

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

MCDR inspection REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/SNG/MCDR-22/BBS

Mine code : 30ORI13054

- (i) Name of the Inspecting : **U11**) **DAYANAND UPADHYAY**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Sri A K Mishra, GM, Sri Jagaddish Mahanta, Mines Mana
Official with
Designation
- (iv) Date of Inspection : 21-SEP-18
- (v) Prev.inspection date : 11-JAN-18

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PATABEDA IRON (14 HA)**
- (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 :
Taluka :
Post office :
Pin Code :
FAX No. : 06742596370
E-mail : mgmbbsr@gmail.com
Phone : 06742596400
- (f) Police Station : KOIRA
- (g) First opening date : 09-APR-06
- (h) Weekly day of rest : SUN
2. Address for : M/S M.G.MOHANTY, POST BOX NO. 17, BARBIL,
correspondance DIST. KEONJHAR- 758 035 (ORISSA)
ODISHA
3. (a) Lease Number : ORI0978
(b) Lease area : 14
(c) Period of lease :
(d) Date of Expiry : 20-DEC-33
4. Mineral worked : 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 : M/s M.G. Mohanty, R.L. Monhanty (Managing Partner)
 5A, Forest Park
 Bhubaneshwar Odisha-751009
 SUNDARGARH ORISSA
 Phone: 0674-2596400
 FAX : 0674-2596390

Geologist
 Name : Shri Dilip Kumar Pattnaik,Full Time
 Qualification : M.Sc
 Appointment/ : 01-JUL-06
 Termination date

Manager
 Name : Shri Balram Behara
 Qualification : BE(mining)
 Appointment/ : 15-OCT-11
 Termination date

6. Date of approval of Mining	:	Modif.of approved Mining Plan	07-AUG-07
Plan/Scheme of Mining	:	Modif.of approved Mining Plan	13-NOV-09
	:	Mining Scheme rule 12 MCDR1988	01-APR-11
	:	Modif.approved Mining Scheme	28-MAY-14
	:	Mining Scheme rule 12 MCDR1988	18-MAR-16

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No Proposal in 2017-18.	Nil.	A total of 06 bore hole proposed during 2016-17 to 2020-21 which has been completed in 2016-17.
1b	Exploration over lease area for geological axis 1 or 2	No Proposal in 2017-18.	Nil.	A total of 06 bore hole proposed during 2016-17 to 2020-21 which has been completed in 2016-17.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified.	Exploration has been carried out in-house Geology Division of the Company.	Exploration has been carried out in-house Geology Division of the Company.
1d	Balance area to be explored to bring Geological axis in 1 or 2	No Proposal in 2017-18.	Entire potentially mineralised area explored.	Entire potentially mineralised area explored.
1e	Balance reserve as on 01/04/20	In the approved SOM dated 18/03/2016, the Reserve and Resource of the Iron Ore estimated as on 01/04/2016 was 1131158.00 tonnes and 172965.00 tonnes respectively.	Reserves and resources as on 01/04/2018 is 1149543 tonne.	Reserves and resources as on 01/04/2018 is 1149543 tonne.
1f	General remarks of inspecting officers on geology, exploration etc	No Exploration Proposal in 2017-18.	Entire potentially mineralised area explored.	Entire potentially mineralised area explored.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
--------	------	-----------	-------------	---------

2a	Location of development w.r.t.lease area	Single pit- N2426125-2426275 & E331838-331917	The development is concentrated in Single pit between grid N2426125-2426275 & E331838-331917.	The development is concentrated in Single pit between grid N2426125-2426275 & E331838-331917.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches proposed for Mineral and OB, top soil not proposed..	Separate benches in OB and ore of 6m height have been maintained.	Separate benches in OB and ore of 6m height have been maintained.
2c	Stripping ratio or ore to OB ratio	1: 0.22 tonnes/CuM	1: 0.05 tonnes/CuM	Average stripping ratio varies due to irregular nature of ore deposit.
2d	Quantity of topsoil generation in m3	Not propopsed.	Not applicable.	Nil.
2e	Quantity of overburden generation in m3	20019cu.m	4250 cu.m	Less quantity of OB generated due to less production of ROM as proposed.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The development is proposed in single pit.	The development is proposed in single pit and bench height is maintained 6m as per proposal.	The development is proposed in single pit and bench height is maintained 6m as per proposal.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	The development is proposed in single pit.	The development is concentrated in single pit.	The development is concentrated in single pit.
3b	Quantity of ROM mineral production proposed	2017-18, 90947T	81280T	Production is in lower side due to less demand of Ore.
3c	Recovery of sailable/usable mineral from ROM production	2017-18, 90947T	81280T	Total ROM is Saleble

3d	Quantity of mineral reject generation	11020T	Nil.	Only salable ore is encountered during excavation. Hence, no production of MR.
3e	Grade of mineral rejects generation and threshold value declared.	Between 45 to 55% Fe.	No Generation.	Only salable ore is encountered during excavation. Hence, no production of MR.
3f	Quantity of sub grade mineral generation.	11020T	Nil.	Only salable ore is encountered during excavation. Hence, no production of MR.
3g	Grade of sub grade mineral generation	Between 45 to 55% Fe.	Nil.	Only salable ore is encountered during excavation. Hence, no production of MR.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised.	Mechanised.	Mechanised.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not proposed.	Not applicable.	Nil.
3j	Provision of drilling and blasting in mineral benches	Deep hole drilling 110mm dia & balsting with slury explosive.	Deep hole drilling 110mm dia with 2.5m burden, 3.0m spacing and 6m height. Blasting is carried out with Slurry explosives of 83mm dia, Nonel and Electric detonator.	Deep hole drilling 110mm dia with 2.5m burden, 3.0m spacing and 6m height. Blasting is carried out with Slurry explosives of 83mm dia, Nonel and Electric detonator.

3k	Provision of mining machineries in mineral benches	Excavator - 0.9 cu.m, Excavator - 2.1 cu.m,Tipper - 10tonne, Mineral Sizing &Screening Plant -250TPH	Excavator - 0.9 cu.m, Excavator - 2.1 cu.m,Tipper - 10tonne, Mineral Sizing &Screening Plant -250TPH	Excavator - 0.9 cu.m, Excavator - 2.1 cu.m,Tipper - 10tonne, Mineral Sizing &Screening Plant -250TPH
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height- 6m.	Bench height is suitably matched with the excavator.	Bench height is suitably matched with the excavator.
3m	Total area covered under excavation/pits	At the end of plan period 2.878 Ha	As on 01/04/2018, area covered under pit 2.496 Ha	As on 01/04/2018, area covered under pit 2.496 Ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.22T/cu.m	1:0.05T/cu.m	Average stripping ratio varies due to irregular nature of ore deposit.
3o	Total area put in use under different heads at the end of year	Pit - 2.878Ha, Dump -2.408Ha, Mineral Stack yard, road & Infrastructure -4.572Ha, Safety zone - 1.942Ha	Pit - 2.496Ha, Dump - 1.876Ha, Mineral Stack yard, road & Infrastructure - 4.270Ha, Safety zone - 1.942Ha	Pit - 2.496Ha, Dump -1.876Ha, Mineral Stack yard, road & Infrastructure - 4.270Ha, Safety zone -1.942Ha
3p	Production of ROM mineral during the last five year period as applicable	2013-14 - 54141T 2014-15 - 94038T 2015-16 - 100473T 2016-17 - 90684T 2017-18 - 90947T	2013-14 - 38025T 2014-15 - 38500T 2015-16 - 77520T 2016-17 - 73300T 2017-18 - 81280T	Nil.

3q	General remarks of inspecting officers on method of mining etc.	The development is proposed in single pit.	The development is concentrated in single pit. Deep hole drilling 110mm dia with 2.5m burden, 3.0m spacing and 6m height. Blasting is carried out with Slurry explosives of 83mm dia, Nonel and Electric detonator.	The development is concentrated in single pit. Deep hole drilling 110mm dia with 2.5m burden, 3.0m spacing and 6m height. Blasting is carried out with Slurry explosives of 83mm dia, Nonel and Electric detonator.
----	---	--	---	---

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Proposed for separated dumping of OB and MR, top soil not proposed.	Separated dumping of OB, No mineral reject dump as the entire ROM is saleable.	Separated dumping of OB and MR.
4b	Location of topsoil, OB and mineral reject dumps	OB dump: N2425952- E331748 N2426018- E331809, No top soil proposed.	There are 03 OB dump in the lease area, DUMP-1: N2426024- E331837 & N2416076- E331899, DUMP-2: N2425952- E331748 & N2426018- E331809, DUMP-3A: N2425982- E331954 & N2426060- E331920.	There are 03 OB dump in the lease area. No mineral reject dump as the entire ROM is saleable.
4c	Number of dumps within lease area and outside of lease area	Within Lease area: 3 OB dump.	There are 03 OB dump in the lease area, DUMP-1: N2426024- E331837 & N2416076- E331899, DUMP-2: N2425952- E331748 & N2426018- E331809, DUMP-3A: N2425982- E331954 & N2426060- E331920.	There are 03 OB dump in the lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Out side of the UPL.	Out side of the UPL.	The dumps are located out side of the UPL.
4e	Number of active and alive dumps.	One dump	One dump	There is single active dump.
4f	Number of dead dumps.	Not speciified.	There is 02 dead dumps.	There is 02 dead dumps.

4g	Number of dumps established.	Not specified.	One OB dump has been stabilised by plantation.	One OB dump has been stabilised by plantation.
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall of 200mX1.0mX1.5m	Proposed retaining wall not made.	Shortcoming has been observed through violation.
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall of 200mX1.0mX1.5m along boundary line D2-D3.	Proposed retaining wall not made.	Shortcoming has been observed through violation.
4j	Number of settling ponds	Not proposed.	Nil.	There are 03 nos. of settling tank exist in lease area.
4k	Specific comments of inspecting officer on waste dump management	One active dump.	Slope of the dead dump has been stabilised by plantation. One dead dump has been fully rehabilitated by plantation. The retaining wall and garland drain has been constructed around the dump.	Slope of the dead dump has been stabilised by plantation. One dead dump has been fully rehabilitated by plantation. The retaining wall and garland drain has been constructed around the dump.

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 for backfilling.	Not Applicable.	Nil.
5b	Area under backfilling of mined out area	No Proposal for backfilling.	Not Applicable.	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.	No Proposal for backfilling.	No Proposal for backfilling as mineralisation is continued in depth.	Pit is not fully exhausted.

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).	Not specified.	Annual report of PMCP submitted on 17.07.2018	Annual report of PMCP submitted on 17.07.2018
6b	Area available for rehabilitation (ha) .	Not proposed.	Nil.	Pit is not fully exhausted.
6c	afforestation done (ha).	Not proposed.	In 1.085Ha area Plantation done within the lease.	In 1.085Ha area Plantation done within the lease.
6d	No. of saplings planted during the year	Not proposed.	In 2017-18, 106 nos saplings has been planted by lessee.	In 2017-18, 106 nos saplings has been planted by lessee.
6e	Cumulative no .of plants	Not specified.	Total 9163 nos of tree planted by lessee.	Total 9163 nos of tree planted by lessee.
6f	Any other method of rehabilitation	Not proposed.	Nil.	Nil.
6g	Cost incurred on watch and care during the year	Not specified.	Rs.78720.00 incurred on watch and care.	Rs.78720.00 incurred on watch and care.

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	Not proposed.	Nil.	Nil.
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	Not proposed.	Nil.	Nil.
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	Not proposed.	Nil.	Nil.

6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring	Quarterly monitoring of air, water and noise level are being carried out.	Quarterly monitoring of air, water and noise level are being carried out.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No proposal of backfilling.	As the mineralisation is continued in depth the backfilling has not been proposed. Afforestation has been carried out along slope of waste dump & safety zone.	As the mineralisation is continued in depth the backfilling has not been proposed. Afforestation has been carried out along slope of waste dump & safety zone.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Gradewise sorting	Gradewise sorting of - 55% Fe, , 55-58% Fe, 58-60% Fe, 60-62% Fe, 62-65% Fe, +65% Fe	Gradewise sorting of -55% Fe, , 55-58% Fe, 58-60% Fe, 60-62% Fe, 62-65% Fe, +65% Fe
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanized	Mechanized	Mechanized
7c	Different grade of mineral sorted out at mines.	Gradewise sorting	Gradewise sorting of - 55% Fe, , 55-58% Fe, 58-60% Fe, 60-62% Fe, 62-65% Fe, +65% Fe	Gradewise sorting of -55% Fe, , 55-58% Fe, 58-60% Fe, 60-62% Fe, 62-65% Fe, +65% Fe
7d	Any beneficiation process at mines	Not proposed.	Nil.	Nil.

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Gradewise sorting	Gradewise sorting of - 55% Fe, , 55-58% Fe, 58-60% Fe, 60-62% Fe, 62-65% Fe, +65% Fe	Gradewise sorting of -55% Fe, , 55-58% Fe, 58-60% Fe, 60-62% Fe, 62-65% Fe, +65% Fe
----	--	-------------------	--	---

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No Proposal of top soil generation	Nil.	No generation of top soil generation.
8b	Concurrent use or storage of topsoil	No Proposal of top soil generation	Nil.	No generation of top soil generation.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposed for separate dumping of OB, rejects and fines.	separate dumping of OB, no mineral reject reported.	Being done as per proposal.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not proposed.	Nil.	Pit is not fully exhausted.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not proposed.	Nil.	Pit is not fully exhausted.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Plantation not proposed in 2017-18.	Total 106 nos planted along slope of dump.	Total 106 nos planted along slope of dump.

8g	Survival rate	Not specified.	82%	As reported survival rate is 82%.
8h	Water sprinkling on roads to control airborne dust	Water tanker	Water sprinkling on roads through water tanker.	Water sprinkling on roads through water tanker.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No comment.	Aesthetic beauty in and around mined area is maintained. In 2017-18, total 106 nos of saplings have been planted by lessee. As reported cumulative no. of trees planted by lessee is about 9163 nos.	Aesthetic beauty in and around mined area is maintained. In 2017-18, total 106 nos of saplings have been planted by lessee. As reported cumulative no. of trees planted by lessee is about 9163 nos.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly and annual returns are being submitted regularly.	Monthly and annual returns are being submitted regularly.	Monthly and annual returns are being submitted regularly.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager: 01 No. Geologist: 01 No. Mining Engineer: 01 No.	As per annual return.	As per annual return.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit - 2.496Ha, Dump -1.876Ha, Mineral Stack yard, road & Infrastructure -4.270Ha, Safety zone - 1.942Ha	Pit - 2.496Ha, Dump - 1.876Ha, Mineral Stack yard, road & Infrastructure - 4.270Ha, Safety zone - 1.942Ha	Pit - 2.496Ha, Dump -1.876Ha, Mineral Stack yard, road & Infrastructure - 4.270Ha, Safety zone -1.942Ha
9d	Scrutiny of Annual return on afforestation	106nos.	106nos.	106nos.

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not reported.	Not reported.	Not reported.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM production 81280 tonne	ROM production 81280 tonne	ROM production 81280 tonne
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	production cost - Rs1237.42	production cost - Rs1237.42	production cost - Rs1237.42
9k	Scrutiny of Annual return on mining machineries	Excavator - 0.9 cu.m, Excavator - 2.1 cu.m,Tipper - 10tonne, Mineral Sizing &Screening Plant -250TPH	Excavator - 0.9 cu.m, Excavator - 2.1 cu.m,Tipper - 10tonne, Mineral Sizing &Screening Plant -250TPH	Excavator - 0.9 cu.m, Excavator - 2.1 cu.m,Tipper - 10tonne, Mineral Sizing &Screening Plant -250TPH

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)	28-SEP-18	07-DEC-18			

Date :

(DAYANAND UPADHYAY)

Indian Bureau of Mines