

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

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

Mine file No : ORI/IRON/KJR/MCDR-86/BBS

Mine code : 30ORI08115

- (i) Name of the Inspecting Officer and ID No. : SKM1 ) SANJIB KUMAR MOHAPATRA
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine Official with Designation : Sri Manas Kumar Sahu, Mines Manager
- (iv) Date of Inspection : 20/06/2022
- (v) Prev.inspection date : 06/10/2021

**PART-I : GENERAL INFORMATION**

1. (a) Mine Name : NAYAGARH IRON ORE MINE
- (b) Registration NO. : IBM/4639/2011
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : NAYAGARH
- Taluka : JHUMPURA
- Post office : DABUNA
- Pin Code : 758086
- FAX No. : 0674-2394794
- E-mail : sp@kcp.in
- Phone : 0674-2392078, 2392099
- (f) Police Station : Jhumpra
- (g) First opening date : 17/09/2018
- (h) Weekly day of rest : SUN
2. Address for correspondence : Village-Nayagarh  
Tahasil-Jhumura  
Dist-Keonjhar, Odisha
3. (a) Lease Number :
- (b) Lease area : 24.570 Ha
- (c) Period of lease : 50 yrs
- (d) Date of Expiry : 10/01/2067
4. Mineral worked : IRON ORE Main

## 5. Name and Address of the

Lessee : K. C. PRADHAN  
 K.C.PRADHAN, MINES  
 OWNER, PLOT NO.1262 ROAD-  
 8, UNIT-9 BHUBNESHWAR ORISSA  
 Phone:0674-2394794  
 FAX :0674-2392078

Owner : K.C.PRADHAN  
 K.C.PRADHAN, MINES OWNER  
 PLOT NO-1262, ROAD-8 UNIT-9  
 BHUBNESHWAR ORISSA  
 Phone: 0674-2394794  
 FAX : 0674-2392078

Agent : SIDDARTHA PRADHAN  
 KHURDA ORISSA  
 Phone: 9439066666  
 FAX : 0674-2394794

## Mining Engineer

Name : Manas Kumar Sahu, Full Time  
 Qualification : B Tech in Mining Engg  
 Appointment/ : 16/09/2018  
 Termination date

## Geologist

Name : Sachdananda Giri, Full Time  
 Qualification : MSC Geology  
 Appointment/ : 11/11/2019  
 Termination date

## Manager

Name : Manas Kumar Sahu  
 Qualification : B Tech Mining Engineer  
 Appointment/ : 16/09/2018  
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	MP modif under 17(3) MCR 2016	27/03/2018
		MP modif under 17(3) MCR 2016	15/07/2020
		MP review under 17(1) MCR 2016	22/11/2021

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	4 nos of RC bore hole were drilled with a total of 24 mtrs during 2020-21.	No backlog of previous year. 4 nos of RC bore hole were drilled with a total of 24 mtrs during 2020-21.
1b	Exploration over lease area for geological axis 1 or 2	Entire area of 24.570 Ha covered under G1 level of exploration.	Entire area of 24.570 Ha covered under G1 level of exploration.	Entire area of 24.570 Ha covered under G1 level of exploration.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil	NA	NA
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Entire area of 24.570 Ha covered under G1 level of exploration.	Entire area of 24.570 Ha covered under G1 level of exploration.
1e	Balance reserve as on 01/04/20	4666912 tons	4666912 tons	4666912 tons as on 01/04/2022
1f	General remarks of inspecting officers on geology, exploration etc		There was no exploration proposal during the reporting year. However the entire lease has been already explored under G1 level of exploration.	There was no exploration proposal during the reporting year. However the entire lease has been already explored under G1 level of exploration.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	2418260N-2418517N to 336624E-336832E	2418314N-2418467N to 336650E-336796E	The lesee has carried out as per the proposal but could not achieve the complete proposal due to non obtaining of environmental clearance of enhanced production proposal.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Ore-4 OB-1	Ore-4 OB-1	The lesee has carried out as per the proposal but could not achieve the complete proposal due to non obtaining of environmental clearance of enhanced production proposal.
2c	Stripping ratio or ore to OB ratio	1:0.04	1:0.019	The lesee has carried out as per the proposal but could not achieve the complete proposal due to non obtaining of environmental clearance of enhanced production proposal. Hence stripping ratio could not be achieved.
2d	Quantity of topsoil generation in m3	672 Cum	376 Cum	The lesee has carried out as per the proposal but could not achieve the complete proposal due to non obtaining of environmental clearance of enhanced production proposal.

2e	Quantity of overburden generation in m3	10560Cum-Insitu 11220Cum-Float	1557 Cum-Insitu	The lesee has carried out as per the proposal but could not achieve the complete proposal due to non obtaining of environmental clearance of enhanced production proposal. Hence generation of waste could not be achieved.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		The lesee has carried out as per the proposal but could not achieve the complete proposal due to non obtaining of environmental clearance of enhanced production proposal. Hence generation of top soil,waste and proposed production could not be achieved.	The lesee has carried out as per the proposal but could not achieve the complete proposal due to non obtaining of environmental clearance of enhanced production proposal. Hence generation of top soil,waste and proposed production could not be achieved.

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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	02	01	The lesee could not carried the float quarry due to not obtaining statutory clearances during the reporting year.

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3b	Quantity of ROM mineral production proposed	300135 tons	79800 tons	Although the lesee has carried out as per the proposal but could not achieved the proposed production due to lack of statutory clearances during the reporting year.
3c	Recovery of sailable/usable mineral from ROM production	80% in Insitu & 60% in Float	80% in Insitu.	The lesee could not carried out production from the proposed float quarry due to want of statutory clearances.
3d	Quantity of mineral reject generation	28875 tons	1230 tons	Although the lesee has carried out as per the proposal but could not achieved the proposed production due to lack of statutory clearances during the reporting year. Hence there was a deviation in production in mineral reject.
3e	Grade of mineral rejects generation and threshold value declared.	+45 % Fe to 58 % Fe for Iron +10 % Mn to 25 % Mn for Manganese	+45 % Fe to 58 % Fe for Iron +10 % Mn to 25 % Mn for Manganese	+45 % Fe to 58 % Fe for Iron +10 % Mn to 25 % Mn for Manganese
3f	Quantity of sub grade mineral generation.	Nil	Nil	Nil
3g	Grade of sub grade mineral generation	NA	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	Mechanized

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Nil	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	Yes, Jack Hammer 115 mm dia Drills. Blasting proposed with LD explosives of 25mm dia. & 83mm dia. with detonating cord & milli second delay detonators.	Yes, Jack Hammer 115 mm dia. Drills. Blasting proposed with LD explosives of 25mm dia. with detonating cord & milli second delay detonators.	Yes, Jack Hammer 115 mm dia. Drills. Blasting proposed with LD explosives of 25mm dia. & 83mm dia. with detonating cord & milli second delay detonators.
3k	Provision of mining machineries in mineral benches	Yes, Shovel and Dumper combination proposed	Yes, Shovel and Dumper combination carried out.	Yes, Shovel and Dumper combination carried out.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	The height of the bench proposed is 6m.	The height of the bench is suitable for the method of mining proposed in review of mining plan.	The height of the bench is suitable for the method of mining proposed in review of mining plan.
3m	Total area covered under excavation/pits	7.732 Ha.	3.909 Ha.	3.909 Ha.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.07	1:0.019	1:0.019
3o	Total area put in use under different heads at the end of year	As per the approved review of mining plan , the total area under different heads at the end of plan period will be 14.155 Ha.	As per the approved review of mining plan , the total area under different heads at the end of the reporting year is about 9.472 Ha.	As per the approved review of mining plan , the total area under different heads at the end of the reporting year is about 9.472 Ha.

3p	Production of ROM mineral during the last five year period as applicable	2017-18- Nil 2018-19- 79998 mt. 2019-20- 79998 mt. 2020-21- 300094 mt. 2021-22- 300135 mt.	2017-18- Nil 2018-19- 60640 mt. 2019-20- 79280 mt. 2020-21- 79380 mt. 2021-22- 79800 mt.	2017-18- Nil 2018-19- 60640 mt. 2019-20- 79280 mt. 2020-21- 79380 mt. 2021-22- 79800 mt.
3q	General remarks of inspecting officers on method of mining etc.		The lesee has carried out as per the proposal but could not achieved the proposed production due to lack of statutory clearances during the reporting year.	The lesee has carried out as per the proposal but could not achieved the proposed production due to lack of statutory clearances during the reporting year.

#### Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate stacking of top soil, OB & mineral reject was proposed.	Separate stacking of soil, OB & mineral reject were subsequently blended with sale bale ore and sold out of a regular manner.	Separate stacking of top soil, OB & mineral reject was carried out and mineral reject were subsequently blended with sale bale ore and sold out of a regular manner.
4b	Location of topsoil, OB and mineral reject dumps	Top soil: N2418641- N2418676 to E337203 to E337237 OB: N2418122- N2418172 to E336606 to E336680 Mineral Reject: N2418258- N2418331 to E336924 to E336989	Top soil: N2418654- N2418672 to E337210 to E337237 OB: N2418145-N2418167 to E336646 to E336674 Mineral Reject: N2418258-N2418331 to E336924 to E336989	Top soil: N2418654-N2418672 to E337210 to E337237 OB: N2418145- N2418167 to E336646 to E336674 Mineral Reject: N2418258-N2418331 to E336924 to E336989



4c	Number of dumps within lease area and outside of lease area	One - Inside	One - Inside	One - Inside
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Out side UPL proposed.	Outside UPL carried out.	Outside UPL carried out.
4e	Number of active and alive dumps.	One	One	One
4f	Number of dead dumps.	Nil	Nil	Nil
4g	Number of dumps established.	Nil	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes, proposed	Yes, carried out.	Yes, carried out.
4i	Length of Retaining wall or garland drain all along dumps	195 mtr	195 mtr.	195 mtr.
4j	Number of settling ponds	01	01	01
4k	Specific comments of inspecting officer on waste dump management		Separate stacking of top soil, OB & mineral reject was carried out and mineral reject were subsequently blended with sale bale ore and sold out of a regular manner. retaining wall has been constructed as per the proposal around the waste dump during the reprting year.	Separate stacking of top soil, OB & mineral reject was carried out and mineral reject were subsequently blended with sale bale ore and sold out of a regular manner. retaining wall has been constructed as per the proposal around the waste dump during the reprting year.

#### Solid Waste Management - Backfilling:

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.	Nil	No proposal during the reporting year.
5b	Area under backfilling of mined out area	Not proposed as pit is not exhausted.	Nil	No proposal during the reporting year.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Only 672 Cum of top soil generation was proposed.	376 Cum generated during the reporting year.	376 Cum generated during the reporting year.
5d	Total area fully reclaimed and rehabilitated	Mine is not matured for reclamation and rehabilitation. Hence no proposal.	Nil	Mine is not matured for reclamation and rehabilitation. Hence no proposal.
5e	General remarks of inspecting officers on backfilling and reclamation etc.		As the mine is not matured during the reporting year, no proposal for reclamation and rehabilitation was proposed.	As the mine is not matured during the reporting year, no proposal for reclamation and rehabilitation was proposed.

#### Progressive Mine Clousre Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	As per Rule 26(2) Annual PMCP report to be submitted before 1st day of July of Every Year.	Submitted within the stipulated time period for the reporting year.	Submitted within the stipulated time period for the reporting year.
6b	Area available for rehabilitation (ha) .	Nil	Nil	Nil
6c	afforestation done (ha) .	0.174 Ha	1.0 Ha	1.0 Ha

6d	No. of saplings planted during the year	435 sapplings	1500 sapplings	1500 sapplings
6e	Cumulative no .of plants	1740 sapplings	4820 sapplings	4820 sapplings
6f	Any other method of rehabilitation	Nil	Nil	Nil
6g	Cost incurred on watch and care during the year	Nil	Nil	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Nil	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Nil	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	Nil	Nil

6m	Compliance of rehabilitation of waste land within lease (i) afforestation	0.174 Ha with 435 sapplings	1.0 Ha with 1500 sapplings	1.0 Ha with 1500 sapplings
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	0.174 Ha with 435 sapplings	1.0 Ha with 1500 sapplings	1.0 Ha with 1500 sapplings
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	Plantation	Plantation	Plantation
6p	Compliance of environmental monitoring (core zone and buffer zone)	Air, Noise and Water quality monitoring will be done during the year within the lease area.	Air, Noise and Water quality monitoring carried out as per the proposal during the reporting year.	Air, Noise and Water quality monitoring carried out as per the proposal during the reporting year.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		The lessee has carried out afforestation and environmental monitoring as per the proposal during the reporting year.	The lessee has carried out afforestation and environmental monitoring as per the proposal during the reporting year.

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe was proposed.	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe sorting is being practiced.	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe sorting is being practiced.

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanised	Mechanised	Mechanised method of sorting is being practiced.
7c	Different grade of mineral sorted out at mines.	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe was proposed.	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe sorting is being practiced.	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe sorting is being practiced.
7d	Any beneficiation process at mines	Nil	Nil	No beneficiation process was proposed. Only crushing and screening is being carried out.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		No beneficiation process was proposed. Only crushing and screening is being carried out.	No beneficiation process was proposed. Only crushing and screening is being carried out.

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**Environment:**

Sl.No.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	672 cum propped during the reporting year	376 cum generated and subsequently utilized.	the could not achieved the proposed top soil generation due to less development as a result of not obtained statutory clearances during the reporting year.

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8b	Concurrent use or storage of topsoil	672 cum proposed during the reporting year	376 cum generated and subsequently utalized.	the could not achieved the proposed top soil generation due to less development as a result of not obtained statutory clearances during the reporting year. However the generated topsil has been utalized during the reporting year.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate stacking of top soil, OB, mineral reject & fines was proposed during the reporting year.	Separate stacking of top soil, OB, mineral reject & fines was carried out and mineral reject were subsequently blended with sale bale ore and sold out of a regular manner.	Separate stacking of top soil, OB, mineral reject & fines was carried out and mineral reject were subsequently blended with sale bale ore and sold out of a regular manner.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Nil	Nil	No such proposal during the reporting year.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	Nil	No such proposal during the reporting year.

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	435 sapplings during the reporting year	1500 sapplings during the year and 4820 nos of sapplings cummulatively planted within th lease area till the reporting year.	1500 sapplings during the year and 4820 nos of sapplings cummulatively planted within th lease area till the reporting year.
8g	Survival rate	Not proposed	82 % survival rate	82 % survival rate
8h	Water sprinkling on roads to control airborne dust	Water Sprinkling on haul road were proposed.	Water sprinkling by water tanker over haul roads has been carried out.	Water sprinkling by water tanker over haul roads has been carried out.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Lessee has planted 1500 no of sapling within the lease area and water sprinkling by water tanker over haul roads to minimize the fugutive dust emmision. This sustains the asthetic beauty of the mine area.	Lessee has planted 1500 no of sapling within the lease area and water sprinkling by water tanker over haul roads to minimize the fugutive dust emmision. This sustains the asthetic beauty of the mine area.

#### Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly returns for the month of May 2022 and annual return for FY 2021-22 have been submitted within the stipulated time period.	Monthly returns for the month of May 2022 and annual return for FY 2021-22 have been submitted within the stipulated time period.	Monthly returns for the month of May 2022 and annual return for FY 2021-22 have been submitted within the stipulated time period.

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Sri Manas Kumar Sahu- Mines Manager cum Mining Engineer Sri Satya ranjan Mohanta- Geologist	Sri Manas Kumar Sahu- Mines Manager cum Mining Engineer Sri Satya ranjan Mohanta- Geologist Mines manager, Mining engineer & Geologist were present during the inspection.	Sri Manas Kumar Sahu- Mines Manager cum Mining Engineer Sri Satya ranjan Mohanta- Geologist Mines manager, Mining engineer & Geologist were present during the inspection.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit =3.909ha OB Dump =0.077 ha Infrastructure & Road=2.466 ha Mineral Storage =1.080 ha Plantation= 1.00 ha	Pit =3.909ha OB Dump =0.077 ha Infrastructure & Road=2.466 ha Mineral Storage =1.080 ha Plantation= 1.00 ha	Pit =3.909ha OB Dump =0.077 ha Infrastructure & Road=2.466 ha Mineral Storage =1.080 ha Plantation= 1.00 ha
9d	Scrutiny of Annual return on afforestation	435 sapplings	1500 sapplings	1500 sapplings
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	1230 tons	1230 tons	1230 tons. the lessee could not able to achieve the targeted production during the reporting year due to lack of statutory clearances.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	79800 tons ROM produced during the reporting year 2021-22.	79800 tons ROM produced during the reporting year 2021-22.	79800 tons ROM produced during the reporting year 2021-22.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production: Rs. 2141.28/-. Grade wise Ex mine price for lumps and fines are furnished in Annual return.	Cost of production: Rs. 2141.28/-. Grade wise Ex mine price for lumps and fines as furnished in Annual return has been scrutinised.	Cost of production: Rs. 2141.28/-. Grade wise Ex mine price for lumps and fines as furnished in Annual return has been scrutinised.
9h	Scrutiny of Annual return on fixed assets	Fixed Asset: Rs 29791213/-	Fixed Asset: Rs 29791213/-	Fixed Asset: Rs 29791213/-



9k	Scrutiny of Annual return on mining machineries	Shovel-3Nos, Wheel loader: 1 nos, Dumper: 4 nos, Backhoe: 1 nos, Rock drill: 1no Water tanker: 1 nos Generator: 1no.	Shovel-3Nos, Wheel loader: 1 nos, Dumper: 4 nos, Backhoe: 1 nos, Rock drill: 1no Water tanker: 1 nos Generator: 1no.	Shovel-3Nos, Wheel loader: 1 nos, Dumper: 4 nos, Backhoe: 1 nos, Rock drill: 1no Water tanker: 1 nos Generator: 1no.
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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 : 03/08/2022

(SANJIB KUMAR MOHAPATRA)

Indian Bureau of Mines



03/08/2022