

**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, Mines Manager. Sri.Sharanandan, M  
Official with  
Designation
- (iv) Date of Inspection : 24/02/2023
- (v) Prev.inspection date : 25/08/2022

**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. R.Vinoth Priya , IAS, Managing Director  
 Karnataka State Minerals  
 Corporatio 'A' block, 5th  
 Floor, Shanthinagar  
 Bangalore BANGLORE URBAN  
 KARNATAKA  
 Phone: +91 9448456789,  
 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	4 nos. of exploratory boreholes with total meterage of 125 proposed during year 2020-21.	2 nos. of exploratory boreholes drilled during year 2021-22 with total meterage of 142.	Backlog of 2020-21.
1b	Exploration over lease area for geological axis 1 or 2	No exploratory proposal during year 2021-22.	Further exploratorydrilling work carried from 15.07.2022 to 17-08-2022. 9No's of exploratory holes completed with total meterage of 786.	Backlog of 2020-21 completed.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not mentioned	APC Drilling and Construction Pvt. Ltd., 153 C-7, Third Floor, R. Gopal Complex, Salem Road, Namakkal - 637001. Tamil Nadu, India. Total Expenditure: Rs.8,44,432/-	As reported by the Lessee during inspection.
1d	Balance area to be explored to bring Geological axis in 1 or 2	G-1- 71.69 ha G-2-1.37 ha	G-1- 71.69 ha G-2-1.37 ha	Balance area covered under waste dump. Exploration completed to upgrade the potentially mineralized area to G-1 excluding the area covered under temporary waste dump.
1e	Balance reserve as on 01/04/20	71,895,899 tons of iron ore with avg grade +45 % Fe as on 30.11.2019	68,906,910 tons of iron ore as on 1.04.2022 after depleting the production.	As reported in AR 2021-22.

1f	General remarks of inspecting officers on geology, exploration etc	It is observed during inspection that the DGPS Sketch duly certified by the State Government for the aforesaid mine is not available. Accordingly, Letter was sent to the Lessee dated 17/03/2023 directing to take immediate necessary action in this regard and submit the copy of DGPS Sketch duly certified by the State Govt. at the earliest.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Development was proposed in Sec 1-1' to J-J'. (Top - 1011 mRL & bottom 936 mRL).	It was observed during inspection that the portion of benches having BHQ have been left in-situ between Section B-B' to F-F' from 972 to 960 mRL due to which the benches formation is irregular and have not been advanced systematically as per the proposal.	Violation issued under Rule 11(1) of MCDR 2017.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in overburden & mineral proposed	It was observed during inspection that the portion of benches having BHQ have been left in-situ between Section B-B' to F-F' from 972 to 960 mRL due to which the benches formation is irregular and have not been advanced systematically as per the proposal.	Violation issued under Rule 11(1) of MCDR 2017.

2c	Stripping ratio or ore to OB ratio	1:0.06(in tons) proposed	1:0.06(in tons) achieved	Ore- 13,11,240 tons Waste-80,236 tons (As reported in AR 2021-22)
2d	Quantity of topsoil generation in m3	No proposal	NIL	NIL
2e	Quantity of overburden generation in m3	39,811 Cum proposed	40,118 Cum generated	NIL
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			It was observed during inspection that the portion of benches having BHQ have been left in-situ between Section B-B' to F-F' from 972 to 960 mRL due to which the benches formation is irregular and have not been advanced systematically as per the proposal. Violation issued under Rule 11(1) of MCDR 2017.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1 Pit proposed	Actual working in one pit only.	Sec 1-1' to J-J'
3b	Quantity of ROM mineral production proposed	13,39,998 tonnes proposed	13,11,240 tonnes achieved.	As reported in AR 2021-22.
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 dry crushing & screening proposed	Crusher& Screen-250 TPH-1No.	NIL
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	Deep hole Drilling & Blasting is proposed.	Drilling & Blasting carried out with slurry explosives in conjunction with detonators	Drill-100 mm-1 no. 30 % of drilling & blasting requirement in hard strata only.
3k	Provision of mining machineries in mineral benches	Mining Machineries proposed:	1.Excavator- 7 nos.-(0.9 Cum & 1.7 Cum). 2.Front End loader-4 nos. (1.8 Cum) 3.Dumper-16 nos.- (16 tons) 4.Drill-1 no. (100 mm) 5.Water tanker- 8 nos.- (8 KL)	As reported by Lessee during inspection & AR 2021-22.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	8m bench height proposed for both OB & mineral.	It was observed during inspection that the portion of benches having BHQ have been left in-situ between Section B-B' to F-F' from 972 to 960 mRL due to which the benches formation is irregular and have not been advanced systematically as per the proposal	Violation issued under Rule 11(1) of MCDR 2017.
3m	Total area covered under excavation/pits	50.96 ha till end of plan period (31.03.25)	49.49 ha as on 1.04.2022.	As reported in AR 2021-22.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.06(in tons) proposed	1:0.06(in tons) achieved	Ore- 13,11,240 tons Waste-80,236 tons (As reported in AR 2021-22)

3o	Total area put in use under different heads at the end of year	Area under Mining - 50.96 Ha, Waste Dump- 5.39 Ha Infrastructure & roads - 0.55 Ha till end of plan period (31.03.25)	Covered under current (O/C) workings - 49.49Ha, Used for waste Disposal - 2.79Ha. Occupied by plant, buildings, residential, welfare buildings & Roads - 0.55 Ha	As reported in AR 2021-22.
3p	Production of ROM mineral during the last five year period as applicable	(In tons) 2017-18 16,85,498 2018-19 16,85,498 2018-19 7,92,053 2019-20 7,92,053 2019-20 3,42,356 2020-21 3,42,356 2020-21 13,39,999 2021-22 13,39,998 2021-22 13,39,998	(In tons) 2017-18 16,85,498 2018-19 7,92,053 2019-20 3,42,356 2020-21 13,39,997 2021-22 13,11,240	NIL
3q	General remarks of inspecting officers on method of mining etc.		i)It was observed during inspection that the portion of benches having BHQ have been left in-situ between Section B-B' to F-F' from 972 to 960 mRL due to which the benches formation is irregular and have not been advanced systematically as per the proposal. Violation issued under Rule 11(1) of MCDR 2017.	ii)As advised to the lessee vide previous letter no KNT/BLR/Fe375/BNG-Vol-V dated 11/03/2022 for carrying out 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, the lessee has awarded the work to NIT Surathkal and study is under progress.

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 dumping of O/B proposed at temporary waste dump PTD-1	The terrace height of the proposed waste dump (PTD-1) at Sec G-G' (N-1660877, E-667113) has not been maintained as per the proposal. The proposed top mRL of 1st Stage is 1056 mRL whereas it is maintained at 1065 mRL.	Violation issued under Rule 11(1) of MCDR 2017
4b	Location of topsoil, OB and mineral reject dumps	OB dumping proposed at PTD-1. No topsoil and mineral reject generation. PTD-1 dumping proposed (Sec-TFL-5- 5', 6- 6')	The terrace height of the proposed waste dump (PTD-1) at Sec G-G' (N-1660877, E-667113) has not been maintained as per the proposal. The proposed top mRL of 1st Stage is 1056 mRL whereas it is maintained at 1065 mRL.	Violation issued under Rule 11(1) of MCDR 2017
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. D1- North side of Lease.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposed within UPL.	OB Dumps located within UPL.	Entire M.L. Area is mineralized and hence temporary dumping was carried out.
4e	Number of active and alive dumps.	1 Dump (PTD-1)	1 Dump (PTD-1)	Temporary Dump
4f	Number of dead dumps.	1 dead dump-D-1	1 dead 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.	67 m Retaining wall and garland drain proposed along dump PTD-1 & 61 m Retaining wall proposed for dump-D-1	Retaining wall & garland drain construction along dump PTD-1 & D-1 completed as per proposal for the year 2021-22.	Further retaining wall and garland drain construction under progress.
4i	Length of Retaining wall or garland drain all along dumps	67 m Retaining wall and garland drain proposed along dump PTD-1 & 61 m Retaining wall proposed for dump-D-1	Retaining wall & garland drain construction along dump PTD-1 & D-1 completed as per proposal for the year 2021-22.	Further retaining wall and garland drain construction under progress.
4j	Number of settling ponds	No proposal	NIL	NIL



4k	Specific comments of inspecting officer on waste dump management	i)It is observed during inspection that the DGPS Sketch duly certified by the State Government for the aforesaid mine is not available. Accordingly, Letter was sent to the Lessee dated 17/03/2023 directing to take immediate necessary action in this regard and submit the copy of DGPS Sketch duly certified by the State Govt. at the earliest.	ii)The terrace height of the proposed waste dump (PTD-1) at Sec G-G' (N-1660877, E-667113) has not been maintained as per the proposal. The proposed top mRL of 1st Stage is 1056 mRL whereas it is maintained at 1065 mRL. Violation issued under Rule 11(1) of MCDR 2017
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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	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.	The processed output [digital elevation model (DEM) and Orthomosaic] have not been submitted in accordance with the Standard Operating Procedures under sub rule (5) of rule 34A of MCDR, 2017 for carrying out drone survey and submission of Digital Aerial Images of Mining areas. Violation issued under Rule 34A. (1) of MCDR 2017.
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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 of July every year.	Annual PMCP Report for year 2021-22 is Submitted on 10.06.2022.	NIL
6b	Area available for rehabilitation (ha) .	0.20 ha available	0.20 ha afforestation carried out .	Afforestation carried on Greenbelt & top worked out benches.
6c	afforestation done (ha).	0.20 ha available	0.20 ha afforestation carried out.	Afforestation carried on Greenbelt & top worked out benches.
6d	No. of saplings planted during the year	100 nos. of saplings plantation proposed	320 nos. of saplings planted.	Afforestation carried on Greenbelt (Gap plantation) & top worked out benches.
6e	Cumulative no .of plants	Not mentioned	6,270 nos. of plants within lease.	As reported in Annual PMCP report 2021-22.

6f	Any other method of rehabilitation	No proposal	NIL	NIL
6g	Cost incurred on watch and care during the year	Rs. 1 lakh proposed	As per the proposal.	NIL
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( L x 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 in core zone & buffer zone	It was observed that seasonal environmental monitoring for Air, dust, water, noise, and soil for ongoing year 2022-23 both in core and buffer zone were not carried out as per the proposal and mine plan conditions	Violation issued under Rule 11(1) of MCDR 2017
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			It was observed that seasonal environmental monitoring for Air, dust, water, noise, and soil for ongoing year 2022-23 both in core and buffer zone were not carried out as per the proposal and mine plan conditions. Violation issued under Rule 11(1) of MCDR 2017

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#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Dry crushing & Screening proposed	Dry crushing & screening carried out. Crusher & Screen-250 TPH-1No.	Product size- - 10mm(fines), 10-40 mm(lumps).
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Dry crushing & screening proposed with grade wise sorting.	Lumps (Fe-grade): 62-65% 65% & above Fines (Fe-grade): 60-62 % 62-65 %	Grade as reported in AR 2021-22

7c	Different grade of mineral sorted out at mines.	Dry crushing & screening proposed with grade wise sorting.	Lumps (Fe-grade): 62-65% 65% & above Fines (Fe-grade): 60-62 % 62-65 %	Grade as reported in AR 2021-22
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	NIL	NIL
8b	Concurrent use or storage of topsoil	No proposal	NIL	NIL
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposed separate dump for waste /OB (PTD-1)	The terrace height of the proposed waste dump (PTD-1) at Sec G-G' (N-1660877, E-667113) has not been maintained as per the proposal. The proposed top mRL of 1st Stage is 1056 mRL whereas it is maintained at 1065 mRL.	Violation issued under Rule 11(1) of MCDR 2017
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	6,270 nos. of plants within lease.	As reported in Annual PMCP report 2021-22.
8g	Survival rate	Not mentioned	80 % achieved	As reported in AR 2021-22.
8h	Water sprinkling on roads to control airborne dust	Water Sprinkling on haul roads proposed to control the air borne dust	Water sprinkling inside the mine carried out by 8 KL water sprinkler- 8 nos.	8 Tankers with capacity of 8 KL utilized for sprinkling of water for dust suppression.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around the mine looks good.

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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 Jan-2023 on 7.2.2023 Annual Returns submitted for 2021-22 submitted on 27.06.2022	Monthly Returns Submitted up to Jan-2023 on 7.2.2023 Annual Returns submitted for 2021-22 submitted on 27.06.2022	NIL

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager: Sri.M.R.K.Bagawan Mining Engineer:Sri.Sharanananda Geologist: Sri..T.Ramkrishna	Appears to be correct	NIL
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) workings - 49.49Ha, Used for waste Disposal - 2.79Ha. Occupied by plant, buildings, residential, welfare buildings & Roads - 0.55 Ha	Appears to be correct	NIL
9d	Scrutiny of Annual return on afforestation	Within M.L. Area- 320Nos.of saplings and 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	ROM: O/s -34,644 tons, Production - 13,11,240 tons, C/s - 34,644 tons Graded Ore O/s- 9,14,419 tons Production- 13,11,240 tons Despatch- 17,95,363 tons C/s- 4,30,296 tons. (Includes both lumps & fines)	Appears to be correct	NIL
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production- Rs.1497.70/Ton Lumps: Ex-mine Price- Rs. 3752/Ton - 60-62% Fe Rs.6451/Ton- 62-65% Fe Rs.5889/Ton- 65% Fe &Above Fines Rs. 5871/Ton - 60-62% Fe Rs.4801/Ton- 62-65% Fe	Appears to be correct	Non-captive mine.
9h	Scrutiny of Annual return on fixed assets	Rs. 8,68,57,664 including plant- machinery & capitalized expenditure.	Appears to be correct	NIL



9k	Scrutiny of Annual return on mining machineries	1. 1. Excavator- 7 nos.-(0.9 Cum & 1.7 Cum). 2. Front End loader-4 nos. (1.8 Cum) 3. Dumper-16 nos.- (16 tons) 4. Water tanker- 8 nos.-(8 KL) 5. Crusher- 250 TPH-1 no.	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)	17/03/2023			
MCDR17	Rule 34(1)	17/03/2023			

**Date :**

(SANDEEP KUMAR SINGH)

Indian Bureau of Mines