

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

Inspection under SDF for star rating of mines REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/52/BNG

Mine code : 30KAR03035

- (i) Name of the Inspecting : **A101**) **ARUN KUMAR**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Y.V.Ramakrishna Reddy, AGM(Mines) and N.Sivaprasad ,
Official with
Designation
- (iv) Date of Inspection : 24/10/2019
- (v) Prev.inspection date : 14/11/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KARADIKOLLA SURESH**
- (b) **Registration NO.** : **IBM/243/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **KARNATAKA**
- District : **BELLARY**
- Village : **KARADIKOLLA SURESH**
- Taluka : **HOSPET**
- Post office : **KARIGANUR**
- Pin Code :
- FAX No. : **08394-226853 (F),pbsandson@**
- E-mail : **pbsandson@gmail.com.**
- Phone : **08394-228332 (O),8971200391**
- (f) **Police Station** : **HOSPET**
- (g) **First opening date** : **05/09/1953**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **M/s P. BALASUBBA SETTY & SON**
correspondance **P.B.No. 3, Hampi Road,**
HOSPET, Bellary -583201
3. (a) **Lease Number** : **KAR0323**
- (b) **Lease area** : **44.6**
- (c) **Period of lease** : **20**
- (d) **Date of Expiry** : **22/01/2006**
4. **Mineral worked** : **IRON ORE** **Main**

5. Name and Address of the

Lessee : P.B.SETTY & SONS
D.No-2078, P.B.No-03 22nd
Ward, J.P.Nagar Bellary
Road, Hospet BELLARY
KARNATAKA
Phone:08394-265695, 265366
FAX :08394-265355

Owner : P.V.Prakash, M.Partner of M/s P.B. Setty & Son
D.No-2078, P.B.No-03, 22nd
ward, J.P.Nagar, Bellary
Road Hospet BELLARY
KARNATAKA
Phone: 08394-265595, 2
FAX : 08394-265355

Mining Engineer

Name : J.Vijay Narasihulu, Full Time
Qualification : BE, Mining
Appointment/ : 01/08/2017
Termination date

Geologist

Name : N. Shiva Prasad., Full Time
Qualification : M.sc Geology
Appointment/ :
Termination date

Manager

Name : Y.V.Ramakrishna Reddy
Qualification : Dip. in Mining
Appointment/ : 01/12/2011
Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	12/04/1991
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	07/02/1996
		Renewal under rule 22 MCR1960	26/06/2001
		Modif.of approved Mining Plan	20/12/2002
		Modif.of approved Mining Plan	23/03/2007
		Mining Scheme rule 12 MCDR1988	27/06/2008
		Modif.approved Mining Scheme	11/01/2013
		MS modif under MCR 1960	27/08/2015
		MP review under 17(1) MCR 2016	27/11/2017
		MP modif under 17(3) MCR 2016	13/07/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Core bore holes-10 No.s,total - 550 m and 10 Nos of trial pits (3m x 3m x 3m)	10 core bore holes drilled to a total meterage of 523 and 10 pits by 100X 100 grid intervals.	One core bore hole (NPBH 10) was closed at 80m instead of 100m proposed due to jamming of drill bit.
1b	Exploration over lease area for geological axis 1 or 2	G1 and G2	Area under G1-7.19ha Area under G2-3.62ha	Total mineralized area: 13.87ha.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified	Geo Tech Exploration, Nagpur and Expenditure in 20.00 Lakhs approximately	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal	Nil	Non mineralized area:28.23 ha
1e	Balance reserve as on 01/04/20		15.43Million Tonnes.	As per annual return for aFY-2018-19
1f	General remarks of inspecting officers on geology, exploration etc			10 core bore holes and trial pits were done in the reporting year. 0.82 ha converted into G1-Axis

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed location of development N1683725- N1684080 ,E- 653400 - E653930 (832 to 776MRL)	Location of development: N-1683726.0705 to 1684062.8450 ,E- 653468.1493 to 653897.1120 (832 to 776 MRL)	Southern Side w.r.t Lease area
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No separate benches for OB & mineral proposed.	Combined benches for OB & mineral	No separate benches for topsoil , working in broken up area

2c	Stripping ratio or ore to OB ratio	1:0.40	1:0.40	No change
2d	Quantity of topsoil generation in m3	No proposal	Nil	Working in broken up area
2e	Quantity of overburden generation in m3	330045 tones	330575 tones	BD: 2.5
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development of the benches was done in the direction as per the proposal. There is no generation of top soil as the workings are in broken up area.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Single pit proposed for production	Single pit , divided into 2 section as eastern and western sections	Approximate dimensions :L:420m W: 120m D:56m
3b	Quantity of ROM mineral production proposed	0.825MMT	0.825MMT	Nil
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Nil
3d	Quantity of mineral reject generation	No proposal	Nil	No generation of mineral reject.
3e	Grade of mineral rejects generation and threshold value declared.	+ 45% Fe for hematite Iron Ore	Nil	+35% Fe material blended with High grade to suit market demand
3f	Quantity of sub grade mineral generation.	No proposal	90000 tones	In pit Blending of mineral reject with high grade ore.
3g	Grade of sub grade mineral generation	No proposal	< 45% Fe	Nil

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Method proposed for segregating from ROM	Mechanised method adopted for segregating from ROM	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	No such Beneficiation study carried out.	Only dry crushing and screening.
3j	Provision of drilling and blasting in mineral benches	Provision of drilling & blasting in mineral benches is made	Drilling and blasting adopted in mineral benches with 2 no. of 115mm capacity wagon drilling and slurry explosives	Slurry explosive booster in conjunction with ANFO
3k	Provision of mining machineries in mineral benches	7 no.s of hydraulic excavators with 1.2 to 2.8 M3 of bucket capacity , 10 nos of 16 tonners and 4 Nos of 30tonnes capacity of tippers/ Dumpers	hydraulic excavators : 7no.s,Front end loader : 7No,Wagon drill:2no.Compressor : 2 no Dumper 18No. Water tankers :6	One drill, 5 excavators and 10 tippers in operation on the date of inspection.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Benche height of 8 m. & bench width of 10m proposed	Bench height of 8 m. & bench width of 7-8 m is maintained in most of the places in the mine and suitable for mining.	The width of the top two benches towards the North East portion was observed to be 7-8 mts against the proposal of 10 Mts.
3m	Total area covered under excavation/pits	14.82 ha proposed under mining pit at the end of the plan period.	13.81ha	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.40	1:0.40	Nil

3o	Total area put in use under different heads at the end of year	Mining Pit- 14.82 ha, Waste dumps- 13.96ha,Mineral storage - 3.25ha,Infrast ructure -0.20 ha, Mineral separation - 0.02ha, Roads- 0.75 ha, Others (specify) - 8.85ha.	Mining Pit- 13.81 ha, Waste dumps-14.96ha, Mineral storage -3.25ha, Infrastructure -1.2 ha, Others -12.13ha.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2014-15: 480000 2015-16: 480000 2016-17: 480000 2017-18: 480000 2018-19: 825000 (in tones)	2014-15: 4,76,000 2015-16: 4,78,850 2016-17: 4,80,000 2017-18: 4,80,000 2018-19: 8,25,000 (in tones)	Actual production within the propose limits
3q	General remarks of inspecting officers on method of mining etc.			The width of the top two benches towards the North East portion was observed to be 7-8 mts against the proposal of 10 Mts. Violation issued.

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 Proposed	OB is dumped separately	No top soil and mineral reject.
4b	Location of topsoil, OB and mineral reject dumps	Location of OB : N -1684050 to 1684400, E- 653800 to 654000	Actual Location of OB: N-1684066.6919 to 1684409.6052,E- 653783.7021 to 653975.5781	One Mineral reject dump :N- 1683905 to 1684095, E- 653785 to 653991

4c	Number of dumps within lease area and outside of lease area	Within mining lease - 3No. of dumps outside mining lease Nil.	One number of active dumps within the lease.	One active dump and two in active dumps.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dump proposed outside the ultimate pit limit.	Actual dumping carried out side the ultimate pit limit .	Approx 50m. away from UPL.
4e	Number of active and alive dumps.	One number of active dump within the lease	One number of active dump within the lease	Nil
4f	Number of dead dumps.	2no.dead dumps	2no.dead dumps	Nil
4g	Number of dumps established.	Inactive portion of dump concurrently afforested	Partially Stabilized at Active dump	Stabilized by coir matting
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall and garland drain proposed all along the dumps	RW and GD constructed all along the dump.	Constructed as per Approved R&R plan
4i	Length of Retaining wall or garland drain all along dumps	990 m. of Retaining wall 1000 m of garland drain.	990 m. of Retaining wall 1000 m garland drain.	Nil
4j	Number of settling ponds	No proposal	NA	Nil
4k	Specific comments of inspecting officer on waste dump management			Waste dump management was done as per the proposal including construction of RW & GD and coir matting on the terraces of the dump.

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	Mineral is not exhausted in the working pit and back filling is not necessary as of now.

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.			Mineral persist at depth and is not exhausted in the working pits.

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	AR on PMCP submitted	Submitted on date 29/06/2019
6b	Area available for rehabilitation (ha) .	0.85 ha	0.85 ha	Nil
6c	afforestation done (ha).	0.85 ha	0.85 ha	Nil
6d	No. of saplings planted during the year	1360 saplings proposed	2650 No.s, (2050nos of plants and 600 of agave are planted)	Excess of 1290 no. of plants are planted for balance of 2017-18)
6e	Cumulative no .of plants	6,05,045No.s	6,05,050 No.s	Nil
6f	Any other method of rehabilitation	Geo textiles / Coir matting proposed	Geo textiles / Coir mating done	Dump covered with coir mat 0.5ha of waste in 2018-19
6g	Cost incurred on watch and care during the year	10,00,000/-	11,74,920/-	Nil

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 in core and buffer zone.	Monitoring of Ambient air quality, water quality, noise and soil testing done on monthly basis.	Environmental monitoring is carried out by Mineral engineering services, Ballari.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Environmental monitoring carried out regularly Core and Buffer zone, environmental parameters observed within the permissible limits.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting of ROM proposed by dry crushing and screening.	Found to be maintained as per the proposal.	Fines : 0 to 10mm, Lumps: +10 to 40 mm.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical method proposed for grade wise sorting	Mechanical method adopted for grade wise sorting	Nil
7c	Different grade of mineral sorted out at mines.	Lumps:58 to 60% Fe, 62 to 65% Fe Fines: below 55%fe, 60 to 62% Fe, 62 to 65% Fe and 65% Fe above	Lumps : 58 to 60 Fe% , 60 to 62% Fe, 62 to 65% Fe and 65% Fe above Fines: below 55%, 60 to 62% Fe, 62 to 65% Fe and 65% Fe above	Nil
7d	Any beneficiation process at mines .	No Proposal	No Beneficiation study carried out	Dry crushing and screening and blending.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No deviation w.r.t mineral conservation was observed during the course of inspection.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	Nil	No top soil, working in broken up area
8b	Concurrent use or storage of topsoil	No Proposal	NA	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for OB proposed.	Maintained separate dumps for OB at earmarked location.	OB dumped separately at earmarked location
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	OB as waste will be used for back filling in the conceptual stage of mining.	Nil	Mineral not exhausted
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Will be complied during FMCP	Na	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposed _1360 Nos. of saplings	Actual-2650 Nos.saplings planted	Cumulative of plants 6,05,050 Nos.
8g	Survival rate	78%	74%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haluroads proposed to control the air bone dust	Regular water sprinkling is done on haul roads by water tanker and with help of Mist spray.	Total 5no. of water tankers deployed
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Entire ML is within the forest land. Most of the area is degraded. Healthy population of natural vegetation outside the ML area.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to 05.10.2019 (for the month of September 2019) A.R. Submitted up to 2018-2019	AR submitted on 26.09.2019	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager : Y.V.R.K.Reddy Mining Engineer : J. VijayaNarasihu lu, Geologist : N.Siva Prasad	Same mine officials were present during the course of inspection	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Current working: 13.81 ha. Waste dump: 14.96 ha. Infrastructure : 1.20 ha. Others: 12.13ha.	Appears to be correct.	
9d	Scrutiny of Annual return on afforestation	With in Mining Lease : 2500 plants @ 78% survival rate , out side mining lease area 150 plants and 70% survivalrate.	Appears to be correct	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	90000 tonnes	No proposal of sub grade , Subgrade generated is blended with High grade ore.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM;Opening and closing Stock - Nil, Production - 825000tonnes Dump working ; opening and closing stock- 354442tonnes	Appears to be correct	

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value: 3136 Rs. / tone. Ex. Mine price &: 3136 rs./tone, production cost : 545.23/-	Royalty, DMF & NMET were not included in the cost of production. Violation issued.
9h	Scrutiny of Annual return on fixed assets	Value of fixed assets: 41,41,91,169/- .including land industrial plant and machinery	Appears to be correct
9k	Scrutiny of Annual return on mining machineries	Back HOE - 8nos, front end loaders - 9no.s, dumpers- 18 nos, water tankers -6 nos, dill machine-2nos, crushers - 2nos.	Appears to be correct

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

Violation observed			Show cause position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
MCDR17	Rule 11(1)	06/11/2019			
MCDR17	Rule 35(2)	06/11/2019			
	Rule 45(7)	06/11/2019			

Date :

(ARUN KUMAR)

Indian Bureau of Mines