

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

MCDR INSPECTION REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/437/BNG

Mine code : 30KAR03156

- (i) Name of the Inspecting : **A101**) **ARUN KUMAR**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : P.Sreenivasa Rao, General Manager Mines Pramod S Ritt
Official with
Designation
- (iv) Date of Inspection : 10/10/2017
- (v) Prev.inspection date : 13/11/2014

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **HADDINAPADE**
- (b) **Registration NO.** : **IBM/155/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
State : KARNATAKA
District : BELLARY
Village : HULIKUNTA
Taluka : SANDUR
Post office : SANDUR
Pin Code : 583119
FAX No. : 08395-260471 (F),geosurvey
E-mail : bkgsurveygeo@gmail.com
Phone : 08395-252139 (O),
- (f) Police Station : SANDUR
- (g) First opening date : 14/03/2006
- (h) Weekly day of rest : SUN
2. Address for : Sri B. Rudragouda
correspondance #2198,BKG house, K.H.B.Colony,
SANDUR - 583 119,Bellary District Karnataka
3. (a) Lease Number : KAR1504
- (b) Lease area : 54.22
- (c) Period of lease : 20
- (d) Date of Expiry : 13/03/2026
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : B.RUDRA GOUDA
 #2198,BKG house,
 K.H.B.Colony, SANDUR - 583
 119,Bellary District
 BELLARY KARNATAKA
 Phone:
 FAX :

Owner : B.RUDRA GOUDA
 #2198,BKG house,
 K.H.B.Colony, SANDUR - 583
 119,Bellary District
 BELLARY KARNATAKA
 Phone:
 FAX :

Mining Engineer

Name : NARESH KAKUMANU,Full Time
 Qualification : B.E.IN MINING
 Appointment/ : 01/12/2013
 Termination date

Manager

Name : P.SREENIVASA RAO
 Qualification : FCC, DIP IN MINING ENGINEER
 Appointment/ : 07/04/2006
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Modif.of approved Mining Plan	16/05/2007
		Mining Scheme rule 12 MCDR1988	10/09/2012
		MP modif under MCR 1960	23/09/2015
		Mining Scheme rule 12 MCDR1988	03/03/2016
		MP modif under 17(3) MCR 2016	14/10/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	4 no of boreholes (core)	5 bore holes drilled, minimum depth of 22 mts & maximum depth upto 70 mts	No Backlogs
1b	Exploration over lease area for geological axis 1 or 2	NA	About 34.67 Ha in G1 axis	As per the approved document
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NA	74.87 Laks	Exploration Agency is Central Province Drilling Company Nagpur.
1d	Balance area to be explored to bring Geological axis in 1 or 2	24.266 Ha Proposed to drill in plan period	Nil	About 24 Ha in unexplored/Non explored needs to be explored.
1e	Balance reserve as on 01/04/20		27.456 MMT as on 01.04.2017	
1f	General remarks of inspecting officers on geology, exploration etc			The total mineralized area is 58.936 Ha. Out of the total mineralized area about 36.67 Ha have been proved by exploration

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	South Block in cross sections F-F', G-G' and H-H'	South Block in cross sections F-F' & G-G'	Little advancement of benches towards southern side i.e in between section line GG' & HH'. Voilation pointed out
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	15 benches are in ore with dyke intrusions at places	Working as per proposals.	Dyke (clay) is the only waste generation.
2c	Stripping ratio or ore to OB ratio	1:0.06	1:0.02	Due to High recovery

2d	Quantity of topsoil generation in m3	Nil	No top soil generation	Till date 3700 m3 of Topsoil is generated & utilised in nursery and avenue road plantation purpose.
2e	Quantity of overburden generation in m3	43708 Tons	19110 Tons	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The locations of the developments were found to be in line with the proposal. However very little advancement were observed in between section line GG' & HH' distorting the stripping ratio.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Single pit, workings are proposed in cross sections F-F', G-G', H-H'	Working as per proposal	Little advancement of benches towards southern side i.e in between section line GG' & HH'. Voilation pointed out
3b	Quantity of ROM mineral production proposed	950000 MT	944160 MT	Actual within the proposed limits
3c	Recovery of sailable/usable mineral from ROM production	95%	99.38%	No intrusion of clay
3d	Quantity of mineral reject generation	No proposal	No Mineral Reject generation	
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	NA	

3f	Quantity of sub grade mineral generation.	No proposal	1,24,005 Tons generated which was below 55% Fe	Whatever Subgrade mineral generated has been blended and sold through e-auction.
3g	Grade of sub grade mineral generation	No proposal	Not applicable	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method	Segregating as per proposal	complied
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	NA	
3j	Provision of drilling and blasting in mineral benches	Yes, proposed	MS delay detonators & cord relays are utilised for better fragmentation & control of vibration.	The formations are mostly soft & drilling blasting is done only in hard strata
3k	Provision of mining machineries in mineral benches	Yes, Provision of mining machineries in mineral bench proposed	Excavators, Dozers, Wheel loaders, Volvo Dumpers, Drill machine, Compressor, Mobile Crushers & Screens used in mineral benches	Equipment deployed as per the proposal given in the document
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed Bench height 7m & Width more than 8m	Working as per proposal	Complied
3m	Total area covered under excavation/pits	14.77 Ha	14.77 Ha	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.06	1:0.02	Due to higher recovery
3o	Total area put in use under different heads at the end of year	Under Opencast working: 14.70 Ha Waste disposal: 0.190 Ha Infrastructure : 2.560 Ha Safety Zone: 3.770	Total area: 25.54 Ha	

3p	Production of ROM mineral during the last five year period as applicable	2012-13: 6,40,000 2013-14: 6,40,000 2014-15: 6,40,000 2015-16: 6,40,000 2016-17: 9,50,000 (in tonnes)	2012-13: 6,21,205 2013-14: 6,34,980 2014-15: 6,36,230 2015-16: 6,36,265 2016-17: 9,44,160 (in tonnes)	Actaul within the proposed limits
3q	General remarks of inspecting officers on method of mining etc.			The exploitation of the ore is done as per the proposal except that the advancement of faces has not reached to the extent proposed. Conservation of minerals is done by blending the subgrade ore with high grade ores.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Yes, separate dumping was proposed for OB	Separate dumping of OB is done.	No proposal to handle topsoil & mineral rejects in this year.
4b	Location of topsoil, OB and mineral reject dumps	Overburden dump, In South block section X2-X'2	Overburden dump, In South block section X2'	
4c	Number of dumps within lease area and outside of lease area	3 dumps within lease area	3 dumps within lease area	No dump outside the lease area
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	NW portion of south block	NW portion of south block	Dumps located outside the UPL
4e	Number of active and alive dumps.	One	One	On Section Line X2-X2'
4f	Number of dead dumps.	Two	Two	

4g	Number of dumps established.	Two	Two	One Dump in South block is fully stabilized by covering Geo-textile matt, where as another in North block is partly stabilized
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes	Constructed Retaining wall and Garland drain all along dump area.
4i	Length of Retaining wall or garland drain all along dumps	No proposal during the year	Nil	As on date Retaining Wall-395m, Garland drain-339m constructed.
4j	Number of settling ponds	No proposal	Nil	2 settling tanks constructed in alternate locations, previously.
4k	Specific comments of inspecting officer on waste dump management			The dumping was as per the proposal. One inactive dump has been fully stabilized and the other inactive dump is partially stabilized. Total area for waste dump disposal is 0.19 Ha .

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	Not applicable	Mine started operations in the year 2006, So there is no proposal for backfilling.
5b	Area under backfilling of mined out area	No prposal	NA	No backfilling was proposed. Moreover there were no mined out pits matured where backfilling could be done.

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	NA	
5d	Total area fully reclaimed and rehabilitated	No proposal	Not applicable	No area is fully reclaimed & rehabilitated
5e	General remarks of inspecting officers on backfilling and reclamation etc.			None of the areas of mined out pits were matured for backfilling due to occurrence of mineral at depth.

Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Yes	Annual report on PMCP is submitted for the year 2016-17.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	No proposal	Not applicable	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Not applicable	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Monitoring Locations are Air Quality-10 Surface Water-3 Ground Water-6 Noise-10	Environmental Monitoring is regularly done through MOEF recognised Laboratory.	Monthly Compliance of Environmental monitoring stations is sent regularly to KSPCB.

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	PMCP activities were carried out as per the approved plan and plantation done, construction of retaining wall and garland drains were in place.
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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 within lease area	Dry crushing & screening for size separation	Complied
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical method with Crushers and Screening plants	Mechanical method with Crushers and Screening plants	EXTEC & SANDVIK MAKE machines are used.
7c	Different grade of mineral sorted out at mines.	>45% to < 65% Fe	55% to 58%Fe 58% to below 60%Fe 60% to below 62%Fe 62% to below 65%Fe	Both the Lumps and fines of the same grading are sorted out at mines
7d	Any beneficiation process at mines .	No proposal	Dry crushing & screening is done at mines	Crushers of 100-150TPH & Screens 150-250 TPH are utilised
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			All the ROM except fines are crushed and screened. The fines and Lumps are segregated and sold in the domestic market.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposals	NA	So far 7400 Tons Top soil generated has been utilised in nursery & Avenue road for plantation.

8b	Concurrent use or storage of topsoil	No proposal	NA	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for overburden is planned	Overburden is dumped in northwest part of south block of lease area.	Separate dump for overburden, stacks of lumps & fines area maintained
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	NA	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Not applicable	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Available	Available	plantations done after baseline information as per suggestions from ICFRE in 2011-12.
8g	Survival rate	80%	85%	
8h	Water sprinkling on roads to control airborne dust	Yes, proposed	6 Water Tankers & 1 Mist spray Air borne dust suppression system is used.	Also Fixed water sprinklers (jet) are provided on waste dumps, and drip irrigation is done at fruit bearing plantation & at Nursery
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around the mine is good as licensee carried out afforestation and other environment protection measures. The boundary pillars were intact with requisite details on the date of inspection.

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 September-2017 A.R. Submitted up to 2016-17	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Naresh Kakumanu- Mining Engineer, Pramod S. Ritti - Geologist, P.Sreenivasa Rao- Mines Manager.	Mining Engineer, Geologist and Manager as per the given details	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Under Opencast working: 14.70 Ha Waste disposal:0.190 Ha Infrastructure : 2.560 Ha Safety Zone: 3.770	Appeared to be correct	
9d	Scrutiny of Annual return on afforestation	WML: 6240 OML: 4560	Appeared to be correct	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	No mineral reject generated	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stock: Nil Graded ore: 240130 Tons	Appeared to be correct	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Avg. Ex. Mine price: Rs,1659/- Production cost: Rs,1079.31/-	Appeared to be correct	
9h	Scrutiny of Annual return on fixed assets	Rs.260471000/-	Appeared to be correct including crushing & screening unit.	
9k	Scrutiny of Annual return on mining machineries	Excavator: 5 Wheel Loader:6 Dumper : 10 Drill:1 Crushers : 5	Appeared 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)	27/10/2017			
MCDR17	Rule 19(1)	27/10/2017			

Date :

(ARUN KUMAR)

Indian Bureau of Mines