

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON-MN/KJR/MCDR-83/BBS

Mine code : 30ORI08104

- (i) Name of the Inspecting : **DJ03**) **DILIP JAIN**
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine : Sri Surajit Jena, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 14/03/2019
- (v) Prev.inspection date : 14/07/2016

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **DALPAHAR (4.84H)**
- (b) **Registration NO.** : **IBM / 476 / 2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : DALPAHAR
- Taluka : BARBIL
- Post office : VICHAKUNDI
- Pin Code : 758035
- FAX No. : 06767-273089
- E-mail : rbdas@yahoo.in
- Phone : 0671-2617676
- (f) Police Station : Joda
- (g) First opening date : 07/07/2010
- (h) Weekly day of rest :
2. Address for : PO- DALPAHAR
correspondance : DISTT- KEONJHAR
ORISSA
3. (a) Lease Number : ORI0886
- (b) Lease area : 4.84
- (c) Period of lease : 30
- (d) Date of Expiry : 06/01/2040
4. Mineral worked : MANGANESE ORE Associated
IRON ORE Main

5. Name and Address of the

Lessee : SRI R.B. DAS
 KUNDRUPANI IRON-MN MINE
 DIST: KEONJHAR ORISSA
 KEONJHAR ORISSA
 Phone:
 FAX :

Owner : R.B.DAS
 S.C.NAYAK (COMPLEX) AT/PO:
 JODA KEONJHAR ORISSA
 Phone:
 FAX :

Mining Engineer
 Name : Sri A.P. Mohanty, Full Time
 Qualification : B.E. Mining
 Appointment/ : 24/12/2012
 Termination date

Geologist
 Name : Sri Dipen Parida, Full Time
 Qualification : M.Sc. Geology
 Appointment/ : 01/03/2016
 Termination date

Manager
 Name : Sri Surajit jena
 Qualification : B.E. Mining
 Appointment/ : 01/09/2018
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : Modif.of approved Mining Plan 23/05/2011
 Mining Scheme rule 12 MCDR1988 30/07/2015

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal for the reporting Year i.e. 2017-18.	No exploratory work has been carried out during 2017-18.	NIL.
1b	Exploration over lease area for geological axis 1 or 2	As per approved document dated 30/07/2015, a total of 18 BH have been proposed during 2015-16 to 2016-17 to explore lease area under G1 level of exploration.	Exploratory BH proposed during the year from 2015-16 to 2016-17 have not been carried out.	Violation has been issued vide letter dated 27/03/2019
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No specific proposal of exploration agency.	Exploration has not been carried out during the reporting year i.e. 2017-18.	NIL.
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per approved document dated 30/07/2015, total lease area i.e. 4.84 ha has been explored under G2 level of exploration.	4.84 Ha area is yet to bring under G1 level of exploration.	NIL.

1e	Balance reserve as on 01/04/20	As per approved document dated 30/07/2015, the position of reserve and resource as on 25/12/2014 was as follows: Iron Ore: Reserve: 68310 tonnes Resource: 154170 tonnes. Manganese Ore: Reserve: 126204 tonnes Resource: 106314 tonnes.	Balance reserve and resource as on 01/04/2018 is as follows: Iron Ore: Reserve: 68310 tonnes Resource: 154170 tonnes. Manganese Ore: Reserve: 100770 tonnes Resource: 106314	Figures of reserve and resource as on 01/04/2018 are as per AR 2017-18.
1f	General remarks of inspecting officers on geology, exploration etc	A total of 18 BH have been proposed during 205-16 to 2016-17 to explore lease area under G1 level of exploration	Exploration has not been carried out during the reporting year i.e. 2017-18.	Violation has been issued vide letter dated 27/03/2019.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Iron Ore: E 68-165/S 70-170 Mn Ore: E 100-W50/S 240-500	No development has been carried out in Iron Ore Zone. Development of the Mn Zone carried out within approved limit i.e. E 100-W50/S 240-500	As reported due to no demand of Iron Ore, development in Iron has not been carried out.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No proposal of top soil generation during 2017-18. Separate benches have been proposed in OB and Mineral.	Top soil has not been generated during 2017-18. Separate benches have been observed in OB and Mineral.	Top soil has not been generated during 2017-18. Separate benches have been observed in OB and Mineral.
2c	Stripping ratio or ore to OB ratio	Iron Ore: 1:0.06 Tonne/ CuM Mn Ore: 1:0.90 Tonne/ CuM	Iron Ore: NIL Mn Ore: 1:0.20 Tonne/ CuM	NIL in iron Ore as no development in Iron ore zone.
2d	Quantity of topsoil generation in m3	No proposal of top soil generation, as no top soil has been envisaged during 2017-18.	Top soil has not been generated during 2017-18.	NIL.
2e	Quantity of overburden generation in m3	Iron Ore: 820 CuM Mn Ore: 22260 CuM	Iron Ore: NIL. Mn Ore: 2224 CuM	NIL in iron Ore as no development in Iron ore zone. Less generation of waste in Mn Zone due to less production.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Two quarries, each for Iron Ore and Manganese Ore has been proposed to develop during year 2017-18.	As reported due to no demand of Iron Ore, development in Iron has not been carried out. Development in Mn quarry has been carried out as per the proposal.	NIL.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Iron Ore: One Pit Mn Ore: One Pit	Iron Ore: One Pit Mn Ore: One Pit	As reported due to no demand of Iron Ore, development in Iron has not been carried out.

3b	Quantity of ROM mineral production proposed	Iron Ore: 14040 tonne Mn Ore: 24804 tonne	Iron Ore: NIL Mn Ore: 11020 tonne	As reported due to no demand of Iron Ore, development in Iron has not been carried out.
3c	Recovery of sailable/usable mineral from ROM production	Iron Ore: 13260 tonne Mn Ore: 23150 tonne	Iron Ore: NIL Mn Ore: 10680 tonne	NIL.
3d	Quantity of mineral reject generation	Iron Ore: 1654 tonne Mn Ore: 780 tonne	Iron Ore: NIL Mn Ore: 340 tonne	NIL in iron Ore as no production. Less generation of MR is due to less production.
3e	Grade of mineral rejects generation and threshold value declared.	Iron Ore: 45 to 55% Fe Mn Ore: 10 to 15% Mn	Iron Ore: NIL Mn Ore: 10 to 15% Mn	NIL.
3f	Quantity of sub grade mineral generation.	Iron Ore: 1654 tonne Mn Ore: 780 tonne	Iron Ore: NIL Mn Ore: 340 tonne	NIL in iron Ore as no production. Less generation of MR is due to less production. Actual figure as per AR 2017-18.
3g	Grade of sub grade mineral generation	Iron Ore: 45 to 55% Fe Mn Ore: 10 to 15% Mn	Iron Ore: NIL Mn Ore: 10 to 15% Mn	NIL.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized for Iron Ore and manual for Mn Ore	Manual method has been adopted for segregating of Mn ROM. No processing of Iron Ore as no production of Iron ROM during 2017-18	NIL.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposal of any Beneficiation study.	No beneficiation study during the year 2017-18.	NIL.

3j	Provision of drilling and blasting in mineral benches	Blast holes of 110mm dia drill machine fed by compressed air.	No drilling and blasting during 2017-18, as OB and Ore being excavated through excavator only due to soft nature of strata.	NIL.
3k	Provision of mining machineries in mineral benches	Excavator, Loader, Tipper, Mobile Screen, water tanker etc.	Excavator, Loader, Tipper, Mobile Screen, water tanker etc.	NIL.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height and width of the benches have been proposed to 10 mts.	Height and width has been found as per proposal.	NIL.
3m	Total area covered under excavation/pits	At the end of the plan period an area of 2.744 Ha has been proposed under the excavation.	1.586 Ha area as on 01/04/2018.	Actual figure as per AR 2017-18.
3n	Ore to OB ratio for the pit/mine during the year.	Iron Ore: 1:0.06 CuM/tonne Mn Ore: 1:0.90	Iron Ore: NIL Mn Ore: 1:0.20 CuM/tonne	NIL in iron Ore as no development in Iron ore zone.
3o	Total area put in use under different heads at the end of year	Total area put under the different heads like excavation, OB dumping, Mineral Storage, Infrastructure, Road, Green belt etc. was 4.84 Ha.	An area of 3.871 Ha has been degraded due to various mining and related activity.	NIL.

3p	Production of ROM mineral during the last five year period as applicable	Iron Ore: 2013-14: 26460 mt 2014-15: 6005 mt 2015-16: 12150 mt 2016-17: 14040 mt 2017-18: 14040 mt Mn Ore: 2013-14:40026 mt 2014-15:40026 mt 2015-16:21746 mt 2016-17:24492 mt 2017-18:24804 mt	Iron Ore: 2013-14: 26460 mt 2014-15: 6005 mt 2015-16: NIL 2016-17: NIL 2017-18: NIL Mn Ore: 2013-14:10227 mt 2014-15:6149 mt 2015-16:5615.5 mt 2016-17:8200 mt 2017-18:11020 mt	NIL.
3q	General remarks of inspecting officers on method of mining etc.	Fully mechanized opencast method of mining has been proposed to win the ore.	Fully mechanized opencast method of mining is being practiced at mine.	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 proposal of top soil generation during 2017-18. Separate dumping has been proposed for MR and OB.	No top soil generation during 2017-18. OB and MR has been dumped separately as per proposal.	NIL.

4b	Location of topsoil, OB and mineral reject dumps	No proposal of top soil generation during 2017-18. Two new dump near boundary pillar A and C has been proposed namely Dump-4 and Dump-5.	Dumping has been carried at dump number 4. Dumping of the waste over proposed area of dump-5 could not be carried out due to less generation of waste.	There exists three old waste dumps in the lease area namely dump1, dump-2 and Dump-3.
4c	Number of dumps within lease area and outside of lease area	Old dumps: 3 numbers, new dumps:2 numbers, Total: 5 dumps.	Old dumps: 3 numbers, new dumps:1 numbers, Total: 4dumps.	NIL.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposed outside of the UPL.	Found outside of the UPL.	NIL.
4e	Number of active and alive dumps.	Two dumps has been proposed.	One dump observed active.	NIL.
4f	Number of dead dumps.	No specific proposal.	Not applicable as no proposal.	NIL.
4g	Number of dumps established.	No specific proposal.	Dumps are yet to established.	NIL.
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposal of retaining wall and garland drain has been envisaged.	Retaining wall and garland drain has been observed along the dumps.	NIL.
4i	Length of Retaining wall or garland drain all along dumps	No proposal of construction of retaining wall and garland drain during 2017-18.	Retaining wall and garland drain has been observed along the dumps.	NIL.
4j	Number of settling ponds	No proposal of construction of retaining wall and garland drain during 2017-18.	Not applicable as no proposal.	NIL.

4k	Specific comments of inspecting officer on waste dump management	Two new dump near boundary pillar A and C has been proposed namely Dump-4 and Dump-5.	Dumping has been carried at dump number 4. Dumping of the waste over proposed area of dump-5 could not be carried out due to less generation of waste.	There exists three ole waste dumps in the lease area namely dump1, dump-2 and Dump-3.
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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.	An area of around 0.2 Ha was proposed for full extraction of the mineral from mined out are before starting of backfilling during 2017-18.	Backfilling could not be undertaken as proposed area was not exhausted completely.	NIL.
5b	Area under backfilling of mined out area	An area of around 0.2 Ha was proposed to backfilled during reporting year i.e. 2017-18.	Backfilling could not be undertaken as proposed area was not exhausted completely.	NIL.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal of top soil generation, as no fresh area has been proposed to develop during 2017-18.	No top soil generation during 2017-18.	NIL.
5d	Total area fully reclaimed and rehabilitated	No proposal of fully reclamation and rehabilitation during 2017-18.	Not applicable as no proposal.	NIL.

5e	General remarks of inspecting officers on backfilling and reclamation etc.	An area of around 0.2 Ha was proposed to backfilled during reporting year i.e. 2017-18.	Backfilling could not be undertaken as proposed area was not exhausted completely.	NIL.
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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 not been submitted for the year 2017-18.	Violation has been issued vide letter dated 27/03/2019.
6b	Area available for rehabilitation (ha) .	0.075 Ha in safety Zone.	0.075 Ha in safety Zone.	NIL.
6c	afforestation done (ha).	Safety zone plantation over 0.075 Ha area.	As per proposal.	NIL.
6d	No. of saplings planted during the year	188 number of saplings.	679 numbers.	Figures as per AR 2017-18.
6e	Cumulative no .of plants	A total of 564 numbers of saplings have been proposed from 2015-16 to 2017-18.	A total of 3713 numbers of saplings have been planted from 2015-16 to 2017-18.	Figures as per AR 2015-18.
6f	Any other method of rehabilitation	No specific proposal of rehabilitation other than plantation.	Not applicable as no proposal.	NIL.

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	An area of around 0.2 Ha was proposed to backfilled during reporting year i.e. 2017-18.	Backfilling could not be undertaken as proposed area was not exhausted completely.	NIL.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	22260 CuM of waste.	NIL as no backfilling during reporting year 2017-18.	NIL.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No proposal of afforestation over backfilled area.	Not applicable as no proposal.	NIL.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal of making of water reservoir.	Not applicable as no proposal.	NIL.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No specific proposal on reclamation and rehabilitation by any other specific means.	Not applicable as no proposal.	NIL.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal as waste land within lease area.	Not applicable as no proposal.	NIL.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal as waste land within lease area.	Not applicable as no proposal.	NIL.

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal as waste land within lease area.	Not applicable as no proposal.	NIL.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposal has been given for environment monitoring in core and buffer zone.	Environment Monitoring was carried out in core and buffer zone for reporting year.	NIL.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	An area of around 0.2 Ha was proposed to backfilled during reporting year i.e. 2017-18. Proposal has been given for environment monitoring in core and buffer zone.	Backfilling could not be undertaken as proposed area was not exhausted completely. Environment monitoring carried out regularly.	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.	NIL.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Iron Ore: Mechanical by Crushing and Screening. Mn Ore: Manual Sorting.	Manual method has been adopted for segregating of Mn ROM. No processing of Iron Ore as no production of Iron ROM during 2017-18.	NIL.
7c	Different grade of mineral sorted out at mines.	Iron Ore: 45 to 55% Fe and +55% Fe. Mn Ore: 10 to 15% Mn and +15% Mn	No processing of Iron Ore during year 2017-18. Mn ore below 25%Mn, grade between 25 to 35% Mn and +35%Mn has been sorted during 2017-18.	NIL.

7d	Any beneficiation process at mines .	No proposal of beneficiation process during the reporting year 2017-18.	No beneficiation process has been observed.	NIL.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No specific proposal on Mineral Conservation and beneficiation.	No beneficiation within the lease area.	NIL.

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 top soil has been envisaged during 2017-18.	Top soil has not been generated during the reporting year.	NIL.
8b	Concurrent use or storage of topsoil	Not applicable as no proposal of top soil generation during 2017-18.	Not applicable as no proposal.	NIL.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps have been proposed for waste dumping and Mineral reject.	Waste dumping and Mineral reject dumps have been observed separately.	NIL.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Waste quantity of 22260 CuM was proposed for backfilling.	NIL as no backfilling during 2017-18.	NIL.

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	An area of around 0.2 Ha was proposed to reclamation by the way of backfilling during reporting year i.e. 2017-18.	Backfilling could not be undertaken as proposed area was not exhausted completely.	NIL.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	188 numbers of saplings have been proposed to plant during 2017-18.	679 numbers of saplings have been planted.	As per AR 2017-18.
8g	Survival rate	No specific proposal.	81%	As per AR 2017-18.
8h	Water sprinkling on roads to control airborne dust	Water sprinkling has been proposed over roads and in general.	Water sprinkling has been observed.	NIL.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	To improve the aesthetic beauty of mines proposal of plantation has been envisaged.	Plantation has been carried out in the safety zone area as per proposal.	NIL.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
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 have been 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.	Covered under o/c working:1.586 ha, waste dumping:0.398 Ha, Infrastructure : 0.253 Ha.	The land details furnished in AR seems to be in order.	Scrutiny of AR 2017-18.
9d	Scrutiny of Annual return on afforestation	679 numbers of saplings.	Found to be in order.	Scrutiny of AR 2017-18.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	340 tonnes during 2017-18.	340 tonnes during 2017-18.	Scrutiny of AR 2017-18.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Iron Ore: ROM stock-NIL, Total Graded Stock-26247.43 tonnes. Mn Ore: ROM Stock: NIL, Total Graded Stock-8352.23 tonnes	Iron Ore: ROM stock-NIL, Total Graded Stock-26247.43 tonnes. Mn Ore: ROM Stock: NIL, Total Graded Stock-8352.23 tonnes	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: Ex-mine price- Below 55% Fe: Rs 710/-, 55 to 58% Fe: Rs. 1472.00 Mn Ore: Ex Mine Price- Below 25%Mn: Rs 1789.90, 25to 35% Mn: Rs 6764.33, 35 to 46% Mn: Rs 17677 and Dioxide grade: Rs 19635.00 Cost of production: Rs 2482.19 / tonne	The information furnished about the ex-mine price and cost of production under the annual return for the year 2017-18 seems to be in order.	Scrutiny of AR 2017-18.

9h	Scrutiny of Annual return on fixed assets	The value of fixed assets furnished is Rs. 995685/-	Appears to be in order.	Scrutiny of AR 2017-18.
9k	Scrutiny of Annual return on mining machineries	Back Hoe, Dumper, front end loader and Generator.	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 couse position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
MCDR17	Rule 11(1)	27/03/2019			
MCDR17	Rule 26(2)	27/03/2019			
MCDR17	Rule 27(1)	27/03/2019			
MCDR17	Rule 27(2)	27/03/2019			
MCDR17	Rule 35(1)	27/03/2019			

Date :

(DILIP JAIN)

Indian Bureau of Mines