

MCDR INSPECTION REPORT-2019

General

S.N.	Particulars	Details
1	Name of inspecting office & designation, Accompanying officer	Shri Rajesh Kumar Das (Senior ACOM) Shri Rudra n Mishra (Senior Mining Geologist), Shri Vinayak Tiwari, DGM, Geology (Inspection is done for approval of mining plan.
2	Date of inspection	31.10.19
3	Name of the Mine	Bailadila Iron Ore Mines, Kirandul Complex, DEP-11 ML
4	Total Lease Area (Ha) with breakup of Non-forest and forest land	Forest Land: 874.924HA Non Forest Land: NIL
5	Mine code	30CHG03002
6	IBM Registration Number under rule 45 of MCDR, 1988	IBM/270/2011
7	Name of the Lease, Address, Phone, email and fax number	NMDC Ltd, Masab Tank, Hyderabad, PIN-500028, Telangana. pkSATpathy@nmdc.co.in Fax no: 040-27172569, Phone 040-23538713-21, 23538723 & 23538767
8	Village	Kirandul
9	Taluka/Mandal, District	Bade Bacheli, Dantewada
10	State	Chhattisgarh
11	Post Office & PIN	Kirandul, 494556
12	Nearest Police Station	Kirandul
13	Nearest Railway Station	Kirandul
14	Date of Grant of Mining Lease	27/12/1966
15	Date of Execution	12/09/1967
16	Date of opening of Mine	In the year 1987
17	Date of First Renewal, if applicable and its period & expiry	12/09/1997, 20 Years, Expiry-11/09/2017
18	Date of Second Renewal, if applicable and its period & expiry	Second renewal on 03-05-2018 Period from 11.09.2017 to 10.09.2037
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	NA
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri P.K.Satpathy Director (Prodn.), NMDC Ltd, Masab Tank, Hyderabad, PIN-500028, Telangana. pkSATpathy@nmdc.co.in Fax no: 040-27172569, Phone No: 040- 23538701, 23538704. DOA:13/12/2014
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri A.K.Prajapati, General Manager, NMDC Ltd, Kirandul, B.I.O.M. Kirandul Complex, Dantewada PIN-494556, Chhattisgarh, akprajapati@nmdc.co.in Fax no: 07857-255227, Phone 07857-255222

		DOA:30/09/2018
22	Name of the Mine Manager with Address, phone, email, fax number and date of appointment in mines	Shri Vinay Kumar, Jt.General Manager, NMDC Ltd, Kirandul, B.I.O.M. Kirandul Complex, Dantewada PIN-494556, Chhattisgarh, Fax no: 07857-255226, Phone 07857-255232 DOA:30/09/2018
23	Name of the Mining Engineer, Qualification and total experience with address, phone, email, fax number and date of appointment in the mine	Shri Sunil Kumar, Dy.General Manager, B.Tech (Mining) FCC ©, Experience: 20 Years Approximately NMDC Ltd, Kirandul, B.I.O.M. Kirandul Complex, Dantewada PIN-494556, Chhattisgarh, DOA:03/05/2017
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.	Yes, appointed under Rule-55 and carrying out duties as per rule 56 & 57 of MCDR-2017.
25	Date of Approval of Mine Plan/Modified Mine Plan with five- year period and specific condition in approval letter, if any.	Vide Letter No: 314(3)/96- MCCM © /MP-7, Dated: 23.07.1997. Vide Letter No: 314(3)/2005 MCCM (cz) /MP-7, Dated: 15.10.2005. Vide Letter No: Dantewada/FE/MPLN-1055/2016/Raipur/724, Dated:09.12.2016 Vide Letter No: Dantewada /Fe/Khanij-1203/2018/-Raipur/72 dated 08-05-2019 for period 01.04.2019 to 31.03.2020
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five- year period and specific condition in approval letter, if any.	Vide Letter No: 314(3)/2007 – MCCM (CZ) /S-7, Dated:29.11.2007 Vide Letter No: 314(3)/2012 – MCCM (CZ) /MS-18, Dated:11.03.2013
27	Mineral(s) granted in lease and approved for Mining	Hematite
28	Method of Mining (Opencast, Underground)	Opencast
29	Category (Fully Mechanised, Others or Manual)	Fully Mechanised
30	Captive/Non-Captive	Non-Captive
31	Bank guarantee validity	Amount Rs 262477200/- upto 31.03.2020

Scientific Mining: Compliance of proposal of approved mining plan/scheme of mining.

1.0 Exploration

S.N.	Item	Proposals	Actual Work	Remarks
1a	Backlog of previous year	NIL	NIL	
1b	Exploration over lease area for Geological axis 1 or 2.	22BH/1750Mts	24BH/1995 Mts	
1c	Exploration Agency & Expenditure in Lakh Rupees during the year	Applicant itself is the exploration Agency.	Applicant itself is the exploration Agency. Expenditure during 2018-19:211.69 Lakh	
1d	Balance area to be explored to bring Geological axis in 1 or 2.	G3 level = 346.22 Ha G4 level = 44.886 Ha Non mineralised area = 223.007 Ha		
1e	Balance reserves as on 01.04.2019	Code	Quantity	

		A. Mineral Reserve		
		111	246.23	
		122	80.45	
		B. Remaining Resources		
		211	46.06	
		221	-	
		222	33.00	
		331	372.74	
		332	33.00	
		333	212.04	
		334	-	
		331=111+121+122+211		
		332=221+222		
1f	General remarks of Inspecting officer on geology, exploration etc.	As mentioned above the balance area for exploration. Bailadila hills represents the type area of southern most part of Kotri-Dongargarh orogen of Bastar craton known as Bailadila group. The Strike direction of Bailadila group are N-S trending and dip direction NW to NE subvertical folded meta sedimentary bedded formations.		

2.0 Development

S.N	Item	Proposals	Actual Work	Remarks
2a	Location of Development w.r.t. lease area	Dep-11A North Block CS12 to CS19 W 250 M to E100, South Block CS21 to CS25 W 300 M to E100. Dep-11B CS3 to CS14, W 400M to E300M w.r.t. CAL Dep-11C SW of CS -1 to CS7, W100 to E400 wrt CAL	The development is broadly within proposed area in 11B and 11C. There is no work done in 11 A due to safety reason	
2b	Separate benches in topsoil overburden and mineral (Rule 13 of MCDR 2017)	Separate benches in overburden and mineral	Separate benches in overburden and mineral	Top soil not available
2c	Stripping ratio or ore to OB ratio	1:0.21	1:0.08	
2d	Quantity of topsoil generation in m ³	Top soil is not available	Top soil is not available	
2e	Quantity of overburden generation in m ³	374074	96816	
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	The development is broadly within proposed area only the 11A area as proposed not worked due to safety reason.		

3.0 Exploitation

S.N.	Item	Proposals	Actual Work	Remarks
3a	Number of pits proposed for production	Pit-3	Pit-3	
3b	Quantity of ROM mineral production proposed	4800000 Tonne	3468280 Tonne	
3c	Recovery of Salable/usable mineral from ROM production	100 %	85 %	
3d	Quantity of mineral reject generation	NIL	NIL	
3e	Grade of mineral reject generation and threshold value declared	-	-	
3f	Quantity of sub-grade mineral generation	130000Tonne	7000 Tonne	

3g	Grade of sub-grade mineral generation	45-55 Fe %	45-55 Fe %	
3h	Manual/Mechanised method adopted for segregation from ROM	Mechanised	Mechanised	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No study Proposed	No study Proposed	
3j	Provision of drilling & blasting in mineral benches	As per Rule 106 (2)(b) MMR-1961, doing drilling and blasting	As per Rule 106 (2)(b) MMR-1961, doing drilling and blasting	
3k	Provision of mining machineries in mineral benches	As per Rule 106 MMR-1961,	As per Rule 106 MMR-1961,	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height:12Mtr and Over Burden Bench Height : 30Mtr	Bench Height:12Mtr and Over Burden Bench Height : 30Mtr	
3m	Total area covered under excavation /pits	94.590 HA	94.590 HA	
3n	Ore to OB ratio for the pit/mine during the year	1:0.21	1:0.08	
3o	Total area put in use under different heads at the end of year	212.637 HA	212.637 HA	
3p	Production of ROM mineral during last five-years period, as Applicable	2014-15: 8300000Tonne 2015-16: 9300000Tonne 2016-17: 9300000 Tonne 2017-18:3800000 Tonne 2018-19: 4800000 Tonne	2014-15: 1619006 Tonne 2015-16: 2319706 Tonne 2016-17: 1310508 Tonne 2017-18:2618285 Tonne 2018-19: 3468280 Tonne	
3q	General remarks of inspecting officer on method of mining etc	The method of mining is broadly as per proposal by opencast using HEMM and deep hole drilling and blasting.		

4.0 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)	OB :3 NOS	OB : 3 NOS	
4b	Location of topsoil, OB & mineral reject dumps	Dep-11A CS18 to CS24Southern side Dep-11B Western side CS6 to CS10, 200 M to 500 M w.r.t. CAL Dep-11C SW of CS 14 to CS18, - 300 to -700 w.r.t CAL	Dep-11A CS18 to CS24 Southern side Dep-11B Western side CS6 to CS10, 200 M to 500 M w.r.t. CAL Dep-11C SW of CS 14 to CS18, -300 to -700 w.r.t CAL	
4c	Number of Dumps within lease area and outside lease area	3 NOS with in lease area	3 NOS with in lease area	
4d	Location of Dumps w.r.t. ultimate pit limit (Rule 14 of MCDR 2017)	Out Side UPL	Out Side UPL	
4e	Number of Active & Alive dumps	Active & Alive : 3 NOS	Active & Alive : 3 NOS	
4f	Number of dead dumps	NIL	NIL	
4g	Number of dumps stabilized	NIL	NIL	

4h	Whether Retaining wall or garland drain all along dumps are there	Yes	Constructed/Repaired.	
4i	Length of Retaining wall or garland drain all along dump	200Mtrs	132Mtrs Retaining wall / Buttress wall constructed along the bottom of the dump.	
4j	Number of settling ponds	03 Nos	03Nos	
4k	Specific comments of inspecting officer on waste dump management	The waste dump management is not proper and the retaining wall also not constructed as per proposal.		

5.0 Solid Waste Management-Backfilling

S.N.	Item	Proposals	Actual Work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Back Filling not proposed	Back Filling not proposed	
5b	Area under backfilling of mined out area	Back Filling not proposed	Back Filling not proposed	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 36)	Top soil storage not proposed	Topsoil not available	
5d	Total area fully reclaimed & rehabilitated	Reclaimed & Rehabilitated not proposed	Reclaimed & Rehabilitated not available	
5e	General remarks of inspecting officer on backfilling, reclamation etc	No such proposal of backfilling.		

6.0 Progressive Mine Closer 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	For 2018-19 PMCP proposed	PMCP compliance report submitted	
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	Not proposed within Mining Lease	All along the Safety Zone 5000 plantation	
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L*B*D) ii) Void filled by waste/tailings iii) Afforestation on the backfilling iv) Rehabilitation by making water reservoir v) Any other specific means	Nil	PMCP report submitted	Area not matured for backfilling
6d	Compliance of Rehabilitation of waste land within lease	As per PMCP	PMCP report submitted	The lease area is

	i) Afforestation ii) Area rehabilitation iii) Method of rehabilitation			forest area and already full of natural afforestation.
6e	Compliance of Environment monitoring (core zone & buffer zone)	As per PMCP	Complied.	
6f	General remarks of inspecting officer on PMCP compliance & progressive closer operations	Broadly complied		

7.0 Mineral Conservation

S.N.	Item	Proposals	Actual Work	Remarks
7a	ROM mineral dispatch or grade wise sorting within lease area	Above 55 Fe%	Above 55 Fe%	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	mechanical	mechanical	
7c	Different grade of mineral sort out at mine	Below 55 Fe%, 55 to 58 Fe%, 58 to 60 Fe%, 60 to 62 Fe%, 62 to 65 Fe% 65%and Above	Below 55 Fe%, 55 to 58 Fe%, 58 to 60 Fe%, 60 to 62 Fe%, 62 to 65 Fe% 65%and Above	
7d	Any beneficiation process at mines	No such beneficiation except crushing and screening.	Beneficiation processes doing at SP-1 and SP-2 screening plant	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	No such beneficiation except crushing and screening.		

8.0 Environment

S.N.	Item	Proposals	Actual Work	Remarks
8a	Separate removal and utilization of topsoil (Rule32)	Top soil not available	Top soil not available	No top soil exist
8b	Concurrent use or storage of topsoil	Top soil not available	Top soil not available	No top soil exist
8c	Separate dumps for overburden waste rock, rejects and fines (Rule 33)	OB dump proposed	As per Proposed waste dump available	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not Proposed	NA	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not proposed as no voids available for R&R	NA	
8f	Baseline information on existence of plantation & additional plantation done (Rule 44 of MCDR 2017)	Not proposed	Lease Safety zone area.	
8g	Survival rate	100 %	85%	
8h	Water sprinkling on roads to control airborne dust	As per proposal	Water sprinkling on road to control the air bore dust,	

			Wet Drilling.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mine area	No adverse impact observed during mine visit due to mining on aesthetic beauty.		

9.0 Compliance of Rule 45

S.N	Item	Comments		Remarks
9a	Status of submission of monthly and Annual returns	Monthly Return Form F1 for the month September-2019 submitted and Annual Return for the year 2018-19 submitted		
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	MiningEngineer: Sunil Kumar, Geologist: Ritayan Goswami Mines Manager: Vinay Kumar		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining:94.59 Ha Infrastructure:71.989Ha Overburden:46.058Ha	Mining:94.59 Ha Infrastructure:71.989Ha Overburden:46.058Ha	
9d	Scrutiny of Annual return on afforestation	5000 nos saplings reported	Total area is forest area	
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	20000 MT .Grade 40.8 Fe%		
9f	Scrutiny of Annual return on ROM stock and/or grade ore	ROM stock Closing Balance:85518Tonne	ROM stock Closing Balance:85518Tonne	
9g	Scrutiny of Annual return on sale value, Ex-Mine price & production costs	Ex-Mine price: Lump 65% and above- Rs 3834.28/-,sale price-Rs4082/-, Fines : 62% to below 65-Rs 3236.36/-, sale price-Rs3513/-, Fines : above 65-Rs 3555/-, sale price-Rs3843/-, Production Cost: Rs 1202.91/- PMT	As per H1	
9h	Scrutiny of Annual return on Fixed assets	Rs. 5,43,07,43,282/-	Rs. 5,43,07,43,282/-	For kirandul complex
9i	Scrutiny of Annual return on mining Machineries	Given in Annual Return Form-H1	Drill m/c 100mm,152mm,254m m dia., Shovel 8 cum bucket capacity, Dumper 60 & 100 tons capacity, Dozer, Grader, etc.	

10. Details of Validations observed during current inspection and compliance position of earlier violation pointed out: - The earlier inspection is broadly complied and during present inspection few deviation is observed in protective measures in dump and working but the same is incorporated in Review of Mining Plan for which inspection was done.

(Rajesh Kumar Das, Senior Assistant Controller of Mines)