

I/25865/2024

**MCDR inspection REPORT**

**Bangalore regional office**

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

**Mine code :** 30KAR03069

- (i) Name of the Inspecting : **S47** ) **DR. Sudhakara T.L**  
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Sri.M.R.K.Bagawan , Mines Manager, Sri.T.Ramakrishna,  
Official with  
Designation
- (iv) Date of Inspection : 06/07/2023
- (v) Prev.inspection date : 24/02/2023

**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** : 80.06
- (c) **Period of lease** : 50
- (d) **Date of Expiry** : 12/04/2049
4. **Mineral worked** : IRON ORE Main

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## 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

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## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	9Nos Reverse Circulation (RC) was drilled and total Depth was 786.00 Mtrs.	4Nos of bore holes are proposed in the year 2020-21. In which lessee has carried out 2 nos. of core holes in the year 2021-22 with a total depth of 142.40Mtrs. During 2022-23, further lessee has carried out 09 nos. of RC Drilling with a total meterage of 786.0 Mtrs.
1b	Exploration over lease area for geological axis 1 or 2	G1- 71.69 Ha. G2 -1.37 Ha.	-	The Entire 73.06 Ha. area covered under exploration. The 7.00 Ha. Area which falls under temporary dump yard (73.06 + 7.00 = 80.06 Ha.) (North side of the lease boundary)
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NIL	M/s Rock Tech Enterprises, Hosapete, Vijayanagar, Ground Floor, Kaushika, Annapurna Badavane, Chittawadgi, Hosapete Total Expenditure :Rs.56,59,200/- (15.07.2022 to 17-08-2022 RC Drill)	As per the information provided by lessee during the inspection.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not applicable	-	-
1e	Balance reserve as on 01/04/20	-	Proved = 6,46,43,496MTs Probable = 29,23,416MTs Prefeasibility Resources = 60,45,046MTs	-

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1f	General remarks of inspecting officers on geology, exploration etc	From the recent exploration data and the geological cross sections observed that lease area consists of hematitic silicious ore (HSIO), same is not assessed by lessee as per the revised threshold value notification dated 25th April 2018. In view of this vide letter dated 13/09/2023 advised lessee to modify the Mining Plan by incorporating the reserve/resources as per threshold value notification.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	The proposed location of development :- N584.02mtrs.to N-1752.69mtrs. E-771.83mtrs. to E-1400mtrs. Proposed working in between 928mtrs. R.L. to 1036mtrs.M.R.L	The actual location of development:- N-600.00 mtrs.to N-1740.00 mtrs. E-780 mtrs.toE-1400.00 mtrs. actual workings in between 936mtrs. R.L. to 1018mtrs M.R.L	Working between section 1-1' to J-J'
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No separate benches in topsoil, overburden and mineral proposed	All the benches contains mineral & O/B	-
2c	Stripping ratio or ore to OB ratio	1:0.04 Ore: 13,39,999 tonnes Waste: 59495 tonnes	1:0.07 Ore: 13,39,998 tonnes Waste: 97500 tonnes	Lessee explained that more waste handled due to intercalated waste in the ore zone.

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2d	Quantity of topsoil generation in m3	No proposal	NIL	-
2e	Quantity of overburden generation in m3	Cum = 29,747 Tonnes =59495	Cum= 48,750 Tonnes = 97500	-
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The development carried out with in the proposed extent. However, between section line B-B' & F-F' mine benches are not systematically developed. The benches are advanced leaving behind BHQ/Hematitic Silicious Iron ore (HSIO) bands which is hampering free movement of men & machinery thereby creating safety concern. Violation pointed out under Rule 11(1) of MCDR, 2017.

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**Exploitation:**

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit	Working in one pit.	The extent of the pit : L-1150.06m, W-605.06m, D-82.00m
3b	Quantity of ROM mineral production proposed	13,39,999 tonnes	13,39,998 tonnes	-
3c	Recovery of sailable/usable mineral from ROM production	95% was Proposed recovery in ore	Achieved	5% is considered as intercalated waste
3d	Quantity of mineral reject generation	No proposal	Not applicable	No mineral reject proposed & generated

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3e	Grade of mineral rejects generation and threshold value declared.	No proposal	Not applicable	-
3f	Quantity of sub grade mineral generation.	No proposal	Not applicable	No sub grade mineral was generated.
3g	Grade of sub grade mineral generation	No proposal	Not applicable	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method proposed for segregating from ROM	Mechanized method adopted for segregating from ROM	Crusher plant - 250T/H 1Unit Screening plant- 200T/H 3 Units
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	-	-
3j	Provision of drilling and blasting in mineral benches	Drilling & Blasting proposed in mineral benches	Drilling & Blasting carried out in hard strata encountered.	Explosives ANFO= 32,500Kg. Slurry Explosives= 4,775Kg. OD= 85 Nos. Safety Fuse = 318Mtrs Detonator Fuse = 11,205Mtrs Excel Detonators (Nonel) = 1,574 Nos.
3k	Provision of mining machineries in mineral benches	Front end loaders: 07 nos. Excavator : 07 nos. Trippers/Dumpers: 22 nos. Screening/crushing : 05nos. Water tankers : 10 nos. Drilling machine: 01 no. Rock breaker : 01 no.	Excavator : 08 nos. Dipers 25 nos. Loaders: 06 nos. Water tanker : 08 nos. Drilling machine : 01 no. Rock breaker : 01 no. Crusher/screening: 04 nos.	

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3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of the Bench - 8Mtrs Width of the Bench - 10Mtrs	Bench height & width maintained as per proposal	
3m	Total area covered under excavation/pits	Mining - 11.66 Ha.	Mining - 11.66 Ha.	-
3n	Ore to OB ratio for the pit/mine during the year.	1:0.04	1:0.07	Bulk density : Ore - 3.5, Waste-2.00
3o	Total area put in use under different heads at the end of year	Mining - 49.49Ha., Waste dump - 2.79 Ha., Infrastructure - 0.05 Ha., Road = 0.50Ha. Green belt - 3.05 Ha Retaining Wall - 0.66Ha. Untouched Area - 23.52 Ha.	Mining- 50.078Ha., Waste dump - 3.83 Ha., Infrastructure - 0.05Ha. Road = 0.50Ha. Green belt - 3.05 Ha Retaining Wall - 0.70Ha. Mineral Storage- 0.108Ha. Untouched area = 23.52Ha.	
3p	Production of ROM mineral during the last five year period as applicable	Proposal in Mining plan (In Tonnes) 2017-18: 29,99,934 2018-19: 13,39,992 2019-20: 13,39,998 2020-21: 13,39,999 2021-22: 13,39,998 2022-23: 13,39,999	In Tonnes 2017-18 : 16,85,498 2018-19 : 7,92,053.30 2019-20 : 3,42,356.29 2020-21 : 13,39,997 2021-22 : 13,11,240 2022-23 : 13,39,998	Figures as per Annual return submitted

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3q	General remarks of inspecting officers on method of mining etc.	Lessee has achieved the proposed production, however, between section line B-B' & F-F' mine benches are not systematically developed. The benches are advanced leaving behind BHQ/Hematitic Silicious Iron ore (HSIO) bands which is hampering free movement of men & machinery thereby creating safety concern. Violation pointed out under Rule 11(1) of MCDR, 2017.
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## 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	Separate dumping of O/B is carried out	No top soil & Mineral reject generated.
4b	Location of topsoil, OB and mineral reject dumps	Proposed Temporary Waste Dump (PTD-1) N-810.0 m. to 910.02 m. & E- 790.83m.to E-869.09 m.	Existing Temporary Waste Dump (PTD-1) N-813.56 m.to N-908.32m. & E- 792.35 m.to E-865.14 m.	--
4c	Number of dumps within lease area and outside of lease area	1 Dump Within lease area No Dumps Outside M.L.area	1 Dump Within lease area No Dumps Outside M.L.area	-



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4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	O/B Dump (PTD1) proposed within UPLNorth western side of the lease	ActiveO/B Dump (PTD-1) within UPL North western side of the lease	Entire M.L. Area is mineralized and hence temporary dumping was carried out.
4e	Number of active and alive dumps.	1 Dump	1 Dump	Dumps are Temporary
4f	Number of dead dumps.	3	3	Dump-1, Dump-2, dump-3 all are Temporary dumps.
4g	Number of dumps established.	No proposal	NIL	
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes	-
4i	Length of Retaining wall or garland drain all along dumps	Proposed retaining wall & garland drain at PTD-1 dump 67.00 Mtrs. and Proposed retaining wall At Dump-D1 : 63 Mtrs	Achieved retaining wall 67.00 Mtrs. & Garland Drain 67.00 Mtrs. at PTD-1 Achieved retaining wall At Dump-D1 63 Mtrs	Proposed retaining wall and Garland drain achieved.
4j	Number of settling ponds	No proposal	Nil	5 No's Settling Tank with in lease area
4k	Specific comments of inspecting officer on waste dump management			The existing dumps in the lease area are temporary and are within the UPL. Lessee has constructed toe wall and garland drain along the toe of the dump as per proposal.

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Solid Waste Management - Backfilling:

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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.	No proposal	Nil	Pit is not matured for back filling as ore is not exhausted.
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 entire lease area is mineralized and the pit is not matured for back filling.

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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).	Yes	Submitted	Submitted on 28.06.2023
6b	Area available for rehabilitation (ha) .	No proposal	NIL	-
6c	afforestation done (ha).	-	-	-
6d	No. of saplings planted during the year	400 Nos.	400 Nos.	Total Amount of Rs.1,46,000/-
6e	Cumulative no .of plants	-	6670 Nos.	-
6f	Any other method of rehabilitation	Nil	Nil	
6g	Cost incurred on watch and care during the year	Nil	Nil	

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6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	Nil

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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.	Monitoring done by MSV Analytical Laboratories, Ballari. All environmental parameters were observed to be within the permissible limit.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Lessee has carried out the PMCP activities as per the proposal. In the season-wise environment data submitted, environmental parameter values of air, water and noise are within the permissible limit.

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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 area	Mechanical sorting by crushing and screening done within the lease area.	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical Method of grade wise mineral sorting proposed	Grade wise sorting done mechanically within the M.L.area as per proposal	-
7c	Different grade of mineral sorted out at mines.	Lumps & Fines	Lumps & Fines 60% to 62% 62% to 65%	-
7d	Any beneficiation process at mines	No proposal	No beneficiation process carried out.	No beneficiation process carried out except dry crushing & screening

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7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Lessee has adopted crushing and screening method to separate the lumps and fines of various grades. However, mineral conservation of view, hematitic siliceous ore (Fe grade between 35% to 45%) to be utilized by blending with highgrade ore. In this regard, vide letter dated 13/09/2023 this office has advised lessee to reassess the reserve/resources as per the revised threshold value notification.
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Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	No generation of Top soil	Working within the broken up area.
8b	Concurrent use or storage of topsoil	No proposal	Not applicable	-
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate temporary dump of O/B (PTD-1) of proposed in North western part of the M.L. Area	Separate O/B dump (PTD-1) carried out in North western part of the M.L. Area.	-
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	Entire lease area is mineralized, ate present, no part of the mining pit is matured for back filling

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8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Nil	Protective& safety measures are being carried out for management of temporary dump (PTD-1).
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No proposal	6670Nos.	As per the information provided by lessee, about 6670Nos. sapling were planted so far
8g	Survival rate	No proposal	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 suppress the dust.	8 No's of 10 K.L. capacity of water tanker deployed in mine.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The entire lease area is mineralized. Lessee has carried out plantation in the safety zone and greenery around the lease area is 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 uptoM ay-2023 Annual Returns submitted for FY.2022-23	Submitted within stipulated time	Annual return submitted on 28.06.2023.

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- 9b Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager  
 Manager : Sri.M.R.K.Baga All the officials were present during the date of inspection  
 Mining Engineer : Sri.Sharanananda  
 Geologist : Sri.T.Ramkrishna
- 9c Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.  
 Mining- 50.078Ha.,  
 Waste dump - 3.83 Ha.,  
 Infrastructure - 0.05Ha.  
 Road = 0.50Ha.  
 Green belt - 3.05 Ha  
 Retaining Wall - 0.70Ha.  
 Mineral Storage- 0.108Ha.  
 Untouched area = 23.52Ha.
- 9d Scrutiny of Annual return on afforestation  
 Within M.L. area- 400 Nos.of saplings and 80% survival rate. Appears to be correct
- 9e Scrutiny of Annual return on mineral reject generation (Grade and quantity)  
 NIL

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9f	Scrutiny of Annual return on ROM stock and/or graded ore	All in Tonnes ROM Stock:- Opening stock- 34,644.40 Production- 13,39,998.00 Closing stock - 34,644.40  Lumps processed 55% to 58% : Nil 58% to 60% : Nil 60% to 62% : Nil 62% to 65% : 474348  Fines processed 55% to 58% : Nil 58% to 60%: Nil 60% to 62%: Nil 62% to 65%: 865650	Appears to be correct
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production Rs.805.78/Ton  Lumps: Ex-mine Price- Rs. 3883/Ton 60-62% Fe Rs.4402/Ton 62-65% Fe Rs.4553/Ton 65% Fe Above Fines Rs. 2698/Ton 60-62% Fe Rs.3273/Ton 62-65% Fe	Appears to be correct



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9h	Scrutiny of Annual return on fixed assets	9.12Crores including land, industrial, plant-machinery , capitalized expenditure& pre-production exploration etc.,	Appears to be correct
9k	Scrutiny of Annual return on mining machineries	Excavator : 08 nos. Dupers 25 nos. Loaders: 06 nos. Water tanker : 08 nos. Drilling machine : 01 no. Rock breaker : 01 no. Crusher/screening: 04 nos.	Appears to be correct

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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)	12/07/2023	10/11/2023			
MCDR17	Rule 34(1)	12/07/2023	01/12/2023			

**Date :****(DR. Sudhakara T.L)**

Indian Bureau of Mines