

**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- Mines Manager
Official with
Designation
- (iv) Date of Inspection : 09/12/2020
- (v) Prev.inspection date : 24/10/2019

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),897120039!**
- (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	No proposal	Nil	10 cores bore holes drilled to a total meterage of 523 and 10 No. of pits by 100 X 100 grid intervals in the FY 2018-19.
1b	Exploration over lease area for geological axis 1 or 2	G1 & G2	G1:7.19 ha G2:3.62ha.	Mineralized area : 13.87 ha, Non mineralized area: 28.23 ha
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil	Not applicable	Geo Tech exploration, Nagpur and expenditure in 20 lakhs rupees approximately in the year 2018-19.
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	Nil	14.60 Million Tones with average grade of 63% Fe & 5% (SiO ₂ +Al ₂ O ₃)	As per annual returns for the FY - 2019-20
1f	General remarks of inspecting officers on geology, exploration etc			10 cores bore holes drilled to a total meterage of 523 and 10 No. of pits by 100 X 100 grid intervals in the FY 2018-19.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed development : N1683675 to N 1684030, E653480 to E653900	Actual Development : N1683720 to N 1684030, E653500 to E653887 in the Southern Side w.r.t Lease area.	ROM stacked over the proposed production & development area,causing hindrance for the movement of benches & production.Clarification sought

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	There is no separate benches for OB & mineral	Combined benches for OB & mineral (6 benches)	No generation of topsoil, working in broken up area
2c	Stripping ratio or ore to OB ratio	1:0.80	1:0.80	No change
2d	Quantity of topsoil generation in m3	No proposal	Nil	No generation of top soil
2e	Quantity of overburden generation in m3	660818 tones	661000 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 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 , divided into 2 section as eastern and western sections proposed	Working in Single pit , divided into 2 section as eastern and western sections	Approximate dimension : L: 450 m , W: 140 m, D : 48 m
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	72460 Tones below 45% Fe	Low grade blended with high grade ore to meet the market demand
3e	Grade of mineral rejects generation and threshold value declared.	+ 45% Fe for hematite Iron Ore & +35% Fe for Heamatatic siliceous ore	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	Mechanized Method proposed for segregation from ROM	Mechanized 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 115 mm wagon drilling and slurry Explosives.	Slurry explosive booster in conjunction with ANFO
3k	Provision of mining machineries in mineral benches	Excavator tipper combination proposed	Mining carried out with the help of Excavator tipper combination	One drill, 5 excavators and 11 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	Benches of 8 m. height & 10m width proposed	8 Benches height of 8 m. & bench width of 8 m. is maintained in most of the places in mine and suitable for mining.	Nil
3m	Total area covered under excavation/pits	14.82 ha proposed under mining pit at the end of the plan period.	14.064ha at the end of reporting year	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.80	1:0.80	Nil

3o	Total area put in use under different heads at the end of year	Mining Pit-14.82ha, Waste dumps- 13.96 ha, mineral storage - 3.25ha, Infrastructure - 0.20 ha, mineral separation - 0.02ha, Roads - 0.75ha, others (specify) - 8.85ha.	Mining Pit-14.064ha, Waste dumps-14.716ha. Infrastructure, road and plant.-0.970 ha. Recl / Rehab:-5.360 ha. Virgin area 1.300 Ha. Others- 5.690Ha.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2015-16: 480000 2016-17: 480000 2017-18: 480000 2018-19: 825000 2019-20: 825000 2020-21: 825000	2015-16: 4,78,850 2016-17: 4,80,000 2017-18: 4,80,000 2018-19: 8,25,000 2019-20: 8,25,000 2020-21: 5,72,000 (upto 30th Nov-2020)	All unit in Tons. Actual production within the propose limit
3q	General remarks of inspecting officers on method of mining etc.			Opencast methods of mining were carried out in single pit with stripping ratio of 1: 0.8 with drilling & blasting & use of excavator tipper combination.

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	Nil
4b	Location of topsoil, OB and mineral reject dumps	Location of OB: Northing - 1684450 to 1684020, Easting - 653680 to 654000	Actual Location of OB : Northing - 1684450 to 1684010, Easting - 653736 to 653994	Nil

4c	Number of dumps within lease area and outside of lease area	With in mining lease -2 no. of dumps, outside mining lease nil.	One number of active dump within the lease, OML- Nil	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dump proposed within lease area and outside of the ultimate pit limit.	Maintaining waste dump within lease area and outside of the ultimate pit limit.	Nil
4e	Number of active and alive dumps.	One number of active dump within the lease proposed	One number of active dump within the lease maintained	Nil
4f	Number of dead dumps.	1no. dead dump	one dead dump	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 dumps	Retaining wall and garland drain constructed along the dumps	Constructed as per approved R&R plan.
4i	Length of Retaining wall or garland drain all along dumps	1000 m. of Retaining wall 1000 m of garland drain.	960 m. of Retaining wall 960 m garland drain.	Clarification sought for not constructing 40 mts of RW & GD
4j	Number of settling ponds	No proposal	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management			Waste dump management was satisfactory. Waste dumping carried as per the proposal

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

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 29/07/2019.
6b	Area available for rehabilitation (ha) .	0.85 ha	0.85 ha	Nil
6c	afforestation done (ha).	0.85 ha	0.90 ha	Nil
6d	No. of saplings planted during the year	1360 saplings proposed	1450 saplings planted	Nil
6e	Cumulative no .of plants	6,06,405 saplings	6,06,500 saplings	Nil
6f	Any other method of rehabilitation	No proposal	Nil	Nil
6g	Cost incurred on watch and care during the year	Rs. 10,00,000/- proposed	Rs.15,28,809/- incurred	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 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 parameters observed within the permissible limits.	Environmental monitoring is carried out by mineral engineering services, Ballari.

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	PMCP activities were carried out as per the proposal
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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 sorting of ROM proposed by dry crushing and screening.	Found to be as per proposal	Fines : 0 to 10mm, Lumps : +10 to 40mm.
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, 60 to 62% 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. Fines: below 55%fe, 60 to 62% fe, 62 to 65% fe and 65% fe above.	Nil
7d	Any beneficiation process at mines	No proposal	Dry crushing & screening plant for sizing & blending of ore.	Dry crushing and screening and blending.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral conservation were taken care. Low grade ore below 45% Fe were blended with highgrade to meetthe market requirement

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	Nil	No generation of top soil, working in broken up area.
8b	Concurrent use or storage of topsoil	No proposal	Nil	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 proposed to 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	Nil	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposed -1360 Nos. of saplings	Actual planted: :2380 nos. saplings(including dump, gap plantation and avenue plantation) 3700nos. of agave are additionally planted and 120no. outside lease area	Nil
8g	Survival rate	Not specified	81%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads proposed to control the air bone dust.	Regular water sprinkling is done on haul roads by water tankers with the help of mist spray.	Total 5no. of water takers deployed.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in & around the mine area was good as the lessee had carried out afforestation & environmental protection measures as per the proposal

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 11-11-2020 upto Oct-2020 A.R. Submitted up to 2019-20	AR submitted on 28-07-2020	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manage: Y.V.R.K.Reddy Mining Engineer : J. VijayaNarasihu lu Geologist : N.Siva Prasad,	Same mines 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: 14.064 ha. Waste dump: 14.716 ha. Infrastructure : 0.970 ha. Reclm/Rehab: 5.36 ha. Others: 6.99 ha.	Appears to be correct	
9d	Scrutiny of Annual return on afforestation	With in Mining Lease : 2380 saplings OML-120 saplings	Appears to be correct	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	72460 tones	Low grade generated below 45% Fe was blended with high grade to meet the market requirement	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM : Opening and Closing Stock - Nil, Production : 825000 tones, Dump working : opening stock -354442 tonnes and closing stock 298401.520 tonnes(old sub grade stock)	Clarification sought for not showing the production from dump working	

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value: 2096.00 Rs. / tone. Ex. Mine price : 2096.00 Rs./tone , production cost : 1198.60/ tone	Appears to be correct
9h	Scrutiny of Annual return on fixed assets	Value of fixed assets: 38,92,64,066/- Including land industrial plant and machinery	Appears to be correct
9k	Scrutiny of Annual return on mining machineries	Back HOE - 8nos, Front end loaders - 9nos, Dumpers - 18 Nos, water tankers - 6nos, drill 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 couse position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
MCDR17	Rule 11(1)	02/02/2021			
MCDR17	Rule 45(7)(a)	02/02/2021			

Date :

(ARUN KUMAR)

Indian Bureau of Mines