

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

Inspection under SDF for star rating of mines REPORT

Kolkata regional office

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

Mine code : 30BHR27016

- (i) Name of the Inspecting : **G004**) **OM PRAKASH GOPAL**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Sh. Ram Singh Mines Manager, Sh. S. Patnaik Geologis
Official with
Designation
- (iv) Date of Inspection : 14/09/2021
- (v) Prev.inspection date : 04/02/2020

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 Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	17/08/2005
		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
		MP modif under 17(3) MCR 2016	20/12/2019
		MP review under 17(1) MCR 2016	27/01/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	30 boreholes	Nil	Boreholes could not be drilled for want of stage-II forest clearances.
1b	Exploration over lease area for geological axis 1 or 2	31 boreholes	NIL	Violation letter issued under Rule 11(i) of MCDR 2017 for non compliance of approved proposals. Lessee intimated that proposed boreholes could not be drilled for want of stage-II forest clearance .
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NA	NA	NIL
1d	Balance area to be explored to bring Geological axis in 1 or 2	Diverted area is fully explored. G1 level exploration Proposal envisaged over South Block.	Exploration could not be taken up as per approved proposals for want of stage-II forest clearances over South Block.	NIL
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	NA	NIL

1f	General remarks of inspecting officers on geology, exploration etc	Nil	Nil	Ore body occur as a cap over flat topped undulating hill. Area has been divided into two block namely North Block and South Block. The ore body in North block extends over 2000 m with an average width of 300 m and in south block it extends over a length of 1650 m with an average width of 250m. North Block is fully explored and developed while South block is yet to be explored and developed.
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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	Mining activties restricted over Kiruburu North Block only and Kiruburu South Block not opened yet for want of Stage II FC.	NIL
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Proposal envisaged for development of seperate benches in top soil, OB and mineral.	Mining activties restricted over Kiruburu North Block only and Kiruburu South Block not opened yet for want of Stage II FC.	NIL
2c	Stripping ratio or ore to OB ratio	1:0.19(NB) 1:0.48(SB)	1:0.29(NB) South block not opened yet.	South Block Not opened yet for want of Stage-II forest clearance
2d	Quantity of topsoil generation in m3	0.01 mill cum (SB) and Nil (NB)	Nil.	No fresh area broken
2e	Quantity of overburden generation in m3	2.46 million cum	1906173 tonnes	South Block not opened yet.

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Nil	Nil	Working restricted in North Block only and south block not opened yet.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two	1	South Block not opened yet for want of FC.
3b	Quantity of ROM mineral production proposed	916763 tonnes (South Block) 5453505 tonnes (North Block)	3828870 tonnes (North Block only)	South Block not opened yet for want of Stage II FC.
3c	Recovery of sailable/usable mineral from ROM production	501238 tonnes (South Block) 4306460 tonnes (North Block)	3714827 tonnes	Production restricted to North Block only. South Block not opened yet.
3d	Quantity of mineral reject generation	NA	NA	-
3e	Grade of mineral rejects generation and threshold value declared.	NA	NA	-
3f	Quantity of sub grade mineral generation.	415525 tonnes (South Block) 1147045 tonnes (North Block)	NA	-
3g	Grade of sub grade mineral generation	NA	NA	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	-
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposal	--	-

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 and shovel combination	Dumper and shovel combination	-
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	10 mt	10 mt	Yes bench height is suitable for proposed method of mining
3m	Total area covered under excavation/pits	Total area put to use at the beginning of plan period (1/420020) : 107.2 Ha (Kiruburu mine + Mehatuburu mine)	NA	Proposals in approved document are envisaged for amalgamated lease (2897.499 ha) comprising three leases i.e. lease I (1936.06 ha), Lease II (879.439 ha) and lease III (82.00 ha.) Break up in respect of area covered under Kiruburu mine is not available separately.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.19 (NB) 1:0.48(SB)	1:0.49 (NB) Nil(SB)	South Block not opened yet.
3o	Total area put in use under different heads at the end of year	Total area put to use at the beginning of plan period (1/420020) : 415.15 ha Ha (Kiruburu mine + Mehatuburu mine).	NA	Proposals in approved document are envisaged for amalgamated lease (2897.499 ha) comprising three leases i.e. lease I (1936.06 ha), Lease II (879.439 ha) and lease III (82.00 ha.) Break up in respect of area covered under Kiruburu mine is not available separately.

3p	Production of ROM mineral during the last five year period as applicable	2016-17 7470000 tonnes	2016-17 tonnes	4134150	Entire reported production is from North Block as South Block not opened yet.
		2017-18 7950000 tonnes	2017-18 tonnes	4195620	
		2018-19 7050000 tonnes	2018-19 tonnes	3884940	
		2019-20 7110000 tonnes	2019-20 tonnes	3924450	
		2020-21 6370268 tonnes	2020-21 tonnes	3828870	
3q	General remarks of inspecting officers on method of mining etc.	NA	NA		Mining operations are being carried out by opencast mechanised method as per proposals envisaged in approved document.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	There is no proposal for external dumping. It is proposed to backfill generated waste in mined out pit.	Backfilling done as per approved proposals.	NIL
4b	Location of topsoil, OB and mineral reject dumps	There is no proposal for external dumping. It is proposed that generated waste will be utilised for road making and backfilling of voids.	Generated OB are being utilised for Backfilling in exhausted pit in NorthBlock. South block not opened yet fo want of FC clearances.	NIL
4c	Number of dumps within lease area and outside of lease area	Two	Two	NIL

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No extenal dumping during reporting period.	No extenal dumping during reporting period.	NIL
4e	Number of active and alive dumps.	one	one	NIL
4f	Number of dead dumps.	one	one	NIL
4g	Number of dumps established.	one	one	NIL
4h	Whether Retaining wall or garland drain all along dumps are there.	yes	yes	NIL
4i	Length of Retaining wall or garland drain all along dumps	NA	NA	NIL
4j	Number of settling ponds	one	one	NIL
4k	Specific comments of inspecting officer on waste dump management	Nil	Nil	Generated OB and waste are being utilised for road making and backfilling over exhausted pit.

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 extraction	Full extraction	NIL

5b	Area under backfilling of mined out area	16.03 Ha	0.453 Ha.	Violation under rule 11(1) of MCDR 2017 pointed out for non compliance of reclamation proposals. In their reply lessee informed that, since Mineral is not completely exhausted from the area proposed for backfilling therefore, actual area available for backfilling is less.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use.	South block not opened yet therefore no fresh area was broken.	NIL
5d	Total area fully reclaimed and rehabilitated	1 ha Ha	0.45 Ha	Violation under rule 11(1) of MCDR 2017 pointed out for non compliance of reclamation proposals. In their reply lessee informed that, since Mineral is not completely exhausted from the area proposed for backfilling therefore, actual area available for backfilling is less.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Nil	Nil	Violation under rule 11(1) of MCDR 2017 pointed out for non compliance of reclamation proposals. In their reply lessee informed that, since Mineral is not completely exhausted from the area proposed for backfilling therefore, actual area available for backfilling is less.

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	NIL
6b	Area available for rehabilitation (ha) .	NA	NA	NIL
6c	afforestation done (ha).	one ha	one ha	NIL
6d	No. of saplings planted during the year	500	300	NIL
6e	Cumulative no .of plants	NA	NA	NIL
6f	Any other method of rehabilitation	NA	NA	NIL
6g	Cost incurred on watch and care during the year	Six lac	NA	NIL
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	10.21 Ha	0.45 Ha	NIL
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	16.03 Ha	0.45 ha ha	Non complainece from approved proposals were communicated to lessee by issuing a V/L under Rule 11(1)of MCDR 2017.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	01 Ha, 500 Nos.	01 Ha, 300 Nos.	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No such proposal	NIL	NIL

6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No such proposals	NIL	NIL
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No such proposal	Nil	NIL
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No such proposal	Nil	NIL
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No such proposal	Nil	NIL
6p	Compliance of environmental monitoring (core zone and buffer zone)	Yes	Yes	NIL
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Nil	Nil	NIL

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	NIL
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	NIL

7c	Different grade of mineral sorted out at mines.	It is proposed to process ROM by way of crushing and screening before dispatch to captive plant.	Processing done as proposed. Grade wise production during reporting period as per AR is as under: LUMPS: 60% to below 62% 101437 tonnes FINES: 60% to below 62% 171803 tonnes and 62% to below 65% 81810	NIL
7d	Any beneficiation process at mines .	Processing of ROM by way of crushing and screening (Both wet and dry circuit).	Processing of ROM by way of crushing and screening (Both wet and dry circuit).	NIL
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NIL	NIL	NIL

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal for North Block. However, from south Block it was proposed to generate 1.03 cum of Top soil	Nil as mining activity was restricted over broken area only and south block not opened yet.	No fresh area was broken broken.
8b	Concurrent use or storage of topsoil	Concurrent use.	No fresh area was broken broken.	NIL
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Concurrent backfilling over excavated voids.	Concurrent backfilling over excavated voids.	NIL
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Concurrent backfilling over excavated voids.	Concurrent backfilling over excavated voids.	NIL

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Yes by way of concurrent backfilling over excavated voids.	Concurrent backfilling over excavated voids.	NIL
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Yes	Yes	NIL
8g	Survival rate	65%	65%	NIL
8h	Water sprinkling on roads to control airborne dust	Yes	Yes	NIL
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Nil	Nil	Mining activities diffinitely affect aesthetic beuty in mining area.For Phased restoration, concurrent backfilling of excavated voids and rehabilitation of aesthetic beuty by plantation are being followed.

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 2020-21 submitted.	Annual and Monthly Returns for 2020-21 submitted.	NIL
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer Sh. Deepen Lohar and Geologist Sh.S Patnayak	Mining Engineer and Geologists are in post.	NIL

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- 0.0 ha, Area covered under current open cast working- 107.2 ha, Reclaimed/ Rehabilitated Area -4.24 ha, Area used for waste disposal- 6.099 ha, Infrastructure : 238.02 ha	Details on land use pattern as furnished in Annual Returns appears to be in order.	NIL
9d	Scrutiny of Annual return on afforestation	Plantation: 300 saplings.	Details are in order.	NIL
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Reject generation : NIL	Details are in order.	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: NIL	Details are in order.	NIL
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production: Rs. 1117 per tonnes	Details are more or less in order.	NIL
9h	Scrutiny of Annual return on fixed assets	Total fixed assets: Rs. 1165382351/-	Financial Matter. No comments.	NIL
9k	Scrutiny of Annual return on mining machineries	Dumper: 07, Shovel: 03, Dozer: 04, Motor Grader: 02, Front end loader:01, Back hoe:01, Blast hole drill: 04, Crane: 03, Water tanker: 02.	Details are more or less in order.	NIL

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)	04/10/2021	12/11/2021			
MCDR17	Rule 11(1)	27/09/2021				

Date :

(OM PRAKASH GOPAL)

Indian Bureau of Mines