

MCDR INSPECTION REPORT**General**

S.N.	Particulars	Details
1	Name of inspecting office & designation ,Accompanying Officer	Shri Rajesh Kumar Das (Senior ACOM) Shri Rudra n Mishra (SeniorMiningGeologist),Shri B Venkateswarlu,QP
2	Date of inspection	01.11.19
3	Name of the Mine	Bailadila Iron Ore Mines, Kirandul Complex, DEP-14 ML
4	Total Lease Area (Ha) with breakup of Non-forest and forest land	Forest Land: 322.368HA Non Forest Land: NIL
5	Mine code	30CHG03001
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	11/02/1965
15	Date of Execution	11/09/1965
16	Date of opening of Mine	October-1968
17	Date of First Renewal, if applicable and its period & expiry	12/09/1995, 20Years, Expiry-11/09/2015 Further, in the provision of as per Rule 8A (6) of MMDR (Amendment) Act, 2015 Lease has been extended upto 31.03.2020.
18	Date of Second Renewal, if applicable and its period & expiry	Lease Executed from:12.09.2015 to 31.03.2020 (As per MMDR Amendment act 2015 section 8A).
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	Form J submitted on 10-09-2013 for lease renewal
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 Anil kumar, Dy.General Manager (Mining) FCC (R), 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)/95 MCCM (c) /MP-5, Dated: 01.02.1996. Vide Letter No: BST/FE/MPLN-435/NGP-15, Dated: 16.03.2016 for period 2015-16 to 2019-2020
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)/2002 - MCCM (C) /MP-4, Dated:02.09.2003 Vide Letter No: 314(3)/2006 - MCCM (CZ) /S-5, Dated:27.03.2007 Vide Letter No: 314(3)/2010 - MCCM (CZ) /S-21/51, Dated:18.01.2011
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	BG validity	Amount Rs 96710400/- upto 31.03.2025
32	EC Capacity	5 million ton

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.	7 BH/600 Mts	10 BH/919 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 2018-19:97.52 Lakh	
1d	Balance area to be explored to bring Geological axis in 1 or 2.	G3 level = 66.503 Ha G4 level = 12.611 Ha Non mineralised area =	G3 level = 66.503 Ha G4 level = 12.611 Ha Non mineralised area =	

		100.127 Ha	100.127 Ha																					
1e	Balance reserves as on 01.04.2019	<table border="1"> <tr> <th>Code</th> <th>Quantity</th> </tr> <tr> <td colspan="2">A. Mineral Reserve</td> </tr> <tr> <td>111</td> <td>309.41</td> </tr> <tr> <td>121</td> <td>-</td> </tr> <tr> <td>122</td> <td>38.04</td> </tr> </table>	Code	Quantity	A. Mineral Reserve		111	309.41	121	-	122	38.04	<table border="1"> <tr> <th>Code</th> <th>Quantity</th> </tr> <tr> <td colspan="2">A. Mineral Reserve</td> </tr> <tr> <td>111</td> <td>321.41</td> </tr> <tr> <td>121</td> <td>-</td> </tr> <tr> <td>122</td> <td>38.04</td> </tr> </table>	Code	Quantity	A. Mineral Reserve		111	321.41	121	-	122	38.04	Due to less production w.r.t proposal
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1f	General remarks of Inspecting officer on geology, exploration etc.	As mentioned above the balance area for exploration. Bailadila hills represent 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 sub vertical folded meta sedimentary bedded formations.																						

2.0 Development

S.N.	Item	Proposals	Actual Work	Remarks
2a	Location of Development w.r.t. lease area	CS-3 to CS15,W 600 M to E400 M	Broadly as per proposal	
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 ore to OB ratio	1:0.24	1:0.13	
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	444444	133607	
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	The development is broadly within proposed area and development is on lower side w.r.t. proposal.		

3.0 Exploitation

S.N.	Item	Proposals	Actual Work	Remarks
3a	Number of pits proposed for production	Pit-1	Pit-1	
3b	Quantity of ROM mineral production proposed	5000000 Tonne	2744858 Tonne	
3c	Recovery of Salable/usable mineral from ROM production	100 %	100 %	
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	185000 Tonne	25000 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 (2)(b) MMR-1961,	As per Rule 106 (2)(b) MMR-1961,	
3l	Whether height of benches in	Bench Height:12Mtr	Bench Height:12Mtr	

	overburden and mineral suitable for method of mining proposed in MP/SOM	and Over Burden Bench Height : 30Mtr	and Over Burden Bench Height : 30Mtr	
3m	Total area covered under excavation /pits	86.550 HA	86.550 HA	
3n	Ore to OB ratio for the pit/mine during the year	1:0.24	1:0.13	
3o	Total area put in use under different heads at the end of year	174.610 HA	174.610 HA	
3p	Production of ROM mineral during last five-years period, as Applicable	2014-15: 5000000Tonne 2015-16: 5000000Tonne 2016-17: 5000000Tonne 2017-18: 5000000Tonne 2018-19: 5000000Tonne	2014-15: 4320378 Tonne 2015-16: 3092970 Tonne 2016-17: 4132570 Tonne 2017-18: 3425696Tonne 2018-19: 2744858 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 : 1 NOS	
4b	Location of topsoil, OB & mineral reject dumps	NW of Deposit, CS 02 to CS-5, -200 to 600	Broadly as per proposal	
4c	Number of Dumps within lease area and outside lease area	OB : 3 NOS	OB : 1 NOS	
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 : 1 NOS	Active & Alive : 1 NOS	
4f	Number of dead dumps	Dead :1	Dead :1	
4g	Number of dumps stabilized	01Nos	01Nos	
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	Not Proposed (Retaining wall / Buttress wall has been made at the edge of waste dump area to prevent flowing of waste dump)	158 Mtr Retaining wall / Buttress wall done all along the dump bottom.	
4j	Number of settling ponds	01	01	
4k	Specific commends of inspecting officer	Nil		

on waste dump management	
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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 does not exist	Top soil does not exist	
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 26E(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 6000 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	As per PMCP	PMCP report submitted	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitation iii) Method of rehabilitation	As per PMCP	PMCP report submitted	
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	Broadly as per proposal	
7d	Any beneficiation process at mines	As per mining plan Crushing and Screening	As per mining plan Crushing and Screening	
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	Safety zone area.	
8g	Survival rate	100 %	85 %	
8h	Water sprinkling on roads to control airborne dust	As per proposal	Water sprinkling is done on haul road to control the air borne dust, Wet Drilling, Water mist spray at crusher.	
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	Remarks

.			I/Officer	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Anil Kumar Geologist: Santosh Anand Padhye Mines Manager: Vinay Kumar		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining:86.550 Ha Infrastructure:43.840Ha Overburden:44.22Ha		
9d	Scrutiny of Annual return on afforestation	6000 nos saplings reported	Total area is forest area	
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	20000 tons of grade 43.46 FE%	BHQ and SHALE (Grade:35Fe%)mix material	
9f	Scrutiny of Annual return on ROM stock and/or grade ore	ROM stock Closing Balance:27971Tonne		
9g	Scrutiny of Annual return on sale value, Ex-Mine price & production costs	Yes given	Ex-Mine price: Lump 65% and above-3842.71 Fines :62% to below 65-3232.88, Production Cost: 1202.91 PMT in addition other grade also dispatch as mentioned	
9h	Scrutiny of Annual return on Fixed assets	Rs: 5430743282	Rs: 5430743282	For Kirandul Complex
9i	Scrutiny of Annual return on mining Machineries	Given in Annual Return Form-H1	Drill m/c of 100& 254 mm, Dumper of 50 & 60 tons capacity, Shovel of 8 & 8.8 cum bucket capacity and in addition front end loader, crane, grader, etc.	

10. Details of Validations observed during current inspection and compliance position of earlier violation pointed out:-The earlier violation is taken as compliance and during present inspection which was carried out for processing of Review of Mining Plan and deviation/violation observed has been incorporated in the plan.

(Rajesh Kumar Das, Senior Assistant Controller of Mines)