

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/SNG/MCDR-12/BBS/13/01

Mine code : 30ORI13018

- (i) Name of the Inspecting : **SRM**) **SHRI SUDIP RANJAN MAZUMDAR**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Shri T.C.Sei, C.G.M Mines
Official with
Designation
- (iv) Date of Inspection : 03/12/2019
- (v) Prev.inspection date : 17/07/2016

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **RAIKELA**
- (b) **Registration NO.** : **IBM/135/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : RAIKELA
- Taluka : BONAI
- Post office : DENGULA
- Pin Code :
- FAX No. : 06767- 275362
- E-mail : snmbbl@gmail.com
- Phone : 06767-212164
- (f) Police Station : koira
- (g) First opening date : 03/04/1982
- (h) Weekly day of rest : SAT
2. Address for : RAIKELA IRON MINES OF S.N.MOHANTY
correspondance AT-RAIKELA
PO-PENGULA, DIST-SUNDERGARH
3. (a) Lease Number : ORI0149
- (b) Lease area : 18.15
- (c) Period of lease : 30
- (d) Date of Expiry : 02/04/2012
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : S.N.MOHANTY
 STATION ROAD AT/PO:BARBIL
 PO NO.21 KEONJHAR ORISSA
 Phone:30362 (OFFICE),30254(R)
 FAX :

Owner : SHRI PRABODH MOHANTY
 AT-STATION ROAD, PO- BARBIL
 DIST-KEONJHAR, ODISHA
 KEONJHAR ORISSA
 Phone: 06767-212164
 FAX : 06767-275362

Agent : SHRI T. C. SEI
 AT-WEIGHTBRIDGE ROAD PO-
 BARBIL DIST-KEONJHAR,
 ODISHA KEONJHAR ORISSA
 Phone: 9437062149
 FAX : 06767-275362

Mining Engineer

Name : SHRI B SAMAL,Full Time
 Qualification : B E MINING
 Appointment/ : 02/02/2012
 Termination date

Geologist

Name : SHRI TUSAR KANTA SAHOO,Full Time
 Qualification : MSC APPLIED GEOLOGY
 Appointment/ : 02/02/2012
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	30/11/1998
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	12/04/2005
		Mining Scheme rule 12 MCDR1988	15/12/2008
		Modif.of approved Mining Plan	11/11/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	2017-18: 4 BHS 2018-19: 4 BHS	In 2018-19, total 19 nos of boreholes have been drilled.	There is no backlog of exploration as per the modification and review of mining plan approved dated 11.11.2016. The information was not furnished in annual return for 2018-19 for which violation was issued under rule 45 (7) of MCDR 2017 which was subsequently complied by submitting revised annual return for 2018-19
1b	Exploration over lease area for geological axis 1 or 2	As on 03.09.2016, area explored under G1 is 12.69 ha and unexplored lease are is 5.665 Ha. Exploration has been proposed in 2017-18 and 2018-19 to complete exploration of the entire M.L area as per UNFC.	In 2018-19, total 19 nos of boreholes have been drilled.	In 2018-19, total 19 nos of boreholes have been drilled.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not Proposed	Exploration Agency Name: Gemcokati Exploration Pvt. Ltd. Total Expenditure of this project is Rs. 4621300.00	Exploration Agency Name: Gemcokati Exploration Pvt. Ltd. Total Expenditure of this project is Rs. 4621300.00

1d	Balance area to be explored to bring Geological axis in 1 or 2	As on 03.09.2016, area explored under G1 is 12.69 ha and unexplored lease are is 5.665 Ha. Exploration has been proposed in 2017-18 and 2018-19 to complete exploration of the entire M.L area as per UNFC.	In 2018-19, total 19 nos of boreholes have been drilled.	In 2018-19, total 19 nos of boreholes have been drilled.
1e	Balance reserve as on 01/04/20	As per the modification and review of mining plan approved dated 11.11.2016 for the period 2017-18 to 2021-22 reserve and resource is as follows: As on 03.09.2016, reserve is 1623037 tones and remaining resource is 144697 tones. Total reserve and resource is 1767734 tones.	Mine was under temporary discontinuance w.e.f 03.04.2012 and mine reopened on 09.04.2018 and there was no production during the year 2018-19. Hence reserve and resource remains the same as approved in the modified mining plan dated 11.11.2016. As on 01.04.2019, reserve is 1623037 tones and remaining resource is 144697 tones. Total reserve and resource is 1767734 tones.	Violation was issued under rule 29 of MCDR 2017 for not submitting intimation of reopening of mine after temporary discontinuation in Form-C of MCDR 2017
1f	General remarks of inspecting officers on geology, exploration etc	2017-18: 4 BHs 2018-19: 4 BHs	In 2018-19, total 19 nos of boreholes have been drilled.	There is no backlog of exploration as per the modification and review of mining plan approved dated 11.11.2016

 Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	In 2018-19 development proposed in 4S-185 N, 68W-116W.	In 2018-19, development work carried out in 4S-185 N, 68W-116W.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	In 2018-19, there is no proposal for top soil generation. Separate bench in OB proposed	There was no top soil generation. Separate bench in OB maintained.	Nil
2c	Stripping ratio or ore to OB ratio	1.0.31 t/m3	Nil	There was no ROM production during the year. Only around 1200 tones of overburden have been generated.
2d	Quantity of topsoil generation in m3	Not Proposed	Nil	Nil

2e	Quantity of overburden generation in m3	19610 m3	In 2018-19, around 1200 tones or 750 m3 of OB generated. It was observed during inspection that some amount of blasted mug pile of overburden/waste material was lying in mine face but the OB quantity generated was not mentioned in annual return for 2018-19. Violation was issued under rule 45 (7) of MCDR 2017 which was subsequently complied by submitting the revised annual return for 2018-19 furnishing the OB quantity generated during 2018-19.	In 2018-19, around 1200 tones or 750 m3 of OB generated. It was observed during inspection that some amount of blasted mug pile of overburden/waste material was lying in mine face but the OB quantity generated was not mentioned in annual return for 2018-19. Violation was issued under rule 45 (7) of MCDR 2017 which was subsequently complied by submitting the revised annual return for 2018-19 furnishing the OB quantity generated during 2018-19.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No comments to offer	Only around 1200 tones of overburden have been generated. There was no ROM production during the year 2018-19	Only around 1200 tones of overburden have been generated. There was no ROM production during the year 2018-19

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit	One pit	Nil
3b	Quantity of ROM mineral production proposed	63986.00 tones	Nil	There was no ROM production during the year 2018-19
3c	Recovery of sailable/usable mineral from ROM production	54225.00 tones	Nil	There was no ROM production during the year 2018-19.

3d	Quantity of mineral reject generation	9761.00 tones	Nil	There was no ROM production during the year 2018-19
3e	Grade of mineral rejects generation and threshold value declared.	Grade of mineral reject: Fe +45% to <-55% Fe, and the threshold value: 45% Fe.	Nil	There was no ROM production during the year 2018-19
3f	Quantity of sub grade mineral generation.	9761.00 tones	Nil	There was no ROM production during the year 2018-19
3g	Grade of sub grade mineral generation	Grade of subgrade: Fe +45% to <-55% Fe	Nil	There was no ROM production during the year 2018-19
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not Proposed	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	Drilling and blasting will be performed for loosening of hard and compact strata.	Carried out	Nil
3k	Provision of mining machineries in mineral benches	ROM ore and overburden will be excavated and loaded in the 10 tonne tipper by 0.9 n3 capacity excavator	There was no ROM production during the year 2018-19	There was no ROM production during the year 2018-19

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height: 6 m	Height of benches in overburden and mineral is suitable for method of mining proposed in mining plan.	Nil
3m	Total area covered under excavation/pits	Area under mining at the end of plan period will be 4.5 Ha.	3.376 Ha.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1.0.31 t/m ³	Nil	There was no ROM production during the year. Only around 1200 tones of overburden have been generated.
3o	Total area put in use under different heads at the end of year	Total area put in use under different heads at the end of plan period will be 10.858 Ha	9.643 Ha.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2017-18: 51330 tones 2018-19: 63986 tones	2017-18: Nil 2018-19: Nil	The mine was under temporary discontinuation from 03.04.2012 and re-opened on 09.04.2018. There was no production during this period and also in 2018-19. Last modification of review of mining plan approved dated 11.11.2016 was for the period 2017-18 to 2021-22
3q	General remarks of inspecting officers on method of mining etc.	No comments to offer	There was no ROM production during the year 2018-19	There was no ROM production during the year 2018-19

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	There is no proposal for top soil generation. Separate dumping of OB and mineral reject proposed	There was no generation of top soil. The waste generated was lying as blasted mug pile. There was no generation of mineral reject.	Nil
4b	Location of topsoil, OB and mineral reject dumps	There is no proposal for top soil generation. In 2018-19, OB/waste generated will be dumped inside the lease area at its south western part near dump-1 which has been proved barren. Mineral reject will be stacked initially in the M.L area and sold /dispatched subsequently as per demand.	There was no generation of top soil. The waste generated is lying as blasted mug pile. There was no generation of mineral reject.	Nil
4c	Number of dumps within lease area and outside of lease area	There exists two waste dumps within lease area	There exists two waste dumps within lease area	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside the UPL	Outside the UPL	Nil
4e	Number of active and alive dumps.	Nil	Nil	Nil
4f	Number of dead dumps.	Two dumps	Two dumps	Nil
4g	Number of dumps established.	Two dumps	Two dumps	Nil

4h	Whether Retaining wall or garland drain all along dumps are there.	In 2018-19, there is no proposal for construction of retaining wall or garland drain	Nil	Nil
4i	Length of Retaining wall or garland drain all along dumps	In 2018-19, there is no proposal for construction of retaining wall or garland drain	Nil	Nil
4j	Number of settling ponds	In 2018-19, there is no proposal for construction of settling ponds	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management	There is no proposal for top soil generation. Separate dumping of OB and mineral reject proposed	There was no generation of top soil. The waste generated is lying as blasted mug pile. There was no generation of mineral reject.	Nil

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.	Not Proposed	Nil	Nil
5b	Area under backfilling of mined out area	Not Proposed	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not Proposed	Nil	Nil

5d	Total area fully reclaimed and rehabilitated	Not Proposed	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	There is no proposal for backfilling	There was no backfilling carried during the year 2018-19	There was no backfilling carried during the year 2018-19

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).	Annual report on PMCP to be submitted as per Rule 26 (2) of MCDR, 2017	Annual report on PMCP for the year 2018-19 have been submitted	Annual report on PMCP for the year 2018-19 have been submitted
6b	Area available for rehabilitation (ha) .	1.826 Ha	1.826 Ha	Nil
6c	afforestation done (ha).	0.3 Ha.	0.5 Ha.	Nil
6d	No. of saplings planted during the year	In 2018-19, 375 nos of saplings proposed for plantation	In 2018-19, 1500 nos of saplings planted	Nil
6e	Cumulative no .of plants	In 2018-19, 375 nos of saplings proposed for plantation	In 2018-19, 1500 nos of saplings planted	Nil
6f	Any other method of rehabilitation	Not specified	Nil	nil
6g	Cost incurred on watch and care during the year	Rs 87500.00	Rs 90000.00	Nil

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not Proposed	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not Proposed	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Not Proposed	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not Proposed	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	0.3 Ha.	0.5 Ha.	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.3 Ha.	0.5 Ha.	Nil

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Plantation	Plantation	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Monitoring of environmental parameters proposed	Carried out	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No comments to offer	PMCP proposals carried out as proposed.	Nil

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	There was no production of ROM during the year 2018-19	There was no production of ROM during the year 2018-19
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	ROM ore raised from the mine will be fed to the screening plant and for sizing. After screening, over size ore will be transported to the stack yard for breaking & sizing manually	Nil	There was no production of ROM during the year 2018-19
7c	Different grade of mineral sorted out at mines.	45% Fe to -55% Fe and +55% Fe	Nil	There was no production of ROM during the year 2018-19
7d	Any beneficiation process at mines	Not Proposed	Nil	Nil

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No comments to offer	There was no production of ROM during the year 2018-19	There was no production of ROM during the year 2018-19
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	There is no proposal of removal and utilization of top soil in year 2018-19	There is no generation of top soil during the year 2018-19	Nil
8b	Concurrent use or storage of topsoil	There is no proposal of removal and utilization of top soil in year 2018-19.	There is no generation of top soil during the year 2018-19.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	There is no proposal for top soil generation. Separate dumping of OB and mineral reject proposed	There was no generation of top soil. The waste generated after blasting is lying as blasted mug pile. There was no generation of mineral reject.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not Proposed	Nil	Nil

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	0.15 Ha for dump management	0.15 Ha for dump management	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	375 nos of saplings	1500 nos of saplings planted	Nil
8g	Survival rate	Not Specified	Survival rate : 80%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads to control airborne dust proposed	Water sprinkling done	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No comments to offer	Aesthetic beauty in and around mines area is maintained	Aesthetic beauty in and around mines area is maintained

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly and Annual returns to be submitted as per rule 45 of MCDR 2017	Monthly returns and annual return for 2018-19 have been submitted.	Monthly returns and annual return for 2018-19 have been submitted.

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information on Manager, Mining Engineer and Geologist furnished in annual return for 2018-19	Manager, Mining Engineer and Geologist have been appointed in mines.	Information on Geologist appointed was found to be incorrect. Violation was issued under rule 45 (7) of MCDR 2017 which was subsequently complied by submitting revised annual return for 2018-19
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Lease area (surface area) utilization at the end of the year as furnished in annual return for 2018-19. Covered under current working: 3.376 Ha, Used for waste disposal: 2.565 Ha, Occupied by plant buildings, residential, welfare buildings & roads: 1.585 Ha, other purposes: 2.117 Ha	Found to be in order	Nil
9d	Scrutiny of Annual return on afforestation	1500 nos of saplings planted	1500 nos of saplings planted	Information rectified after issue of violation under rule 45 (7) of MCDR for furnishing incorrect information

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil	There was no production during the year 2018-19
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing stock of Processed Ore A. Lump (% of Fe content): 60% to below 62% Fe: 3715.001 tones 62% to below 65% Fe: 218.774 tones 65% and above: 257.01 tones B. Fines: 60% to below 62% Fe: 1.3 tones	Found to be in order	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost: Nil	Production cost: Nil	There was no ROM production during the year 2018-19
9h	Scrutiny of Annual return on fixed assets	Nil	Nil	Nil
9k	Scrutiny of Annual return on mining machineries	Backhoe (0.9 cum capacity): 1 no; Dumper (10 tonne capacity); 1no; Rock drill (non-electric): 1 no; air compressor : 1no	Not observed during inspection	Nil

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 29	12/12/2019	23/01/2020				
MCDR17	Rule 45(7)(a)	12/12/2019	23/01/2020				

Date :

(SHRI SUDIP RANJAN MAZUMDAR)

Indian Bureau of Mines