

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON-MN/SNG/MCDR-16/BBS

Mine code : 30ORI13017

- (i) Name of the Inspecting : **S010**) **SHRI G.C. SETHI**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri Chaturbhuja Sahoo, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 14/07/2019
- (v) Prev.inspection date : 14/09/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PATABEDA**
- (b) **Registration NO.** : **IBM/247/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : PATABEDA
- Taluka : BONAI
- Post office : PATAMUNDA
- Pin Code :
- FAX No. : 06767-275770
- E-mail : rlmbsr@mail.com
- Phone : 06767-275318,275620
- (f) Police Station : Koira
- (g) First opening date : 24/06/1986
- (h) Weekly day of rest : MON
2. Address for : PATABEDA IRON & MANGANESE MINE C/O.M.G.MOHANTY
correspondance VILL.PATABEDA, PATMUNDA,SUNDARGARH,ORISSA.
770048
3. (a) Lease Number : ORI0133
- (b) Lease area : 19.43
- (c) Period of lease : 50
- (d) Date of Expiry : 02/04/2036
4. Mineral worked : MANGANESE ORE Associated
IRON ORE Main

5. Name and Address of the

Lessee : M/S.M.G.MOHANTY
 R.L.MOHANTY, MANAGING PAR
 AT/PO.BARBIL,KEONJHAR,
 ORISSA.-758035 KEONJHAR
 ORISSA
 Phone:06767-75318
 FAX :06767-75770

Owner : SRI.R.L.MOHANTY
 AT/PO.BARBIL,KEONJHAR
 ORISSA.758035 KEONJHAR
 ORISSA
 Phone: 06767-75318
 FAX : 06767-75770

Geologist

Name : SHRI SUSANTA KUMAR PATNAIK,Full Time
 Qualification : MSC GEOLOGY
 Appointment/ : 10/06/2016
 Termination date

Manager

Name : SHRI CHATURBHUIJ SAHOO
 Qualification : DEGREE MINING
 Appointment/ : 28/01/2013
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	18/07/2000
Plan/Scheme of Mining		Fresh under rule 22 MCR1960	08/11/2002
		Renewal under rule 24 MCR1960	05/07/2005
		Modif.of approved Mining Plan	13/11/2009
		Mining Scheme rule 12 MCDR1988	01/04/2011
		Modif.approved Mining Scheme	28/05/2014
		Mining Scheme rule 12 MCDR1988	11/03/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No backlog exploration.	The exploration proposed for the year was for 4 nos. of bore holes, which were already drilled during the year 2016-17 well in advance of the schedule.	No backlog.
1b	Exploration over lease area for geological axis 1 or 2	BH-4 nos in 2018-19.	The exploration proposed for the year was for 4 nos. of bore holes, which were already drilled during the year 2016-17 well in advance of the schedule.	Total boreholes which were planned during the year including the plan period were completed by 2016-17.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No specific proposal.	Total boreholes which were planned in the year 2018-19 were already completed by 2016-17, which is well in advance.	Total boreholes which were planned in the year 2018-19 were already completed by 2016-17, which is well in advance.
1d	Balance area to be explored to bring Geological axis in 1 or 2	15 nos of boreholes were proposed during the scheme period from 2016-17 to 2020-21.	Total boreholes which were planned in the year 2018-19 were already completed by 2016-17, which is well in advance.	Nil
1e	Balance reserve as on 01/04/20	As per the scheme of mining approved on 11.03.2016, the iron ore reserves are 4.785 million tonnes and resources of 1.056 million tonnes.	On depletion of production for the year 2018-19, the available iron ore reserves/resources as on 01.04.2019 are 4.294 million tonnes & 1.056 million tonnes respectively.	Nil
1f	General remarks of inspecting officers on geology, exploration etc		The mineralsied leased out area has been explored upto G1 level.	Nil

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Single pit proposed in between grid lines N2426085-2426377 & E331931-332156.	Single pit being worked in between grid lines N2426085-2426377 & E331931-332156.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Seperate becnhes in OB and mineral zone are envisaged. However, there no topsoil exists in the location proposed under mine excavation during 2018-19.	Seperate becnhes in OB and iron ore zone are made. There no topsoil exists and no topsoil generated during 2018-19.	Nil
2c	Stripping ratio or ore to OB ratio	1: 0.02 t/cu.m.	1: 0.001 t/cu.m.	Due to changes in the lithology of the woking benches, the quantity of waste generation was minimal.
2d	Quantity of topsoil generation in m3	No topsoil exists,hence not applicable.	Nil	Nil
2e	Quantity of overburden generation in m3	4156 cu.m.	170 tonnes	Due to changes in the lithology of the woking benches, the quantity of waste generation was minimal.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		The development of the mine is in scientific line.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Single pit.	Lone Pit.	Nil
3b	Quantity of ROM mineral production proposed	195083 tonnes in 2018-19.	180000 tonnes during the year 2018-19	Nil
3c	Recovery of sailable/usable mineral from ROM production	179551 tonnes	174080 tonnes	Nil
3d	Quantity of mineral reject generation	15532 tonnes	Nil	The deviation is due to irregular nature of ore deposit.
3e	Grade of mineral rejects generation and threshold value declared.	+45% to -55% Fe	+45% to -55% Fe	Nil
3f	Quantity of sub grade mineral generation.	None	Nil	Nil
3g	Grade of sub grade mineral generation	Not applicable.	Not applicable.	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised.	Mechanised.	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	None	Not applicable.	Nil

3j	Provision of drilling and blasting in mineral benches	Deep hole drilling of 110mm dia is done with 2.5m burden, 3.0mspacing and 6m hight. Blasting is done with Slurry explosives of 83mm dia, Nonel and Electric detonator envisaged	Deep hole drilling of 110mm dia is done with 2.5m burden, 3.0mspacing and 6m hight. Blasting is done with Slurry explosives of 83mm dia, Nonel and Electric detonator used.	Nil
3k	Provision of mining machineries in mineral benches	A fleet of mining machineries are proposed in the benches to be excavated.	A fleet of mining machineries are deployed in the benches.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	6m	6m	Nil
3m	Total area covered under excavation/pits	7.271 ha, by end of pla period i.e. 2020-21.	6.3 ha by end of 2018-19.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.02 t/cu.m.	1: 0.001 t/cu.m.	Nil
3o	Total area put in use under different heads at the end of year	Pit: 7.271 ha, waste dump: 1.132 ha, others: 11.7 ha by the end of plan period upto 2020-21.	The land degrdated in diffrent count by end of the year 2018-19 is as furnishd: Pit - 6.3ha Dump -0.815ha, plant & of plan period buildings etc.-8.519 and safety zone: 1.290 ha.	Nil

3p	Production of ROM mineral during the last five year period as applicable	2014-15: 173043 t 2015-16: 183544 t 2016-17: 194317 t 2017-18: 194458 t 2018-19:195083 t	2014-15: 117150 t 2015-16: 124410 t 2016-17: 144000 t 2017-18: 166520 t 2018-19:180000 t	Nil
3q	General remarks of inspecting officers on method of mining etc.		The mining operations are confined to a single pit in a systematic manner.	Nil

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Provisions for seperate dumping for OB/waste ie envisaged. No topsoil exists in the area proposed under excavation.	No top soil is generated during the year 2018-19. The overburden/waste generated is beng dumped in the designated dumping site in the lease area.	Nil
4b	Location of topsoil, OB and mineral reject dumps	Not applicable.	Not applicable.	Nil
4c	Number of dumps within lease area and outside of lease area	one waste dumps with in the leasehold area.	One waste dumps with in the leasehold area.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	N2426378- E332105 N2426325- E332195	N2426378- E332105 N2426325- E332195	Nil
4e	Number of active and alive dumps.	One	One	Nil
4f	Number of dead dumps.	None	Nil	Nil
4g	Number of dumps established.	one	One	Nil

4h	Whether Retaining wall or garland drain all along dumps are there.	Yes, proposed.	Provided.	Nil
4i	Length of Retaining wall or garland drain all along dumps	82m	82m	Nil
4j	Number of settling ponds	Nil	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management		The waste generated from the mine excavation is dumped in the designated site.	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.	Area not matured for reclamation	Area not matured for reclamation	Nil
5b	Area under backfilling of mined out area	Not applicable.	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No topsoil exists.	Not applicable.	Nil
5d	Total area fully reclaimed and rehabilitated	Area not matured for reclamation	Area not matured for reclamation	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Area not matured for reclamation	Area not matured for reclamation	Nil

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 return on PMCP has been submitted to this office.	Annual return on PMCP has been submitted to this office.	Nil
6b	Area available for rehabilitation (ha) .	Nil	Nil	Nil
6c	afforestation done (ha).	0.1 ha	0.1 ha	Nil
6d	No. of saplings planted during the year	100 nos saplings.	250 nos. of saplings	Nil
6e	Cumulative no .of plants	No specific proposal.	18305 nos	Nil
6f	Any other method of rehabilitation	Not applicable.	Not applicable.	Nil
6g	Cost incurred on watch and care during the year		Rs 0.25 lakh	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Area not matured for reclamation.	Area not matured for reclamation.	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Area not matured for reclamation.	Area not matured for reclamation.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	Not applicable.	Not applicable.	Nil

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Area not matured for reclamation.	Nota applicable.	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Area not matured for reclamation.	Not applicable.	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not applicable.	Not applicable.	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable.	Not applicable.	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Regular monitoring of environmental parameters are envisaged.	Regular monitoring of environmental parameters are in practice.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Regular monitoring of environmental parameters are in practice as the measurs for environmental protection.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting envisaged.	Grade wise sorting done.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical means	Mechanised.	Nil
7c	Different grade of mineral sorted out at mines.	-55% Fe 55-58% Fe 58-60% Fe 60-62% Fe 62-65% Fe +65% Fe	-55% Fe 55-58% Fe 58-60% Fe 60-62% Fe 62-65% Fe +65% Fe	Annual return 2018-19.
7d	Any beneficiation process at mines	None	Not applicable.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		The iron ore produced from the mine is being sorted & sized for different grades of the ore before despatches.	Nil

Environment:

Sl.No.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No topsoil exists.	Nil	No topsoil generated during 2018-19.
8b	Concurrent use or storage of topsoil	Not applicable.	Not applicable.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Provisions for separate dumping of overburden /waste envisaged.	The overburden/waste generated due to the mine excavation is dumped in the designated dumping site.	Nil

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Area not matured for reclamation.	Area not matured for reclamation.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Area not matured for reclamation.	Area not matured for reclamation.	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	100 nos of saplings plantation envisaged for the year 2018-19.	250 nos of saplings planted during 2018-19.	Nil
8g	Survival rate	No such specific proposal	92%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinklers for dust suppression on haul roads envisaged.	Water sprinkling on the haul roads are done for dust suppression.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Aesthetic beauty in and around the mine is well maintained.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	Submitted all the monthly and annual returns for the year 2018-29 to this office.	The submission status of monthly and annual returns are found to be in order.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer, Geologist and Mine Manager are employed.	Mining Engineer, Geologist and Mine Manager are employed.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Current (O/C) Workings: 6.300 Ha, waste disposal 0.815 Ha, Occupied by plant, buildings, residential, welfare buildings & roads 8.519 Ha and safety zone: 1.290ha	Current (O/C) Workings: 6.300 Ha, waste disposal 0.815 Ha, Occupied by plant, buildings, residential, welfare buildings & roads 8.519 Ha and safety zone: 1.290ha	Nil
9d	Scrutiny of Annual return on afforestation	250 nos. of saplings planted.	Found to be in order.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	No mineral reject generated during 2018-19.	Nil

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing stock: Lumps 60% to below 62%: 1525 tonnes Lumps 60% to below 62%: 15.400 tonnes, 62% to below 65% 11576.270 tonnes, above 65% Fe: 15.400 tonnes, 62% to below 65% 11576.270 tonnes, above 65% Fe: 11729.240 tonnes. Fines: Below 55%: 13.960 tonnes, 55% to below 58%: 33068.180 tonnes, 60% to below 62%: 5774.780 tonnes, , 62% to below 65%: 5815.360 tonnes and above 65% Fe: 275.312 tonnes.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	The ex-mine price varies from Rs. 750/- to 5505.21 per tonne for different grades of the materials.	The is found to be in order. Nil
9h	Scrutiny of Annual return on fixed assets	Rs 84571210/-	Rs 84571210/- Nil
9k	Scrutiny of Annual return on mining machineries	Back hoe: 6 nos., Front end loader: 1 no., wheel loader: 2 nos. blast hole drill 100mm dia: 1 no and rock drill 32 mm dia 4 nos.	The deployment status of mining machineries in the mine is found to be in order. 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 35(2)	26/07/2019	19/08/2019				

Date :

(SHRI G.C. SETHI)

Indian Bureau of Mines