

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

Review and updation of Mining Plan REPORT

Kolkata regional office

Mine file No : KOL/JHK/SB(W)/FE-15

Mine code : 30BHR27016

- (i) Name of the Inspecting : **K004**) **B.P KERKETTA**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Ram Singh, DGM(Mines)& Mines Manager
Official with
Designation
- (iv) Date of Inspection : 07/11/2019
- (v) Prev.inspection date : 06/11/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KIRIBURU**
- (b) **Registration NO.** :
- (c) **Category** : A Fully Mechanised
- (d) **Type of Working** : Opencast
- (e) **Postal address**
- State : JHARKHAND
- District : SINGHBHUM (WEST)
- Village : KIRIBURU
- Taluka : CHAIBASA
- Post office : KIRIBURU
- Pin Code : 833222
- FAX No. : 06767-268212 / 06596-24428'
- E-mail :
- Phone : 06596-244204,244203
- (f) **Police Station** :
- (g) **First opening date** : 01/08/1963
- (h) **Weekly day of rest** : SUN
2. **Address for** : P.O KIRIBURU. DIST:SINGHBHUM-W
correspondance JHARKHAND. PIN: 833222
3. (a) **Lease Number** : BHR0071
- (b) **Lease area** : 81.97
- (c) **Period of lease** :
- (d) **Date of Expiry** : 31/03/2020
4. **Mineral worked** : IRON ORE Main

5. Name and Address of the

Lessee : STEEL AUTHORITY OF INDIA LTD.
 INDUSTRY HOUSE 5TH & 6TH
 FLOOR 10, CAMAC STREET
 KOLKATA WEST BENGAL
 Phone:033-22822316/0462/3385
 FAX :033-22822316/0462

Owner : Amarendu Prakash
 Steel Authority Of India
 Limited Bokaro Steel Plant
 Bokaro-827001 SINGHBHUM
 (WEST) JHARKHAND
 Phone: 05642240300,024
 FAX : (06542)240/82

Agent : K. IVARAJU
 AT &PO KIRIBURU DIST
 SINGHBHUM WEST JHARKHAND
 SINGHBHUM (WEST) JHARKHAND
 Phone: 06596-268275
 FAX : 06596-245251

Mining Engineer

Name : DIPEN LOHAR,Full Time
 Qualification : B.TECH(MINING ENGG)
 Appointment/ : 01/12/2015
 Termination date

Geologist

Name : AMULYA KUMAR BEHERA,Full Time
 Qualification : M.Sc.(Geology)
 Appointment/ : 02/05/2016 31/07/2019
 Termination date

Geologist

Name : Sri U.S Pareya.,Full Time
 Qualification : B. Sc. (Geo)
 Appointment/ : 01/08/2019
 Termination date

Manager

Name : SRI RAM SINGH
 Qualification : B.TECH(MINING ENGG)
 Appointment/ : 22/06/2018
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	17/08/2005
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	18/07/2008
	:	Renewal under rule 24 MCR1960	29/01/2010
	:	MP modif under 17(3) MCR 2016	13/06/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	It was proposed to drill 25 boreholes in South block in 2018-19	No boreholes were drilled in 2018-19	
1b	Exploration over lease area for geological axis 1 or 2	-	-	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such Proposal	-	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No such Proposal	-	
1e	Balance reserve as on 01/04/20	Balance Reserves as on 1/7/2019: Kiruburu North Block: Reserves: 21.65 million tonnes Remaining Resources: 49.63 million tonnes Kiruburu South Block: Reserves: 38.82 million tonnes Remaining Resources: 6.89 million tonnes	-	

1f	General remarks of inspecting officers on geology, exploration etc	The ore body in Kiruburu North Block occur as a cap over flat topped undulating hill with three conspicuous peaks (Hill 1, Hill2 and Hill 3) rising to about 900 m above MSL. The ore body extends over 2000 m with an average width of 300 m. Like North block the south block also comprises of three hills (Hill no 1, 2 and 3). The ore deposit occurring in the south block extends over a length of 1650 m with an average width of 250m.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Kiruburu North Block and Kiruburu South Block	Kiruburu North Block	Kiruburu South Block could not be developed for want of Stage II FC.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	It was proposed to develop benches in ore zone only. There was no proposal for development of soil benches.	In Kiruburu North Block development done as per proposal however, there was no development in Kiruburu South Block for want of Stage II FC.	
2c	Stripping ratio or ore to OB ratio	Kiruburu North Block - 1.67:1 Kiruburu South Block - 1.52:1	Kiruburu North Block - 1:0.33 Kiruburu South Block - NIL	
2d	Quantity of topsoil generation in m3	NIL	NIL	

2e	Quantity of overburden generation in m3	Kiruburu North Block - 1.19 million cum	Kiruburu North Block - 1299292 Tonnes	
		Kiruburu South Block - 0.25 million cum	Kiruburu South Block - NIL	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	Deepening of existing pit continued in North Block. No development in South Block for want of Stage II FC.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two	One	
3b	Quantity of ROM mineral production proposed	Kiruburu North Block: 5.92 million tonnes Kiruburu South Block: 1.14 million tonnes	Kiruburu North Block: 3.93 million tonnes Kiruburu South Block: NIL	
3c	Recovery of sailable/usable mineral from ROM production	Kiruburu North Block: 5.92 million tonnes Kiruburu South Block: 1.14 million tonnes	Kiruburu North Block: 3.93 million tonnes Kiruburu South Block: NIL	
3d	Quantity of mineral reject generation	NIL	NIL	
3e	Grade of mineral rejects generation and threshold value declared.	Threshold value 45%Fe	Threshold value 45%Fe	
3f	Quantity of sub grade mineral generation.	Kiruburu North Block: 0.72 million tonnes Kiruburu South Block: 0.09 million tonnes	NA	
3g	Grade of sub grade mineral generation	-	-	

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	None	None	
3j	Provision of drilling and blasting in mineral benches	Wet drilling and Use of delay detonators.	Wet drilling and Use of delay detonators.	
3k	Provision of mining machineries in mineral benches	Dumper & Shovel combination	Dumper & Shovel combination	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	
3m	Total area covered under excavation/pits	107 ha	107 ha	
3n	Ore to OB ratio for the pit/mine during the year.	1.67:1 (NB) 1.52:1 (SB)	1:0.33 (NB) Nil (SB)	
3o	Total area put in use under different heads at the end of year	415.15 Ha	415.15 Ha	
3p	Production of ROM mineral during the last five year period as applicable	2015-16 7080000MT 2016-17 7470000MT 2017-18 7950000MT 2018-19 7050000MT 2019-20 7110000MT	2015-16 3648780MT 2016-17 4134150MT 2017-18 4195620MT 2018-19 3884940MT 2019-20 3924450MT	Production not commenced from South Block for want of stage II Forest Clearance.

3q	General remarks - of inspecting officers on method of mining etc.	-	-	Mining carried out by open cast method deploying HEMM keeping bench height 10 m and bench width 30m. Benches are developed by 150 mm dia drilling and blasting with low density (LD) cartridge explosives. 100 t dumpers and matching capacity hydraulic excavators/loaders are deployed for loading and transportation of ore.
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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)	Backfilling of excavated voids proposed.	Backfilling done as proposed.	
4b	Location of topsoil, OB and mineral reject dumps	No proposal for external dumping.	Generated waste are used for Backfilling of excavated voids.	
4c	Number of dumps within lease area and outside of lease area	Two	Two	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL	Outside UPL	
4e	Number of active and alive dumps.	One	One	
4f	Number of dead dumps.	One	One	
4g	Number of dumps established.	One	One	
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	Yes	Yes
4j	Number of settling ponds	One	One
4k	Specific comments of inspecting officer on waste dump management		Waste dump management is carried out as per 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.	Full	Full	
5b	Area under backfilling of mined out area	12.53 ha	4.24 ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Generation of top soil not envisaged during reporting period.	No generation of top soil during reporting period.	
5d	Total area fully reclaimed and rehabilitated	15.56 ha	4.24 ha	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Less area has been backfilled as it has not been matured for reclamation.	

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	Yes	

6b	Area available for rehabilitation (ha) .	15.56 ha	4.24 ha
6c	afforestation done (ha).	15.56 ha	4.24 ha
6d	No. of saplings planted during the year	2000nos.	500nos.
6e	Cumulative no .of plants	33000nos	NA
6f	Any other method of rehabilitation	None	None
6g	Cost incurred on watch and care during the year	3.90 Crore	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	12.53 ha	5.64 ha
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	12.53 ha	5.64 ha
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	1000 saplings	500 saplings
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.	No such proposal	-

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No such proposal	-	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No such proposal	-	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No such proposal	-	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Four stations	Four stations	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP compliance and progressive closure operations are being carried out as per proposal as far as possible.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting	Grade wise sorting	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	

7c	Different grade of mineral sorted out at mines.	-	LUMPS: a)Below 55% 0.000 b)55% to below 58% 0.000 c)58% to below 60% 0.000 d)60% to below 62% 0.000 e)62% to below 65% 590103.000 f)65% and above 453557.600 Total 1043660.6 FINES: a)Below 55% 0.000 b)55% to below 58% 0.000 c)58% to below 60% 0.000 d)60% to below 62% 357703.900 e)62% to below 65% 2557043.300 f)65% and above 0.000 Total 2914747.2
7d	Any beneficiation process at mines	Both wet and dry circuit.	Both wet and dry circuit.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Due regard is given towards mineral conservation.Both wet and dry circuit mechanical beneficiation process is done.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal for generation of topsoil	There is no generation of topsoil during reporting period.	
8b	Concurrent use or storage of topsoil	No such proposal	No generation of top soil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	External dumping not envisaged in North Block.	No external dumping.	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Restoration of profile by backfilling of mined out voids with generated waste.	Restoration of profile by backfilling of mined out voids with generated waste.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Restoration of profile by backfilling of mined out voids with generated waste followed by levelling and plantation.	Restoration of profile by backfilling of mined out voids with generated waste followed by levelling and plantation.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Yes	Yes
8g	Survival rate	-	80%
8h	Water sprinkling on roads to control airborne dust	Yes	Yes
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		The mine is located in Asia Famous Saranda Forest. The aesthetic beauty in and around mines area is good.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		Annual and Monthly Returns for 2018-19 submitted.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer Sh. Deepen Lohar Geologist Sh. US Pareya	Mining Engineer and Geologists are posted.	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area already exploited and abandoned by open cast mining- 107.2 ha, Area covered under current open cast working- 0.0 ha, Reclaimed/ Rehabilitated Area -5.64 ha, Area used for waste disposal- 5.64 ha, Infrastructure : 238.02 ha	Details on land use pattern as furnished in Annual Returns are not in order and same has been communicated to Mine management. They ensured that the will rectify it in next AR.
9d	Scrutiny of Annual return on afforestation	Plantation: 500 saplings.	Details are more or less in order.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Reject generation : NIL	Details are more or less in order.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: NIL	Details are more or less in order.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production: Rs. 1030per tonnes	Details are more or less in order.
9h	Scrutiny of Annual return on fixed assets	Total fixed assets: Rs. 1793130392/-	-
9k	Scrutiny of Annual return on mining machineries	Dumper: 07, Showel: 03, Dozer: 05, Motor Grader: 02, Front end loader:01, Back hoe:01, Blast hole drill: 03, Crane: 03, Water tanker: 02.	Details are more or less in order.

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

Date :

(B.P KERKETTA)

Indian Bureau of Mines