

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

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/375/BNG

Mine code : 30KAR03069

- (i) Name of the Inspecting : **S19**) **SANDEEP KUMAR SINGH**
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : Sri. M.R.K Bagawan, Mine Manager, Sri T. Ramakrishna,
Official with
Designation
- (iv) Date of Inspection : 22/02/2022
- (v) Prev.inspection date : 12/10/2017

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,mmliodsandur
- 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 correspondance** : M/s Karnataka State Minerals Corporation Limited
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** : 50
- (d) **Date of Expiry** : 12/04/2049
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 : Smt. B.B.Cauvery, IAS, MANAGING DIRECTOR,
 Karnataka State Minerals
 Corporatio A' block, 5th
 Floor, Shanthinagar
 Bengaluru BANGALORE
 KARNATAKA
 Phone: 08022278814/15/
 FAX : 08022213172

Agent : Mallikarjun Sarapur
 Karnataka State Minerals
 Corporatio 'A' block, 5th
 Floor, Shanthinagar
 Bengaluru-560027 BANGALORE
 KARNATAKA
 Phone: 08022278814/15/16, 8763673728
 FAX : 08022213172

Mining Engineer
 Name : Sharanandan, Full Time
 Qualification : BE IN MINING
 Appointment/ : 02/05/2019
 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/ : 24/07/2020
 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
 MP review under 17(1) MCR 2016 12/02/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	The proposal was given in the year 2020-21 but actual work started in the year 2021-22.
1b	Exploration over lease area for geological axis 1 or 2	4 boreholes proposed with total depth of 500 m.	Only 2 nos. of boreholes have been drilled with total of 142 meters. The two boreholes drilled are only to a depth of 69 & 73 meters.	Violation issued under Rule 11(1) of MCDR 2017.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	40 lakhs proposed	9.96 lakhs	As reported by Lessee representative during inspection.
1d	Balance area to be explored to bring Geological axis in 1 or 2	7 Ha area under temporary dump.	7 Ha area under temporary dump.	G-1- 71.69 Ha G-2- 1.37 Ha. 4 nos. of boreholes proposed for covering entire lease into G-2 level of exploration. Violation issued under Rule 11(1) of MCDR 2017 for not carrying out the exploratory boreholes as per the proposal.
1e	Balance reserve as on 01/04/20	71,895,899 tonnes of iron ore as on 30.11.2019 with grade +45% Fe.	70,218,150 tonnes as on 1.04.2021 after depleting production.	As reported in AR 2020-21.

1f	General remarks of inspecting officers on geology, exploration etc	i) i) 4 nos. of exploratory boreholes with total 500 meters proposed for the year 2020-21 against which 2 nos. of boreholes have been drilled with total of 142 meters. The two boreholes drilled are only to a depth of 69 & 73 meters and have not been drilled up to the proposed depth/ discontinuance of ore body. Violation issued under Rule 11(1) of MCDR 2017.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed between section 1-1' & A-A' to J-J'.	Actual working carried out within the proposed extent as per the proposal.	Nil.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches proposed in Overburden & Mineral.	Separate benches maintained in Overburden & mineral as per proposal.	Therefore, the lessee was advised to take immediate steps to conduct integrated slope stability study of the mine from any recognized Govt. agency, to assess the overall Geotechnical stability of the mine including both waste dump and mine benches, vide letter no KNT/BLR/Fe-375/BNG-Vol-V dated 11/03/2022.
			24 benches in ore and 1 bench in OB. It was observed during inspection that the mine has reached depth of 100 metres and more in places and also the old inactive dumps present at Northern portion of the lease are located at steep slope.	
2c	Stripping ratio or ore to OB ratio	1:0.13 (in tons)	1:0.12 (in tons)	Ore-13,39,997 tons Waste- 1,55,806 tons. As reported in AR 2020-21.
2d	Quantity of topsoil generation in m3	No proposal	Nil	Nil
2e	Quantity of overburden generation in m3	85593 Cum~171185 tons	77903 Cum~ 155806 tons.	As reported in AR 2020-21.

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	It was observed during inspection that the mine has reached depth of 100 metres and more in places and also the old inactive dumps present at Northern portion of the lease are located at steep slope. Therefore, the lessee was advised to take immediate steps to conduct integrated slope stability study of the mine from any recognized Govt. agency, to assess the overall Geotechnical stability of the mine including both waste dump and mine benches vide letter no KNT/BLR/Fe-375/BNG-VolV dated 11/03/22
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1 Pit proposed	Actual working carried out in one pit.	Nil
3b	Quantity of ROM mineral production proposed	13,39,999 tonnes	13,39,997Tonnes	As reported by lessee in AR 2020-21.
3c	Recovery of sailable/usable mineral from ROM production	100 % proposed	100 % achieved	NIL
3d	Quantity of mineral reject generation	No proposal	NIL	NIL
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	NIL	NIL

3f	Quantity of sub grade mineral generation.	No proposal	NIL	NIL
3g	Grade of sub grade mineral generation	No proposal	NIL	NIL
3h	Manual / Mechanised method adopted for segregating from ROM	Only Crushing & Screening proposed of ROM.	Crushing & Screening carried out for ROM as per the proposal.	Crusher capacity- 150 TPH.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	NIL	NIL
3j	Provision of drilling and blasting in mineral benches	30 % of Drilling & Blasting proposed in mineral benches.	Drilling & Blasting carried out as per proposal in hard strata encountered.	30 % of overall material handling requires drilling & Blasting. Slurry explosives in conjunction with detonators.
3k	Provision of mining machineries in mineral benches	1. Excavator- 1.6 Cum- 3nos. 2. Front End Loaders-1.6 Cum- 2nos. 3. Dumpers- 16 tons-16 nos. 4. Drill machine-110 mm- 1no. 5. Water tanker- 8KL-10 nos.	1.Excavator-0.9 Cum-5 nos. & 1.6 Cum- 3 nos. 2. FrontEndloaders-1.8 Cum-6 Nos. 3.Dumpers- 16 Tons-20Nos 4.Water Tanker- 10 KL- 8 nos. 5. Drill machine-110 mm- 1 no	As reported by Lessee during inspection & AR 2020-21.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of the Bench - 8Mtrs Proposed in Mineral & OB.	Bench heightmaintained as per proposal.	24 benches of 8m height in ore and 1 bench of 8m height in OB.
3m	Total area covered under excavation/pits	50.96 Ha. Till end of plan period (31.03.2025).	49.49 ha as on 1.04.2021.	As reported in AR 2020-21.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.13 (In tons)	1:0.12 (In tons)	Ore-13,39,997 tons Waste- 1,55,806 tons. As reported in AR 2020-21

3o	Total area put in use under different heads at the end of year	i)Mining - 50.96 Ha., ii)Infrastruct ure& Road - 0.55 Ha.	i)Mining- 49.49 Ha ii)Infrastructure & Road-0.55 Ha.	NIL
3p	Production of ROM mineral during the last five year period as applicable	2016-17: 3000000 tons 2017- 18:3000000 tons 2018-19: 1339996 tons 2019-20: 1339998 tons 2020-21: 1339999 tons	2016-17: 2165715 tons 2017-18:1685498 tons 2018-19: 792053 tons 2019-20: 342356 tons 2020-21: 1339997 tons	NIL
3q	General remarks of inspecting officers on method of mining etc.			Mining carried out within the proposed extent as per the proposal.

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 O/B proposed (PTD-1)	Separate dumping of O/B is carried out at the proposed dump PTD-1 as per the proposal.	No top soil & Mineral reject generation.
4b	Location of topsoil, OB and mineral reject dumps	OB dumping proposed at PTD-1. No topsoil and mineral reject dump proposed (Sec- TFL-2-2', 3-3', 4-4')	OB dumping carried out at proposed temporary dump PTD-1 within the proposed extent as per the proposal	NIL
4c	Number of dumps within lease area and outside of lease area	2 dumps within lease (PTD-1 & D-1)	2 dumps within lease (PTD-1 & D-1)	PTD-1- Western side of Lease. D-1- North side of Lease.

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposed within UPL.	Dumps located within UPL.	Entire M.L. Area is mineralized.
4e	Number of active and alive dumps.	1 Dump (PTD-1)	1 Dump (PTD-1)	
4f	Number of dead dumps.	1 dump-D-1	1 dump-D-1	D-1 located at North side of the lease
4g	Number of dumps established.	No proposal	NIL	NIL
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall and garland drain proposed along dump PTD-1.	Retaining wall and garland drain construction at dump PTD-1 not carried out as per the proposal.	Violation issued under Rule 11(1) of MCDR 2017.
4i	Length of Retaining wall or garland drain all along dumps	67 m Retaining wall and garland drain proposed along dump PTD-1.	The Retaining wall and garland drain construction at dump PTD-1 not carried out as per the proposal.	Violation issued under Rule 11(1) of MCDR 2017.
4j	Number of settling ponds	No proposal	NIL	NIL
4k	Specific comments of inspecting officer on waste dump management			The construction of 67 m Retaining Wall & garland drain is proposed for the year 2020-21 along dump PTD-1 against which no work has been carried out. Violation issued under Rule 11(1) of MCDR 2017.

Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No proposal	NIL	NIL
5b	Area under backfilling of mined out area	No proposal	NIL	NIL

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	NIL	NIL
5d	Total area fully reclaimed and rehabilitated	No proposal	NIL	NIL
5e	General remarks of inspecting officers on backfilling and reclamation etc.			No backfilling proposals.

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 1st.July of every year.	Submitted on 12.07.2021.	Nil
6b	Area available for rehabilitation (ha) .	0.20 ha proposed for afforestation.	0.50 ha afforestation carried out.	Afforestation proposed and carried out in top worked out benches.
6c	afforestation done (ha).	0.20 ha proposed for afforestation.	0.50 ha afforestation carried out.	Afforestation proposed and carried out in top worked out benches.
6d	No. of saplings planted during the year	300 nos. of saplings plantation proposed.	250 nos. of saplings plantation carried out.	Plantation carried out at western side of Lease. (E-592 to 670 N-1224 to 1296)
6e	Cumulative no .of plants	Not mentioned.	5950 nos. of plants.	As reported in Annual PMCP report 2020-21.
6f	Any other method of rehabilitation	No proposal	NIL	NIL
6g	Cost incurred on watch and care during the year	Rs 1,00,000	Rs 10,000/-	As reported in Annual PMCP report 2020-21.

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No Proposal	NIL	NIL
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No Proposal	NIL	NIL
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No Proposal	NIL	NIL
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal	NIL	NIL
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No Proposal	NIL	NIL
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No Proposal	NIL	NIL
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No Proposal	NIL	NIL
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No Proposal	NIL	NIL

6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring proposed	Environmental monitoring of ambient air quality, water quality & noise carried out. Environmental monitoring report of March-21 available during inspection. All parameters within the limit.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			The PMCP proposals have been implemented in the mine as per the proposal.

Mineral Conservation:

Sl.No.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Only Crushing & Screening of ROM proposed.	Crushing & Screening carried out for ROM as per the proposal.	Crusher capacity- 150 TPH. Input size- 200-300 mm Output size- 0-10mm(fines), 10-20mm(lumps), 20-40 mm(lumps)
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Only Crushing & Screening of ROM proposed.	Crushing & Screening carried out for ROM as per the proposal.	Crusher capacity- 150 TPH. Input size- 200-300 mm Output size- 0-10mm(fines), 10-20mm(lumps), 20-40 mm(lumps).
7c	Different grade of mineral sorted out at mines.	Only Crushing & Screening of ROM proposed.	Crushing & Screening carried out for ROM as per the proposal.	Crusher capacity- 150 TPH. Input size- 200-300 mm Output size- 0-10mm(fines), 10-20mm(lumps), 20-40 mm(lumps). Lumps. Different grades of the sized ore (Lumps & fines) dispatched as per the market requirement.

7d	Any beneficiation process at mines	No proposal	NIL	NIL
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No specific comments.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	No generation of Top soil.	NIL
8b	Concurrent use or storage of topsoil	No proposal	NIL	NIL
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of Overburden proposed at dump PTD-1.	Separate dumping of OB carried out at proposed dump PTD-1.	No rejects generation.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	NIL	NIL
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	NIL	NIL
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Not mentioned.	5950 nos. of plants.	As reported in Annual PMCP report 2020-21.

8g	Survival rate	Not mentioned.	80%	As reported in AR 2020-21.
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed to control airborne dust.		Water sprinkling carried inside the mine to control airborne dust through 8 nos. of 10 KL capacity Water sprinklers.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around the mine looks good.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly Returns Submitted upto Jan-2022 on 04/02/2022 Annual Return submitted up to 2020-21 on 29/06/2021.	Monthly Returns Submitted upto Jan-2022 on 04/02/2022 Annual Return submitted up to 2020-21 on 29/06/2021.	NIL
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager - Sri.M.R.K.Bagawan MiningEngineer : Sri.Sharanananda Geologist: Sri.T.Ramakrishna	Appears to be correct.	NIL
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining - 49.49 Ha Infrastructure & Road - 0.55 Ha.)	Appears to be correct.	NIL
9d	Scrutiny of Annual return on afforestation	Within M.L.Area- 250Nos.of saplings with 80% survival rate.	Appears to be correct.	NIL

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NIL	Appears to be correct	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	<p>ROM Stock: - Opening stock- 697053.59 tons Production - 1339997 tons Closing stock - 34644.40 tons</p> <p>Graded ore: - Opening Stock- 1217703.705 tons Production- 2002406.19 tons Dispatch- 2305727 tons Closing stock- 914382.895 tons</p>	Appears to be correct	NIL
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	<p>Cost of Production- Rs.1264.43/Ton Lumps: Ex-mine Price- Rs. 3268/Ton - 60-62% Fe Rs.4183/Ton- 62-65% Fe Rs.5571/Ton- Above 65% Fe Fines Rs. 2550/Ton - 60-62% Fe Rs.3362/Ton- 62-65% Fe Rs.2979/Ton- Above 65% Fe</p>	Appears to be correct	NIL
9h	Scrutiny of Annual return on fixed assets	Rs. 81975693/- including land, industrial, plant-machinery & capitalized expenditure.	Appears to be correct	NIL

9k	Scrutiny of Annual return on mining machineries	1.Excavator- 0.9 Cum-5 nos. & 1.6 Cum- 3 nos. 2. Front End loaders-1.8 Cum- 6 Nos. 3.Dumpers- 16 Tons- 20Nos 4.Water Tanker- 10 KL- 8 nos.	Appears to be correct.	NIL
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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)	14/03/2022			

Date :

(SANDEEP KUMAR SINGH)

Indian Bureau of Mines