

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

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/IRON-MN/SNG/MCDR-21/BBS

**Mine code :** 40ORI13050

- (i) Name of the Inspecting : **U11** ) **DAYANAND UPADHYAY**  
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Mr. A.N. Prasad (Mgr. Mines)  
Official with  
Designation
- (iv) Date of Inspection : 15/03/2022
- (v) Prev.inspection date : 21/12/2020

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **NUAGAON**
- (b) **Registration NO.** : **IBM/135/2011**
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address  
State : ORISSA  
District : SUNDARGARH  
Village : NUAGAON  
Taluka : BONAI  
Post office : KOIRA  
Pin Code :  
FAX No. : 06767275362  
E-mail : snmbbsr@sify.com, snmbbl@s:  
Phone : 06767212164
- (f) Police Station : Koira
- (g) First opening date : 20/08/1999
- (h) Weekly day of rest : SAT
2. Address for : VILL-NUAGAON  
correspondance PO-KOIRA  
DIST-SUNDERGARH
3. (a) Lease Number : ORI0976  
(b) Lease area : 29.26  
(c) Period of lease : 20  
(d) Date of Expiry : 10/05/2019
4. Mineral worked : IRON ORE Associated  
MANGANESE 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 : PROBODH MOHANTY  
 PROBODH MOHANTY,MINES OWN  
 AT-STATION ROAD,BARBIL  
 DIST-KEONJHAR.758035  
 KEONJHAR ORISSA  
 Phone:  
 FAX :

Agent : T.C.Sei  
 Barbil,Keonjhar,Odisha  
 SUNDARGARH ORISSA  
 Phone: 06767-275362  
 FAX : 06767-212164

## Mining Engineer

Name : Sri. B.Samal,Full Time  
 Qualification : BE Mining  
 Appointment/ : 11/03/2012  
 Termination date

## Geologist

Name : Shri S. Mahanta,Full Time  
 Qualification : MSC Geology  
 Appointment/ : 26/02/2016  
 Termination date

## Manager

Name : Sri A.N. Prasad  
 Qualification : BE Mining  
 Appointment/ : 29/03/2011  
 Termination date

6. Date of approval of Mining	:	Modif.approved Mining Scheme	25/03/2009
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	02/03/2010
	:	Mining Scheme rule 12 MCDR1988	22/05/2014
	:	MP review under 17(1) MCR 2016	14/11/2018

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Not proposed in 2020-21	Nil	Exploration not proposed in 2020-21.
1b	Exploration over lease area for geological axis 1 or 2	Not proposed in 2020-21	Nil	Exploration not proposed in 2020-21.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Exploration not proposed in 2020-21.	Nil	Exploration not proposed in 2020-21.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Exploration not proposed in 2020-21.	Nil	Exploration not proposed in 2020-21.
1e	Balance reserve as on 01/04/20	As per the approved document dated 30.09.2018, Reserve of Iron:688714 T Manganese:224175T Resource of iron :564347 T Manganese:130462 T Total Reserve/resources of Iron:1239261T , Manganese: 354637 T	As on 01.03.2022, Reserve of iron:674914 T Manganese:222841 T Resource of iron :564347 T Manganese:130462 T Total Reserve/resources of iron :1239261T, Manganese: 353063T	As on 01.03.2022, Reserve of iron:674914 T Manganese:222841 T Resource of iron :564347 T Manganese:130462 T Total Reserve/resources of iron :1239261T, Manganese: 353063T
1f	General remarks of inspecting officers on geology, exploration etc	Exploration not proposed in 2020-21.	Nil	Exploration not proposed in 2020-21.

## Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	196 E-22 W, 260N-160 S	Location of development w.r.t. lease area, 196 E-22 W, 260N-160 S	Location of development w.r.t. lease area, 196 E-22 W, 260N-160 S
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	separate benches in OB and mineral	Separate benches in OB and mineral are maintained.	Separate benches in OB and mineral are maintained.
2c	Stripping ratio or ore to OB ratio	1:3.2 t/cu.m.	1:2.28 t/cu.m.	Due to irregular nature of ore deposit and less developemnt and mineral production.
2e	Quantity of overburden generation in m3	121515m <sup>3</sup>	49440.90m <sup>3</sup>	Due to irregular nature of ore deposit and less developemnt and mineral production.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Location of development 196 E-22 W, 260N-160 S	Location of development w.r.t. lease area, 196 E-22 W, 260N-160 S	Location of development w.r.t. lease area, 196 E-22 W, 260N-160 S

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two pits are proposed for iron and manganese production.	Two pits are present in ML area for iron and manganese production.	Two pits are present in ML area for iron and manganese production.
3b	Quantity of ROM mineral production proposed	Iron -95918 T Mn -11025 T	Iron - 4000.00 T Mn -973.850 T	ROM Production is less due to low market demand.
3c	Recovery of sailable/usable mineral from ROM production	Iron 55125.00 T Manganese - 7644.00 T	Iron - 0.00 T Manganese -973.850 T	Iron - 0.00 T Manganese -973.850 T
3d	Quantity of mineral reject generation	Iron - 40793 T Manganese - 3381	Iron - 4000.00 Manganese -0.000	Iron - 4000.00 Manganese -0.000

3e	Grade of mineral rejects generation and threshold value declared.	Grade: Fe> 45 to < 55% Threshold :Fe 45 % Grade: Mn> 10 to < 20% Threshold : Manganese 10 %	Grade: Fe> 45 to < 55% Threshold :Fe 45 % Grade: Mn> 10 to < 20% Threshold : Manganese 10 %	Grade: Fe> 45 to < 55% Threshold :Fe 45 % Grade: Mn> 10 to < 20% Threshold : Manganese 10 %
3f	Quantity of sub grade mineral generation.	Iron - 40793 T Manganese - 3381	Iron - 4000.00 Manganese -0.000	Iron - 4000.00 Manganese -0.000
3g	Grade of sub grade mineral generation	Grade: Fe> 45 to < 55% Threshold :Fe 45 % Grade: Mn> 10 to < 20% Threshold : Manganese 10 %	Grade: Fe> 45 to < 55% Threshold :Fe 45 % Grade: Mn> 10 to < 20% Threshold : Manganese 10 %	Grade: Fe> 45 to < 55% Threshold :Fe 45 % Grade: Mn> 10 to < 20% Threshold : Manganese 10 %
3h	Manual / Mechanised method adopted for segregating from ROM	Manual & Mechanised	Manual & Mechanised	Manual & Mechanised
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 is proposed.	Drilling and blasting is carried out as per proposal.	Drilling and blasting is carried out as per proposal.
3k	Provision of mining machineries in mineral benches	Excavator with tipper combination	Excavator with tipper combination	Excavator with tipper combination
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	3 meter in manganese bench & 5 meter in iron bench	3 meter in manganese bench & 5 meter in iron bench	3 meter in manganese bench & 5 meter in iron bench .

3m	Total area covered under excavation/pits	10.08 ha during plan period.	9.61 Ha area has been covered under excavation pits.	9.61 Ha area has been covered under excavation pits.
3n	Ore to OB ratio for the pit/mine during the year.	1:3.2 t/cu.m.	1:2.28 t/cu.m.	Due to irregular nature of ore deposit and less developemnt and mineral production.
3o	Total area put in use under different heads at the end of year	total area put to use at the end of plan period is 19.801 ha	18.7 ha area covered under excavation pit.	18.7 ha area covered under excavation pit.
3p	Production of ROM mineral during the last five year period as applicable	Iron ore 2015-16: 105840 t 2016-17: 113120 t 2017-18: 117600 t 2018-19: 140224 t 2019-20: 92655t 2020-21:95918t Manganese ore 2015-16: 4004 t 2016-17: 4513 t 2017-18: 5096 t 2018-19: 8246 t 2019-20: 10050 t 2020-21:11025t	Iron ore 2015-16: 40000 t 2016-17: 11000 t 2017-18: 9090 t 2018-19: 4700 t 2019-20: 3000 t 2020-21:4000t Manganese ore 2015-16: 4000 t 2016-17: 185 t 2017-18: 798 t 2018-19: Nil 2019-20: 360 t 2020-21:973.85t	Deviation is due to less market demand.
3q	General remarks of inspecting officers on method of mining etc.	Two pits are proposed for iron and manganese production	Two pits are present in ML area for iron and manganese production.	Two pits are present in ML area for iron and manganese production.

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Solid Waste Management - Dumping:

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Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of OB and mineral reject	Separate dumping of OB and mineral reject are carried out.	Separate dumping of OB and mineral reject are carried out.
4b	Location of topsoil, OB and mineral reject dumps	OB dump: 26 E to 112 W & 196 N to 20 S. Top soil-Nil	OB dump: 26 E to 112 W & 196 N to 20 S.	OB dump: 26 E to 112 W & 196 N to 20 S.
4c	Number of dumps within lease area and outside of lease area	1 Dump within the ML area.	1 Dump within the ML area.	1 Dump within the ML area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL.	Outside UPL.	Dump lies outside UPL.
4e	Number of active and alive dumps.	1 Dump within the ML area.	1 Dump within the ML area.	1 Dump within the ML area.
4f	Number of dead dumps.	Not proposed.	Nil	Nil.
4g	Number of dumps established.	Not proposed.	Nil.	Nil.
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Retaining wall and a garland drain has been maintained.	Retaining wall and a garland drain has been maintained.
4i	Length of Retaining wall or garland drain all along dumps	Maintainance.	Retaining wall and a garland drain has been maintained.	Retaining wall and a garland drain has been maintained.
4j	Number of settling ponds	Not proposed.	Nil	Nil.
4k	Specific comments of inspecting officer on waste dump management	1 Dump within the ML area.	1 Dump within the ML area.	1 Dump within the ML area.

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Solid Waste Management - Backfilling:

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Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Not proposed as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
5b	Area under backfilling of mined out area	Not proposed as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not proposed as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
5d	Total area fully reclaimed and rehabilitated	Not proposed as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Not proposed as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.

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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 provision of MCDR 2017.	Annual return on PMCP has been submitted.	Annual return on PMCP has been submitted.
6b	Area available for rehabilitation (ha) .	Not proposed.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6c	afforestation done (ha).	0.3 ha	0.3 ha	Afforestation done in 0.3 ha
6d	No. of saplings planted during the year	750 nos	3000 nos	No. of saplings planted during the year 3000 nos.



6e	Cumulative no .of plants	Not specfird.	45500 nos	Cumulative nos. of saplings planted in the lease area is about 45500 nos
6f	Any other method of rehabilitation	Not proposed.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6g	Cost incurred on watch and care during the year	Not specified.	Cost incurred on watch & care during the year Rs 15000/-	Cost incurred on watch & care during the year Rs 15000/-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Not proposed.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not proposed.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Not proposed.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not proposed.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	0.1 ha by plantation.	0.1 ha by plantation.	0.1 ha by plantation.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.1 ha by plantation.	0.1 ha by plantation.	0.1 ha by plantation.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	0.1 ha by plantation.	0.1 ha by plantation.	0.1 ha by plantation.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring	Quarterly monitoring	Quarterly monitoring
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Reclamation and rehabilitation not proposed.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.

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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Gradewise sorting	Gradewise sorting is being practiced.	Gradewise sorting is being practiced.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual & Mechanised.	Manual & Mechanised.	Manual for Mn ore mechanised for Iron ore.
7c	Different grade of mineral sorted out at mines.	+10%% Mn and +45% to 55% Fe.	+10%% Mn and +45% to 55% Fe.	+10%% Mn and +45% to 55% Fe.

7d	Any beneficiation process at mines .	Not proposed.	Only crushing and screening Of ROM is being practiced.	Only crushing and screening Of ROM is being practiced.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Manual & Mechanised sorting.	Manual & Mechanised sorting.	Manual & Mechanised sorting.

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**Environment :**

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not proposed.	Nil	Mineable area exposes lateritic iron ore and manganese ore.
8b	Concurrent use or storage of topsoil	Not proposed.	Nil.	Mineable area exposes lateritic iron ore and manganese ore.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for overburden and rejects	Separate dumps for overburden and rejects are maintained.	Separate dumps for overburden and rejects are maintained.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not proposed as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not proposed as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	750 nos	3000 nos of saplings.	3000 nos of saplings.
8g	Survival rate	Not specified.	Survival rate 80%	Survival rate 80%
8h	Water sprinkling on roads to control airborne dust	Water tankers	Water tankers are routinely used.	Water tankers are routinely used.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	750 nos. of plantation.	750 nos. of plantation in 2020-21. Aesthetic beauty in and around mined area is maintained plantation.	Aesthetic beauty in and around mined area is maintained plantation.

#### Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly & Annual returns are being regularly submitted by lessee.	Monthly & Annual returns are being regularly submitted by lessee.	Monthly & Annual returns are being regularly submitted by lessee.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	The employment status of mining engineer, geologist & mine manager have been furnished in the annual return	Mining engineer, geologist & mine managers were employed in the mine.	Mining engineer, geologist & mine managers were employed in the mine.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining-9.61 ha, Mineral storage-1.42 ha, Road-0.35 ha, Infrastructure -0.30 ha, Waste dump-4.75 ha, others-1.87 ha	Mining-9.61 ha, Mineral storage-1.42 ha, Road-0.35 ha, Waste dump-4.75 ha, others-1.87 ha	Mining-9.61 ha, Mineral storage-1.42 ha, Road-0.35 ha, Infrastructure-0.30 ha, Waste dump-4.75 ha, others-1.87 ha

9d	Scrutiny of Annual return on afforestation	3000 nos. of saplings	3000 nos. of saplings	3000 nos. of saplings
9f	Scrutiny of Annual return on ROM stock and/or graded ore	closing stock Below 55% Fe Fines 57571.24T	closing stock Below 55% Fe Fines 57571.24T	closing stock Below 55% Fe Fines 57571.24T
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine price below 55% Fe- Rs 1635/- Cost of production-Rs 3461.39/-	Ex mine price below 55% Fe- Rs 1635/- Cost of production-Rs 3461.39/-	Ex mine price below 55% Fe- Rs 1635/- Cost of production-Rs 3461.39/-
9h	Scrutiny of Annual return on fixed assets	Fixed asset: Rs 9294459/-	Fixed asset: Rs 9294459/-	Fixed asset: Rs 9294459/-
9k	Scrutiny of Annual return on mining machineries	Back Hoe-1, Rock drill-1, Dumper 10T capacity-4, Water Tnker-1	Back Hoe-1, Rock drill-1, Dumper 10T capacity-4, Water Tnker-1	Back Hoe-1, Rock drill-1, Dumper 10T capacity-4, Water Tnker-1

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**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

**Date :**

(DAYANAND UPADHYAY)

Indian Bureau of Mines