	OB removal in 3 proposed benches (S1104, C1188, C1176) could not be done due to lack of forest clearance in proposed waste dumps (WDY-2, WDY-4)
2c	Stripping ratio or ore to OB ratio	0.40	0.87	
2d	Quantity of topsoil generation in m ³	NIL	NIL	
2e	Quantity of overburden generation in m ³	1538500	112893.7	Waste handling is reduced due to lack of forest clearance in proposed dump area.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit	Exploration has been carried out in excess of proposal.		

etc.	
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Exploitation details for the year 2020-21

S.N.	Item	Proposals	Actual Work	Remarks
3a	Number of pits proposed for production	NIL	NIL	
3b	Quantity of ROM mineral production proposed (2020 - 21)	100 LT	80.40 LT	Production is reduced due to covid-19 situation.
3c	Recovery of salable/usable mineral from ROM Production	98%	98.62%	
3d	Quantity of mineral reject generation	NIL	NIL	
3e	Grade of mineral reject generation and threshold value declared	45 - 62 % Fe Threshold value: 45% Fe- Hematite Ore	45 - 62 % Fe Threshold value: 45% Fe- Hematite Ore	
3f	Quantity of sub-grade mineral generation	8.53 LT	NIL	The sub-grade minerals generated have been blended with high grade ores and made saleable. No additional generation during the year.
3g	Grade of sub-grade mineral generation	Below 62%	Below 62%	
3h	Manual/Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	NIL	NIL	
3j	Provision of drilling & blasting in mineral benches	YES	YES	
3k	Provision of mining machineries in mineral benches	YES	YES	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	YES	YES	
3m	Total area covered under excavation/pits	167 Ha	167 Ha	
3n	Ore to OB ratio for the pit/mine during the year.	0.40	0.038	
3o	Total area put in use under different heads at the end of year	391.63	213.61	
3p	Production of ROM mineral during last five-year period, as applicable	480 LT (2016-17 to 2020-21)	328.89 LT (2016-17 to 2020-21)	
3q	General remarks of inspecting officer on method of mining etc.	The quarry development and waste dumping are restricted due to lack of forest clearance and adverse ground condition. However, bench development is systematic and protection measures are provided in waste dumps.		

Solid Waste Management - Dumping

S.N.	Item	Proposals	Actual Work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 36, 37 of MCDR, 2017)	YES	YES	
4b	Location of topsoil, OB & mineral reject dump	OB: Waste Dump no.3 (DSP Platform) / SB/ Between CS8 and CS12, Waste Dump no.4 / CB / between CS15 and CS19, &Waste dump no.2 / SB / between CS9 and CS15. Mineral reject:	OB: Waste Dump no.3 / SB/ Between CS8 and CS12	Waste dumping in remaining proposed dumps (WDY-2 & WDY-4) could not be done due to delay in forest clearance.

		subgradestockpile / between CS17 and CS19.		
4c	Number of dumps within lease area and outside lease area	WML: 3 Nos OML: NIL	WML: 1 No OML: NIL	Reason as cited above.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 14 of MCDR, 2017)	Beyond ultimate pit limit	Beyond ultimate pit limit	
4e	Number of active & alive dumps	03	01	Reasons as cited above.
4f	Number of dead dumps	NIL	NIL	
4g	Number of dumps established	03	01	
4h	Whether Retaining wall or garland drain all along dumps are there	YES	YES	
4i	Length of Retaining wall and garland drain all along dump	1210 (810+400) m	1400 (1000+400) m	
4j	Number of settling pond	3	NIL	Settling ponds could not be constructed in proposed locations due to delay in forest clearance.
4k	Specific comments of inspecting officer on waste dump management	Although deviation in respect of proposed waste dump and settling tank observed, violation is not pointed out due to reasons as cited above.		

Solid Waste Management - Backfilling

S.N.	Item	Proposals	Actual Work	Remarks
5a	Status on part of full extraction of mineral from mined out area before starting backfilling	NIL	NIL	No area has matured for backfilling.
5b	Area under backfilling of mined out area	NIL	NIL	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 36 of MCDR, 2017)	NIL	NIL	
5d	Total area fully reclaimed & rehabilitated	NIL	NIL	
5e	General remarks of inspecting officer on backfilling, reclamation etc.			

Progressive Mine Closure Plan

S.N.	Item	Proposals	Actual Work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2) of MCDR, 2017. Details should be given in the format as given in Annexure-20.	YES	YES	
6b	Management of worked/mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year	NIL	NIL	
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D)	NIL	NIL	

	ii) Void filled by waste/tailings iii) Afforestation on the back filled area. iv) Rehabilitation by making water reservoir v) Any other specific means.			
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	NIL	NIL	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	To be Complied	Complied	Environmental monitoring of parameters for air, water, & noise during summer and Monsoon for the year 2020-21 are carried out as checked during the visit.
6f	General remarks of inspecting officer on PMCP compliance & progressive closure operation.	Progressive Mine Closure plan work implemented as proposed.		

Mineral Conservation

S.N.	Item	Proposals	Actual Work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	16% of Subgrade Mineral of total ROM production to be blended simultaneously with high grade mineral during feeding to the crushing plant	20.13% of Subgrade mineral blended simultaneously with high grade mineral during feeding to the crushing plant	Low grade ores are fed to crusher along with high grade ores and made saleable.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines.	35 - 55 % Fe 55 - 62 %Fe 62 - 65 %Fe > 65 % Fe	35 - 55 % Fe 55 - 62 %Fe 62 - 65 %Fe > 65 % Fe	
7d	Any beneficiation process at mines	Crushing, washing and screening	Crushing, washing and screening	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues.	Steps taken for mineral conservation and beneficiation is on right direction.		

Environment

S.N.	Item	Proposals	Actual Work	Remarks
8a	Separate removal and utilization of topsoil (Rule 36 of MCDR, 2017)	NIL	NIL	
8b	Concurrent use or storage of topsoil.	NIL	NIL	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 37 of MCDR, 2017)	YES	YES	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	NIL	NIL	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NIL	NIL	
8f	Baseline information on existence of plantation & additional plantation done (Rule 44 of MCDR, 2017)	The entire lease area is under forest land .	In 2020-21, 3300 trees planted by Chhattisgarh Rajya Van Vikas Nigam Ltd Jagdalpur along lease boundary within safety zones.	
8g	Survival rate	-	80 %	
8h	Water sprinkling on road to control airborne dust	YES	YES	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			General aesthetics in and around the mine is maintained.

Compliance of Rule 45

S.N.	Item	COMMENTS		Remarks
9a	Status of submission of Monthly and Annual return	M.R. Submitted up to JULY21 A.R. Submitted upto 2020-21		
S.N.	Item	Details GIVEN in A.R.	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Name of Mining Engineer & Geologist & Manager furnished.	Information as required submitted.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Total land use of 255.01 ha furnished under different heads as specified in AR.	The figures furnished appears to be correct.	
9d	Scrutiny of Annual return on afforestation	Total 3300 saplings have been planted.	The figure furnished appears to be correct.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil generation	The low grade ores have been fed with higher ores and made saleable.	
9f	Scrutiny of Annual return on ROM stock and / or graded ore	Opening stock- 547584 tonnes Closing stock- 220846 tonnes	Grade wise processed ores stock and grade are furnished & appears to be correct.	
9g	Scrutiny of Annual return on sale value, Ex, Mine price & production cost	Grade-wise sale value, ex-mine price and cost of production data furnished.	Information furnished appears to be correct.	
9h	Scrutiny of Annual return on fixed assets	Net closing balance of Fixed assets of Rs 5566102073 furnished.	Information appears to be correct.	
9i	Scrutiny of Annual return on mining machineries	Details of machinery used are furnished. Information appears to be correct.		

Details of violations observed during current inspection and compliance position of earlier violation pointed out: -

No serious violation is observed during the current inspection.

(D.Dash)
Senior Mining Geologist