

MCDR INSPECTION REPORT

File No. CHG/DNT/FE-1/NGP

General

S.N.	Particulars	Details
1	Name of inspecting office & designation	Shri Rajesh Kumar Das (Senior ACOM)
2	Date of inspection & Accompany Persons	03.03.2021 - 05.03.2021, Shri Vinay Kumar(Mine Manager),Shri Vinayak Tiwari(GM Geology)
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, Under Rule 3 (2) of Mineral (Mining by GOVT company) Rules,2015 Lease Granted for 20 Years from 12.09.15 to 11.09.2035.
18	Date of Second Renewal, if applicable and its period & expiry	Under Rule 3(3) of Mineral (Mining by Government Company) Rules, 2015, the Mining Lease has been extended for 20 years from 12.09.2015 to 11.09.2035 by Mineral Resource Department, Govt of Chhattisgarh via Office Order No. f 4-15/2014/12 Nawa Raipur, dated 17.12.2019.
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 R.Govindarajan, Executive Director, NMDC Ltd, Kirandul, B.I.O.M. Kirandul Complex, Dantewada PIN-494556, Chhattisgarh, rgovindarajan@nmhc.co.in Fax no: 07857-255227, Phone 07857-255222, DOA:31/12/2019
22	Name of the Mine Manager with Address, phone, email, fax number and date of appointment in mines	Shri Vinay Kumar, 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, B.Tech(Mining) FCC (R), Experience: 25 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: Bst/FE/MPLN-435/NGP-15,DATED 16.03.2016
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 Mechanized, Others or Manual)	Fully Mechanized
30	Captive/Non-Captive	Non-Captive

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.	28 BH/1780 Mts	19 BH/1913 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 2019-20:167.50 Lakh																																																					
1d	Balance area to be explored to bring Geological axis in 1 or 2.	27.02 Ha	4.61 Ha																																																					
1e	Balance reserves as on 01.04.2020	<table border="1"> <thead> <tr> <th>Code</th> <th>Quantity(MT)</th> </tr> </thead> <tbody> <tr> <td colspan="2">A. Mineral Reserve</td> </tr> <tr> <td>111</td> <td>309.8</td> </tr> <tr> <td>121</td> <td>-</td> </tr> <tr> <td>122</td> <td>38.04</td> </tr> <tr> <td colspan="2">B. Remaining Resources</td> </tr> <tr> <td>211</td> <td>28.26</td> </tr> <tr> <td>221</td> <td>-</td> </tr> <tr> <td>222</td> <td>13.92</td> </tr> <tr> <td>331</td> <td>-</td> </tr> <tr> <td>332</td> <td>-</td> </tr> <tr> <td>333</td> <td>57.35</td> </tr> <tr> <td>334</td> <td>5.80</td> </tr> </tbody> </table>	Code	Quantity(MT)	A. Mineral Reserve		111	309.8	121	-	122	38.04	B. Remaining Resources		211	28.26	221	-	222	13.92	331	-	332	-	333	57.35	334	5.80	<table border="1"> <thead> <tr> <th>Code</th> <th>Quantity(MT)</th> </tr> </thead> <tbody> <tr> <td colspan="2">A. Mineral Reserve</td> </tr> <tr> <td>111</td> <td>367.074</td> </tr> <tr> <td>121</td> <td>-</td> </tr> <tr> <td>122</td> <td>37.364</td> </tr> <tr> <td colspan="2">B. Remaining Resources</td> </tr> <tr> <td>211</td> <td>58.663</td> </tr> <tr> <td>221</td> <td>-</td> </tr> <tr> <td>222</td> <td>18.074</td> </tr> <tr> <td>331</td> <td>5.400</td> </tr> <tr> <td>332</td> <td>1.688</td> </tr> <tr> <td>333</td> <td>31.378</td> </tr> <tr> <td>334</td> <td>5.411</td> </tr> </tbody> </table>	Code	Quantity(MT)	A. Mineral Reserve		111	367.074	121	-	122	37.364	B. Remaining Resources		211	58.663	221	-	222	18.074	331	5.400	332	1.688	333	31.378	334	5.411	Reserves and Resources Re-estimated as on 01.04.2020
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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	523974E-524702E 2058536N-2058035N	523740E- 524575E 2058534N-2058155 N	
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	1:0.17	
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	135196	
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	The development is very less w.r.t proposals and it is only 30% of the 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	2152276Tonne	
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	180000Tonne	165000 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 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	86.550 HA	86.550 HA	
3n	Ore to OB ratio for the pit/mine during the year	1:0.24	1:0.17	
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	2015-16: 5000000Tonne 2016-17: 5000000Tonne 2017-18: 5000000Tonne 2018-19: 5000000Tonne 2019-20: 5000000Tonne	2015-16: 3092970 Tonne 2016-17: 4132570Tonne 2017-18: 3425696Tonne 2018-19: 2744858Tonne 2019-20: 2152276Tonne	
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. The production achievement is only 43% of the proposals.		

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 :1 NOS	OB :1 NOS	

4b	Location of topsoil, OB & mineral reject dumps	523584E- 523820E 2058503N-2058695N	523584E- 523820E 2058503N-2058695N	
4c	Number of Dumps within lease area and outside lease area	OB :1NOS	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 / Butress wall has been made at the edge of waste dump area to prevent flowing of waste dump)	190MtrRetaining wall / Butress walldone all along the dump bottom.	
4j	Number of settling ponds	01	01	
4k	Specific commends of inspecting officer on waste dump management	Nil		

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 exists	Top soil does not exists	
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 2019-20 PMCP proposed	PMCP compliance report submitted	

6b	<p>Management of worked/mined out benches</p> <p>i) Area available for rehabilitation (Ha)</p> <p>ii) Afforestation done (ha)</p> <p>iii) No.of saplings planted during the year</p> <p>iv) Cumulative no.of plants</p> <p>v) Any other specific method of rehabilitation</p> <p>vi) Cost incurred on watch & care during the year</p>	<p>i) Nil-</p> <p>ii) As per availability</p> <p>iii) As per availability</p> <p>iv) -</p> <p>v) -</p> <p>vi) Departmental</p>	<p>i) Nil</p> <p>ii) 0.8Ha</p> <p>iii) 2012 nos</p> <p>iv) 306285 nos</p> <p>v) -</p> <p>vi) Departmental</p>	
6c	<p>Compliance on reclamation and rehabilitation by backfilling</p> <p>i) Voids available for backfilling (L*B*D)</p> <p>ii) Void filled by waste/tailings</p> <p>iii) Afforestation on the backfilling</p> <p>iv) Rehabilitation by making water reservoir</p> <p>v) Any other specific means</p>	Not proposed	PMCP report submitted	
6d	<p>Compliance of Rehabilitation of waste land within lease</p> <p>i) Afforestation</p> <p>ii) Area rehabilitation</p> <p>iii) Method of rehabilitation</p>	Not proposed	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	Nil	Nil	Different grades are blended and fed directly from mine benches
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.
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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 %	80%	
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 January-2021 submitted and Annual Return for the year 2019-20 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	Mining Engineer: Shri Anil Kumar Geologist: Shri N.Manjunatham Mines Manager: Shri Vinay Kumar		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed	Mining:86.550 Ha Infrastructure:43.840Ha		

	area, dumps etc.	OverburdenDump :44.22Ha		
9d	Scrutiny of Annual return on afforestation	Total area is forest area and 2012 saplings planted	Total area is forest area and area is limited for afforestation	
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Mineral reject 165000Tons,grade 53.50 fe%		
9f	Scrutiny of Annual return on ROM stock and/or grade ore	ROM stock Closing Balance: 266522Tonne	The stock position change as per dispatch	Closing balance as on 31.03.20 20
9g	Scrutiny of Annual return on sale value, Ex.Mine price & production costs	Ex-Mine price: Lump 65% and above- Rs3865.33/- & 62-65% Rs 3730.60/- Fines :below 55% Rs 1262.82/-,55-58% Rs 1854.24/-,58-60% Rs 2216.17/-,60-62% Rs 2527.93,62% to below 65-Rs 3056.68/-, above 65% Rs 3305.31/- Production Cost:1232.76 PMT		
9h	Scrutiny of Annual return on Fixed assets		Rs: 6,50,22,21,865/-	For Kirandul Complex
9i	Scrutiny of Annual return on mining Machineries	Given in Annual Return Form-H1	Given in Annual Return Form-H1	

10. Details of Validations observed during current inspection and compliance position of earlier violation pointed out:- The Earlier Violations taken Compliance and during present inspection following violations pointed out:

Rule	Nature of Violation observed
11(1)	<p>Mining operations should have been undertaken in accordance with the approved Mining Plan.</p> <p>The Modified Mining Plan was approved vide letter no. दांतेवाड़ा / लौह /खयो/1055/2016-रायपुर dated 09.12.2016 and following deviation was observed during inspection</p> <ol style="list-style-type: none"> 1. The proposal was given for development of 444444 m3 of overburden in 2019-20 but actually achievement is only 135196 m3. The development is only 30% of proposal. 2. The proposal of 28 bore holes given in 2019-2020 but against that only 19 bore holes reported. 3. The proposal was given for production of 5000000 million tons of ROM but actual achievement is only 2152276 million tons which is only 43% of proposal.

(Rajesh Kumar Das, Senior Assistant Controller of mines)