

## MCDR INSPECTION REPORT

### Part-I: General

S. N.	Particulars	Details
1	Name of the Mine	<b>Patabeda Iron Mines</b>
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	<b>14.00 Ha. DLC Forest-14.00Ha</b>
3	Mine code	<b>30ORI13054</b>
4	IBM Registration Number under rule 45 of	<b>IBM/247/2011</b>
5	Name of the lessee, Address, phone, email and fax number	<b>M/s M G Mohanty At: Patabeda, Po: Malda, District: Sundargarh(Odisha)</b>
6	Village	<b>Patabeda</b>
7	Taluka/Mandal	<b>Bonai</b>
8	District	<b>Sundargarh</b>
9	Pin code	<b>770088</b>
10	State	<b>Odisha</b>
11	Post office	<b>Malda</b>
12	Nearest police station	<b>Koira</b>
13	Nearest Railway station	<b>Joroli</b>
14	Date of Grant of Mining Lease	<b>04.02.2006</b>
15	Date of Execution	<b>08.03.2006</b>
16	Date of opening of Mine	<b>09.04.2006</b>
17	Date of expiry	<b>07.03.2026</b>
18	Date of submission of renewal application if Mining Operations are continuing under deemed extension	<b>NA</b>
19	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	<b>R.L. Mohanty 5A, forest Park, Bhubaneswar rlmbbsr@mail.com</b>
20	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	<b>Tanuj Mohanty, 5A, forest Park, Bhubaneswar tanuj.mohanty@gmail.com</b>
21	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	<b>Karun Kumar Mandal At: Patabeda, Po: Malda, Dist: Sundargarh Mob. No.: 9668725907 Mail id : <a href="mailto:mandaltempl@gmail.com">mandaltempl@gmail.com</a> Data of Appointment : 01.04.2020</b>
22	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	<b>Mr. Balaram Behera At: Patabeda, Po: Malda, Dist: Sundargarh Mob. No.: 7440015217 Data of Appointment : 13.07.2013</b>
23	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	<b>Yes, B. Register No.: 161 Data of Appointment : 01.07.2006 Mr. Dillip Kumar Pattanayak (Geologist). Mob. No.: 7440015245</b>
24	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	<b>BBS/SG/Fe/MP-130, dt. 08.11.2002</b>

25	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	<b>MRPM/A/38-ORI/BHU/2021-22, dt.24.03.2022</b>
26	Mineral(s) granted in lease and proved for	<b>Iron</b>
27	Method of Mining(Open cast, Underground)	<b>Open Cast</b>
28	Category (Fully Mechanized, Others or Manual)	<b>Fully Mechanized</b>
29	Captive/Non Captive	<b>Non-Captive</b>

#### **Details about Mining Plan/ Mining Scheme**

a) Letter No. and date of approval of mining plan	:	<b>BBS/SG/Fe/MP-130, dt. 08.11.2002</b>
b) Letter No. and date of approval of mining scheme.	:	<b>MRPM/A/38-ORI/BHU/2021-22, dt.24.03.2022</b>
c) Condition while approving the MP/ MS/ modification	:	
d) Period of mining plan/ mining scheme in force :	:	<b>Scheme Period 2022-23 to 2025-26</b>

## **PART II**

- 1. Scientific Mining:** Compliance of proposals of approved mining plan/scheme of mining. (Duplication of information in existing TMIS data sheets and draft write up has been avoided.)

#### **Exploration:**

<b>S.N.</b>	<b>Item</b>	<b>Proposals</b>	<b>Actual work</b>	<b>Remarks</b>
1a	Backlog of previous year (2021-22)		<b>Nil</b>	
1b	Exploration over lease area for Geological axis 1 or 2. (2022-23)	<b>Nil</b>	<b>Nil</b>	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	<b>Nil</b>	<b>Nil</b>	
1d	Balance area to be explored to bring Geological axis in 1 or 2	<b>Nil</b>	<b>Entire area explored.</b>	
1e	Balance reserves as on 01.04.2023		<b>1282755 tonne</b>	

**2. Development: (2022-23)**

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	<b>N2426070-2426240 E331931-331880</b>	<b>N2426070-2426240 E331931-331880</b>	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	<b><u>DUMP-2</u> N2425915- E331610 N2426085- E331800</b>  <b><u>DUMP-3(dead)</u> N2425980- E331954 N2426065- E331920</b>  <b><u>M R Stack</u> N2426148- E331770 N2426050- E331817</b>	<b><u>DUMP-2</u> N2425915- E331610 N2426085- E331800</b>  <b><u>DUMP-3</u> N2425980- E331954 N2426065- E331920</b>	<b>Presently there is no M R stack.</b>
2c	Stripping ratio or ore to OB ratio	<b>1:0.05</b>	<b>1:0.12</b>	
2d	Quantity of topsoil generation in m <sup>3</sup>	<b>No Proposal</b>	<b>No Proposal</b>	
2e	Quantity of overburden generation in m <sup>3</sup>	<b>5405 M<sup>3</sup></b>	<b>7247.5 M<sup>3</sup></b>	

**3. Exploitation ( 2022-23 )**

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	<b>One Quarry</b>	<b>One Quarry</b>	
3b	Quantity of ROM mineral production proposed	<b>119700</b>	<b>119520</b>	
3c	Recovery of salable/usable mineral from ROM production	<b>119700 (total ROM is Salable)</b>	<b>119520</b>	
3d	Quantity of mineral reject generation	<b>0</b>	<b>0</b>	
3e	Grade of mineral reject generation and threshold value declared	<b>+45% to -55% Fe</b>	<b>Not generated.</b>	
3f	Quantity of sub-grade mineral generation	<b>-</b>	<b>-</b>	
3g	Grade of sub-grade mineral generation	<b>-</b>	<b>-</b>	

3h	Manual / Mechanized method adopted for segregating from ROM	<b>Mechanized</b>	<b>Mechanized</b>	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade	<b>No Proposal</b>	<b>N A</b>	
3j	Provision of drilling & blasting in mineral benches	<b>Yes</b>	<b>Deep hole drilling of 110mm dia is done with 2.5m burden, 3.0m spacing and 6m high. Blasting is done with Slurry explosives of 83mm dia, Nonel and Electric detonator used.</b>	
3k	Provision of mining machineries in mineral benches	<b>Excavator – 1.5 M<sup>3</sup> Excavator – 2.1 M<sup>3</sup> Tipper – 25tonne Mineral Sizing &amp; Screening Plant - 250TPH</b>	<b>Excavator – 1.5 M<sup>3</sup> Excavator – 2.1 M<sup>3</sup> Tipper – 25tonne Mineral Sizing &amp; Screening Plant -250TPH</b>	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	<b>Yes</b>	<b>Yes</b>	
3m	Total area covered under excavation/pits	<b>3.093Ha</b>	<b>3.093Ha</b>	
3n	Ore to OB ratio for the pit/mine during the year	<b>1:0.05</b>	<b>1:0.12</b>	
3o	Total area put in use under different heads at the end of year	<b>Pit – 3.093Ha Dump –2.876Ha Mineral Stack yard, road &amp; Infrastructure - 5.587Ha <u>Others -0.502Ha</u> Total-12.058Ha</b>	<b>Pit – 3.093Ha Dump –2.876Ha Mineral Stack yard, road &amp; Infrastructure -5.587Ha <u>Others -0.502Ha</u> Total-12.058Ha</b>	
3p	Production of ROM mineral during the last five-year period as applicable. (17-18 to 21-22)	<b>2017-18 – 90947 2018-19 - 90977 2019-20 – 120000 2020-21 - 120000 2021-22 - 80047 2022-23 - 119700</b>	<b>2017-18 – 81280 2018-19 - 64400 2019-20 – 118000 2020-21 - 117800 2021-22 - 79800 2022-23 - 119520</b>	

#### 4. Solid Waste Management-Dumping:

S.N.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Yes	Yes	

4b	Location of topsoil, OB & mineral reject dumps	<b><u>DUMP-2</u></b> N2425915- E331610 N2426085- E331800	<b><u>DUMP-2</u></b> N2425915- E331700 N2426045- E331805	
4c	Number of dumps within lease area and outside lease area	<b>within lease area – 2</b> <b>outside lease area - Nil</b>	<b>within lease area –2</b> <b>outside lease area - Nil</b>	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	<b><u>DUMP-2</u></b> N2425915- E331610 N2426085- E331800  <b><u>DUMP-3(dead)</u></b> N2425980- E331954 N2426065- E331920	<b><u>DUMP-2</u></b> N2425915- E331610 N2426085- E331800  <b><u>DUMP-3(dead)</u></b> N2425980- E331954 N2426065- E331920	
4e	Number of active & alive dumps	<b>1</b>	<b>1</b>	
4f	Number of dead dumps	<b>1</b>	<b>1</b>	
4g	Number of dumps stabilized	<b>1</b>	<b>1</b>	
4h	Whether Retaining wall or garland drain all along dumps are there	<b>Yes</b>	<b>Yes</b>	
4i	Length of Retaining wall or garland drain all along dump	<b>Maintenance of the existing retaining wall or garland drain</b>	<b>Maintenance work of the existing retaining wall or garland drain done</b>	
4j	Number of settling ponds	<b>No Proposal</b>	<b>Nil</b>	

**5. Solid Waste Management-Backfilling: N.A**

S.N.	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	<b>No Proposal</b>	<b>N.A</b>	
5b	Area under backfilling of mined out area	<b>No Proposal</b>	<b>N.A</b>	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	<b>No Proposal</b>	<b>N.A</b>	
5d	Total area fully reclaimed & rehabilitated	<b>No Proposal</b>	<b>N.A</b>	

**6. Progressive Mine Closure Plan:**

S.N.	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.		<b>Annual report of PMCP submitted for the year 2021-22</b>	
6b	Area available for rehabilitation (ha)	<b>No Proposal</b>	<b>N.A</b>	
6c	Afforestation done (ha)	<b>0.02</b>	<b>Plantation done on OB dump</b>	Total 1.665Ha Plantation done within the lease.
6d	No. of saplings planted during the year	<b>500</b>	<b>1023 Nos</b>	
6e	Cumulative no. of plants			Total 12107nos of tree planted
6f	Any other specific method of rehabilitation			
6g	Cost incurred on watch & care during the year			
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L X B X D).			
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings.	<b>No Proposal</b>	<b>N.A</b>	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area.	<b>No Proposal</b>	<b>N.A</b>	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir.	<b>No Proposal</b>	<b>N.A</b>	
6l	Compliance on reclamation and rehabilitation by backfilling (v) Any other specific means	<b>No Proposal</b>	<b>N.A</b>	
6m	Compliance of Rehabilitation of waste land within lease (i) Afforestation	<b>No Proposal</b>	<b>N.A</b>	
6n	Compliance of Rehabilitation of waste land within lease (ii) Area rehabilitated (ha) Method of rehabilitation	<b>No Proposal</b>	<b>N.A</b>	
6o	Compliance of Rehabilitation of waste land within lease (iii) Method of rehabilitation	<b>No Proposal</b>	<b>N.A</b>	
6p	Compliance of Environmental monitoring (core zone & buffer zone)	<b>Core Zone-Quarry Buffer Zone – Gonua Camp</b>	<b>Core Zone- Quarry Buffer Zone – Gonua Camp</b>	

## 7. Mineral Conservation:

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	55-58% Fe 60-62% Fe 62-65% Fe	55-58% Fe 60-62% Fe 62-65% Fe	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	<b>Mechanized</b>	<b>Mechanized</b>	
7c	Different grade of mineral sorted out at mines	55-58% Fe 60-62% Fe 62-65% Fe	55-58% Fe 60-62% Fe 62-65% Fe	
7d	Any beneficiation process at mines	<b>No Proposal</b>	<b>N.A</b>	

## 8. Environment:

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	<b>No Proposal</b>	<b>N.A</b>	
8b	Concurrent use or storage of topsoil	<b>No Proposal</b>	<b>N.A</b>	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	<b>Yes</b>	<b>Yes</b>	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	<b>No Proposal</b>	<b>N.A</b>	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	<b>Plantation on waste dump</b>	<b>1023nos planted</b>	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	<b>No Proposal</b>	<b>N.A</b>	
8g	Survival rate		<b>84%</b>	
8h	Water sprinkling on roads to control airborne dust	<b>Yes</b>	<b>Water sprinkling on roads through water tanker</b>	

**9. Compliance of Rule 45 (2021-22)**

S.N.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Yes	M.R. Submitted up to April-2023 A.R. submitted up to 2021-22	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer-1 Geologist -1 Manager -1	Balaram Behera, Mining Engineer Dillip Kumar Pattanayak, Geologist Karun Kumar Mandal, Mines Manager	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit – 3.093Ha Dump –2.766Ha Mineral Stack yard, road & Infrastructure - 3.397Ha <u>Others -0.502Ha</u> Total- 9.758Ha	Pit – 3.093Ha Dump –2.766Ha Mineral Stack yard, road & Infrastructure - 3.397Ha <u>Others -0.502Ha</u> Total- 9.758Ha	
9d	Scrutiny of Annual return on Afforestation	Nil	1569	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil	Nil	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	<u>Closing stock</u> ROM - 164.000  <u>Processed Ore</u> <u>Lump</u> +65% Fe - 30.812 62-65&% Fe - 1577.710 60-62&% Fe - 6790.000  <u>Fines</u> +65% Fe - 189.558 62-65&% Fe – 10.160 60-62&% Fe – 4159.310 55-58&% Fe – 1699.530 -55% Fe - 492.410	<u>Closing stock</u> ROM - 164.000  <u>Processed Ore</u> <u>Lump</u> +65% Fe - 30.812 62-65&% Fe - 1577.710 60-62&% Fe - 6790.000  <u>Fines</u> +65% Fe - 189.558 62-65&% Fe – 10.160 60-62&% Fe – 4159.310 55-58&% Fe – 1699.530 -55% Fe - 492.410	



9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost etc.	<u>Ex- Mine Price</u> <b>Lump</b> +65% Fe - --- 62-65&% Fe - 9496.98 60-62&% Fe - 9244.52  <b>Fines</b> 62-65&% Fe - --- 60-62&% Fe - 5623.74 55-58&% Fe - 4677.30 <b>production cost -</b> <b>Rs3729.10</b>	<u>Ex- Mine Price</u> <b>Lump</b> +65% Fe - --- 62-65&% Fe - 9496.98 60-62&% Fe - 9244.52  <b>Fines</b> 62-65&% Fe - --- 60-62&% Fe - 5623.74 55-58&% Fe - 4677.30 <b>production cost -</b> <b>Rs3729.10</b>	
9h	Scrutiny of Annual return on fixed assets	<b>Rs. 64024322.00</b>	<b>Rs. 64024322.00</b>	Same as 19.425 Ha.
9i	Scrutiny of Annual return on mining machineries	<b>Excavator - 1.5 M<sup>3</sup></b> <b>Front end Loader-1.8M<sup>3</sup></b> <b>Tipper - 25tonne</b> <b>Water Tanker-9KL</b> <b>Blast Host Drill-110mm</b> <b>Mobile Screening Plant -</b> <b>250TPH</b>	<b>Excavator - 1.5 M<sup>3</sup></b> <b>Front end Loader-1.8M<sup>3</sup></b> <b>Tipper - 25tonne</b> <b>Water Tanker-9KL</b> <b>Blast Host Drill-110mm</b> <b>Mobile Screening Plant -</b> <b>250TPH</b>	

Details of violations observed during current inspection and compliance position of earlier violation pointed out.  
**NIL VIOLATIONS**