

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/GRAPHITE/NUA/09-BBS

Mine code : 28ORI24007

- (i) Name of the Inspecting : **SRM**) **SHRI SUDIP RANJAN MAZUMDAR**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Shri S.C.Jayasingh, General Power of Attorney holder
Official with
Designation
- (iv) Date of Inspection : 22/11/2019
- (v) Prev.inspection date : 11/08/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KIRKITA (31.808 HA)**
- (b) **Registration NO.** : **IBM/4401/2011**
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : NAWAPARA
- Village : KIRKITA
- Taluka : KHARIAR
- Post office : KIRKITA
- Pin Code :
- FAX No. : 0663-2533374
- E-mail : pratyush_agi@hotmail.com
- Phone : 0663-2403251
- (f) Police Station : SINAPALI PIN: 766 118
- (g) First opening date : 21/02/2005
- (h) Weekly day of rest : SUN
2. Address for : SHRI D K AGRAWAL, MINE OWNER
correspondance SHANTIKUNJ, FARM ROAD, P.O: MODIPARA
DISTT: SAMBALPUR, ODISHA, PIN: 768 002
3. (a) Lease Number : ORI0786
- (b) Lease area : 31.81
- (c) Period of lease : 20
- (d) Date of Expiry : 14/02/2025
4. Mineral worked : GRAPHITE Main

5. Name and Address of the

Lessee : D.K.AGRAWAL
NAWAPARA ORISSA
Phone:
FAX :

Owner : D K AGARWALA
NAWAPARA ORISSA
Phone:
FAX :

6. Date of approval of Mining : Mining Scheme rule 12 MCDR1988 28/03/2016
Plan/Scheme of Mining

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	2016-17: 8 BHs 2017-18: 9 BHs 2018-19: 9 BHs	2016-17: Nil 2017-18: 5 BHs 2018-19: Nil	Violation was issued under rule 11(1) of MCDR 2017 for non-compliance of exploration proposal.
1b	Exploration over lease area for geological axis 1 or 2	In 2018-19, 9 numbers of boreholes have been proposed to be drilled.	Nil	Violation was issued under rule 11(1) of MCDR 2017 for non-compliance of exploration proposal.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not Specified	No exploration work carried out in 2018-19	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	In 2018-19, 9 numbers of boreholes have been proposed to be drilled.	Nil	Violation was issued under rule 11(1) of MCDR 2017 for non-compliance of exploration proposal.
1e	Balance reserve as on 01/04/20	As per the approved scheme of mining for the period 2016-17 to 2020-21, reserve and resource is as follows: Reserve is 32216 tones and remaining resource is 8191 tones. Total reserve and resource is 40407 tones.	As on 01.04.2019, reserve and resource as furnished in annual return is as follows: Reserve is 32181 tones and remaining resources at 8191 tones. Total reserve and resource is 40372 tones	As on 01.04.2019, reserve and resource as furnished in annual return is as follows: Reserve is 32181 tones and remaining resources at 8191 tones. Total reserve and resource is 40372 tones

1f	General remarks of inspecting officers on geology, exploration etc	In 2018-19, 9 numbers of boreholes have been proposed to be drilled.	No exploration work carried out in 2018-19	Violation was issued under rule 11(1) of MCDR 2017 for non-compliance of exploration proposal
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	During the year 2018-19, Quarry-2 will be developed to the north of Quarry-1	No development done as proposed	Violation has been issued under rule 11(1) of MCDR 2017
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Generation of top soil proposed. Separate benches in OB proposed	No development done as proposed	Violation has been issued under rule 11(1) of MCDR 2017
2c	Stripping ratio or ore to OB ratio	1: 13.3 m3/m3	Nil	No production and development done in 2018-19
2d	Quantity of topsoil generation in m3	891 m3	Nil	Violation has been issued under rule 11(1) of MCDR 2017
2e	Quantity of overburden generation in m3	11345 m3	Nil	Violation has been issued under rule 11(1) of MCDR 2017
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	During the year 2018-19, Quarry-2 will be developed to the north of Quarry-1	No production and development carried out as proposed during the year 2018-19	Violation has been issued under rule 11(1) of MCDR 2017

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One Pit	Nil	Nil

3b	Quantity of ROM mineral production proposed	1796 tones	Nil	Violation has been issued under rule 11(1) of MCDR 2017
3c	Recovery of sailable/usable mineral from ROM production	Beneficiable ROM: 1197 tones	Nil	No production and development carried out as proposed during the year 2018-19
3d	Quantity of mineral reject generation	599 tones	Nil	No production and development carried out as proposed during the year 2018-19
3e	Grade of mineral rejects generation and threshold value declared.	+3% - 5% F.C	Nil	No production and development carried out as proposed during the year 2018-19
3f	Quantity of sub grade mineral generation.	599 tones	Nil	No production and development carried out as proposed during the year 2018-19
3g	Grade of sub grade mineral generation	+3% - 5% F.C	Nil	No production and development carried out as proposed during the year 2018-19
3h	Manual / Mechanised method adopted for segregating from ROM	Manual	Nil	No production and development carried out as proposed during the year 2018-19
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Graphite ore (9.47% F.C on an average) produced from the mine will be beneficiated for semi-enrichment of graphite in nearby lease area of Sri P.K. Agrawal over 20.234 hectares	Nil	No production and development carried out as proposed during the year 2018-19

3j	Provision of drilling and blasting in mineral benches	Graphite ore is amenable to mining without blasting. Here, wall rocks are regarded as OB for common understanding. OB is moderately soft and weathered. At places, hard rock is encountered. These hard rocks are drilled by the jack-hammer drill and blasted for ease in excavation	Nil	No production and development carried out as proposed during the year 2018-19.
3k	Provision of mining machineries in mineral benches	Run-off-mine ore and overburden will be excavated & loaded in the tipper by manually	Nil	No production and development carried out as proposed during the year 2018-19
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed Bench height: 5m	Nil	No production and development carried out as proposed during the year 2018-19
3m	Total area covered under excavation/pits	Area under mining at the end of plan period will be 0.95 Ha	Nil	No production and development carried out as proposed during the year 2018-19
3n	Ore to OB ratio for the pit/mine during the year.	1: 13.3 m ³ /m ³	Nil	No production and development done in 2018-19

3o	Total area put in use under different heads at the end of year	Total area put in use under different heads at the end of plan period will be 5.207 Ha	Nil	No production and development done in 2018-19
3p	Production of ROM mineral during the last five year period as applicable	2016-17: 1796 tones 2017-18: 1796 tones 2018-19: 1796 tones	2016-17: 10.0 tones 2017-18: 25.50 tones 2018-19: Nil	Nil
3q	General remarks of inspecting officers on method of mining etc.	Production proposed from one pit	No production and development carried out as proposed during the year 2018-19	Violation has been issued under rule 11(1) of MCDR 2017

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 of Topsoil, OB & mineral Reject proposed	Nil	No production and development done in 2018-19
4b	Location of topsoil, OB and mineral reject dumps	Separate dumping of Topsoil, OB & mineral Reject proposed	Nil	No production and development done in 2018-19
4c	Number of dumps within lease area and outside of lease area	One waste dump	Nil	No production and development done in 2018-19
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside of UPL	Nil	No production and development done in 2018-19
4e	Number of active and alive dumps.	One waste dump	Nil	No production and development done in 2018-19
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.	Maintenance of existing retaining wall and garland drain proposed	Nil	Nil
4i	Length of Retaining wall or garland drain all along dumps	Maintenance of existing retaining wall and garland drain proposed	Nil	Nil
4j	Number of settling ponds	Maintenance of existing settling pond proposed	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management	Separate dumping of Topsoil, OB & mineral Reject proposed	No production and development done in 2018-19. There is no waste dump.	No production and development done in 2018-19. There is no waste dump.

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.	Not Proposed	Nil	Nil
5b	Area under backfilling of mined out area	Not Proposed	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not Proposed	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	Not Proposed	Nil	Nil

5e	General remarks of inspecting officers on backfilling and reclamation etc.	There is no proposal for reclamation and rehabilitation	Nil	Nil
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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).	Annual report on PMCP to be submitted as per Rule 26 (2) of MCDR, 2017	Not Submitted	Violation was issued under rule 26 (2) of MCDR 2017
6b	Area available for rehabilitation (ha) .	0.8 Ha	0.8 Ha	Nil
6c	afforestation done (ha).	0.1 Ha	0.1 Ha	Nil
6d	No. of saplings planted during the year	In 2018-19, 250 nos of sapling proposed for plantation	In 2018-19, 250 nos of saplings planted	Nil
6e	Cumulative no .of plants	In 2018-19, 250 nos of sapling proposed for plantation	In 2018-19, 250 nos of saplings planted	Nil
6f	Any other method of rehabilitation	Not Proposed	Nil	Nil
6g	Cost incurred on watch and care during the year	Not Proposed	Nil	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not Proposed	Nil	Nil

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not Proposed	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Not Proposed	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Not Proposed	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	In 2018-19, 250 nos of sapling proposed for plantation	In 2018-19, 250 nos of sapling planted	Nil
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	0.1 Ha	0.1 Ha	Nil
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	Plantation	Plantation	Nil

6p	Compliance of environmental monitoring (core zone and buffer zone)	Regular monitoring	Carried out	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	250 nos of sapling proposed for plantation	250 nos of sapling planted	Violation was issued under rule 26 (2) of MCDR 2017 for non-submission of annual return on PMCP for 2018-19

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Graphite ore (9.47% F.C on an average) produced from the mine will be beneficiated for semi-enrichment of graphite in nearby lease area of Sri P.K. Agrawal over 20.234 hectares.	Nil	There was no production of ROM graphite ore during 2018-19
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manually	Nil	There was no production of ROM graphite ore during 2018-19
7c	Different grade of mineral sorted out at mines.	+3% to -5% F.C and +5% F.C	Nil	There was no production of ROM graphite ore during 2018-19
7d	Any beneficiation process at mines .	There is no beneficiation facility within lease area	Nil	There was no production of ROM graphite ore during 2018-19

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No comments to offer	There was no production of ROM graphite ore during 2018-19	There was no production of ROM graphite ore during 2018-19
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposal is given to scrap 0.3m thick topsoil on an average, gather and store the topsoil in the lease area for spreading over the back-filled area, waste dump as well as the plantation pits for reclamation of mined out area	Nil	There was no production of ROM graphite ore during 2018-19
8b	Concurrent use or storage of topsoil	Proposal is given to scrap 0.3m thick topsoil on an average, gather and store the topsoil in the lease area for spreading over the back-filled area, waste dump as well as the plantation pits for reclamation of mined out area	Nil	There was no production of ROM graphite ore during 2018-19

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of OB & mineral Reject proposed	Nil	No production and development done in 2018-19
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not Proposed	Nil	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed	Nil	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	250 nos of sapling proposed for plantation	250 nos of sapling proposed for plantation	Nil
8g	Survival rate	Not Specified	Survival rate: 85% as reported in revised annual return submitted for 2018-19	Nil
8h	Water sprinkling on roads to control airborne dust	Proposed	Carried Out	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No comments to offer	Aesthetic beauty in and around mines is maintained	Nil

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	Annual return and monthly returns for 2018-19 have been submitted	Annual return and monthly returns for 2018-19 have been submitted	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Not furnished	A part time mining engineer and part time geologist have not been employed	Violation has been issued under rule 55 (1) of MCDR 2017
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Nil	Lease area utilisation at the end of year 2018-19 as furnished in the annual return for 2018-19 is not as per field position as observed during inspection	Violation was issued under rule 45 (7) of MCDR 2017
9d	Scrutiny of Annual return on afforestation	Nil	It was observed during field inspection that the saplings have been planted but in annual return submitted for 2018-19 it has shown as nil	Violation was issued under rule 45 (7) of MCDR 2017
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil	No production and development done in 2018-19
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing stock of ROM: 44.5 tonnes	Found to be in order	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost: Nil	Nil	No production and development done in 2018-19
9h	Scrutiny of Annual return on fixed assets	Nil	Nil	Nil
9k	Scrutiny of Annual return on mining machineries	Nil	Nil	Nil

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
MCDR17	Rule 11(1)	26/11/2019	02/07/2020				
MCDR17	Rule 26(2)	26/11/2019	02/07/2020				
	Rule 45(7)	26/11/2019	02/07/2020				
MCDR17	Rule 55(1)(3)	26/11/2019	02/07/2020				

Date :

(SHRI SUDIP RANJAN MAZUMDAR)

Indian Bureau of Mines