

MCDR-MIFLOFE/19/2023-BBS-IBM_RO_BBS
INDIAN BUREAU OF MINES
MINERALS DEVELOPMENT AND REGULATION DIVISION

I/17309/2023

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON-DOL/KJR/MCDR-34/BBS

Mine code : 30ORI08127

- (i) Name of the Inspecting : **RKD**) **RAJESH KUMAR DAS**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri Ranjit Choudhury, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 09-AUG-23
- (v) Prev.inspection date : 18-JAN-23

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KASIA IRON & DOLOMITE MIN**
- (b) **Registration NO.** :
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : ORISSA
District : KEONJHAR
Village : Kasia
Taluka : Barbil
Post office : Kasia
Pin Code : 758035
FAX No. :
E-mail :
Phone :
- (f) Police Station :
- (g) First opening date : 20-NOV-21
- (h) Weekly day of rest :
2. Address for :
correspondance :
3. (a) Lease Number :
(b) Lease area :
(c) Period of lease :
(d) Date of Expiry :
4. Mineral worked :

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5. Name and Address of the
Lessee : m/s Jindal Steel and Power Ltd
TRB Iron Ore Mines At
P.O.Tensa SUNDARGARH
ORISSA
Phone:06625 - 82023, 82024
FAX :
6. Date of approval of Mining :
Plan/Scheme of Mining

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	2021-22-20 nos bore holes 2022-23: 22 nos bore holes	2022-23 only 13 nos bore holes done.	
1b	Exploration over lease area for geological axis 1 or 2	20 nos bore holes proposed in 2022-23	only 13 bore holes done.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not mentioned specifically	Sarda mines pvt. ltd., Expenditure-4063500 Rs	
1d	Balance area to be explored to bring Geological axis in 1 or 2	73.626 ha. area of potentially mineralized area under G2 proposed to convert under G1 in plan period.	10% of the proposed area converted to G1 approximately.	
1e	Balance reserve as on 01/04/20	216713815 Tons	218612038 Tons	

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1f	General remarks of inspecting officers on geology, exploration etc	The Iron & Dolomite ore deposit of Kasia leasehold area is a part of Bonai-Keonjhar group forming a part of "Horse- Shoe Synclinorium" comes under the litho-stratigraphic units. The general trend of the rock is N-S with variation between NNW-SSE to NNE-SSW with rolling dip varying from 20 degree to 35 degree westerly. the potentialy mineralised area is broadly explored in G2 category with 150 nos boreholes reported in lease area.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t. lease area	North Block(N2440995 /2441445,E3310 31/331527) South Block(N2439524 /2439867,E3309 64/331235)	Broadly within lease area work is done.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes	Yes	
2c	Stripping ratio or ore to OB ratio	1:0.051	1:0.091	

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2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	389310	508636	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The development is broadly within proposed area as reported that encounter of interburden more therefore OB/waste generation is more w.r.t proposal.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two pit :North Block and South Block	Broadly as per proposal.	
3b	Quantity of ROM mineral production proposed	7499495 Tons	5601421 Tons	
3c	Recovery of sailable/usable mineral from ROM production	87.5%	86.6%	
3d	Quantity of mineral reject generation	935300 Tons	751649 Tons	
3e	Grade of mineral rejects generation and threshold value declared.	+45%Fe-55Fe%	avg. 53.20% Fe	
3f	Quantity of sub grade mineral generation.	935300 Tons	751649 Tons	The mineral reject is subgrade.
3g	Grade of sub grade mineral generation	+45%Fe-55Fe%	avg. 53.20% Fe	

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3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	NA
3j	Provision of drilling and blasting in mineral benches	Deep hole drilling proposed	Down the hole crawl drills(Atlas Copco ROC L8,165 mm)
3k	Provision of mining machineries in mineral benches	Yes Shovel - Dumper combination.	As per proposal mining done with Dumper-Shovel combination.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height proposed maximum 9 meter and width minimum 15 meter.	Broadly as per proposal.
3m	Total area covered under excavation/pits	88.142 ha. proposed for total plan period	Broadly working with in proposed area.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.051	1:0.091
3o	Total area put in use under different heads at the end of year	182 ha. for total plan period.	approximately 100 ha. area use under different heads upto 2022-23.
3p	Production of ROM mineral during the last five year period as applicable	2021- 22:2148930 Tons. 2022- 23:7499495 Tons.	2021-22:2148781 Tons. 2022-23:5601421 Tons.

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3q General remarks of inspecting officers on method of mining etc.

The method of mining as proposed by opencast mining using shovel-Dumper combination with deep hole drilling and blasting.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Yes	Yes	Top soil generation -Nil,OB is used for backfilling and Mineral reject is fed to plant and used by blending.
4b	Location of topsoil, OB and mineral reject dumps	Over Burden Dump- N2439598/24397 52 & E331343/331535	Broadly as per proposal.	
4c	Number of dumps within lease area and outside of lease area	One dump OB within lease and outside lease-Nil	Broadly as per proposal.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	outside UPL	outside UPL	
4e	Number of active and alive dumps.	One dump	One dump	
4f	Number of dead dumps.	Nil	Nil	
4g	Number of dumps established.	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposal given for Retaining wall and garland drain	Not done as per proposal.	

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4i	Length of Retaining wall or garland drain all along dumps	Retaining wall-200m Garland Drain-200m	Retaining wall-Nil Garland Drain-80 m	
4j	Number of settling ponds	06 Nos of Settling ponds to be maintained as constructed by Ex-Lessee	Broadly done as per proposal.	
4k	Specific comments of inspecting officer on waste dump management			As mentioned in above points waste dump management work not done as per proposal.

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.	NA	NA	
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)	NA	NA	
5d	Total area fully reclaimed and rehabilitated	NA	NA	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Area not matured for backfilling.

Progressive Mine Clousre Plan:

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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 Annual report on PMCP to be submitted on or before 30th June	Annual Report on PMCP submitted on 29.06.2023	
6b	Area available for rehabilitation (ha) .	No proposal	NA	
6c	afforestation done (ha).	1.25 ha.	3.50 ha.	
6e	Cumulative no .of plants	1500 nos	5362 nos	
6f	Any other method of rehabilitation	No proposal	NA	
6g	Cost incurred on watch and care during the year	600000 Rs	INR-150000/-reported	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NA	NA	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	NA	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	NA	NA	

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6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	NA	Backfilling not done
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NA	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	NA	NA	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NA	NA	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NA	NA	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Yes as per statutory provisions	Done quaterly as per proposal	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Broadly complied.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting or blending of different grade of material to get the desired grade	Broadly as per proposal.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical
7c	Different grade of mineral sorted out at mines.	yes	Yes
7d	Any beneficiation process at mines .	No beneficiation process only Dry Crushing and Screening	No beneficiation process only Dry Crushing and Screening
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Broadly done as per proposal

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Yes	Top soil generation is negligible	
8b	Concurrent use or storage of topsoil	Yes given	NA as top soil generation nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes	Yes	

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8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	NA	NA	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NA	NA	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	1500 nos plantation	5362 nos within lease plantation.	
8g	Survival rate	80%	76% reported	
8h	Water sprinkling on roads to control airborne dust	Yes given	2 Nos water tanker of 10 KL and 28Kl capacity and 1.5 KM static water sprinkling in haul road for dust suppression is used.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			No adverse impact observed during mine visit on aesthetic beauty in mines area.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	As per Rule 45	Rule complied and MR & AR submitted in time.	

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9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information Given	Manager: Shri Ranjit Choudhury Mining Engineer: Tanmaya Pattnaik Geologist: Raghuraj Singh Raghuwanshi
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Yes given	Broadly as per actual.
9d	Scrutiny of Annual return on afforestation	Yes given 5311 nos saplings	Broadly as per actual.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	751649 Tons generated and disposed as reported.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Yes given	475767 Tons reported
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Maximum quantity is used for captive consumption Ex-Mine price, sale price is different for different grades & cost of production Rs.5385.19/- including bid premium.	
9h	Scrutiny of Annual return on fixed assets	Reported 3025483944 Rs	
9k	Scrutiny of Annual return on mining machineries	Yes given	Shovel-2.8 & 5.2 cum Dumper-25,35 & 100 Tons Drill-105 & 165 mm diameter Dozer- 350 & 420 HP

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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)	09-AUG-23			
MCDR17	Rule 37(2)	09-AUG-23			
MCDR17	Rule 45(5)(c	09-AUG-23			
MCDR17	Rule 48	09-AUG-23			

Date :**(RAJESH KUMAR DAS)**

Indian Bureau of Mines