

I/29744/2024

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

Review and updation of Mining Plan REPORT

Bangalore regional office

Mine file No : KNT/BLR/Fe-496/BNG

Mine code : 30KAR03187

- (i) Name of the Inspecting : S47) DR. Sudhakara T.L
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Sri. Dasharatha R Mine Manager, Sri. Prashanth Lahari
Official with
Designation
- (iv) Date of Inspection : 19/10/2023
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KARADIKOLLA IRON ORE MINE**
- (b) **Registration NO.** : **IBM/199/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : KARNATAKA
- District : BELLARY
- Village : KARADIKOLLA
- Taluka : SANDUR
- Post office : SUSHEELANAGAR
- Pin Code : 583119
- FAX No. : 08394232444
- E-mail : email@mspllimited
- Phone : 08394232002, 08394232003
- (f) **Police Station** : **Sandur**
- (g) **First opening date** : **12/03/2020**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **Siddapur Village**
Sandur taluk, Bellary District
Karnataka
3. (a) **Lease Number** : **ML No. 0010**
- (b) **Lease area** : **86.59Ha**
- (c) **Period of lease** : **50 years**
- (d) **Date of Expiry** : **02/02/2070**
4. **Mineral worked** : **IRON ORE** **Main**

5. Name and Address of the

Lessee : MSPL LTD
CO-OPERATIVE COLONY,
HOSPET, BELLARY, BELLARY
KARNATAKA
Phone:28402,28502
FAX :08394-24537,25052

Owner : Dr. Meda Venkataiah..Nominated Owner
M/s MSPL Limited
BaldotaEnclave,Abheraj
Baldota Road Hosapete
BELLARY KARNATAKA
Phone: 08394232002
FAX : 08394232444

Agent : K. MADHUSUDHANA
MSPL Limited, Baldota
Enclave Abheraj Baldota
Road, Hosapete BELLARY
KARNATAKA
Phone: 08394-232002
FAX : 08394-232444

Mining Engineer

Name : MURALIDHAR T, Full Time
Qualification : BE IN MINING FCC
Appointment/ : 02/04/2012
Termination date

Geologist

Name : ADHINARAYANAKANTA, Full Time
Qualification : M.Sc GEOLOGY
Appointment/ : 02/04/2012
Termination date

Manager

Name : Dasharatha R
Qualification :
Appointment/ : 12/03/2020
Termination date

6. Date of approval of Mining Plan/Scheme of Mining : MP under 16(1) of MCR 2016 24/10/2017

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	2022-23 Nil	NIL	2019-20 : 1 BH 2020-21: 3 BH 2021-22: 1 BH 2022-23: 0 BH
1b	Exploration over lease area for geological axis 1 or 2	-	As per the approved RUMP dated 14/02/2024 G1 Area: 17.29 Ha G2 Area : 0.48 Ha Area proved as Non-mineralized: 68.29 Ha	2014-15 by MECL : 11 core boreholes with a total metearge of 333m and 45 RC bore holes with a total metearge of 1310m. 2016-17 by M/s MSPL 34 bore hoes (RC) with a total metearge 1198m. 2019-20 to 2023-24 M/s MSPL has carried out 20 RC boreholes with a total meterage of 1089m.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	-	-	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal	-	As per the approved RUMP dated 14/02/2024 G1 Area: 17.29 Ha G2 Area : 0.48 Ha Area proved as Non-mineralized: 68.29 Ha
1e	Balance reserve as on 01/04/20	NIL	7.68 MT (7680600 tons with average grade of 54.44) As per annual return submitted for the year 2022-23	As per the approved RUMP dated 14/02/2024 total Mineral Reserves of 16.04 millionTonnes of Iron Ore comprising of 9.495 million Tonnes of HIO and 6.545 million Tonnes of HSIO (as on 31/05/2023)

1f	General remarks of inspecting officers on geology, exploration etc	As per the approved RUMP dated 14/02/2024, Mineralized area has been explored under G1/G2 level (G1 Area: 17.29 Ha and G2 Area : 0.48 Ha) and area proved as Non-mineralized: 68.29 Ha. In the RUMP lessee has proposed additional core bore holes where bore holes ended in the mineralized area and to explore the G2 area under to convert into G1 level.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	A1 Band (E 659800-E 660100 N 1678100-N1678400) D&E Band 661000-E 661200 N 1677000-N1676800)	A1 Band (E 659800-E660100 N 1678100-N1678400) D&E Band 661000-E 661200 N 1677000-N1676800)	Excavation carryout within the proposed grid.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches proposed in overburden and mineral	Separate benches in overburden and mineral Maintained.	OB:3 benches, Ore: 4 benches
2c	Stripping ratio or ore to OB ratio	1:0.45 Ore:510084 OB: 126440 tones (63220cu.m)	1:0.44 Ore:510000 tons OB: 61951 cu.m	
2d	Quantity of topsoil generation in m3	No Proposal	NA	No generation of top soil

2e	Quantity of overburden generation in m3	63220cu.m.	61951cu.m	B.D for Waste 2
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Lessee has carried out the development systematically as per the proposal.

Exploitation:

Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pit proposed for production	2 (A1, D&E Band)	2 (A1, D&E Band)	
3b	Quantity of ROM mineral production proposed	510084 tons	510000 tons	
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	
3d	Quantity of mineral reject generation	No Proposal	NA	No generation of mineral reject
3e	Grade of mineral rejects generation and threshold value declared.	No Proposal	NA	NIL
3f	Quantity of sub grade mineral generation.	No Proposal	NA	No sub grade mineral generated
3g	Grade of sub grade mineral generation	No Proposal	NA	

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method to be used for segregating of ROM Proposed: Screen: Specs-180TPH Output Size 0-10mm (Fines) 10-40mm (Lumps) >40mm (Oversize) Crusher: Specs-100TPH Feed Size- 300mm Output Size- 0-10mm (Fines) 10-40mm (Lumps)	Mechanized method to be used for segregating of ROM Screen: Specs-180TPH Output Size 0-10mm (Fines) 10-40mm (Lumps) >40mm (Oversize) Crusher: Specs-100TPH Feed Size-300mm Output Size- 0-10mm (Fines) 10-40mm (Lumps)	Screen 2no's of 180 TPH used for segregating from ROM
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposal	NA	NIL
3j	Provision of drilling and blasting in mineral benches	Drilling and blasting proposed Hired Wagon Drilling Machine Specs- 4.0" Drill Diameter	Drilling and blasting carried out in hard strata Hired Wagon Drilling Machine Specs- 4.0" Drill Diameter 20mtr/hr in Ore 10mtr/hr in BHQ	Drilling and Blasting Operations has been outsourced
		Blasting Materials proposed: Slurry Explosives, Delay Detonators , Cord Relays Charge Density-2.4 to 3.5kg/m Max Explosives /delay-100- 150kgs	Blasting Materials Used: Specs: Solar Prime (83mm) Solar Fuse (Cordex) Relay, Cord Safety Fuse Detonator (Ordinary) Charge Density-2.4 to 3.5kg/m Max Explosives /delay- 100-150kgs	

3k	Provision of mining machineries in mineral benches	Yes Machinery Proposed: Excavator: 1.6cum-2nos 1.2cum-2nos Tippers 25 tonnes: 12nos Wheel Loader 1.6cum :4 nos	Yes Machineries Deployed: Specs: Excavator: 1.6cum-2nos 1.2cum-2nos Tippers 25 tonnes: 12nos Wheel Loader 1.6cum :4 nos	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height: 9m Bench Width: 9-10m	Bench Height: 9m Bench Width: 9-10m	
3m	Total area covered under excavation/pits	47.41Ha.	45.04Ha.	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.45	1:0.44	
3o	Total area put in use under different heads at the end of year	Mining Pit - 47.41Ha. Waste disposal- 17.7 Ha Infrastructure Roads 2.35Ha Other Purpose- 18.66Ha	Mining Pit - 45.04Ha. Waste disposal- 16.92 Ha Infrastructure Roads 3.74Ha Other Purpose-20.42Ha	
3p	Production of ROM mineral during the last five year period as applicable	2040210 tons (2019-20:510138 2020-21:510048 2021-22:509940 2022-23:510084)	1792400 tons (2019-20:262400 2020-21:510000 2021-22:510000 2022-23:510000)	Mine started on 12.03.2020
3q	General remarks of inspecting officers on method of mining etc.			Lessee has carried out mechanized mining as proposed.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate Waste Dump is proposed	Separate Waste Dump is maintained as per proposal	No generation of top soil
4b	Location of topsoil, OB and mineral reject dumps	PD-2 (E 659300-E 659700 N 1678200- N1678600) PD-3 (E 659000- E 659300 N 1678700- N1679250) BF-1 (E 660800- E 661000 N 1677080- N1677250)	PD-2 (E 659300-E 659700 N 1678200- N1678600) PD-3 (E 659000-E 659300 N 1678700- N1679250)	During the inspection it is observed that at the proposed location of Backfilling ore is not exhausted. Hence, lessee has not carried out backfilling at the proposed location.
4c	Number of dumps within lease area and outside of lease area	WML 13 (ID-8, AD-1&PD-3) OML-9 (EID-9)	WML 12 (ID-8, AD-1 & PD-2&) OML-9 (EID-9)	Except PD2 and PD3 dumps, all dumps are pertaining to erstwhile lessee.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	PD-2 (E 659300-E 659700 N 1678200- N1678600) PD-3 (E 659000- E 659300 N 1678700- N1679250) BF-1 (E 660800- E 661000 N 1677080- N1677250)	PD-2 (E 659300-E 659700 N 1678200- N1678600) PD-3 (E 659000-E 659300 N 1678700- N1679250)	
4e	Number of active and alive dumps.	1 Active, 3 Alive dumps & 1 Back Filling dump	1 Active, 2 Alive dumps	
4f	Number of dead dumps.	No Proposal	NA	
4g	Number of dumps established.	EID-4, ID-4 and ID-6	EID-4, ID-4 and ID-6	

4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining Wall (TW-11 & TW-12) and Garland Drain (GD-12 & GD-13) along the toe of the active waste dumps PD-2 and PD-3 proposed.	The proposed toe wall and garland drain was not constructed for PD-2 and PD-3 dumps.	The proposed toe wall and garland drain was not constructed for PD-2 and PD-3 dumps. Violation pointed out under Rule 11(1) of MCDR, 2017.
4i	Length of Retaining wall or garland drain all along dumps	1064m proposed as per Approved R&R Plan (AS per Approved R&R retaining wall 5117 m and 5700 m Garland drain is proposed for all the EID's ID's and PD's with In& outside the lease area for the 5year Plan period)	1345m retaining wall and 1405m GD is not constructed (PD1, PD-2 and PD-3 dumps)	The proposed toe wall and garland drain was not constructed for PD-2 and PD-3 dumps. Violation pointed out under Rule 11(1) of MCDR, 2017
4j	Number of settling ponds	Proposed in Approved R & R 3 (SST-1, RWHP-2)	RWHP& SST Constructed as per proposals.	
4k	Specific comments of inspecting officer on waste dump management			Lessee has not constructed the proposed toe wall and garland drain for PD-2 and PD-3 Active dumps. Violation pointed out under Rule 11(1) of MCDR, 2017. Lessee has handled the PD-1 dump and disposed in the PD-2 and PD-3 dumps due to existence of mineral beneath waste dump.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Backfilling proposed at (E 660800-E 661000 and N 1677080-N1677250)	Backfilling not carried out at the proposed location due to fully mineral not extracted from the proposed area.
5b	Area under backfilling of mined out area	Backfilling proposed at (E 660800-E 661000 and N 1677080 - N1677250)	Backfilling not carried out at the proposed location due to mineral not exhausted at the proposed location.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No Proposal	NIL
5d	Total area fully reclaimed and rehabilitated	No Proposal	NIL
5e	General remarks of inspecting officers on backfilling and reclamation etc.		During the plan period Lessee has proposed to backfill part of the pit at E 660800-E 661000 and N 1677080 - N1677250, however backfilling is not carried out due to mineral is not exhausted at the proposed location.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Annual report on PMCP to be submitted before 1st July every year.	PMCP Report has been submitted within due date	
6b	Area available for rehabilitation (ha) .	No Proposal	NIL	

6c	afforestation done (ha).	1.98Ha	10Ha. (10000 plants planted including Previous years backlog)	Outside, Inside&Safety zone
6d	No. of saplings planted during the year	1100 (1.02Ha)	1100	Inside the lease, mainly in safety zone.
6e	Cumulative no .of plants	No proposal	5250	Inside the lease as per Annual return 2022-23.
6f	Any other method of rehabilitation	No proposal	NIL	
6g	Cost incurred on watch and care during the year	No proposal	Rs.1976288	As reported by lessee team during inspection.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Backfilling proposed at (E 660800-E 661000 and N 1677080 - N1677250)	Backfilling not carried out at the proposed location due to mineral not exhausted at the proposed location.	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Backfilling proposed at (E 660800-E 661000 and N 1677080 - N1677250)	Backfilling not carried out at the proposed location due to mineral not exhausted at the proposed location.	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Backfilling proposed at (E 660800-E 661000 and N 1677080 - N1677250)	Backfilling not carried out at the proposed location due to mineral not exhausted at the proposed location.	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	NIL	

6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No proposal	NIL	
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	No proposal	NIL	
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No proposal	NIL	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No proposal	NIL	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environment monitoring Proposed in core and buffer zone Core zone: 2 No Buffer zone: 4 Nos	Carried out in core and buffer zones as per proposal	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Lessee has carried out the afforestation as per proposal. Lessee has no carried out backfilling in the proposed area due mineral not exhausted in the proposed location.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	-	-	

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanized method adopted: (ROM produced is segregated in to saleable products of fines (-10mm) by crushing and screening process to obtain saleable products:	Double Deck - turbo chieftain 1400 Double Deck -Extec S5 Mobile crusher and screen -terex 1000SR	
7c	Different grade of mineral sorted out at mines.	51-55% Fe.	51-55% Fe.	
7d	Any beneficiation process at mines .	NIL	NIL	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			In the approved Mining plan lessee has proposed crushing and screening process, same is adopted during the course of Mining.

Environment:

Sl.No.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	NIL	The mine workings is at broken up area.
8b	Concurrent use or storage of topsoil	No proposal	NIL	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposed separate dumps for Overburden & Fines	Separate dumps for Overburden, Fines and Lumps maintained as per Proposal	NIL

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	NIL	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	NIL	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Baseline information on existence of plantation available	Within ML 1100 saplings plated during the year	As per Annular return Cumulative within ML 5250 no. of plants
8g	Survival rate	No proposal	90%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed on roads to control airborne dust	Water sprinkling done regularly to control airborne dust	3no's of water tanker each of 9,000 liters capacity
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in and around the mine is good.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly Returns submitted up to Sept-23 Annual Returns submitted on 30.06.2023 for the FY:2022-23		Submitted within stipulated time

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer : 04 Diploma Mining Eng. :03 Geologist: 01	Appears to be correct	Sri. Dasharatha R Mine Manager Present at the time of inspection.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under mining: 45.04ha Area under waste dump: 16.92ha Infrastructure : 3.74ha reclaimed area: nil	Appears to be correct	
9d	Scrutiny of Annual return on afforestation	Within the lease 1100	Appears to be correct	Plantation done in safety zone
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NIL		
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Opening stock: 362400 tons Production: 510000 tones Closing stock: 510483 tons Graded ore Lumps: nil Fines (Fe 51 to 55%) Opening Stock: 40000 tons Production :361917 Closing stock: 21917 tons	Appears to be correct	Lessee has only produced fines to use their captive plant. State Govt. has objected for processing of ROM into 100% fines. The matter is in Honorable High Court of Karnataka.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex-Mine price: Rs. 495/- production cost : Rs. 1975.83	Appears to be correct	The ore is consumed in the lessee plant (Captive consumption)
9h	Scrutiny of Annual return on fixed assets	Rs. 70664467	Appears to be correct	

9k Scrutiny of SHOVEL Appears to be correct
Annual return on (HYDRAULIC):
mining 04
machineries Front end
loader: 04
Dumper: 12
Water tank:03

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed				Show cause position			
Rule NO.		Issued on	Compliance on	Rule NO.		Issued on	Compliance on
MCDR17	Rule 11(1)	30/10/2023	11/01/2024	MCDR17	Rule 45(7)	30/10/2023	22/12/2023
MCDR17	Rule 45(7) (a)	30/10/2023	22/12/2023				

Date :

(DR. Sudhakara T.L)

Indian Bureau of Mines