

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/SNG/MCDR-23/BBS

Mine code : 30ORI13051

- (i) Name of the Inspecting : **S010**) **SHRI G.C. SETHI**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri H.S.Pattnayak, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 01/10/2018
- (v) Prev.inspection date : 01/11/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PATABEDA**
- (b) **Registration NO.** : **IBM/290/2011**
- (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. : 06767-275770
E-mail : mgmbbl@gmail.com
Phone : 06767-275318, 276319
- (f) Police Station : KOIRA
- (g) First opening date : 12/11/2006
- (h) Weekly day of rest : SUN
2. Address for : VILLAGE- PATABEDA,
correspondance P.O.- MALDA
DISTRICT- SUNDARGARH,
3. (a) Lease Number : ORI0979
(b) Lease area : 28.4
(c) Period of lease : 20
(d) Date of Expiry : 07/03/2026
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : M/S.MGM.MINERALS (P) LTD
 SUNDARGARH ORISSA
 Phone:
 FAX :

Owner : M.G.MOHANTY
 PB-17,PO.BARBIL,KEONJHAR
 ORISSA. KEONJHAR ORISSA
 Phone: 06767-30318
 FAX : 06767-30770

Agent : B. N. Mohapatra
 2A, Forest park Bhubaneswar
 KHURDA ORISSA
 Phone: 0674-2596390
 FAX : 0674-2596400

Manager
 Name : HIMANSHU PATTNAIK
 Qualification : DIGREE MINING
 Appointment/ : 11/05/2014
 Termination date

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	08/11/2002
Plan/Scheme of Mining	:	Modif.of approved Mining Plan	26/10/2007
	:	Mining Scheme rule 12 MCDR1988	01/04/2011
	:	Mining Scheme rule 12 MCDR1988	28/03/2016
	:	Modif.approved Mining Scheme	24/11/2017

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	A total of 14 BH have been proposed during 2017-18.	A total of 14 BH have been completed during 2017-18. No backlog.	NIL.
1b	Exploration over lease area for geological axis 1 or 2	As per approved document dated 24/11/2017 a total of 24 boreholes have been proposed during 2017-18 and 2018-19 to explore lease area under G1 level of exploration.	A total of 14 boreholes have been drilled in 2017-18.	NIL.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Lessee.	Exploration has been carried out departmentally.	NIL.
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per approved document dated 24/11/2017 an area of 11.097 ha was to be explored.	The explored area has been covered under G1/G2 resources.	NIL.
1e	Balance reserve as on 01/04/20	As per approved document dated 24/11/2017 the position of reserve and resource as on 10/09/2017 was: Reserve- 11.11 mT Resource- 0.637 mT	The position of reserve and resource as on 01/04/2018 was as follows: Reserve: 10.31 mT Resource: 0.637 mT	mT million tonnes.

1f	General remarks of inspecting officers on geology, exploration etc	A total of 14 BH have been proposed during 2017-18.	A total of 14 BH have been completed during 2017-18.	NIL.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Development has been proposed between grid N2426630-2426920/E331650-331990	The work of development for the year 2017-18 has been carried out within the approved limits.	NIL.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Mostly the waste proposed to be generated during the year is of intercalated nature. No topsoil.	Separate benches have been maintained in overburden and ore zone.	NIL.
2c	Stripping ratio or ore to OB ratio	1:0.022 CuM/Tonnes	1:0.022 CuM/Tonnes	NIL.
2d	Quantity of topsoil generation in m3	Not applicable.	Nil	NIL.
2e	Quantity of overburden generation in m3	17750 CuM	17612 CuM	NIL.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Development has been proposed between grid N2426630-2426920/E331650-331990	The work of development for the year 2017-18 has been carried out within the approved limits.	NIL.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	Single pit has been proposed for the production.	Production has been carried out as per proposal.	NIL.
3b	Quantity of ROM mineral production proposed	800596.00 MT	795118.00 MT	NIL.
3c	Recovery of sailable/usable mineral from ROM production	660037.15 MT	784337.84 MT.	NIL.
3d	Quantity of mineral reject generation	140558.85 MT	120802.684MT	NIL.
3e	Grade of mineral rejects generation and threshold value declared.	Mineral Reject Grade is between 45-58% Fe	Mineral Reject Grade is between 45-58% Fe	NIL.
3f	Quantity of sub grade mineral generation.	140558.85 MT	120802.684 MT	The same figure has also been reflected in the MR.
3g	Grade of sub grade mineral generation	45% Fe to 58% Fe	45% Fe to 58% Fe	NIL.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanical.	Mechanical.	NIL.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposal of any Beneficiation Study during 2017-18.	Not applicable as no proposal of any fresh beneficiation study.	NIL.

3j	Provision of drilling and blasting in mineral benches	Blast holes of 105 mm dia have been proposed. Deep hole drilling & blasting with use of HEMMs. Controlled blasting with NONEL system of Initiation has been proposed for blasting.	Drilling and blasting has been carried out as per the proposal.	NIL.
3k	Provision of mining machineries in mineral benches	Excavator, Front end loader, Back Hoe, Tripper, Crushing and Screening unit, Water tanker, DG set etc.	Machineries have been deployed as per proposal.	NIL.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of benches has been proposed 10 m.	The height of benches has been maintained as per the proposal.	NIL.
3m	Total area covered under excavation/pits	As per approved document dated 24/11/2017an area of 13.64 Ha been proposed under excavation/pits at the end of the plan period.	An area of around 12.34 Ha has been covered under pits as on 01/04/218.	As per AR 2017-18.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.022 CuM/Tonnes	1:0.022 CuM/Tonnes	NIL.

3o	Total area put in use under different heads at the end of year	As per approved document dated 24/11/2017, total area put in use under different heads is 28.397 Ha at the end of the plan period	Total of around 24.611 Ha area has been degraded under different heads as on 01/04/2018.	As per AR 2017-18.
3p	Production of ROM mineral during the last five year period as applicable	2013-14: 524791 MT 2014-15: 536605 MT 2015-16: 556783 MT 2016-17: 662338 MT 2017-18: 800596.MT	2013-14: 292876 MT 2014-15: 285480 MT 2015-16: 241430 MT 2016-17: 293778 MT 2017-18: 795118 MT	NIL.
3q	General remarks of inspecting officers on method of mining etc.	Fully mechanized method of mining has been proposed to win the Ore.	Fully mechanized method of mining is being in practice win the Ore.	NIL.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No top soil generation during 2017-18 as no fresh area under degradation for mine excavation. Separate dumping of waste and Mineral reject has been proposed.	Waste and Mineral reject has been kept separately.	NIL.

4b	Location of topsoil, OB and mineral reject dumps	Dumping of waste has been proposed over waste dump-03 by extending towards NE direction.	Dumping of waste has been observed as per proposal.	NIL.
4c	Number of dumps within lease area and outside of lease area	There exist four waste dumps within lease area. No dump outside of the lease area.	No waste dumping outside of the lease has been observed.	NIL.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposed dump during the year 2017-18 is outside of UPL. .	Waste dumping has been observed outside of UPL.	NIL.
4e	Number of active and alive dumps.	One (Dump 03)	One (Dump 03)	NIL.
4f	Number of dead dumps.	Three dumps namely Dump 01, Dump 02 and Dump 04.	Three dumps namely Dump 01, Dump 02 and Dump 04.	NIL.
4g	Number of dumps established.	Not applicable.	Not applicable.	NIL.
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal of retaining wal and garland drain during 2017-18.	A retaining wall and garland drain of 35 mts has been constructed.	NIL.
4i	Length of Retaining wall or garland drain all along dumps	No proposal of retaining wal and garland drain during 2017-18.	A retaining wall and garland drain of 35 mts has been constructed.	NIL.
4j	Number of settling ponds	None	2 number of Settling tank has been constructed.	NIL.
4k	Specific comments of inspecting officer on waste dump management		Waste and Mineral reject has been kept separately. Dumping of waste has been observed as per proposal.	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.	No area has been exhausted for mineral.	Not applicable.	NIL.
5b	Area under backfilling of mined out area	No area is matured for backfilling.	Not applicable.	NIL.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not applicable.	Not applicable.	NIL.
5d	Total area fully reclaimed and rehabilitated	Fully reclamation and rehabilitation to the mine is not applicable as the mineral has not been exhausted .	Not applicable.	NIL.
5e	General remarks of inspecting officers on backfilling and reclamation etc.		No backfilling done during 2017-18 as no area is matured for backfilling.	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).	As per rule 26(2) of MCDR, 2017, PMCP report to be submitted for previous year by 1st July.	Annual report of PMCP has been submitted for the year 2017-18.	NIL.

6b	Area available for rehabilitation (ha) .	A total of 0.15 Ha area has been proposed for Safety Zone Plantation and waste dump plantation during 2017-18.	A total of around 0.22 hectare area of Safety Zone and waste dump has been planted.	NIL.
6c	afforestation done (ha).	A total of 0.15 Ha area has been proposed for Safety Zone Plantation and waste dump plantation during 2017-18.	A total of around 0.22 hectare area of Safety Zone and waste dump has been planted.	NIL.
6d	No. of saplings planted during the year	As per approved PMCP a total of 240 Numbers of sapling has been proposed to plant during 2017-18.	200 plant (within lease area), 2000 plant (outside lease area)	NIL.
6e	Cumulative no .of plants	As per approved PMCP a total of 240 Numbers of sapling has been proposed to plant during 2017-18.	200 plant (within lease area), 2000 plant (outside lease area)	NIL.
6f	Any other method of rehabilitation	Not applicable.	Not applicable.	NIL.
6g	Cost incurred on watch and care during the year	Rs. 3000 thousand	Rs. 29620.00	NIL.

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not applicable	Not applicable	NIL.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not applicable	Not applicable	NIL.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Not applicable	Not applicable.	NIL.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable	Not applicable	NIL.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not applicable	Not applicable	NIL.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	An area of 0.0625 Ha has been proposed to rehabilitate during 2017-18 (safety zone planation).	Afforestation has been carried out as per proposal.	NIL.

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	An area of 0.0625 Ha has been proposed to rehabilitate during 2017-18 (safety zone planation).	Afforestation has been carried out as per proposal.	NIL.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Afforestation has been proposed as a method of rehabilitation .	Afforestation has been carried out as per proposal.	NIL.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Ambient air ,Water quality , Noise level survey & Ground Vibration to be measured Quarterly.	Environmental monitoring was carried out in Core and buffer zone for the reporting year.	NIL.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	A total of 0.15 Ha area has been proposed for Safety Zone Plantation and waste dump plantation during 2017-18.	A total of around 0.22 hectare area of Safety Zone and waste dump has been planted.	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 has been proposed.	Grade wise sorting has been observed within lease area.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical sorting of Iron Ore by Crushing and screening.	Mechanical method has been adopted by Crushing and screening at Mines.	

7c	Different grade of mineral sorted out at mines.	Iron Ore :- 45- 55%Fe, 55- 58%Fe, 58- 60%Fe, 60- 62%Fe, 62- 65%Fe and 65% Fe and above.	Iron Ore :- 45- 55%Fe, 55-58%Fe, 58-60%Fe, 60- 62%Fe, 62-65%Fe and 65% Fe and above.
7d	Any beneficiation process at mines .	Not applicable.	Not applicable.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Sub-grade material generated during excavation and processing of ROM, has been proposed to stack separately for future use.	Sub-grade material generated during excavation and processing of ROM has been stacked separately for future use.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal of top soil generation as no fresh area is proposed for excavation during 2017-18.	No top soil has been generated during the year 2017-18.	NIL.
8b	Concurrent use or storage of topsoil	Not applicable.	Not applicable.	NIL.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps have been proposed for waste dumping and mineral reject.	Separate dumps have been maintained for waste and mineral reject/sub-grade material.	NIL.

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	The overburden, waste rock, rejects and fines generated are proposed to be dumped separately.	The overburden, waste rock, rejects and fines generated are dumped separately.	NIL.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal of backfilling during the plan period as no area is matured for backfilling.	Not applicable	NIL.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	As per approved PMCP a total of 240 Numbers of sapling has been proposed to plant during 2017-18.	200 plant (within lease area), 2000 plant (outside lease area)	NIL.
8g	Survival rate	85%	85%	NIL.
8h	Water sprinkling on roads to control airborne dust	Water sprinkling has been proposed over haul road and mine.	Water sprinkling has been observed over haul road and quarry area.	NIL.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Plantation has been carried out in Safety Zone and Dump1 to improve aesthetic beauty in and around lease area.	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	As per rule 45 of MCDR , monthly and annual returns to be submitted.	Monthly and annual returns are being submitted regularly.	Scrutiny of AR 2017-18.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information has been furnished about Mining Engineer, Geologist, and Manager.	Mining engineer, Mines Manager and geologist has been appointed at the mine.	Scrutiny of AR 2017-18.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mine working: 12.34 Ha. , Waste dump: 3.701 Ha. , Infrastructure with road: 8.57 Ha. , Mineral separation plant:19.545 Ha	The land details furnished in AR seems to be in order.	Scrutiny of AR 2017-18.
9d	Scrutiny of Annual return on afforestation	200 plant (within lease area), 2000 plant (outside lease area)	Found to be in order.	Scrutiny of AR 2017-18.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	120802.684 MT	In order.	Scrutiny of AR 2017-18.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Iron Ore ROM Stock - 82450.00 MT, Total lump stock: 57255.289 MT and Total fines stock : 146011.90 MT	Found to be in order.	Figures as per AR 2017-18 as on 01.04.2018

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Iron Ore (Lumps):- Below 55%Fe: Rs. 726.52, 55-58%Fe: Rs.1000.00, 58-60%Fe: RS.1040.22, 60-62% Fe: Rs. 1175.45, 62-65% Fe: Rs. 3272.49, 65% Fe and above: Rs. 3462.94 Iron Ore (Fines) Below 55%Fe: Rs. 400.00, 55-58%Fe: Rs.534.08, 60-62% Fe: Rs. 1000.00, 62-65% Fe: Rs. 1629.28, 65% Fe and above: Rs. 1515.73 Cost of Production - Rs. 1366.03 Per tonne.	The information furnished about the ex-mine price and cost of production under the Annual return for the year 2017-2018 seems to be in order	As per AR 2017-18.
9h	Scrutiny of Annual return on fixed assets	The value of fixed assets furnished is Rs 90353510.00	Rs 90353510.00	Scrutiny of AR 2017-18.
9k	Scrutiny of Annual return on mining machineries	Back Hoe, Dumper, front end loader, wheel loader, Tipper, water tanker, blast hole drill, crane, crusher.	Information furnished appears to be correct.	Scrutiny of AR 2017-18.

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 34(1)	26/10/2018	08/04/2019				
	Rule 45(7)	26/10/2018	08/04/2019				

Date :

(SHRI G.C. SETHI)

Indian Bureau of Mines