## INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

#### MCDR inspection REPORT

#### Bangalore regional office

Mine file No : KNT/BLR/FE/150/BNG Mine code: 30KAR03017

(i)Name of the Inspecting : **S47** ) DR. Sudhakara T.L

Officer and ID No.

(ii) Designation : Senior Mining Geologist

(iii) Accompaning mine : Sri. K. Madhusudhana VP (Mines), Sri. P. Venkateswar R

Official with

Designation

(iv) Date of Inspection : 07/09/2021 Prev.inspection date : 09/09/2017 (v)

PART-I : GENERAL INFORMATION

(a) Mine Name : VYASANAKERE

(b) Registration NO. : IBM/199/2011

(C) Category : A Fully Mechanised

(d) Type of Working Opencast

(e) Postal address

> State : KARNATAKA District BELLARY Village VYASANKERI Taluka HOSPET Post office : VYASANKERI

Pin Code : 583201

: (08394) 232333 FAX No.

E-mail rahulbaldota@mspllimited.co (08394) 232003 08394232002 Phone

Police Station (f) : Hospet

First opening date : 01/11/1962 (g)

Weekly day of rest (h) : SUN

Address for : M/s MSPL Limited

correspondance BALDOTA ENCLAVE, ABHERAJ BALDOTA RD,

HOSPET, BELLARY-583201

3. : KAR0196 (a) Lease Number (b) Lease area : 858

Period of lease : 20 (C)

(d) Date of Expiry : 13/11/2002

Mineral worked 4. : 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 : MSPL LTD

CO-OPERATIVE CLONY, HOSPET,

BELLARY-583203 BELLARY

KARNATAKA
Phone:
FAX:

Agent : K. MADHUSUDHANA

MSPL Limited, Baldota Enclave Abheraj Baldota Road, Hosapete BELLARY

KARNATAKA

Phone: 08394-232002 FAX: 08394-232444

Mining Engineer

Name : DOMNIC SAVIO, Full Time

Qualification : BE MINING Appointment/ : 01/03/2007

Termination date

Mining Engineer

Name : K.MADHUSUDAN, Full Time

Qualification : AMIE.MINING Appointment/ : 01/01/2015

Termination date

Geologist

Name : S.Shiv Kumar, Full Time

Qualification : M.Sc GEOLOGY Appointment/ : 19/02/2001

Termination date

Manager

Name : P.Venkeswara Rao Qualification : Dip.and 1st class

Appointment/ : 01/09/2012

Termination date

6. Date of approval of Mining Plan/Scheme of Mining

: Fresh under rule 22 MCR1960 30/11/1989 Existing rule 11 MCDR1988 06/08/1990 Mining Scheme rule 12 MCDR1988 04/04/1996 Fresh under rule 22 MCR1960 10/03/1997 Renewal under rule 22 MCR1960 03/09/2002 Modif.of approved Mining Plan 13/08/2004 Modif.of approved Mining Plan 25/04/2005 Mining Scheme rule 12 MCDR1988 30/04/2007 11/01/2013 Mining Scheme rule 12 MCDR1988 Modif.approved Mining Scheme 22/06/2016 MP review under 17(1) MCR 2016 04/11/2016

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MP review under 17(1) MCR 2016 16/02/2021 MP review under 17(1) MCR 2016 16/02/2021 FMCP under 23C(1) 25/02/2021

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

# Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	NA	
1b	Exploration over lease area for geological axis 1 or 2	No proposal	NA	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No exploration proposal.	NA	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal.	NIL	
1e	Balance reserve as on 01/04/20	35.915 Million Tonnes as on 1/4/2016.	27.358 million tonnes as on $1/4/2021$ .	S
1f	General remarks of inspecting officers on geology, exploration etc			Exploration in the 15 Ha mineralized area explored under G1 level laterally, however, the area has not been assessed as per the revised threshold value notification Vide letter dated 16/09/2021, suggested lessee to reassess the Iron ore Reserves/Resources as per the revised threshold value notification.
Deve	elopment :			
Sl.No.	Item	Propasals	Actual work	Remarks

2a	Location of development w.r.t.lease area	North & A-Block E. 649300 N. 1681700 E. 650100 N. 1682450 E. 649300 N. 1681700 E. 650100 N. 1682450 B-Block E. 650300 N. 1681100 E. 650700 . 1681500 E. 650300 N. 1681100 E.	North & A-Block E. 649300 N. 1681700 E. 650100 N. 1682450 E. 649300 N. 1681700 E. 650100 N. 1682450 B-Block E. 650300 N. 1681100 E. 650700 . 1681500 E. 650300 N. 1681100 E. 650700 N. 1681500	Location of the development is within the proposed extent.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches proposed in overburden and mineral	Separate benches maintained for ore and OB as proposed	NIL
2c	Stripping ratio or ore to OB ratio	1:2.18	1:2.18	Iron ore: 1800000 tons OB: 2214750 tons
2d	Quantity of topsoil generation in m3	No Proposal	NIL	
2e	Quantity of overburden generation in m3	1107375 m3	2214750 tons i.e. 1107375 m3	Bulk Density for Waste/OB: 2 tons/m3
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development of the pit carried out in accordance with Approve Mining Plan

# Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	3 Pits proposed for production	Production carried out in the three pits	Tentative Dimension of the North & A Block is 1300m (L) x W 350m (W) x 115m (D) and B-Block is 1200m (L) x 100m (w) and 50m (D)

3b	Quantity of ROM mineral production proposed	1800000 Tons	1800000 Tons	Achieved the production as proposed
3с	Recovery of sailable/usable mineral from ROM production	100%	100%	No Mineral reject generated
3d	Quantity of mineral reject generation	No proposal	NA	Low grade BHQ stacked separately.
3e	Grade of mineral rejects generation and threshold value declared.	NA	NA	No sub-grade ore generated.
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 method adopted for segregation of different size of ore from ROM	Dry crushing and screening, capacity of 475 TPH Downhill Conveyor Plant
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	NA	No sub-grade/Mineral Reject and no such No benefaction study carriedout	
3j	Provision of drilling and blasting in mineral benches	Proposed	Drilling & blasting carriedout for OB and ore benches	Drill Dia-102 and 115 mm, Spacing 3mts Burden 2.5m. Ammonium nitrite and Slurry explosive combination and LOX is used for blasting. Nonel and D-Cord are used
3k	Provision of mining machineries in mineral benches	Hydraulic Excavator and tippers are proposed.	Ore is mined out with help of excavator and tipper combination (16 to 25 T).	In addition of Excavator and Tipper combination crushed material is transported through DHC.

Whether height Bench height 7 Benches Height Benches width not to 9mtrs Bench maintained as proposed. of benches in maintained as overburden and width 7 to Benches width not proposed. mineral suitable 10Mts. maintained as proposed Violation issued. for method of in the eastern side of mining proposed the pit between the in MP/SOM section line NB-NB' and NC-NC' 86.655 Ha at the end of 3m Total area 86.655 Ha As per A.R. 2020covered under (till plan Year 2021-22 2.1 period 2021excavation/pits 22) 1:2.18 1:2.18 Iron ore: 1800000 3n Ore to OB ratio for the pit/mine tons during the year. OB: 2214750 tons Bulk density for OB/waste is 2 ton/m3 (i)Mining:86.6 (i) Covered under Achievement 30 Total area put in use under 55 Ha, current (O/C) Workings: information from different heads (ii) Active 86.655Ha A.R. 2020-21 Dump: 42.04Ha (ii) Reclaimed/
(iii) Inactive Rehabilitated : at the end of year Dump: 34.742 122.554Ha (iii) Used for waste На, (iv) BHQ Dump disposal: 84.292Ha : 7.410 Ha (iv) occupied by plant, (v) Mineral buildings, Storage: residential, welfare 17.741Ha, buildings & roads : (vi) 16.557Ha Infrastructure (v) Other purposes: : 5.925Ha 37.162 (vii) Roads (vi) work done under 2.704 Ha, PMCP : 0 (viii) Mineral separation Plant: 149.469 Ha, (ix) Others: 149.451 Total 347.10 На (till plan period i.e. upto 2021-22)

Violation issued.

3p	Production of ROM mineral during the last five year period as applicable	2016-17 - 1355000Tons 2017-18- 1800000Tons 2018-19- 1800000Tons 2019-20- 1800000Tons 2020-21- 1800000Tons	2016-17 -1355000Tons 2017-18-1800000Tons 2018-19-1800000Tons 2019-20-1800000Tons 2020-21-1800000Tons	Production within the CEC capping limit
3q	General remarks of inspecting officers on method of mining etc.			Mining operations carried out using combination of excavator tipper, Drilling and Blasting Carried out in OB and Ore Benches. Mining is carried out within the proposed extent area. Benches width not maintained as proposed in the eastern side of the pit between the section line NB-NB' and NC-NC'.

## Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks	
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of OB/Waste proposed	OB/Waste dumped separately	Nil	

4b	Location of topsoil, OB and mineral reject dumps	Proposed location of OB: Dump 2 (Active): E649000- E649650, N1681200- N1681800 Dump 3 (Active): E648400- E6493002, N1682000- N1682600 Dump 6 (Active): E650100- E650650 N1680800- N1681200	Actual location Dump 2 (Active): E649000-E649650, N1681200-N1681800 Dump 3 (Active): E648400-E6493002, N1682000-N1682600 Dump 6 (Active): E650100-E650650 N1680800-N1681200	During the inspection it is observed that, at Dump no. 6, Teracing of dump and laying of coir mat work was in progress for stabilization of dump.
4c	Number of dumps within lease area and outside of lease area	Within Lease: 5 OB Dumps Outside Lease: 1 OB Dump	Within Lease: 3 Active Dumps & 2 Inactive Dumps Outside Lease: 1 Inactive Dump	One OB Dump present outside the lease area as per the survey of CEC Year 2011-12
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps proposed outside UPL At northern part of the pit backfilling proposed	All Dumps observed outside UPL Backfilling not carried during the year 2020-21 due to presence of iron ore in the pit.	During the inspection it was observed that backfilling was progress in the northern part of the pit. The proposed backfilling area contains about 40% Fe, which is above threshold value of iron ore. Hence, advised lessee to stop the backfilling in the proposed area.
4e	Number of active and alive dumps.	Three	Three	page and an ear
4f	Number of dead dumps.	Three	Three	
4g	Number of dumps established.	Three	Three	

Remarks

4h	Whether Retaining wall or garland drain all along dumps are there.	and garland	Retaining wall and garland drain were constructed all along dumps 105 mts	2924mts is the cumulative retaining wall	
		105mts			
4i	Length of Retaining wall or garland drain all along dumps	105.2mtr Retaining wall at the toe of the dumps	105 mts Toe wall and Garland drain constructed around Dump no.2	RW & GD was constructed as per Approved R&R Plan. As per lessee, in total 2924 Mtrs of Toe Wall 2806 Mtrs G drain constructed along the dumps	
<b>4</b> j	Number of settling ponds	No Proposals	5 nos.		
4k	Specific comments of inspecting officer on waste dump management			During the inspection it was observed that backfilling was progress in the northern part of the pit. Beneath the proposed backfilling area contains about 40% Fe, which is above threshold value of iron ore. Hence, advised lessee to stop the back filling in the proposed area. W.r.t. previous inspection violation, at Dump no. 6, lessee has carried out Terracing of dump and laying of coir mat on dump for stabilization.	
Solid Waste Management - Backfilling:					

Propasals Actual work

Sl.No. Item

5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Proposed to back fill north-eastern part of the Mined out area in the year 2020-21 with BHQ	Backfilling not carried out during the year 2020-21 due to existence of mineral in the proposed area	During 2020-2021 mineral was not exhausted, hence backfilling not cacrriedout in the Proposed area. Backfilling is commenced with BHQ material in the year 2021-22. During the inspection it was observed that, proposed back filled area contains iron ore (Fe) around 40%. Advised lessee to stop the back filling immediately and vide letter dat 16/09/2021 suggested lessee to stop the backfilling and reassess the reserves and resources as per revised Threshold value notification dated 25th April 2018
5b	Area under backfilling of mined out area	Proposed at section line NA4-NA4' to NA3-NA3' L200m x W130m x D80m	No backfilling done during the year 2020-21 due to iron ore not exhausted in the proposed area	Back filling not carried out during the year 2020-21 due to iron ore not exhausted in the proposed area.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	NA	Top soil generated were used for plantation in the past
5d	Total area fully reclaimed and rehabilitated	Proposed 122.554 Ha at the end of Plan period	122.554 На	As per A.R. 2020- 21

5e General remarks of inspecting officers on backfilling and reclamation etc.

Backfilling was proposed in FY 2020-21 after full extraction of mineral in North Block. Since the mineral has not exhausted completely, lessee has not carried out back filling in the year 2020-21. However, lessee has commenced the backfilling in year 2021-22. During the inspection it was observed that, iron ore (Fe) around 40% exists beneath the proposed backfilling area. Hence, advised lessee to stop the back filling immediately and vide letter dated 16/09/2021 suggested lessee to stop the back

#### 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).	Yes	AS per proposal	Submitted on 28.06.2021
6b	Area available for rehabilitation (ha) .	No Proposal	Nil	
6c	afforestation done (ha).	Afforestation proposed on dumps 4Ha	Afforestation done on dumps and gap filling Total area 4 Ha	
6d	No. of saplings planted during the year	20000 nos	20000 nos	19000 nos. saplings within the lease 1000 nos. saplings outside lease

6e	Cumulative no .of plants	Nearly 20 Lakhs both inside and outside lease area	19,99,031 plants	
6f	Any other method of rehabilitation	No Proposal	NA	Nil
6g	Cost incurred on watch and care during the year	Rs. 2.6 lakhs	Rs. 4,93,538 /-	As given by lessee
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Proposed at section line NA4-NA4' to NA3-NA3' L200m x W130m x D80m	No backfilling done during the year 2020-21 due to iron ore not exhausted in the proposed area	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	NA	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	2.6 На	No backfilling done during the year 2020-21 due to iron ore not exhausted in the proposed area	Backfilling commenced in the FY 2021-22. Advised lessee to stop back filling due to presence of iron ore above threshold value.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal	NA	Nil
61	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No Proposal	NA	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No Proposal	NA	Nil

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No Proposal	NA	Nil
60	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No Proposal	NA	Nil
бр	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring Proposed in core zone & buffer zone	Environmental monitoring carried out in core zone & buffer zone.	Environmental study carried out by SUMS Techno Labs Pvt Ltd., Readings are within the permissible limit.
бq	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			No backfilling done during the year 2020-21 due to iron ore not exhausted in the proposed area. During the year 2021-22 backfilling commenced in the proposed area. Advised lessee to stop the back filling due iron ore above threshold value exits beneath in the backfilling area.

# Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting proposed within lease area Total ROM 18,00,000 tons	Grade-wise sorting done for 18,00,000 tons ROM within the lease area and Old ROM stock of 5740 tons of grade Fe 65+ sold as advised by DMG	Old ROM stock of 5740 tons of grade Fe 65+ sold as advised by DMG

7b	Method of grade- wise mineral sorting i.e. manual or mechanical.	Mechanical Method proposed for grade wise mineral sorting	Grade-wise mineral sorting carriedout mechanically as proposed	475 TPH crushing and screening unit in the lease
7c	Different grade of mineral sorted out at mines.	60-62% Fe 62-below 65% Fe	Lumps: 62% to below 65% Fines: Lumps	Old ROM stock of 5740 tons of grade Fe 65+ sold as advised by DMG, no sorting done
7d	Any beneficiation process at mines .	No Proposal	NA	Only dry crushing and screening is done for sizing grading
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			All the ROM, except fines were crushed and separated lumps and fines and sold through e-auction. Old ROM stock of 5740 tons of grade Fe 65+ sold by lessee as advised by DMG.

#### Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a Separate removal and utilization No Propos of topsoil (Rule 32)		No Proposal	NA	Mining is within the excavated pits and no top soil generation, top soil generated during earlier years are judiciously utilized.
8b	Concurrent use or storage of topsoil	No Proposal	NA	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	for overburden	Separate dumps for overburden/waste and BHQ maintained as proposed	

Remarks

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfilling proposed in the North- eastern part of the northern pit by using BHQ, OB	Backfilling not carried out due to mineral not exhausted in the proposed area.	Backfilling commenced in the year 2021-22
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Backfilling proposed in the North- eastern part of the northern pit by using BHQ	Mineral not Exhausted	Started backfilling in the FY 2021-22
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Record maintained	Record maintained	
8g	Survival rate	80 to 85 %	84 %	As per A.R. 2020- 21
8h	Water sprinkling on roads to control airborne dust	sprinkling on	2 -	6 water tankers (10 KL and 16 KL) Fixed water sprinklers in main haulage roads and water spraying at crusher hoppers
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in & around the mine was good as the lessee had carried out afforestation & other environment protective measures were in place.

Propasals Actual work

Compliance of Rule 45:

Item

Sl.No.

9a	Status of submission of Monthly and Annual returns	M.R. Submitted on 10th August 2021 for September 2020 A.R. Submitted up to 2020-21 Submitted by 30.06.2021	27/06/2021	Both Monthly return and annual return submitted within the stipulated time.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Domnic Savio Geologist: Shivakumar Mines Manager: P Venkateshwara Rao	Mining Engineer: Domnic Savio Geologist: Shivakumar Mines Manager: P Venkateshwara Rao present at Mine site during the date of inspection	NIL
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	under current (O/C) Workings:	Appears to be correct	Nil
9d	Scrutiny of Annual return on afforestation	Saplings within Mining lease 19000 and outside mining lease 1000 @84% survival rate	Appears to be correct	NIL

9e Scrutiny of Nil  $\mathtt{Nil}$ Annual return on mineral reject generation (Grade and quantity) 9f Scrutiny of Total ROM Appears to be correct Annual return on production ROM stock and/or 1800000 tons graded ore Opening stocks 5740 tons Closing stock 0 tons Violation issued 9g Scrutiny of Ex Mine Price In the cost of Annual return on For Lumps Production, NMET, DMF, 60% to below sale value, Ex. Royalty not taken into Mine price and 62% : Rs. 3100 account while production cost per ton calculating Cost of 62% to below Production. 65%: Rs. 4944.18 For Fines 62% to below 65%: Rs. 4752.59 Cost of production Rs. 1992 9h Scrutiny of Rs. In the Capital Structure Violation issued Annual return on 3,87,16,469/- Value of land mentioned fixed assets including as Rs. 4,38,92,330/-.land, However, the total lease industrial & area is in Forest land. plant & Depreciation of fixed assets in Part-II of machineries annual return given as Rs. 3,73,14,834. The values are not matching. Violation issued

9k Scrutiny of Crushers: 03 Appears to be correct

Annual return on nos.

mining

machineries

Diesel

Generator : 10

nos.

Pumps : 03

nos.

Back hoe : 09

nos.

Trucks : 50

nos.

Wheel loaders-

7no

Water tankers-

6nos

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

Violation observed			Show couse position	
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on Compliance on
MCDR17 Rule 11(1)	16/09/2021			
MCDR17 Rule 45(7)(a	16/09/2021			

Date:

(DR. Sudhakara T.L)

Indian Bureau of Mines