

**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/375/BNG

Mine code : 30KAR03069

- (i) Name of the Inspecting : **M003**) **G C MEENA**
Officer and ID No.
- (ii) Designation : Regional Controller Mines
- (iii) Accompanying mine : Sri MRK Bagawan, Mines Manager and Sri T. Ramakrishna
Official with
Designation
- (iv) Date of Inspection : 13/01/2020
- (v) Prev.inspection date : 21/02/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SUBBARAYANAHALLI**
- (b) **Registration NO.** : **IBM/4369/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : KARNATAKA
District : BELLARY
Village : SUBBARAYANAHALLI
Taluka : SANDUR
Post office : NANDIHALLI
Pin Code :
FAX No. : 080-22213172,
E-mail : info.mml@nic.in,mmliodsandh
Phone : 080-22278814 / 15 /16
- (f) Police Station : SANDUR
- (g) First opening date : 01/01/1980
- (h) Weekly day of rest : SUN
2. Address for : M/s Karnataka State Minerals Corporation Limited
correspondance : Vaishnavi Farm House, Doulathpur Road
Iron ore Sector, Sandur-583 119 Karnataka
3. (a) Lease Number : KAR0199
- (b) Lease area : 80.93
- (c) Period of lease : 20
- (d) Date of Expiry : 12/04/2019
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : Karnataka State Minerals Corp. Ltd
 TTMC, A Block, 5th Floor,
 BMTC Building, K.H.Road,
 Shanthinagar Bengaluru
 BANGALORE KARNATAKA
 Phone:080-22278813-14-15-16
 FAX :080-22213172

Owner : Naveen Raj Singh, IAS & MD
 Karnataka State Minerals
 Corp. Ltd TTMC, A Block,
 5th Floor, BMTC Building,
 K.H. Road, Shanthinagar,
 BANGALORE KARNATAKA
 Phone: 080-22278813-14
 FAX : 080-22213172

Agent : Shankarlingaiah
 Karnataka State Minerals
 Corp. LTD TTMC Building, A
 blcok,5th Floor BMTC Bus
 station, Shanthinagar
 BANGALORE KARNATAKA
 Phone: 080-22278813-14-15-16
 FAX : 080-22213172

Mining Engineer

Name : Dhruvaraj S,Full Time
 Qualification : BE (Mining)
 Appointment/ : 01/04/2017
 Termination date

Geologist

Name : T. Ramakrishna,Full Time
 Qualification : MSc (Geology)
 Appointment/ : 01/07/2015
 Termination date

Manager

Name : M.R.K.Bagawan
 Qualification : Dip. In Mining,
 Appointment/ : 04/03/2016
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Existing rule 11 MCDR1988	22/12/1992
		Existing rule 11 MCDR1988	29/11/1995
		Renewal under rule 22 MCR1960	20/12/2002
		Mining Scheme rule 12 MCDR1988	23/04/2007
		Modif.of approved Mining Plan	14/09/2010
		Modif.of approved Mining Plan	27/09/2013
		Modif.of approved Mining Plan	31/10/2014
		Mining Scheme rule 12 MCDR1988	16/04/2015
		Modif.approved Mining Scheme	04/03/2019

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No Proposal	Nil	Nil
1b	Exploration over lease area for geological axis 1 or 2	NIL	NIL	During 2014-15 & 2015-16 total Meterage of is 3501Rmtrs were drilled
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NIL	Nil	Soil Tech (India) Pvt. Ltd., Pune During 2014-15 & 2015-16 total Meterage of is 3501Rmtrs were drilled with expenditure of Rs.1,35,00,000/-
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not Specified	NA	NA
1e	Balance reserve as on 01/04/20	63.19 Million Tonnes	71.9 Million tonnes	As per Annual returns submitted for FY 2018-19.
1f	General remarks of inspecting officers on geology, exploration etc			No Exploration proposed in the reporting year.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	The proposed location of development N-492-1647, E-771- 1173	Actual location of development:-N-772-1398, E-793 -1167	Working carried out in between 997 mRL to 952 mRL.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top Soil - Nil Mineral Benches- 18	Mineral Benches- 18	No top soil Benches & all benches pertaining Ore & O/B
2c	Stripping ratio or ore to OB ratio	1:0.14 1339996mts	1:0.06 792053.30mts	(By tonnage)

2d	Quantity of topsoil generation in m3	No Proposal	Nil	—
2e	Quantity of overburden generation in m3	95435 m3	25522 m3	—
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The development of the mine was carried out within the proposed grids as per the proposal.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1 Pit	In Meters L x W x D 1052X200X48	—
			Working in 1 pit only.	
3b	Quantity of ROM mineral production proposed	13,40,000 Tonnes	7,92,053.30Tonnes	Violation issued for less production.
3c	Recovery of sailable/usable mineral from ROM production	Proposed recovery of 95 % in ore	95 % recovery in ore achieved.	5 % is considered as waste.
3d	Quantity of mineral reject generation	No Proposal	Nil	—
3e	Grade of mineral rejects generation and threshold value declared.	-45% Fe +45% Fe Threshold value	-45% Fe +45% Fe Threshold value	+45% Fe grade ore is being utilized by blending with high grade as per market condition.
3f	Quantity of sub grade mineral generation.	No proposal	Not applicable	—
3g	Grade of sub grade mineral generation	No Proposal	Nil	—
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised method proposed for segregating from ROM.	Mechanized method adopted for segregating from ROM	Dry crushing and screening of 250 TPH

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	Nil	-
3j	Provision of drilling and blasting in mineral benches	Drilling & Blasting proposed in mineral benches	Drilling & Blasting carried out as per proposal in hard zone.	30% of overall material handling requires drilling & blasting.
3k	Provision of mining machineries in mineral benches	Front end loaders: 2 nos. Excavators: 4 Nos. Tippers/Dumper s: 20 Nos. Mobile Screening/Crushing: 5 nos. Water tankers: 10 nos. DTH drill unit: 1 no.	Loaders: 3 nos. Excavators: 8 nos. Tippers/dumpers: 18 nos. Crushing/screening: 5 nos. Water tankers: 7 nos. DTH drill unit: 1 no.	-
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of bench- 8 mtrs Width of bench- 10 mtrs.	Height and width of bench maintained as per proposal.	-
3m	Total area covered under excavation/pits	20.34Ha	15.30Ha.	-
3n	Ore to OB ratio for the pit/mine during the year.	1:0.14	1:0.06	(By tonnes)

3o	Total area put in use under different heads at the end of year	Mining:49.10 Ha Waste dump: 2.79 Ha Mineral storage: WITHIN UPL Infrastructure : 0.05 ha Roads: 0.5 ha Green belt: 3.05 ha Engineering measures: 0.66 ha Untouched area-25.280 ha. TOTAL - 80.06 HA	Mining: 47.73 Ha, Waste dump: 0.26Ha Infrastructure-0.05 Ha Engineering measures: 0.66 ha ROAD - .5 HA Green Belt - 3.05 HA TOTAL - 52.25 HA	-
3p	Production of ROM mineral during the last five year period as applicable	2014-15:3000000 2015-16:3000001 2016-17: 2999808 2017-18: 2999934 2018-19: 1339996	2014-15:2700725 2015-16:1600000 2016-17: 2165715 2017-18: 1685498 2018-19: 792053.3	(-in tonnes).Actual production within proposed limit. Violation issued for less production for the year 2018-19.
3q	General remarks of inspecting officers on method of mining etc.			Violation issued for less production for the period 2018-19 w.r.t the approved proposal.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	1).No top Soil Dump 2).O/B-1 Dump Quantity 190871Tonnes 3). No Mineral Reject Dump	1).No top Soil Dump 2).O/B-1 Dump Quantity 51045Tonnes 3). No Mineral Reject Dump	

4b	Location of topsoil, OB and mineral reject dumps	1).No top Soil Dump 2).O/B-1 Dump (TFL Area North western of the Lease E- 780.99 to E-883.09 & N-847.71 to 947.56) 3). No Mineral Reject Dump	PTD-1 E - 817.54 to E - 871.27 N - 768.7 to N - 840.25	
4c	Number of dumps within lease area and outside of lease area	Within lease area 1No. Dump Out side = Nil	Within lease area 1No. Dump Out side = Nil	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	O/B-1 Dump (TFL Area North western of the Lease E- 780.99 to E-883.09 & N-847.71 to 947.56)	PTD-1 E - 817.54 to E - 871.27 N - 768.7 to N - 840.25	
4e	Number of active and alive dumps.	1 Dump	1 Dump	—
4f	Number of dead dumps.	3 dumps proposed	3 dead dumps	—
4g	Number of dumps established.	No proposal	Nil	—
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall and garland drain proposed all along the dumps.	Retaining wall and garland drain constructed as per proposal.	—
4i	Length of Retaining wall or garland drain all along dumps	186 mtrs Retaining wall 147 mtrs garland drain	Constructed Retaining wall of 186 mtrs and garland drain 147 mtrs.	—
4j	Number of settling ponds	No proposal	Nil	5 nos. of settling tanks are constructed in the year 2013-14 as per R&R plan approved by CEC.
4k	Specific comments of inspecting officer on waste dump management			Waste dump management carried out as per the proposal in approved modified RMP.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No Proposal	Nil	—
5b	Area under backfilling of mined out area	No proposal	Nil	—
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.			Entire ML area is mineralized. No part of the pit is mature for backfilling.

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).	To be submitted before Ist July of every year	Submitted on 27.6.2019.	—
6b	Area available for rehabilitation (ha) .	No proposal	nil	—
6c	afforestation done (ha).	No proposal	nil	—
6d	No. of saplings planted during the year	200 proposed	250 saplings planted.	—
6e	Cumulative no .of plants	No proposal	nil	—

6f	Any other method of rehabilitation	No proposal	nil	—
6g	Cost incurred on watch and care during the year	No proposal	nil	—
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal	nil	—
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	nil	—
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on on backfilled area	No Proposal	nil	—
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	200 Nos plantation proposed	250 Nos of plantation done	—
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	0.017 Ha	0.50 Ha	—

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Plantation proposed	Plantation carried out	—
6p	Compliance of environmental monitoring (core zone and buffer zone)	Season wise environmental monitoring of ambient air quality, water quality, noise & soil samples proposed.	Season wise environmental monitoring of ambient air quality, water quality, noise & soil samples carried out. All environmental parametrs were within permissible limit.	Monitoring done by SUMS Techno Labs. Pvt. Ltd, Hospet.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP activities was implemented as per the proposal in approved modified RMP.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise mechanical sorting proposed within the lease	Grade wise sorting done mechanically within the lease area as per proposal.	—
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical method of grade wise mineral sorting proposed	Mechanical method adopted for grade wise mineral sorting	Dry Crushing & screening.
7c	Different grade of mineral sorted out at mines.	Fines: -10 mm Lumps:10-20 mm & 20-40 mm	Fines: 60 to below 62 % Fe Lumps: 55 to below 58 % Fe 62 to below 65 % Fe.	Lumps and Fines of various grade dispatched as per market requirement.
7d	Any beneficiation process at mines .	No proposal	Nil	—
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral Conservation aspects were carried out as per the approved modified RMP.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	Nil	Working within 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)	Seperate temporary dump of O/B proposed.	Seperate O/B dumping carried out at North western part of the M.L area.	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)	Not specified	250 saplings planted during 2018-19 within the M.L area.	—
8g	Survival rate	Not specified	80%	—
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed on haul road to control airborne dust.	Regular water sprinkling is done by water tanks to control airborne dust.	—
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around the mine was good as lessee has carried out afforestation & other environmental protective measures as per the approved modified RMP.

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 Dec-2019 Annual Returns submitted up to 2018-19	Monthly Returns submitted up to Dec-2019 Annual Returns submitted up to 2018-19	—
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager- Sri M.R.K Bagawan Mining Engineer- Sri Dhruvaraj Geologist- Sri T.Ramkrishna	Same Manger & Geologist present during inspection. S. Sharnananda was present as Mining engineer during inspection. The Mining Engineer appointed does not possess minimum 5 years of professional experience working in a supervisory capacity in field of mining.	Violation issued.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining-47.73 ha Waste dump- 2.79 ha Reclaimed/rehabilitated-3.71 ha Infrastructure - 0.55 ha, Untouched area- 25.28 ha	Appears to be correct.	—
9d	Scrutiny of Annual return on afforestation	250 nos. saplings planted within M.L area @ 80 % survival rate	Appears to be correct.	—
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil	—
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening stock- 193142 tonnes, Production- 792053 tonnes, Closing stock- 416697.3 tons	Appears to be correct.	—

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value average= Rs. 3300.7/- tonnes, Ex- mine price average=Rs. 3300.7/ tonnes. Production cost Rs. 223/ton.	Appears to be correct	_
9h	Scrutiny of Annual return on fixed assets	Excavators: 8 nos. Wheel Loaders: 3 nos. Water tanker-7 nos. Tippers/Dumper s-18 nos. Crusher/Screen ing-5 nos.	Appears to be correct	_

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)	27/01/2020	16/03/2020				
MCDR17	Rule 55(1)(1	27/01/2020	16/03/2020				

Date :

(G C MEENA)

Indian Bureau of Mines