

MCDR INSPECTION REPORT 2022-23
(Rajhara Hill Lease – Bhilai Steel Plant, SAIL)

General:

S.No.	Particulars	Details
1	Name of the Mine	Dalli Mechanised Mine & Jharandalli Iron Ore Mine(Rajhara Hill Lease)
2	Date of Inspection:	26/06/2023
3	Name of Inspecting Officer	Shri D. Dash, Regional Mining Geologist, IBM Raipur
4	Name of official accompanying inspection	Shri P.M. Shirpurkar, GM I/c cum Agent, Shri Pankaj Kumar, DGM cum Mine Manager, Shri S. Raza, DGM (Geology) Shri Praveen Marathe, Geologist
5	Last date of Inspection & Officer	26/08/2022, Shri D. Upadhyay, Senior Assistant Controller of Mines, IBM
6	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease Area -719.60 Ha. Non Forest - 436.00 Ha. Forest-283.60 Ha.
7	Mine code	30MPR13002 & 30MPR 13006
8	IBM Registration Number under rule 45 of MCDR, 1988/2017	5662/2011/IBM
9	Name of the Lease, Address, Phone, email and fax number	Steel Authority of India Ltd, Bhilai Steel Plant,
10	Village	Kondekasa
11	Taluka/Mandal	Taluka –Dalli-Rajhara
12	District	Balod
13	Pin code	491228
14	State	Chhattisgarh
15	Post Office	Dalli- Rajhara
16	Nearest Police Station	Dalli- Rajhara
17	Nearest Railway Station	Dalli- Rajhara
18	Date of Grant of Mining Lease	ML Grant 01/06/1958 to 31/05/1988
19	Date of Execution	Lease deed execution 05/03/1962
20	Weekly day of rest	Staggered (Monday is maintenance day)
21	Date of opening of Mine	Mining Lease Grant (Fresh) (Period 01/06/1958 to 31/05/1988) Lease Deed execution 05.03.1962
22	Date of First Renewal, if applicable and its period & expiry	First renewal period 01/06/1988 to 31/05/1998 (Lease deed date 21/01/1994)
23	Date of Second Renewal, if applicable and its period & expiry	Second renewal period 01/06/1998 to 27/04/2003 (Lease deed date 29/02/2000) Third renewal vide No 3-43/2003/12 Dated 01/01/2005 for the period 20 years from 01/06/2003 to 31/05/2023 (Lease deed date 28/10/2005). The lease is renewed for the period from 01/06/2023 to 31/05/2043.
24	Date of submission of renewal application if Mining	Not applicable.

	Operations are continuing under deemed extension	
25	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Anirban Dasgupta Director Incharge Bhilai Steel Plant, Ispat Bhawan Bhilai, Dist.-Durg, Chhattisgarh Phone : 07882862001 Email anirbandasgupta@sail.in Date of appointment : 30/09/2020
26	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri P M Shirpurkar GM I/c cum Agent(Dalli Mechanised Mine), Off Address: Dalli Administrative Building, Dalli Rajhara, Dist-Balod, PIN 491228(C.G) Phone-9407983906, Email: pshirpurkar@sail.in Date of appointment- 04/08/2020. Shri Mayaram Thakur , (Jharandalli Mine) Add-Room no-50, Administrative Building, IOC, Rajhara Post- Dalli Rajhara, Dist- Balod, Pin- 491228(C.G) Email- mayaramthakur@sail.in Date of appointment- 01/11/2022
27	Name of the Mine Manager with Address, phone, email, fax number and date of appointment in mines	Shri Pankaj Kumar, Mine Manager, Dalli Mech. Mine Off Address: Dalli Administrative Building, Dalli Rajhara, Dist-Balod, PIN 491228(C.G) Phone:-07882851804(Off), Mob. 9407982945 Email: pankajkumar1@sail.in Date of appointment- 12/10/2022 Shri Dhananjay Singh (Jharandalli Mech.Mine) Add-Room no-49, Administrative Building, IOC, Rajhara Post- Dalli Rajhara, Dist- Balod, Pin- 491228(C.G), Ph- 9407982902 Email- dhananjaysingh2@sail.in Date of appointment- 18/10/2018
28	Name of the Mining Engineer, Qualification and total experience with address, phone, email, fax number and date of appointment in the mine	Shri Vinod Kumar Singh, Dalli Mech. Mine BE (Mining), 15 yrs exp in various mines. Off Address: Dalli Administrative Building, Dalli Rajhara, Dist-Balod, PIN 491228(C.G) Mob. 09407982944, Email- yksingh6@sail-bhilaisteel.com Date of appointment- 01/03/2021
29	Whether Geologist and Mining Engineer appointment in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	YES Shri P. Marathe
30	Date of Approval of Mine Plan/Modified Mine Plan with five- year period and specific condition in approval letter, if any.	Mining Plan – 08/06/2018 Modified: 24/01/2020
31	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 mining plan has been approved vide No. बालोद /लौह/ख.यो.-1152/2018-रायपुर/291 दिनांक 08/06/2018 for the year 2018-19 to 2022-23. PLAN HAS MODIFIED vide No. बालोद /लौह/ख.यो.-1229/2019-रायपुर/670 दिनांक 24/01/2020 for YEAR 2019-20 to 2022-23. However the Mining Plan for Rajhara Hill Lease 719.60 Hact has been approved for the financial year 2023-2024 to 2027-2028

		vide order No. RPR/BALOD / IRON ORE /1362/RMP /2022-23. Dated: 31/03/2023
32	Mineral(s) granted in lease and approved for Mining	HEMATITE (IRON ORE)
33	Method of Mining (Opencast, Underground)	OPENCAST
34	Category (Fully Mechanized, Others or Manual)	FULLY MECHANISED
35	Captive/Non-Captive	CAPTIVE
36	Present EC Status	EC Exist. EC quantity is 14 MTPA. Issued vide No. MOEF letter no. J-11015/349/2009-IA.II (M) Dated: 30th September, 2013
37	Status of Financial Assurance	The total amount of financial assurance estimated Rs. 24,40,00,000/- (twenty four Crore forty Lakhs only). A bank guarantee for the same has been provided vide bank guarantee no. 230127IBGP00218, dated-15/02/2023. Period of BG from 15/02/2023 to 31/03/2028.

Scientific Mining: Compliance of proposals of approved Mining Plan/Review of Mining Plan:

1.0 Exploration:

S.N.	Item	Proposals (2022-23)	Actual Work (2022-23)	Remarks
1a	Backlog of previous year Proposals	Backlog of 2020-21 BH= 35 Mtrs = 3130	BH= 35 Mtrs = 5315	Backlog of proposed boreholes of the year 2020-21 drilled during the year.
1b	Exploration over lease area for Geological axis 1 or 2.	2022-23 BH= 0 Mtrs = 0	2022-23 Work done in this year against previous backlog of year 2020-21 BH= 35 Mtrs = 5315	
1c	Exploration Agency & Expenditure in Lakh Rupees during the year	NIL	Agency M/s South West Pinnacle Exploration Pvt. Ltd. Expenditure = Rs 22963756.94	
1d	Balance area to be explored to bring Geological axis in 1 or 2.	Nil	Balance Area = NIL	
1e	Balance reserves as on 01.04.2023	18.58 MT		
1f	General remarks of Inspecting officer on geology, exploration etc.	As per approved Mining Plan, 224 ha area has been covered under G1 scale of exploration. It is cited in the plan that 495 ha area is under G4 scale of exploration. During the year 2023-24, 8 boreholes have been proposed.		

2.0 Development:

S.N	Item	Proposals (2022-23)	Actual Work (2022-23)	Remarks								
2a	Location of Development w.r.t. lease area	<table border="1"> <tr> <td>Pit-1: Dalli Mech Mine</td> <td>6800N – 7450N; 3900E-5500E</td> </tr> <tr> <td>Pit-2: Jharan dalli Mine</td> <td>6600N – 7400N; 5900E-7100E</td> </tr> </table>	Pit-1: Dalli Mech Mine	6800N – 7450N; 3900E-5500E	Pit-2: Jharan dalli Mine	6600N – 7400N; 5900E-7100E	<table border="1"> <tr> <td>Pit-1: Dalli Mech Mine</td> <td>6800N – 7450N; 3900E-5500E</td> </tr> <tr> <td>Pit-2: Jharan dalli Mine</td> <td>6600N – 7400N; 5900E-7100E</td> </tr> </table>	Pit-1: Dalli Mech Mine	6800N – 7450N; 3900E-5500E	Pit-2: Jharan dalli Mine	6600N – 7400N; 5900E-7100E	Pit development is carried out as per proposal.
Pit-1: Dalli Mech Mine	6800N – 7450N; 3900E-5500E											
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2b	Separate benches in topsoil overburden and mineral (Rule 15)	Top soil –NIL Benches in OB and Ore	Top soil –NIL Benches in OB and Ore are being maintained	As per proposal.								
2c	Stripping ratio or ore to OB ratio	ORE: WASTE 1: 0.37	ORE: WASTE 1: 0.28	Slightly on lower side.								
2d	Quantity of topsoil generation in m ³	Not proposed	Not proposed									
2e	Quantity of overburden generation in m ³	2331444 CuM	1527855 CuM	On lower side due to less production.								
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	The quarry development during the year 2022-23 is per proposal.										

3.0 Exploitation:

S.N	Item	Proposals (2022-23)	Actual Work (2022-23)	Remarks								
3a	Number of pits proposed for production	2 (Pit-1: Dalli Mech Mine and Pit-2: Jharandalli Mine) <table border="1"> <tr> <td>Pit-1: Dalli Mech Mine</td> <td>6800N – 7450N; 3900E-5500E</td> </tr> <tr> <td>Pit-2: Jharan dalli Mine</td> <td>6600N – 7400N; 5900E-7100E</td> </tr> </table>	Pit-1: Dalli Mech Mine	6800N – 7450N; 3900E-5500E	Pit-2: Jharan dalli Mine	6600N – 7400N; 5900E-7100E	2 (Pit-1: Dalli Mech Mine and Pit-2: Jharandalli Mine) <table border="1"> <tr> <td>Pit-1: Dalli Mech Mine</td> <td>6800N – 7450N; 3900E-5500E</td> </tr> <tr> <td>Pit-2: Jharan dalli Mine</td> <td>6600N – 7400N; 5900E-7100E</td> </tr> </table>	Pit-1: Dalli Mech Mine	6800N – 7450N; 3900E-5500E	Pit-2: Jharan dalli Mine	6600N – 7400N; 5900E-7100E	As per proposal.
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3b	Quantity of ROM mineral production proposed	6250000	5368764	Less production of ore due to less demand from the captive steel plant. mineral rejects is envisaged, Mineral reject of about 15% of run of mine ore is envisaged in approved Mining Plan. Mineral rejects generation is slightly on higher side.								
3c	Recovery of Salable/usable mineral from ROM production	5312500	4556095									
3d	Quantity of mineral reject generation	937500	818368									

3e	Grade of mineral reject generation and threshold value declared	45-55% Fe	Fe 49.74%																	
3f	Quantity of sub-grade mineral generation	937500	818368 T																	
3g	Grade of sub-grade mineral generation	45-55% Fe	45-55% Fe																	
3h	Manual/Mechanized method adopted for segregation from ROM	Mechanised Crushing, screening & washing Plant	Mechanised (Crushing, screening & washing Plant)																	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Slime Beneficiation Unit (SBU) & Pellet Plant	<p>SBU plant is in operation. Contract for Pellet Plant of 1MTPA is awarded to M/s Shri Jagannath Steels & Power Ltd on BOO basis. The work is under progress.</p> <p>Studies conducted-</p> <p>1) A Study for pilot-scale beneficiation tests involving classification, de-sliming, magnetic separation, and thickening studies of the iron ore sample has been conducted by Institute of Minerals and Materials Technology (Council of Scientific and Industrial Research) Bhubaneswar, Odisha.</p> <p>2) Pelletization studies with Iron ore concentrate Samples has been conducted by Research & Development Centre, NMDC Limited, Uppal Road, Hyderabad</p>																	
3j	Provision of drilling & blasting in mineral benches	Blast hole drilling using IDM-30 drill machines.	<p>Using IDM-30, 152mm dia drill machines.</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Ore</th> <th>Waste/BH Q</th> <th>Phyllitic clay</th> </tr> </thead> <tbody> <tr> <td>Burden</td> <td>3.0 to 4.0 m</td> <td>4.0 to 4.5 m</td> <td>5 to 5.5 m</td> </tr> <tr> <td>Spacing</td> <td>3.5 to 4.5 m</td> <td>4.5 to 5.5 m</td> <td>5.5 to 6.0 m</td> </tr> <tr> <td>Sub-drill</td> <td>10% of B/height</td> <td>10% of B/height</td> <td>10% of B/height</td> </tr> </tbody> </table> <p>Explosive used : Blasting is carried out by using SME and slurry Cartridges. Control blasting is carried out by using Non-Electric multi delay initiation system. NONEL is used for controlled blasting. Detonator fuse of 10 g/m with cord relays is used for initiation of blasts occasionally. Explosive used (M/s IOCL, M/s Shakti Blast Pvt Ltd, Navbharat</p>	Parameter	Ore	Waste/BH Q	Phyllitic clay	Burden	3.0 to 4.0 m	4.0 to 4.5 m	5 to 5.5 m	Spacing	3.5 to 4.5 m	4.5 to 5.5 m	5.5 to 6.0 m	Sub-drill	10% of B/height	10% of B/height	10% of B/height	As proposed.
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			Fuse Co.): 125 mm dia Primary 83 mm dia Toe 25 mm dia Secondary Accessories used : Detonating fuse 10.0 g/m, Cord relays 25 ms, Special OD, DTH and STL of Amamecdet.																																																																						
3k	Provision of mining machineries in mineral benches	Excavators, dumpers, dozers, Tippers	<table border="1"> <thead> <tr> <th>Equipment</th> <th>Capacity</th> <th>Flee</th> </tr> </thead> <tbody> <tr><td>Hydraulic Shovels</td><td>4.6 CuM</td><td>02</td></tr> <tr><td>Hydraulic Shovels Back hoe</td><td>4.3 CuM</td><td>05</td></tr> <tr><td>Hydraulic Shovels</td><td>2.3 CuM</td><td>04</td></tr> <tr><td>Hydraulic Shovels</td><td>1.57 CuM</td><td>01</td></tr> <tr><td>Hydraulic Shovels</td><td>0.9 CuM</td><td>03</td></tr> <tr><td>Dumper</td><td>60T</td><td>09</td></tr> <tr><td>Dumper</td><td>50T</td><td>03</td></tr> <tr><td>Tippers Trucks</td><td>10 T</td><td>11</td></tr> <tr><td></td><td>18T</td><td>31</td></tr> <tr><td></td><td>20T</td><td>30</td></tr> <tr><td>Dozer</td><td>450HP</td><td>06</td></tr> <tr><td>Drill Machine-Diesel</td><td>152mm dia</td><td>05</td></tr> <tr><td>Drill Machine-Diesel</td><td>115mm dia</td><td>02</td></tr> <tr><td>Water Sprinklers</td><td>28 KL</td><td>03</td></tr> <tr><td>Water Sprinklers</td><td>10 KL</td><td>04</td></tr> <tr><td>Explosive Van</td><td>7.3 T</td><td>02</td></tr> <tr><td>Loco-Non Elect</td><td>70 T</td><td>03</td></tr> <tr><td>Cranes</td><td>12 T</td><td>02</td></tr> <tr><td>Motor Grader</td><td>145 HP</td><td>02</td></tr> <tr><td>Crusher</td><td>2100TPH</td><td>01</td></tr> <tr><td>Crusher</td><td>800TPH</td><td>02</td></tr> <tr><td>Crusher</td><td>780TPH</td><td>01</td></tr> </tbody> </table>	Equipment	Capacity	Flee	Hydraulic Shovels	4.6 CuM	02	Hydraulic Shovels Back hoe	4.3 CuM	05	Hydraulic Shovels	2.3 CuM	04	Hydraulic Shovels	1.57 CuM	01	Hydraulic Shovels	0.9 CuM	03	Dumper	60T	09	Dumper	50T	03	Tippers Trucks	10 T	11		18T	31		20T	30	Dozer	450HP	06	Drill Machine-Diesel	152mm dia	05	Drill Machine-Diesel	115mm dia	02	Water Sprinklers	28 KL	03	Water Sprinklers	10 KL	04	Explosive Van	7.3 T	02	Loco-Non Elect	70 T	03	Cranes	12 T	02	Motor Grader	145 HP	02	Crusher	2100TPH	01	Crusher	800TPH	02	Crusher	780TPH	01	Machineries were found in use in the mines.
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3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Dalli Mech Mine</th> <th>Jharandalli Mine</th> </tr> </thead> <tbody> <tr> <td>Maximum Bench Height</td> <td>10 M</td> <td>6 M</td> </tr> <tr> <td>Minimum Bench Width</td> <td>10-35 M</td> <td>6-20 M</td> </tr> </tbody> </table>	Parameter	Dalli Mech Mine	Jharandalli Mine	Maximum Bench Height	10 M	6 M	Minimum Bench Width	10-35 M	6-20 M	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Dalli Mech Mine</th> <th>Jharandalli Mine</th> </tr> </thead> <tbody> <tr> <td>Maximum Bench Height</td> <td>10 M</td> <td>6 M</td> </tr> <tr> <td>Minimum Bench Width</td> <td>10-35 M</td> <td>6-20 M</td> </tr> </tbody> </table>	Parameter	Dalli Mech Mine	Jharandalli Mine	Maximum Bench Height	10 M	6 M	Minimum Bench Width	10-35 M	6-20 M	As per proposal.																																																			
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3m	Total area covered under excavation /pits	Approved Plan Period = 155.07 Hact	153.84 Hact	As reported in Annual Return for the year 2022-23.																																																																					
3n	Ore to OB ratio for the pit/mine during the year	Pit-1 Dalli Mech Mine Ore: Waste 1: 0.38 Pit2 Jharandalli Mine Ore: Waste 1: 0.36	Pit-1 Dalli Mech Mine Ore: Waste 1: 0.30 Pit2 Jharandalli Mine Ore: Waste 1: 0.24	Ore : OB ratio is slightly on lower side due to less production & development.																																																																					
3o	Total area put in use under different heads at the end of year	<table border="1"> <thead> <tr> <th>Type of land use</th> <th>Proposed at end of plan period</th> </tr> </thead> <tbody> <tr><td>Area to be excavated</td><td>147.40</td></tr> <tr><td>Overburden/ dump</td><td>69.95</td></tr> <tr><td>Mineral storage</td><td>3.96</td></tr> </tbody> </table>	Type of land use	Proposed at end of plan period	Area to be excavated	147.40	Overburden/ dump	69.95	Mineral storage	3.96	<table border="1"> <thead> <tr> <th>Type of land use</th> <th>Actual 2022-23</th> </tr> </thead> <tbody> <tr><td>Area excavated</td><td>147.40</td></tr> <tr><td>Overburden/ dump</td><td>69.95</td></tr> <tr><td>Mineral storage</td><td>3.96</td></tr> </tbody> </table>	Type of land use	Actual 2022-23	Area excavated	147.40	Overburden/ dump	69.95	Mineral storage	3.96	As proposed.																																																					
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		Infrastructure	16.47	Infrastructure	16.47	
		Roads	24.50	Roads	24.50	
		Railway	4.92	Railway	4.92	
		Green belt/ Afforestation	79.92	Green belt/ Afforestation	79.92	
		Effluent treatment plant	0.12	Effluent treatment plant	0.12	
		Mineral separation plant	15.22	Mineral separation plant	15.22	
		Pipeline	3.18	Pipeline	3.18	
		Area under state highway No.9	10.25	Area under state highway No.9	10.25	
		Other undisturbed area	343.71	Other area	343.71	
		Total	719.6	Total	719.6	
3p	Production of ROM mineral during last five-years period, as Applicable (tonne)					Production of run of mine ore is on lower side as per demand from Captive steel plant.
		2018-19	5494837	2018-19	5036137	
		2019-20	5361820	2019-20	5080892	
		2020-21	6250000	2020-21	4732275	
		2021-22	6250000	2021-22	5937733	
		2022-23	6250000	2022-23	5368764	
3q	General remarks of inspecting officer on method of mining etc	The pit development is as per approved Mining Plan. Production of run of mine ores during the planned period is on lower side as per demands from the captive steel plant				

4.0 Solid Waste Management-Dumping:

S.N.	Item	Proposals (2022-23)			Actual Work (2022-23)			Remarks												
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32,33)	Topsoil = 13262 cum Separate dump for Overburden and Mineral reject			Topsoil = NIL Separate dump for Overburden and Mineral reject			Due less development work, no top soil is generated.												
4b	Location of topsoil, OB & mineral reject dumps	OB Dump = WD1 N 7100-6700N/ E 5100- 6700 E Backfill BF1 7045N-7550N/ 3720E-4300E BF2 6700N-6950N/ 5900E-6100E Mineral reject Hitkasa tailing Dam <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>E/W</td> <td>2836</td> <td>3604</td> </tr> <tr> <td>N/S</td> <td>8816</td> <td>9604</td> </tr> </table>			E/W	2836	3604	N/S	8816	9604	OB Dump = WD1 N 7100-6700N/ E 5100- 6700 E Backfill BF1 & BF2 Not done. Mineral reject Hitkasa tailing Dam (outside lease area) <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>E/W</td> <td>2836</td> <td>3604</td> </tr> <tr> <td>N/S</td> <td>8816</td> <td>9604</td> </tr> </table>			E/W	2836	3604	N/S	8816	9604	Backfilling was proposed in two locations and have not been done. Violations of Rule 11(1) of MCDR, 2017 is pointed out.
E/W	2836	3604																		
N/S	8816	9604																		
E/W	2836	3604																		
N/S	8816	9604																		
4c	Number of Dumps within lease area	Dalli	WD1	Dalli	WD1															

	and outside lease area	Mech. Mines		Mech. Mines		
		Jharandalli Mine	WD1	Jharandalli Mine	WD1	
4d	Location of Dumps w.r.t. ultimate pit limit (Rule 16)	OB Dump WD1 N 7100-6700N/ E 5100- 6700 E		OB Dump WD1 N 7100-6700N/ E 5100- 6700 E		
4e	Number of Active & Alive dumps	01		01		
4f	Number of dead dumps	NIL		NIL		
4g	Number of dumps established	NIL		NIL		
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	500Mtrs		937 Mtrs		
4j	Number of settling ponds	01		01		
4k	Specific comments of inspecting officer on waste dump management	Backfilling of mined out quarry was proposed during the year 2022-23. However, no such activity carried out. Violation of Rule 11(1) of MCDR, 2017 is pointed out.				

5.0 Solid Waste Management-Backfilling:

S.N.	Item	Proposals (2022-23)	Actual Work (2022-23)	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Part of the Mined out area proposed for Backfilling (BF1 and BF2)	NIL	Violation of Rule 11(1) of MCDR, 2017 is pointed out.
5b	Area under backfilling of mined out area	8 Hect During the 5 years plan period	NIL	-do-
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Top soil = NIL. Only Backfill was proposed.	NIL	.
5d	Total area fully reclaimed & rehabilitated	30000 Nos of sapling in 18 Hact area	NIL	Violation of Rule 11(1) of MCDR, 2017 is pointed out.
5e	General remarks of inspecting officer on backfilling, reclamation etc	During the year 2022-23, both proposed backfilling and plantation have not been carried out. Violation of Rule 11(1) of MCDR, 2017 is pointed out.		

6.0 Progressive Mine Closer Plan:

S. N.	Item	Proposals (2022-23)	Actual Work (2022-23)	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly-Rule 26 (2)		Submitted	
6b	Management of worked/mined out benches	NIL	NIL	
	Area available for rehabilitation (Ha)	NIL	NIL	
	Afforestation done (ha)	Nil	NIL	
	No. of saplings planted during the year	Nil	NIL	
	Cumulative no. of plants		705331 Nos. (Inside lease area = 405481 Nos. Outside lease area= 299850 Nos.)	
	Any other specific method of rehabilitation	Not proposed	Nil	
	Cost incurred on watch & care during the year	Not proposed	Nil	
6c	Compliance on reclamation and rehabilitation by backfilling Voids available for backfilling (L*B*D) Void filled by waste/tailings Afforestation on the backfilling Rehabilitation by making water reservoir Any other specific means	360x350x40 (Backfill)	NIL	Violation of Rule 11(1) of MCDR, 2017 is pointed out.
6d	Compliance of Rehabilitation of waste land within lease i. Afforestation ii. Area rehabilitation (ha) iii. Method of rehabilitation	30,000	NIL	Violation of Rule 11(1) of MCDR, 2017 is pointed out.
6e	Compliance of Environment monitoring (core zone & buffer zone)	Quarterly	Being Complied	
6f	General remarks of inspecting officer on PMCP compliance & progressive closer operations	During the year 2022-23, 0.58m ³ volume of void was proposed for backfilling against which no backfilling has been carried out. Plantation of 30000 saplings was proposed was proposed on waste dumps, against which no planation has been carried out.		

7.0 Mineral Conservation:

S.N.	Item	Proposals (2022-23)	Actual Work (2022-23)	Remarks
7a	ROM mineral dispatch or grade wise sorting within lease area	grade wise sorting within lease area	Grade wise sorting is being done through CSW Plant.	As proposed.
7b	Method of grade-wise mineral sorting	Mechanical screening & washing	Dalli Crushing, Screening and Washing Plant	-do-

	i.e. manual or mechanical			
7c	Different grade of mineral sort out at mine	Lumps, Fines & Slime	Lumps, Fines & Slime	-do-
7d	Any beneficiation process at mines	Slime Beneficiation Unit (SBU)	Slime Beneficiation Unit (SBU) is in operation (temporary stopped due to delay in new contract). Modification in CSW Plant for Silica reduction is under process. Contract for Pellet Plant of 1MTPA is awarded to M/s Shri Jagannath Steels & Power Ltd on BOO basis.	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Sorting, sizing, screening and washing of run of mine ore is carried out in beneficiation plant within the lease area.		

8.0 Environment:

S.N.	Item	Proposals (2022-23)	Actual Work (2022-23)	Remarks
8a	Separate removal and utilization of topsoil (Rule32)	13262 cum	NIL	Due to limited development.
8b	Concurrent use or storage of topsoil	Yes	NIL	
8c	Separate dumps for overburden waste rock, rejects and fines (Rule 33)	Separate dumps for OB, Ore and rejects was Proposed	Being maintained for OB, Ore and mineral rejects.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfill was proposed	NIL	Violation of Rule 11(1) of MCDR, 2017 is pointed out.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Backfill was proposed	NIL	-do-
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	No of Plant proposed = 30000	NIL	Violation of Rule 11(1) of MCDR, 2017 is pointed out.
8g	Survival rate	Not specified.		
8h	Water sprinkling on roads to control airborne dust	Proposed	Being done by using Water Sprinklers of 3 Nos. of 28 KL and 4 Nos. of 10 KL capacity.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mine area	During the year 2022-23, top soil generation of 13262 cum was envisaged in approved Mining Plan, however, no top soil generation has been reported due to limited development of existing quarry. Planation of 30,000 saplings were proposed during the year 2022-23, agonist which no plantation has been done for which violation of Rule 11(1) of MCDR, 2017 is pointed out.		

9.0 Compliance of Rule 45:

S.N	Item	Comments	Remarks																												
9a	Status of submission of monthly and Annual returns	MR submitted up to May-2023 Annual Returns for year 2022-23 submitted on 29/06/2023.																													
S N	Item	Details Given in A.R.	Observation of I/Officer																												
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer and Geologist appointed.	Both were present during the inspection of the mine.																												
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	<table border="1"> <thead> <tr> <th>Type of land use</th> <th>2022-23(area in Hact)</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td>Under forest</td> <td>Outside forest</td> <td>total</td> </tr> <tr> <td>Area covered under current mining area</td> <td>90.60</td> <td>56.80</td> <td>147.40</td> </tr> <tr> <td>Reclaimed / rehabilitated area</td> <td>0</td> <td>6.44</td> <td>6.44</td> </tr> <tr> <td>Used for waste disposal</td> <td>20.89</td> <td>49.06</td> <td>69.95</td> </tr> <tr> <td>Occupied by plant, buildings, residential, welfare buildings & roads</td> <td>16.63</td> <td>29.38</td> <td>46.01</td> </tr> <tr> <td>Other Purpose (railway line)</td> <td>3.92</td> <td>1.00</td> <td>4.92</td> </tr> </tbody> </table>	Type of land use	2022-23(area in Hact)				Under forest	Outside forest	total	Area covered under current mining area	90.60	56.80	147.40	Reclaimed / rehabilitated area	0	6.44	6.44	Used for waste disposal	20.89	49.06	69.95	Occupied by plant, buildings, residential, welfare buildings & roads	16.63	29.38	46.01	Other Purpose (railway line)	3.92	1.00	4.92	Appears to be correct.
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9d	Scrutiny of Annual return on afforestation	Plantation in 2022-23 = NIL	Violation of Rule 11(1) of MCDR, 2017 is pointed out.																												
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Quantity 818368.01 T Quality <table border="1"> <thead> <tr> <th>Constituent</th> <th>Grade %</th> </tr> </thead> <tbody> <tr> <td>Fe</td> <td>49.93</td> </tr> <tr> <td>SiO2</td> <td>21.98</td> </tr> <tr> <td>Al2O3</td> <td>4.14</td> </tr> </tbody> </table>	Constituent	Grade %	Fe	49.93	SiO2	21.98	Al2O3	4.14	Appears to be correct.																				
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9f	Scrutiny of Annual return on ROM stock and/or grade ore	<table border="1"> <thead> <tr> <th>Ore Grade</th> <th>Stock as on 31/03/2023</th> </tr> </thead> <tbody> <tr> <td>ROM</td> <td>73132.53</td> </tr> <tr> <td>LUMPS Fe 62%-<65%</td> <td>47331.53</td> </tr> <tr> <td>FINES Fe 55%-<58%</td> <td>249055.33</td> </tr> <tr> <td>FINES Fe 60%-<62%</td> <td>43422.12</td> </tr> </tbody> </table>	Ore Grade	Stock as on 31/03/2023	ROM	73132.53	LUMPS Fe 62%-<65%	47331.53	FINES Fe 55%-<58%	249055.33	FINES Fe 60%-<62%	43422.12	Appears to be correct.																		
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9g	Scrutiny of Annual return on sale value, Ex. Mine price & production costs	Ex. Mine price = 1435.30 Rs.	Same as cost production being a captive mine.																												
9i	Scrutiny of Annual return on Fixed assets	Value of fixed assets: Rs. 445089894.00	Appears to be correct.																												

9 k	Scrutiny of Annual return on mining Machineries	Equipment	Capacity	Fleet	Found deployed during the inspection.
		Hydraulic Shovels	4.6 CuM	02	
		Hydraulic Shovels	4.3 CuM	05	
		Back hoe			
		Hydraulic Shovels	2.3 CuM	04	
		Hydraulic Shovels	1.57 CuM	01	
		Hydraulic Shovels	0.9 CuM	03	
		Dumper	60T	09	
		Dumper	50T	03	
		Tippers Trucks	10 T	11	
			18T	31	
			20T	30	
		Dozer	450HP	06	
		Drill Machine-Diesel	152mm dia	05	
		Drill Machine-Diesel	115mm dia	02	
		Water Sprinklers	28 KL	03	
		Water Sprinklers	10 KL	04	
		Explosive Van	7.3 T	02	
		Loco-Non Elect	70 T	03	
		Cranes	12 T	02	
		Motor Grader	145 HP	02	
		Crusher	2100TPH	01	
		Crusher	800TPH	02	
Crusher	780TPH	01			

10- Details of violations observed during last inspection and the compliance status.

- 1) Violation pointed out by Shri Dayanand Upadhyay, Senior Assistant Controller of Mines, IBM Raipur during his visit on 26/08/2022.

Observations	Compliance Status
<p>Digital aerial images of mining lease area –</p> <p>(1) Every lease having</p> <p>(a) an annual excavation plan of one million tonne or more in particular year : or</p> <p>(b) Leased area of fifty hectare or more, shall carry out a drone survey of the leased area and up to hundred meters outside the lease boundary in the month of April or May every year and submit the processed output (digital elevation model (DEM) and orthomosaic) images obtained from such survey or any other format as may be specified by the Indian Bureau of Mines in the regard to the Controller General on or before 1st of July every year.</p> <p>However, it is observed that the Drone Survey is not carried out and data is not submitted to this Office as per provision of rule 34A of MCDR 2017 and guideline issued by IBM in this regard.</p>	<p>Drone survey work for Rajhara Hills Lease (Dalli Mech. Mine & Jharandalli Mine) for the financial year 2021-22 had been carried out through contractual agency, M/s Matrix Geo Solutions Pvt. Limited vide award letter no. CC-Mine – Rajhara /4270012778/ 1130021940 Dated: 30/07/2022.</p> <p>The report has been submitted to IBM Raipur vide letter No Mines/IOC/CGM (Mines & Rowghat) /2022-23/143 Dated: 12/11/2022.</p>

2) Violation pointed out by Shri D. Dash, Regional Mining Geologist, IBM, Raipur vide letter No. CHG/DLD/FE/30MPR13002/351 Dated 09/12/2022

Observations	Compliance Status
<p>Under rule 11 (4) –</p> <p>The holder of mining lease shall submit the mining plan to the competent authority for review at least one hundred and eighty days before the expiry of five years period for which it was approved on the last occasion, for mining operation for a period of five subsequent years.</p> <p>However it is observed that, the last approved Modification of Review of Mining Plan i.r.o your above mine is valid till 31.03.2023 and the review and updation of mining plan for the subsequent five year period ought to be submitted before 01st October 2022 has not been submitted so far to the Regional Controller of Mines, Indian Bureau of mines, Raipur.</p>	<p>The Mining Plan for Rajhara Hill Lease 719.60 Hact has been approved for the financial year 2023-2024 to 2027-2028 vide order No. RPR /BALOD / IRON ORE /1362/RMP /2022-23. Dated: 31/03/2023.</p>

2) During the current inspection, following violations have been observed:

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(RMP) approved vide letter No. बालोद /लौह/ख.यो.-1229/2019-रायपुर/670 dated 24/01/2020 of the aforesaid mine for the year 2019-20 to 2022-23 to the extent indicated below:</p> <p>(i) Against the backfilling of mined out quarry proposed during the year 2022-23, no backfilling has been carried out.</p> <p>(ii) No plantation has been carried out over the waste dump area against the proposal of 30,000 saplings during the year 2022-23 in the approved RMP.</p> <p>Hence, the above are observed to be against systematic and scientific development of mines and protection of environment in the said mine.</p>

Name: Debadurllav Dash
Regional Mining Geologist