

MCDR INSPECTION REPORT**1.0 GENERAL**

SN	Particulars	Details
1	Name of the Mine	Mahamaya-Dulki Lease (MahamayaIron Ore Mine & Dulki Iron Ore Mine)
1a.	Name of Inspecting officer, Designation & Accompanying person	Rajesh Kumar Das, Senior Assistant Controller of Mines, Shri N.K.Mandal, Agent Mine & Shri S.N.Tripathi, Qualified person
1b.	Date of Inspection	12.03.2021,Inspection carried out for processing of Mining Plan
2	Total Lease Area (Ha) with breakup of Non- forest and forest land	Total Lease Area -1522.67 Ha. Forest area-1522.67 Ha.
3	Minecode	30MPR13004
4	IBM Registration Number under rule 45 of MCDR, 1988	5662/IBM/2011
5	Name of the lessee, Address, phone, email and fax number	Steel Authorityof India Limited, Bhilai Steel Plant,
6	Village	Mahamaya-Dulki
7	Taluka/Mandal	Mahamaya/Manpur
8	District	Balod and Rajnandgaon
9	Pincode	491228
10	State	Chhattisgarh
11	Post office	Mahamaya/Manpur
12	Nearest police station	Mahamaya
13	Nearest Railway station	Dalli- Rajhara
14	Date of Grant of Mining Lease	04-11-1971
15	Date of Execution	04-11-1971
16	Date of opening of Mine	Mahamaya-04/11/1971,Dulki- 24/06/2017
17	Date of first Renewal, if applicable and its period & expiry	04-11-2001 to 03-11-2021 Letter No. F-3-47/2003/khanij dated 13/02/2006
18	Date of second Renewal, if applicable and its period & expiry	NA
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	NA (applied for lease renewal on 05/10/2019)
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	ShriAnirbanDasgupta DirectorInchargeBhilai Steel Plant, IspatBhawanBhilai, Dist.-Durg, Chhattisgarh Date of appoinment : 30/09/2020
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	ShriN.K.MandalGM cum Agent(Mahamaya&Dulki), Off Address: IOC Administrative Building,Dalli Rajhara,Dist-Balod,Pin491228(C.G) Phone-9407983588 Email: nkmandal@sail.in Date of appointment- 18/08/2015 (For Dulki Mine) : 01/08/2013(For Mahamaya Iron Ore Mine)
22	Name of the Mines Manager with Address, phone, email, fax number and date of	Shri Kumar Shivesh Mine Manager, Mahamaya Iron Ore Mine

	appointment in mines	Mines Office, Iron Ore Complex. Phone 9407982883, Email: kumarshivesh@sail.in Date of appointment: 18/09/2016 Shri Ajay Kumar Chaturvedi Mine Manager, Dulki Mine Mines Office, Iron Ore Complex. Phone 9407980837 Email: akchaturvedi@sail.in Date of appointment: 15/02/2016
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri Manish Jaiswal B Tech. (Mining Engg.), 10 yrs experience, Mines Office, Iron Ore Complex. Phone 9407982884, Email: manishjaisawal@sail.in Date of appointment: 01/01/2013
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Geologist is appointed Geologist: ShriR K Umare(MM) M.Sc. Geology
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Modified Mining Plan – 18/02/2019
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Review Of Mining Plan – 18/02/2019 (2016-17 to 2020-21) MODIFIED PLAN PERIOD: 2018-19 TO 2020-21
27	Mineral(s) granted in lease and proved for mining	HEMATITE (IRON ORE)
28	Method of Mining(Open cast, Underground)	OPENCAST
29	Category (Fully Mechanised, Others or Manual)	FULLY MECHANISED
30	Captive/Non Captive	CAPTIVE
31	Validity of BG	31.03.2021,2.88 crores(Review of MP under process)
32	Valid EC	1.46 MTPA

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

Exploration

SN	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	10	Nil	2019-20
1b	Exploration over lease area for Geological axis 1 or 2.	10 (Core) Dulki D-2 &D-3 Block	Nil	2019-20
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	NA	
1d	Balance area to be explored to bring Geological axis in 1 or 2	1403.66 Ha	1403.66 Ha	
1e	Balance reserves as on 01.04.20(million tons)	11.86	11.86	
1f	General remarks of inspecting officer on geology, exploration etc.	The Iron Ore deposit of this region is associated with the metamorphosed banded ferruginous formations consisting of Banded Hematite Quartzite/Jasper. Iron		

		ore deposit of Mahamaya Dulki is synclinorium type of deposit. The exploration in this lease area is very limited and broadly small area is explored.
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2.0Development

SN	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	M1 655-595 MRL M2-670-590MRL M3-665-585 MRL Dukli-745-660MRL	The development was not as per proposal and proposal in D3 block not executed.	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Proposed	Being maintained	
2c	Stripping ratio or ore to OB ratio	0.55	0.59	
2d	Quantity of topsoil generation in m3	NIL	NIL	
2e	Quantity of overburden generation in m3	M1-120650.90 M2-174881.81 M3-27719.54 D1-52081.81 D3-5168.81	M1- 139644.45 M2- 7933.09 M3- 168710.59 D1-74473.09 D3-0	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The development was not as per proposal and proposal in D3 block not executed.		

	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	3 (Mahamaya) 2 (Dulki) Total - 5	3 (Mahamaya) 1 (Dulki) Total - 4	
3b	Quantity of ROM mineral production proposed	M1-268728T M2-70000T M3-971272T D1-25000T D3-365000T	M1 402338.30 M2 88025.90 M3 834690.08 D1= 131199.00T D3- NIL	
3c	Recovery of salable/usable mineral from ROM production	M1-268728T M2-70000T M3-971272T D1-25000T D3-365000T	1456253.28 tons	
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	Nil	Nil	
3g	Grade of sub-grade mineral generation	Nil	Nil	
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	Mahamaya-Yes Dulki-No	Mahamaya-Yes Dulki-No (Through Rock Breaker)	Due to sensitive area drilling Blasting permission is very limited
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	61.41 Ha	58.09 Ha	
3n	Ore to OB ratio for the pit/mine during the year	0.55	0.59	
3o	Total area put in use under different heads at the end of year	Mining 61.41 ha, Mineral Storage 2.37 ha, Infrastructure and roads 18.73 ha, OB/waste dump 11.17 ha	Mining 58.09 ha, Mineral Storage 2.37 ha, Infrastructure and roads 18.73 ha, OB/waste dump 9.81 ha	
3p	Production of ROM mineral during last five-year period, as applicable (2015-16 to 2019-20)	2015-16 959907.00 T 2016-17 908629.60 T 2017-18 1240000.00 T 2018-19 1460000.00 T 2019-20 2500000.00 T	2015-16 679850.60 T 2016-17 908629.60 T 2017-18 1143010.88 T 2018-19 1437343.00 T 2019-20- 1456253.28T	
3q	General remarks of inspecting officer on method of mining etc.	The method of mining is open cast using Excavator-Dumper combination. The benches are not developed systematically and broadly the top benches width is not proper.		

4.0 Solid Waste Management-Dumping

SN	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Proposed	Being done	
b	Location of topsoil, OB & mineral reject dumps	backfill area of M-1 & M-2 & D-3 pit.	OB has been dumped in back filling in M1. There is no mineral reject.	
4c	Number of dumps within lease area and outside lease area	Within Lease – 01 Nos.	Within Lease – 01 Nos	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside of ultimate pit limit N-2264550-2264900 E-499300-499600	Outside of ultimate pit limit N-2264550-2264900 E-499300-499600	
4e	Number of active & alive dumps	01	01	
4f	Number of dead dumps	01	01	

4g	Number of dumps stabilised	01	01	
4h	Whether Retaining wall or garland drain all along dumps are there	Yes	Yes	
4i	Length of Retaining wall or garland drain all along dump	650mts		
4j	Number of settling ponds	13	13	Check dams
4k	Specific comments of inspecting officer on waste dump management	It was observed that there is no proper terracing and the OB/waste dump is near to lease boundary but still no proper retaining wall is constructed nor any control measures taken for dump stability.		

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	Backfilling is proposed in non-mineralized zone of M1 pit.	Actually the area is not properly explored and present Review of Mining plan exploration proposal given therefore backfilling is temporary nature.	
5b	Area under backfilling of mined out area	2.0 Ha.	1.36 Ha.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	NIL	Top soil is used for plantation in existing dump in south eastern slope	
5d	Total area fully reclaimed & rehabilitated	0.4 Ha	0.4 Ha	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Actually the area is not properly explored and present Review of Mining plan exploration proposal given therefore backfilling is temporary.		

6.0 Progressive Mine Closure Plan

SN	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E (2). 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) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	M1-160*85*30 M2-185*35*30	M1- 390761.18 Cub M backfilled	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	0.4 Ha. (500 Plants to be planted)	0.4 Ha. (500 Plants have been planted)	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Proposed	Being done	
6f	General remarks of inspecting officer on PMCP compliance & progressive	Nil		

7.0 Mineral Conservation

SN	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM despatch to Rajhara/Dalli Crushing Plant for processing	ROM despatch to Rajhara/Dalli Crushing Plant for processing	
7b	Method of grade-wise mineral sorting i.e. manual or	Mechanical screening	Mechanical screening	

	mechanical			
7c	Different grade of mineral sorted out at mines	Lumps, Fines	Lumps, Fines	
7d	Any beneficiation process at mines	No	No	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	As mentioned above ROM dispatch from lease area.		

8.0 Environment

SN	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	NIL	NIL	
8b	Concurrent use or storage of topsoil	NIL	Top soil has been stored and is being utilized for plantation.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposed for OB ,No mineral rejects	Being maintained.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	For back filling of M1 and M2 area	Being Done	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Back filling of M1 and M2 area	Being Done	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)		Cumulative 40531 plants have been planted within mining lease.	
8g	Survival rate	Not mentioned specifically	Survival rate =90%	
8h	Water sprinkling on roads to control airborne dust	Proposed	Being done	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	No adverse impact observed during mine visit.		

9.0 Compliance of Rule 45

S. N.	Item	COMMENTS	Remarks
	Status of submission of Monthly and Annual returns	AR upto 2019-20 submitted,MR upto Feb'2021 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	Yes given	Shri Manish Jaiswal, Mining Engineer, Shri kumar Shivesh, Manager, Shri R.K.Umbre, Geologist	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under Mining- 57.09 ha., Infrastructure & Road 18.73 ha., waste disposal 9.81 ha.	Small area in many blocks has been taken as broken up area.	
9d	Scrutiny of Annual return on afforestation	500 nos sapling reported		
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil, NA	Nil	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Grade ore of various type reported	ROM dispatch as there is no crusher or screen within lease.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex. Mine price & production cost Rs 963.9/-		
9i	Scrutiny of Annual return on fixed assets	Nil		
9k	Scrutiny of Annual return on mining machineries	Yes given	Excavator of 1.5 cum, Tipper 8 cum & drill m/c 115mm(contractual m/c)	

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:- The earlier violation was taken compliance except the exploration proposal violation which is given proposal in last approved document processing for 2020-21. The present inspection is carried out for processing of Mining Plan and Rule 11(1) & 37(2) found violated.

Rajesh Kumar Das, Senior Assistant Controller of Mines

