

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/SNG/MCDR-6/BBS

Mine code : 30ORI13034

- (i) Name of the Inspecting : **SKM**) **SANJAY KUMAR MAHAPATRA**
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine : **SHRI PRAMOD KUMAR SAHOO** , MINES MANAGER
Official with
Designation
- (iv) Date of Inspection : 11/01/2023
- (v) Prev.inspection date : 02/06/2022

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **RAIKELA**
- (b) **Registration NO.** : **IBM/5796/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : RAIKELA
- Taluka : BONAI
- Post office : DENGULA
- Pin Code :
- FAX No. : 06767-275795
- E-mail : sahuo_ore@yahoo.co.in
- Phone : 06767-275520
- (f) Police Station : Koira
- (g) First opening date : 23/08/1993
- (h) Weekly day of rest : SUN
2. Address for : VILL. RAIKELA, PO DENGULA
correspondance POLICE STATION. KOIRA DIST. SUNDERGARH
ORISSA, PIN-770048 PHONE. 30896
3. (a) Lease Number : ORI0143
- (b) Lease area : 67.59
- (c) Period of lease : 50
- (d) Date of Expiry : 01/07/2041
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : M/S GEETARANI MOHANTY
 BARBIL KEONJHAR ORISSA
 Phone:
 FAX :

Owner : SRINIVAS SAHOO
 AT/PO. STATION ROAD BARBIL
 KEONJHAR ORISSA
 Phone: 06767-75896
 FAX : 06767-75896

Agent : SHRI SUNIL PATEL
 BARBIL KEONJHAR ODISHA
 SUNDARGARH ORISSA
 Phone: 7008806558
 FAX :

Mining Engineer

Name : SHRI SUSHIL KUMAR PRADHAN, Full Time
 Qualification : BE MINING
 Appointment/ : 24/06/2019
 Termination date

Geologist

Name : SHRI SUSANTA MAHARANA, Full Time
 Qualification : MSC GEOLOGY
 Appointment/ : 01/07/2020
 Termination date

Manager

Name : P.K.SAHOO
 Qualification : AMIE MINING
 Appointment/ : 03/09/2002
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	11/10/1999
Plan/Scheme of Mining		Modif.approved Mining Scheme	08/05/2003
		Mining Scheme rule 12 MCDR1988	17/02/2005
		Mining Scheme rule 12 MCDR1988	22/03/2010
		Modif.of approved Mining Plan	15/06/2016
		Modif.approved Mining Scheme	20/09/2019
		MP review under 17(1) MCR 2016	18/11/2020
		Modif.approved Mining Scheme	01/07/2021
		MS modif under MCR 1960	06/01/2022

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	during previous year ie 2020-21, 25 nos of boreholes proposed	15 nos of boreholes drilled	VIOLATION LETTER WAS ISSUED VIDE LETTER NO MCDR-MiFLOFE/3/2022-BBS-IBM_RO_BBS DATED 27.01.2023 FOR THE DEVIATION OBSERVED.
1b	Exploration over lease area for geological axis 1 or 2	25 nos of borehole proposed for G1 level of exploration during the year 2021-22	15 no of borholes	VIOLATION OF RULR 11(1) OF MCDR 2017 ISSUED VIDE LETTER NO MCDR-MiFLOFE/3/2022-BBS-IBM_RO_BBS DATED 27.01.2023 FOR THE DEVIATION OBSERVED.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NOT SPECIFIED	M/s Natural Resources Exploration and Mining Pvt. Ltd The Word Consultant service Rs.- 7065235/- and Rs,-5585620	
1d	Balance area to be explored to bring Geological axis in 1 or 2	IT WAS PROPOSED TO DRILL 25 BORE HOLES.	(5.55ha to be explored to G1 level) AS 15 BORE HOLES DRILLED.	Issued violation under rule 11(1) of MCDR 2017
1e	Balance reserve as on 01/04/20		As on 1/4/2022 Reserves 73190135T Resources 13980220 T	

1f	General remarks of inspecting officers on geology, exploration etc	The main rock types found in this mines are BHQ, Hematite , Lateritic Iron Ore and ferruginous laterite. The strike varies from N300E - S300W to N550E - S550W. The dip is generally westerly but varying from 400 to 450 and in few isolated locations the dip amount is 500. The entire area is yet to be explored under G1 level of exploration.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Top Quarry: - N-2419632 to 2420255 E-311556 to 312045 Middle Quarry: - N-2419727to 2420028 E-311773 to 312168	Broadly as per the proposal	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in topsoil, overburden and minerals are proposed	AS PROPOSED.	
2c	Stripping ratio or ore to OB ratio	1:0.049	1:0.031	
2d	Quantity of topsoil generation in m3	NO PROPOSAL	NIL	

2e	Quantity of overburden generation in m3	89530	94000	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	OPEN CAST MECHANISED	Mine development is carried out by opencast mining methods in top and middle quarry.	Mine development is carried out by opencast mining methods in top and middle quarry.OPEN CAST MECHANISED METHOD.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Top quarry and middle quarryas per last approved document	Top quarry and middle quarry	
3b	Quantity of ROM mineral production proposed	2990000MT	2981000T	
3c	Recovery of sailable/usable mineral from ROM production	2139633 T	2396450T	
3d	Quantity of mineral reject generation	807606 T	547550 TONNE	
3e	Grade of mineral rejects generation and threshold value declared.	45-55% Fe	45-55% Fe	
3f	Quantity of sub grade mineral generation.	850367T	547550T	
3g	Grade of sub grade mineral generation	same as mineral reject	same as mineral reject	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method	Mechanized method	

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	no such proposal	NIL	
3j	Provision of drilling and blasting in mineral benches	Drilling and blasting proposed	Drilling and blasting carried out	
3k	Provision of mining machineries in mineral benches	Excavator with dumper	Excavator with dumper	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	width 15m height 10m	MAINTAINED.	NIL
3m	Total area covered under excavation/pits	as per approved MRMP (dt 6/1/2022) total area covered under excavaion/pits is 34.823ha	Broadly as per the proposal	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.049	1:0.031	

3o	Total area put in use under different heads at the end of year	as per last approved document the area under mining 34.823ha Overburden/Waste Dumping 2.716ha Mineral Storage 10.217 Infrastructure (Workshop, Administrative Building etc.)0.600 ha Roads 2.234 ha Others to Specify (safety zone and protective measures 2.977ha	Broadly as per the proposal	
3p	Production of ROM mineral during the last five year period as applicable	2017-18= 864043.0MT 2018-19= 864058.0MT 2019-20=1982165 MT 2020-21= 2990000 MT 2021-22=2990000 MT	2017-18= Nil 2018-19= Nil 2019-20=575700MT 2020-21= 1214000 MT 2021-22=2981000 MT	
3q	General remarks of inspecting officers on method of mining etc.		The method of mining is A category and is fully mechanised. The ROM production is carried out by open cast mining methods.	The method of mining is A category and is fully mechanised. The ROM production is carried out by open cast mining methods.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	seperate dumping of OB and mineral reject is Proposed no proposal for general of top soil	AS PER PROPOSAL.	
4b	Location of topsoil, OB and mineral reject dumps	N-2419720 to 2419843 E-312262 to 312405	BROADLY AS PER PROPOSAL.	As per last approved document location of waste dump
4c	Number of dumps within lease area and outside of lease area	within lease 01 outside lease 0	AS PER PROPOSAL.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	outside Ultimate Pit Limit	outside Ultimate Pit Limit	
4e	Number of active and alive dumps.	01	01	
4f	Number of dead dumps.	NIL	NIL	
4g	Number of dumps established.	NIL	NIL AS NOT APPLICABLE	
4h	Whether Retaining wall or garland drain all along dumps are there.	PROPOSED	CARRIED AS PER PROPOSAL.	
4i	Length of Retaining wall or garland drain all along dumps	295 m	AS PROPOSED.	COMPLINCE OF VIOLATION ISSUED DURING PREVIOUS INSPECTION OBSERVED.
4j	Number of settling ponds	01	01	
4k	Specific comments of inspecting officer on waste dump management		The retaining wall around the waste dump and the coir matting on with grass seedling on dump is constricted as proposed,	COMPLINCE OF VIOLATION ISSUED DURING PREVIOUS INSPECTION OBSERVED.

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	NO SUCH PROPOSAL	NOT APPLICABLE	
5b	Area under backfilling of mined out area	NIL	NIL	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	NO SUCH PROPOSAL	NOT APPLICABLE	
5d	Total area fully reclaimed and rehabilitated	NIL	NIL	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			AREA NOT MATURED FOR BACKFILLING AND RECLAMATION.

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).	To be submitted on Ist july	SUBMITTED	
6b	Area available for rehabilitation (ha) .	NIL	NIL	
6c	afforestation done (ha).	0.346 ha	Broadly as per proposal	
6d	No. of saplings planted during the year	554 nos	3000 PLANTATION CARRIED.	
6e	Cumulative no .of plants	NOT SPECIFIED	32550 nos	

6f	Any other method of rehabilitation	NIL	NIL
6g	Cost incurred on watch and care during the year	NOT SPECIFIED.	WATCH AND WARD BEING CARRIED BY THE EXISTING MINE EMPLOYEE.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	NO SUCH PROPOSAL	NOT APPLICABLE.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NO SUCH PROPOSAL	NOT APPLICABLE.
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	NIL	NIL
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NIL	NOT APPLICABLE.
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	NIL	NIL
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	NIL	NIL

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NIL	NIL	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NIL	NIL	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical monitoring of environmental parameters are proposed in core and buffer zone	Carried out	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP measues are being catted out as proposed	PMCP measues are being catted out as proposed

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	Grade wise sorting within lease	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	MECHANISED	MECHANISED	
7c	Different grade of mineral sorted out at mines.	45 to 55 % Fe & +55% Fe	45 to 55 % Fe & +55% Fe	

7d	Any beneficiation process at mines	Screening and Crushing	Screening and Crushing	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Grade wise sorting is carried out as proposed. No other beneficiation process is adopted except screening and crushing.	Grade wise sorting is carried out as proposed. No other beneficiation process is adopted except screening and crushing.

Environment:

Sl.No.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil generation during the proposed period	No top soil generated	
8b	Concurrent use or storage of topsoil	NO SUCH PROPOSAL	NOT APPLICABLE.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for Overburden, waste rock, Rejects and fines is proposed	Separate dumps for Overburden, waste rock, Rejects & fines are dumped separately.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	NO SUCH PROPOSAL.	NOT APPLICABLE.	

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NIL	NIL	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	554 nos of plantation in the safety zone	CARRIED MORE PLANTATION THAN PROPOSAL.	
8g	Survival rate	70%	Broadly as per proposal	
8h	Water sprinkling on roads to control airborne dust	Water Sprinkling is proposed on haul road to control airborne dust.	Water Sprinkling is carried out on haul road to control airborne dust.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in and around the mines is good because of plantation carriedout & sprinkling of water on mine roads to control the dust.

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 MCDR2017, the monthly return are to be submitted before the 10th day of every month in respect of the preceding month and AR shall be submitted before the 1st day of July each year for the preceding financial year.	RETURNS SUBMITTED.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	MINING ENGG-02 NOS AND GEOLOGIST -02 NOS.	MINING ENGG-02 NOS AND GEOLOGIST -02 NOS PRESENT DURING INSPECTION.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	COVERED BY O/C WORKING- 35.729 HA, BUILDING & ROAD - 2.834 HA, SAFTY ZONE, PLANTATION - 13.194 HA	BROADLY AS PER AR SUBMITTED.
9d	Scrutiny of Annual return on afforestation	2554 TREES PLANTED	BROADLY AS PER AR SUBMITTED.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	547550 TONNE	547550 TONNE
9f	Scrutiny of Annual return on ROM stock and/or graded ore	2981000 TONNE	2981000 TONNE ROM PRODUCED +45 % Fe

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	COST OF PRODUCTION Rs 3166.69/-	COST OF PRODUCTION Rs 3166.69/-
9h	Scrutiny of Annual return on fixed assets	VALUE OF FIXED ASSETS: Rs 140486531/-	VALUE OF FIXED ASSETS: Rs 140486531/-
9k	Scrutiny of Annual return on mining machineries	BACK HOE- 08 NOS, WHEEL LOADER - 04 NOS DUMPER 30TONNE:- 17 NOS	BACK HOE- 08 NOS, WHEEL LOADER - 04 NOS DUMPER 30TONNE:- 17 NOS

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)	27/01/2023			
MCDR17	Rule 12(4)	27/01/2023			
	Rule 33(1)	27/01/2023			

Date :


(SANJAY KUMAR MAHAPATRA)

Indian Bureau of Mines