

MCDR INSPECTION REPORT

1.0 GENERAL

SN	Particulars	Details
1	Name of inspecting office & designation	Shri D Dash, Senior Mining Geologist, Regional office Raipur.
2	Date of inspection	05.12.2022
3	Name of the Mine	Bailadila Iron Ore Mines, Bacheli complex, Dep.10
4	Date of Inspection	06.12.2022
5	Name of Inspecting Officer	D. Dash, Senior Mining Geologist
6	Name of official accompanying inspection	Shri B. Venkateswarlu, CGM(Prodn.)
7	Last date of Inspection & Officer	08.12.2021 Shri Arun Kumar, DCOM
8	Total Lease Area (Ha) with breakup of Non-forest and forest land	309.34Ha (Complete Forest land)
9	Mine Code	30MPR48001
10	IBM Registration Number under rule 45 of MCDR, 1988	IBM/270/2011
11	Name of the lessee, Address, phone, email and fax number	NMDC Ltd, 10-3-311/A, Castle hills, Masab tank, Hyderabad, Telangana Ph.no: 040-23538704 e-mailID: nmdchyd@hd1.vsnl.net, lfax:040-23538705
12	Village	Bacheli
13	Taluka / Mandal / District	Bade Bacheli, Dantewada
14	State	Chhattisgarh
15	Post office & PIN	Bacheli, 494553
16	Nearest police station	Bacheli
17	Nearest Railway station	Bacheli
18	Date of Grant of Mining Lease	11.09.1965
19	Date of Execution	11.09.1965
20	Weekly day of rest	Wednesday
21	Date of opening of Mine	01.09.1996
22	Date of first Renewal, if applicable and its period & expiry	11.09.1995, period 20 years from 11.09.1995 to 10.09.2015 Lease validity extended up to 31.03.2020 as per rule 8A(8) of MMDR(Amendment) 2015 Act. Further lease renewed up to 10.09.2035 for 20 years under section 3 (3) of Mining (Mining by Govt. Companies) Rule 2015
23	Date of second Renewal, if applicable and its period & expiry	NA
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 date of appointment	Shri D.K. Mohanty, Director(Prodn.) NMDC Ltd, 10-3-311/A, Castle hills, Masab tank, Hyderabad Ph.no: 040-23538704 e-mail ID: nmdchyd@hd1.vsnl.net fax:040-23538705

		Date of appointment: 08.10.202
26	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri P.K. Mazumdar, Executive Director, BIOM, Bacheli complex, Ph.no: 07857 230323/230356, e-mail: pranab@nmdc.co.in , fax: 07857 - 230423, date of appointment: 21.06.2021
27	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri B. Venkateswarlu, CGM(Prodn.)/Mines Manager; BIOM, Bacheli complex, Ph.no: 07857 230223, e-mail: bvenkat@nmdc.co.in fax: 07857 230423, date of appointment: 31.08.2021
28	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri R.C.Onker, B.E(Mining), 25years,DGM(Mining), Deposit 10, B.I.O.M, Bacheli complex, Phone- 07857-230588 rconkar@nmdc.co.in , date of appointment: 04.09.2016.
29	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57 of MCDR, 2017.	Joydeep Sen, Msc. (AppliedGeology), 12years, Sr.Manager (Geo.),Deposit 10&11A, B.I.O.M. Bacheli Complex, Ph.No. 07857-230336, Email- jsen@nmdc.co.in , Date of appointment : 07.05.2020
30	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Review of Mining Plan approved vide letter no. Dantewada/Iron/Sl.No.- 1218/2019 dated 16.12.2019 for the period from 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 proved for mining	Hematite
33	Method of Mining(Open cast, Underground)	Open cast
34	Category (Fully Mechanised, Others or Manual)	Fully Mechanised & category A
35	EC for ROM Prod: Date of Issue:	60 lakh tonnes
36	Captive/Non Captive	Non Captive
37	Status of Financial Assurance as	Bank Guarantee of Rs.698.52 lakhs valid up to 31.03.2025

Scientific Mining: Compliance of proposals of approved mining plan/scheme of mining. –

1.0 Exploration

SN	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	13 BH With 910 Mtr.	26 BH With 2375 Mtr.	Exploration in form of drilling of boreholes have been carried out in excess of proposals.
1b	Exploration over lease area for Geological axis 1 or 2.	G1-178.502 hect G2-70 hect	G1-183.166 Hect. G2-92.696 Hect.	
1c	Exploration Agency & Expenditure in lakh Rupees	GEC Raipur 110 Lakhs	GEC Raipur 135.43 Lakhs.	

	during the year			
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not specific	from G2 to G1=92.696 Ha. from G3 to G2=33.478Ha	
1e	Balance reserves as on 01.04.2022 (million tonnes)	111 : 195.39 121: 4.56	111 : 193.66 121: 4.56	Ore depletion is on lower side due to less production.
1f	General remarks of inspecting officer on geology, exploration etc.	Exploration in form of borehole drilling has been carried out in excess of proposals in approved Mining Plan. Ore depletion is on lower side due to less production.		

2.0 Development

SN	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	2067200 to 2069200 and 523200 to 524000	2067200 to 2069000 and 523200 to 524000	As per proposal in approved MP.
2b	Separate benches in topsoil, overburden and mineral (Rule 13 of MCDR, 2017)	Top soil -Nil OB / IB: 3 Mineral: 7	Top soil -Nil OB - IB: 3 Mineral: 6	As proposed.
2c	Stripping ratio or ore to OB /IB ratio	1:0.006	1:0.03	
2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	40,000	179471	OB handling is nearly four times as against proposed quantity.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The quarry development is as per approved Mining Plan. However, the OB handling is nearly four times as against proposed quantity. However, during the visit of the mine, no new waste dump accommodating such huge quantity of waste is observed. Moreover, the configuration of the existing waste dumps were found unchanged, indicating incorrect data submission or unsystematic waste dumping in the mining lease area. Violation of Rule 11(1) of MCDR, 2017 is pointed out.		

3.0 Exploitation

SN	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	1	1	As per proposal.
3b	Quantity of ROM mineral production proposed	6,000,000 Tonnes	5828588 Tonnes	Achieved 97% of proposed production.
3c	Recovery of salable/usable mineral from ROM production	6,000,000 Tonnes	5828588 Tonnes	100% recovery.
3d	Quantity of mineral reject generation	Nil	Nil	

3e	Grade of mineral reject generation and threshold value declared	NA	NA	
3f	Quantity of sub-grade mineral generation	200000 Tonnes	1411253 Tonnes	The generated sub-grade ore is blended with high grade ore and made saleable.
3g	Grade of sub-grade mineral generation	45-55 Fe%	45-55 Fe%	
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	As per proposal in approved Plan.
3m	Total area covered under excavation/pits	Not specific	64.63 Ha	
3n	Ore to OB/IB ratio for the pit/mine during the year	1:0.016	1:0.047	
3o	Total area put in use under different heads at the end of year	Not specific.	Pit-64.63 Ha Waste/reject-15.46 Ha Others-46.51	
3p	Production of ROM mineral during last five-year period, as applicable (In Metric Tonnes)	2017-18: 6000000 2018-19: 6000000 2019-20: 6000000 2020-21: 6000000 2021-22: 6000000	2017-18: 4064260 2018-19: 4645158 2019-20: 5007721 2020-21: 4902020 2021-22: 5828588	
3q	General remarks of inspecting officer on method of mining etc.	The quarry development is as per proposal in approved Mining Plan. About 97% of proposed production has been achieved during the year 2021-22.		

4.0 Solid Waste Management-Dumping

SN	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 dumps	E/W- 523029-523314 N/S- 2068360-2068610	E/W- 523029-523314 N/S- 2068360-2068610	As per proposal.

4c	Number of dumps within lease area and outside lease area	Within lease area-3 Outside lease area-0	Within lease area-2 Outside lease area-0	Waste dumping in proposed waste dump no. 3 could not be carried out due to lack of forest clearance.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 14 of MCDR, 2017)	Outside ultimate pit	Outside ultimate pit	
4e	Number of active & alive dumps	1	1	
4f	Number of dead dumps	1	1	
4g	Number of dumps stabilized	1	1	
4h	Whether Retaining wall or garland drain all along dumps are there	Garland drain: 200 m	Nil	Violation of 11(1) of MCDR, 2017 is pointed out.
4i	Length of Retaining wall or garland drain all along dump	100 meters	125 meters	As per proposal.
4j	Number of settling ponds	Nil	Nil	
4k	Specific comments of inspecting officer	Waste dumping is carried out in proposed waste dump no 1 & 2 as per proposals in approved Mining Plan. However, dumping in proposed waste dump no. 3 could not be carried out due to lack of forest clearance. Garland drains of 200m was proposed around waste dump in approved Mining Plan during the year 2021-22, against which no work has been done. Violation of 11(1) of MCDR, 2017 is pointed out. .		

5.0 Solid Waste Management-Backfilling

SN	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	NA	NA	
5b	Area under backfilling of mined out area	NA	NA	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 36 of MCDR, 2017)	NA	NA	
5d	Total area fully reclaimed & rehabilitated	NA	NA	
5e	General remarks of inspecting officer on backfilling, reclamation etc	No area is mined out. Thus, there was no proposal for backfilling in the mining leasehold.		

6.0 Progressive Mine Closure Plan

SN	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	Seen during the visit.

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	NA	NA	No area is mined out.
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	NA	NA	-do-
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	No proposal	Nil	No waste dump is dead and stable.
6e	Compliance of Environmental monitoring (core zone & buffer zone)	YES	YES	Regular monitoring is being done.
6f	General remarks of inspecting officer on PMCP compliance & progressive	No area is mined out. There is no proposal in approved Mining Plan for rehabilitation of waste land.		

7.0 Mineral Conservation

SN	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Run of mine ore is directly dispatched after sizing in crusher. Subgrade mineral to be blended simultaneously with high grade mineral during feeding to crushing plant. No grade-wise sorting and sizing proposed.	Run of mine ore is directly dispatched after sizing in crusher. Subgrade mineral to be blended simultaneously with high grade mineral during feeding to crushing plant. No grade-wise sorting & sizing done.	

7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines	Not proposed	Not done	
7d	Any beneficiation process at mines	Crushing and Screening	Crushing and Screening	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Run of mine ore is directly sent outside lease area after sizing in crusher. No sorting and sizing done in the lease area.		

8.0 Environment

SN	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	NIL	NIL	No top soil generation within the lease area.
8b	Concurrent use or storage of topsoil	NIL	NIL	Not applicable in view of the above.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	YES	YES	Waste is separately dumped.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	NIL	NIL	No area is mined out. Thus no proposal for restoration.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NA	NA	-do-
8f	Baseline information on existence of plantation & additional plantation done (Rule 44 of MCDR, 2017)	700 700	7715 1020	Excess plantation has been done against the proposal.
8g	Survival rate	85%	85%	
8h	Water sprinkling on roads to control airborne dust	YES	YES	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	In the mining lease area, cumulative plantation of 7715 trees has been done.		

9.0 Compliance of Rule 45

S. N.	Item	COMMENTS		Remarks
	Status of submission of Monthly and Annual returns			
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	Mining Engineer: Shri R.C.Onkar Geologist: Shri Jaydeep Sen	Both were present during the visit.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current working: 70.05 ha, Waste dump: 17.05 ha, Occupied by plant & building etc: 46.510 ha	Figures appears to be correct.	
9d	Scrutiny of Annual return on afforestation	1020 saplings planted with 86% survival.	Appears to be correct.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil	Correct.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening stock: 100000 tonnes Production: 5828588 tonnes, Closing stock: 108388 tonnes	Appears to be correct.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex mine price: lumps: 60 to 62% Fe: Rs 6536, 62 to 65% Fe: Rs 6963, 65% & above Fe: Rs 8045 Fines: 58to 60% Fe: Rs 4805, 60to 62%Fe: Rs 5064, 62to 65% Fe: Rs 6090, 65% & above: Rs 7596 Cost of production: Rs 2981.56 per tonne	Appears to be correct.	
9i	Scrutiny of Annual return on fixed assets	Rs 1354054189	Includes land, plant & building. Appears to be correct.	
9k	Scrutiny of Annual return on mining machineries	Blast hole drill(Elec.): 03 Rock drill(Non Elec.): 1, Shovel: 02 Dumper: 05	Appears to be correct.	

		Dozer: 05, Front end loader: 2 Backhoe: 01, Crane: 01, Motor Grader: 02, Water tanker: 06, Blast hole drill: 01, Dozer: 02, Explosive van: 02,		
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10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:-

During the previous inspection on dated 08.12.2021 by Shri Arun Kumar, DCOM, violations of Rules 11(1) and 45 (5) (c) of MCDR, 2017 were pointed out. The violations have been considered complied.

During the current inspection following violations were observed and pointed out:

नियम	उल्लंघन के प्रकार का ब्यौरा
11(1)	<p>The mining operations are required to be carried out in accordance with the Mining Plan approved, modified or reviewed by Indian Bureau of Mines. However, the mining operations have not been observed carried out in accordance with Review & updation of Mining Plan approved vide letter No. Dantewada/Iron/SI.No.- 1218/2019 dated 16.12.2019 for the period from 2020-21 to 2024-25 to the extent indicated below:</p> <p>Against proposal of 40,000 m³ of waste generation during the year 2021-22 in the approved Mining Plan, waste generation of 1,79,471 m³ has been reported in the Annual Return submitted for the year 2021-22.</p> <p>Moreover, during the inspection of the mine, no new waste dump accommodating such huge quantity of waste was observed. Further, configuration of the existing waste dumps were also found unchanged; it indicates incorrect data reporting or unsystematic waste disposal in the mine.</p> <p>Garland drain of 200 mtrs was proposed around waste dumps during the year 2021-22, against which no work has been done.</p> <p>Hence, the above are observed to be against systematic and scientific development of mines and protection of environment.</p>

Date-

(Debadurllav Dash)
Regional Mining Geologist

