

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/GRPH/BLG/MCDR-63/BBS

Mine code : 28ORI03084

- (i) Name of the Inspecting : **K013**) **KEWAL KRISHAN**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Apurba Ranjan Ray , Mine manager & DP Mohanta Geolo
Official with
Designation
- (iv) Date of Inspection : 07/01/2022
- (v) Prev.inspection date : 12/04/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **AINLAPALI-RARBAHAL 14.937**
- (b) **Registration NO.** : **IBM/115/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : BOLANGIR
- Village : AINLAPALI-RARBAHAL
- Taluka : BELPADA
- Post office : BELPADA
- Pin Code : 767026
- FAX No. :
- E-mail : sureshmishrabgr@gmail.com
- Phone : 0947241725,7008696881
- (f) Police Station : BELPARA
- (g) First opening date : 17/04/2007
- (h) Weekly day of rest : SUN
2. Address for : AT/PO-AINAPALI, VIA-BELPARA
correspondance DIST-BOLANGIR
PIN-767058
3. (a) Lease Number :
- (b) Lease area :
- (c) Period of lease :
- (d) Date of Expiry :
4. Mineral worked : GRAPHITE Main

5. Name and Address of the

Lessee : Antaryami Mishra
At- Thikadarpada P.O./Dist
-Balangir Odisha BOLANGIR
ORISSA
Phone:9437241725
FAX :NA

Owner : ANTARYAMI MISHRA
AT/PO-AINAPALI, VIA-BELPARA
DIST-BOLANGIR BOLANGIR
ORISSA
Phone: 0947241725,7008
FAX :

Mining Engineer

Name : APURBA RANJAN RAY,Full Time
Qualification : AMIE in Mining Engg
Appointment/ : 01/06/2018
Termination date

Geologist

Name : Saidatta Das,Full Time
Qualification : M.Sc Geology
Appointment/ : 01/06/2018
Termination date

6. Date of approval of Mining : Mining Scheme rule 12 MCDR1988 26/04/2012
Plan/Scheme of Mining

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	In year 2018-19 36 nos In year 2019-20 23 nos	20nos boreholes drilled during the year 2020-21	violation under rule 11(1) of MCDR 2017
1b	Exploration over lease area for geological axis 1 or 2	no proposal during the year 2020-2021	20 nos of boreholes are drilled during the year 2020-21 under G1 level of exploration	Lessee has proposed to drill the entire area in 50mx50m grid during the year 2018-19 to 2019-20 But only a part of area ie 20 nos of boreholes are drilled under G1 Level of exploration during the year 2020-21.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	no proposal during the year	no proposal during the year	as per approved document , name of prospecting/ Exploration agencies M/s Antaryami Mishar . Party has drilled the boreholes during the year 2020-21 with Rs 1lakh sixty five thousand expenditure
1d	Balance area to be explored to bring Geological axis in 1 or 2	no such proposal during the year 2020-21	remaining 7.209 ha area is yet to be explored to bring the geological axis under G1 or G2	till area explored till March 2021 under different levels ie 3.051 ha area explored under G1, 1.887 ha explored under G2 2.004 area under G3 2.790 ha non-mineralized 5.205 ha unexplored

1e	Balance reserve as on 01/04/20	Under 122 under 222	64469 T 5443 T	balance reserves/resources as on 1/4/2021 under 122 59549 T under 222 5442 T
1f	General remarks of inspecting officers on geology, exploration etc			The country rock in the area is khondalite.The Graphite ore occurs in form of small veins, pocket/ lens. The area has been explored by means of non core boreholes with vertical angle from the surface. About 4.9 ha area has been explored under G1/G2 level of exploration.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	N2275622 to N 2275739 and E 713559 to E 713750.	N 2275614 to E and E713662 to E 713750.	Development work is less as compare to proposal, Hence violation under rule 11(1) of MCDR 2017
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in topsoil, overburden and mineral	Separate benches in topsoil, overburden and mineral	
2c	Stripping ratio or ore to OB ratio	1:4.2	1: 1.11	waste dump not produced as per the proposal, because of less development work.
2d	Quantity of topsoil generation in m3	no such proposal	no such proposal	

2e	Quantity of overburden generation in m3	29779	2538	Development not achieved as proposed due to Surface right clearance.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The development activities are carried out in one quarry , towards the western side .The entire development work have not been achieved as proposed for plan peroid because of non surface right of the lessee.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	01 no	01 no	
3b	Quantity of ROM mineral production proposed	12754.8 T	4920T	Violation under rule 11(1) of MCDR 2017
3c	Recovery of sailable/usable mineral from ROM production	40%	as per proposal	The recovery of saleable ore is considered as 40% based on the earlier approved document, however during the inspection ,party has been advised to carry out recovery test study .
3d	Quantity of mineral reject generation	7652.88 T	nil	No mineral reject have been produced . The entire ore above the threshold limit is despatched to the plant.

3e	Grade of mineral rejects generation and threshold value declared.	FC 2% to 7%	FC not generated	No mineral reject have been generated during the mining . All the mineral above the threshold limit have been transported to the lessee own beneficiation plant
3f	Quantity of sub grade mineral generation.	7652.88	not generated	No subgrade have been generated during the mining . All the mineral above the threshold limit have been transported to the lessee own beneficiation plant
3g	Grade of sub grade mineral generation	Fc 2% to 7%	FC no subgrade generated	No subgrade mineral has been generated during the mining . All the mineral above the threshold limit have been transported to the lessee own beneficiation plant
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	mechanised	There is no sizing and sorting of material , the ROM above the threshold limit is being transported to washing/ beneficiation plant .
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	no such proposal	no such proposal	

3j	Provision of drilling and blasting in mineral benches	no such proposal	no such proposal	
3k	Provision of mining machineries in mineral benches	Excavator , Pick axes and crow bars.	Excavator , Pick axes and crow bars.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	as per approved document Height 3m width 3m	as per proposal	
3m	Total area covered under excavation/pits	total area proposed as per approved document at the end of plan period . (2018-19 to 2021-22) is 1.847 ha	0.369 ha as reported in the AR	
3n	Ore to OB ratio for the pit/mine during the year.	1:4.2	1:1.11	Development not achieved due to statutory clearance, hence less development and production.

3o	Total area put in use under different heads at the end of year	As per approved review of Mining plan the area under different activities at the end of plan period as fallow a)mining - 1.847ha b)waste dump- 0.317 ha c).Mineral storage 0.163 ha d)Infrastructu re 0.0006 ha e)Roads 0.531 ha settling tank 0.014 ha topsoil 0.1948 ha Others 1.1397 ha	as per the AR submitted by the lessee 1) area under mining 0.369 ha 2) Used for waste disposal 0.063 ha 3) Infrastructures 0.532 ha 4) work done under PMCP 0.228 ha
3p	Production of ROM mineral during the last five year period as applicable	2016-17 15018.48 T 2017-2018 nil (NW) 2018-2019 12237.91T 2019-2020 1227.35 T 2020-2021 12754.8 T	2016-17 nil 2017-2018 nil 2018-2019 3220 T 2019-2020 2670 T 2020-2021 4920 T
3q	General remarks of inspecting officers on method of mining etc.	The ROM production is carried out by opencast mining methods in one quarry . The excavation work and loading of waste is being carriedout by using Excavators, tippers, picks and crow bars.	

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping for overburden and mineral reject/subgrade envisaged	Separate dumping for overburden is being done	no mineral reject is generated
4b	Location of topsoil, OB and mineral reject dumps	N 2275595 to N 2275615 E 713625 to E 713648	N 2275585 to E 713663 713685 to N 2275608 to E	waste dump dumping have been done in the existing dump only
4c	Number of dumps within lease area and outside of lease area	two dumps within lease area	two dump within lease area	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	outside the UPL	outside the UPL	
4e	Number of active and alive dumps.	02	01	
4f	Number of dead dumps.	no such proposal	no such proposal	
4g	Number of dumps established.	no such proposal	no such proposal	
4h	Whether Retaining wall or garland drain all along dumps are there.	no such proposal during the proposaed year	no such proposal during the proposaed year	The maintence of retaining wall and garland is being done.
4i	Length of Retaining wall or garland drain all along dumps	no such proposal during the year	no such proposal during the year	
4j	Number of settling ponds	no such proposal	no such proposal	
4k	Specific comments of inspecting officer on waste dump management			Over burden/waste have not been generated as per the proposal , becuse of the less development work.The waste produced is bing dumped in the existing dump only.

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.	No such proposal	No such proposal	
5b	Area under backfilling of mined out area	No such proposal	No such proposal	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No such proposal	No such proposal	
5d	Total area fully reclaimed and rehabilitated	No such proposal	No such proposal	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			As there is no proposal of backfilling and reclamation etc , hence no activity regarding the have been carreiedout .

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 sumbitted before Ist july	submitted	
6b	Area available for rehabilitation (ha) .	no such proposal	no such proposal	
6c	afforestation done (ha).	no such proposal	no such proposal	
6d	No. of saplings planted during the year	250	plantation carried out in saftey zone	survival rate is about 50%

6e	Cumulative no .of plants	750 nos	around 400 nos	actual plantation is less because of less survival rate.
6g	Cost incurred on watch and care during the year		Rs 1.35 lakh	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	no such proposal	no such proposal	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	no such proposal	no such proposal	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	no such proposal	no such proposal	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	no such proposal	no such proposal	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	no such proposal	no such proposal	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	no such proposal	no such proposal	

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	no such proposal	no such proposal	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	no such proposal	no such proposal	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Air, water and Noise monitoring are proposed .	carried out as per proposal	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			No PMCP compliance and progressive closure operation are proposed during the year, except the environmental monitoring.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Blending and sizing of ROM and despatch to plant.	The ROM produced from the mine above the threshold limit is desptached to the lessee plant	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	mechanised	The ROM produced from the mine above the threshold limit is desptached to the lessee plant. there is no sorting and sizing of the material	
7c	Different grade of mineral sorted out at mines.	Less tha 40% FC	Less tha 40% FC	

7d	Any beneficiation process at mines .	no such proposal	no such proposal	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No mineral reject have been generated by the lessee. The material (ROM) produced from mine above the threshold limit is despatched to the plant for further use.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	no such proposal	no such proposal	
8b	Concurrent use or storage of topsoil	no such proposal	no such proposal	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	provision for seperate dumping of overburden,waste rock,subgrade/reject is envisaged	provision for seperate duming of overbuden,waste rock, is envisaged	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	no such proposal	no such proposal	

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	no such proposal	no such proposal	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	250 nos of sapling were proposed during the year 2020-21	250 nos of sapling are planted during the year 2020-2021	survival rate is about 50%
8g	Survival rate		50%	
8h	Water sprinkling on roads to control airborne dust	By sparying of water on haulage road	dust is being controlled as proposed	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in and around the mine is good because of plantation carriedout and by regular sprinkling of water on mine road 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 MCDR 2017, the monthly return are to be submitted before 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.	submitted	In the monthly return submitted for the month of Nov 2021 , in part -II, at Production & stocks of ROM at mine , the closing stock mentioned is not correct. Similarly in grade -wise production, despatches, stocks and Ex-mine prices table, the production and Ex-mine price are not correct. Under table no 4, details of deduction used for computation of Ex-mine price ie DMF and NMET are included in deduction . The same is not correct. Violation under rule 45 (7) of MCDR 2017.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining engineer/ Manager : 1, geologist: 1,	correct information furnished	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Information has been furnished regarding the land use	Information has been furnished regarding the land use	
9d	Scrutiny of Annual return on afforestation	300 nos	about 250 nos	

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	no mineral reject generated	no mineral reject generated	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	1) Production and stock of ROM at mine head 2) Grade -wise production ,despatch , stocks and Ex-mine prices	wrong information furnished	issued violation rule 45(7) of MCDR 2017
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	sale value , Ex-mine Price Rs 1550/-	wrong information furnished	issued violation rule 45(7)of MCDR 2017
9h	Scrutiny of Annual return on fixed assets	no information is given	no information is given	issued violation under rule 45(7) of MCDR 2017
9k	Scrutiny of Annual return on mining machineries	back Hoe , 0.900 CUM , 1 no Tipper 18.000CUM 2 nos Pumps (non-Elec) 2 nos	back Hoe , 0.900 CUM , 1 no Tipper 18.000CUM 2 nos Pumps (non-Elec) 2 nos	

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 :

(KEWAL KRISHAN)

Indian Bureau of Mines