

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/GRPH/NUP/MCDR-1/BBS

Mine code : 28ORI24003

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri, Jagadish Dash, Senior Surveyor
Official with
Designation
- (iv) Date of Inspection : 22/02/2019
- (v) Prev.inspection date : 09/08/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **GANDABHALI (MLA 20.23)**
- (b) **Registration NO.** : **IBM / 4400 / 2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : NAWAPARA
- Village : GANDABHALI
- Taluka : KHARIAR
- Post office : GANDABHALI
- Pin Code :
- FAX No. : 06632533374
- E-mail : pratyush_agi@hotmail.com
- Phone : 06671-235153
- (f) Police Station : SINAPALI
- (g) First opening date : 11/10/1997
- (h) Weekly day of rest : TUE
2. Address for : VILL-/PO-GANDABHALI
correspondance THANA- SINAPALI VIA KHARIAR
DIST-NUAPARA STATE : ODISHA
3. (a) Lease Number : ORI0675
- (b) Lease area : 20.23
- (c) Period of lease : 20
- (d) Date of Expiry :
4. Mineral worked : GRAPHITE Main

5. Name and Address of the

Lessee : M/S P.K.AGARWAL
 AT-PATTNAIKPARA PO/DIST-
 SAMBALPUR SAMBALPUR ORISSA
 Phone:
 FAX :

Owner : M/S P.K. AGARWAL
 AT-PATTNAIKPARA PO/DIST-
 SAMBALPUR SAMBALPUR ORISSA
 Phone:
 FAX :

Manager

Name : SHRI NIRMAL KUMAR
 Qualification : DIPLOMA (MINING)
 Appointment/ : 01/08/2014
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	11/06/2004
Plan/Scheme of Mining		PMCP under 23B(2) for Existing	06/02/2009
		Mining Scheme rule 12 MCDR1988	07/07/2010
		Modif.approved Mining Scheme	23/01/2014
		Mining Scheme rule 12 MCDR1988	30/06/2014
		Mining Scheme rule 12 MCDR1988	06/07/2015

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Not applicable	Nil	Nil
1b	Exploration over lease area for geological axis 1 or 2	8 nos of boreholes were proposed during the year 2017-18.	drilling of 3 nos of boreholes only carried out.	violation observed and issued on 28/02/2019
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such specific proposal.	Nil	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	12.394 ha of unexplored area proposed for exploration.	drilling of 3 nos of boreholes only carried out.	Nil
1e	Balance reserve as on 01/04/20	As per the approved document on 06.07.2015 graphite reserves are 121 and 122: 86651 t and resources are 221: 4082 t, 222: 2657 t	due to depletion of reserves over period of time the reserves and resources as on 01.04.2018 are 121 and 122: 66982 t and resources are 221: 4082 t, 222: 2657 t	Nil
1f	General remarks of inspecting officers on geology, exploration etc	No comments to offer.	Mine operations were held up w.e.f. 01/10/2017 by the order of Mining officer, Bawanipatna due to expiry of CTO and lease period. As on date of inspection the mine is not in operation.	Nil

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	single quarry development is proposed in the northern side of lease area during the year 2017-18.	development is carried out in single quarry at said location.	Mine operations were held up w.e.f. 01/10/2017 by the order of Mining officer, Bawanipatna due to expiry of CTO and lease period. As on date of inspection the mine is not in operation.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No top soil generation is proposed during the year 2017-18. seperate benches in OB and mineral are proposed.	No top soil is generated, seperate benches in OB and mineral are maintained.	Nil
2c	Stripping ratio or ore to OB ratio	1:4.6 t/cu.m.	1:4.37 t/cu.m.	Nil
2d	Quantity of topsoil generation in m3	Not applicable	Nil	Nil
2e	Quantity of overburden generation in m3	53040 cu.m.	15096 cu.m.	Mine operations were held up w.e.f. 01/10/2017 by the order of Mining officer, Bawanipatna due to expiry of CTO and lease period. As on date of inspection the mine is not in operation.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No comments to offer.	development is carried out in single quarry as proposed.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	single quarry production is proposed for production during the year 2017-18.	single quarry production carried out from single quarry as proposed.	Nil
3b	Quantity of ROM mineral production proposed	11520 t	3454 t	less production due to Mine operations were held up w.e.f. 01/10/2017 by the order of Mining officer, Bawanipatna due to expiry of CTO and lease period. As on date of inspection the mine is not in operation.
3c	Recovery of sailable/usable mineral from ROM production	salable ore: 9792 t and mineral reject: 1728 t	salable ore: 3454 t and mineral reject: Nil	Nil
3d	Quantity of mineral reject generation	1728 t	Nil	Nil production due to Mine operations were held up w.e.f. 01/10/2017 by the order of Mining officer, Bawanipatna due to expiry of CTO and lease period. As on date of inspection the mine is not in operation.
3e	Grade of mineral rejects generation and threshold value declared.	+3-5% FC	+3-5% FC	Nil
3f	Quantity of sub grade mineral generation.	Not applicable	Nil	mineral reject is proposed.
3g	Grade of sub grade mineral generation	Not applicable	Nil	Nil

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised. benefictated in the lease area for improving the %FC in graphite.	Mechanised. benefictated in the lease area for improving the %FC in graphite.	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	drilling by 100 mm dia drill machine and blasting by emulsion exploisves with intitation by eletreic detonators.	drilling by 100 mm dia drill machine and blasting by emulsion exploisves with intitation by eletreic detonators.	Nil
3k	Provision of mining machineries in mineral benches	shovel and dumper combination was proposed for excavation.	shovel and dumper combination deployed for excvation.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	6 m bench height is proposed.	6 m bench height is maintained.	Nil
3m	Total area covered under excavation/pits	7.821 ha at the end of plan period i.e. year 2019-20	7.524 ha till the end of the year 2017-18.	Nil

3n	Ore to OB ratio for the pit/mine during the year.	1:4.6 t/cu.m.	1:4.37 t/cu.m.	less production of waste due to Mine operations were held up w.e.f. 01/10/2017 by the order of Mining officer, Bawanipatna due to expiry of CTO and lease period. As on date of inspection the mine is not in operation.
3o	Total area put in use under different heads at the end of year	under excavation: 7.821 ha waste disposal: 3.413 ha occupied by building, infra: 1.67 ha at the end of plan period i.e. year 2019-20.	under excavation: 7.524 ha waste disposal: 2.948 ha occupied by building, infra: 0.15 ha till the end of year 2017-18.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2013-14: 11520 t 2014-15: 11520 t 2015-16: 11520 t 2016-17: 11520 t 2017-18: 11520 t	2013-14: 10755 t 2014-15: 5097 t 2015-16: 8371 t 2016-17: 7844 t 2017-18: 3454 t	less production is due to market demand.
3q	General remarks of inspecting officers on method of mining etc.	No comments to offer.	production is carried out from single quarry as proposed in the mining plan.	Nil.

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)	no generation of top soil is proposed during the year 2017-18. seperate dumping of OB and mineral rejects are proposed.	no top soil is generated during the year. seperate dumping of OB carried out. no mineral rejects produced during the year 2017-18.	Nil
4b	Location of topsoil, OB and mineral reject dumps	no top soil dump is proposed in the south eastern part of the lease area and mineral reject stack are propsoed in the north western part of the lease area.	OB dump is maintained in the south eastern part of the lease area and no mineral reject generated during the year.	Nil
4c	Number of dumps within lease area and outside of lease area	One OB dump with in lease area.	one OB dump mainatined with in lease area.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	beyond UPL	beyond UPL	Nil
4e	Number of active and alive dumps.	one no of dump	one no of dump	Nil
4f	Number of dead dumps.	Not applicable	Nil	Nil
4g	Number of dumps established.	Not applicable	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	proposed	maintained.	Nil
4i	Length of Retaining wall or garland drain all along dumps	Not applicable	Nil	Nil

4j	Number of settling ponds	Not applicable	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management	No comments to offer.	waste dumping is carried out as per the proposal. however tailings disposal is not carried out as proposed in the mining plan. so violation observed and issued on 28.02.2019.	Nil

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 applicable	Area not matured for backfilling	Nil
5b	Area under backfilling of mined out area	Not applicable	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not applicable	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	Not applicable	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No comments to offer.	Area not matured for reclamation.	Nil

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	submitted.	submitted.	Nil
6b	Area available for rehabilitation (ha) .	0.09 ha during the year 2017-18.	1050 nos of saplings plantation carried out over dump and safety zone area.	Nil
6c	afforestation done (ha).	0.09 ha during the year 2017-18.	1050 nos of saplings plantation carried out over dump and safety zone area.	Nil
6d	No. of saplings planted during the year	600 nos	1050 nos of saplings plantation carried out over dump and safety zone area.	Nil
6e	Cumulative no .of plants	No such specific proposal.	1050 nos of saplings plantation carried out during the year 2017-18.	Nil
6f	Any other method of rehabilitation	Not applicable	Nil	Nil
6g	Cost incurred on watch and care during the year	No such specific proposal.	Rs. 51500	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not applicable	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not applicable	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Not applicable	Nil	Nil

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not applicable	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not applicable	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.09 ha	1050 nos saplings planation carried out.	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	by way of plantation	by way of plantation	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	periodical monitoring of environmental parameters like quality of air, water and noise etc., proposed.	carried out.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No comments to offer.	PMCP measures carried out as per proposal.	Nil.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	grade wise sorting is proposed	grade wise sorting carried out.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	mehacnical	mechanical	Nil
7c	Different grade of mineral sorted out at mines.	below 40 % FC and 40% FC to below 80 % FC after beneficiation.	below 40 % FC and 40% FC to below 80 % FC after beneficiation.	ROM of graphite produced average grade is 14.27 % from which beneficiation is carried out in lease area in which grade of graphite in %FC is upgrdaed to +40%Fc and below 80 % FC which is further beneficiated outside lease area
7d	Any beneficiation process at mines .	proposed. froth floation process	carried out.	ROM of graphite produced average grade is 14.27 % from which beneficiation is carried out in lease area in which grade of graphite in %FC is upgrdaed to +40%FC and below 80 % FC which is further beneficiated outside lease area
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No comments to offer.	beneficiation of ROM is carried out as per proposal in the mining plan.	Nil

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Not applicable	Nil	Nil
8b	Concurrent use or storage of topsoil	Not applicable	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	seperate dumps for OB and mineral rejects are proposed.	seperate dumps for OB and mineral rejects are maintained.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not applicable	Nil	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not applicable	Nil	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	600 nos of saplings plantation proposed.	1050 nos of saplings plantation carried out in safety zone area and dump area.	Nil
8g	Survival rate	No such specific proposal.	70%	Nil
8h	Water sprinkling on roads to control airborne dust	mobile water sprinkler is proposed for dust supression.	mobile water sprinkler is used for water sprinkling for dust supression.	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 lease area is well maintained.	Nil
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	annual return and monthly return are submitted.	submitted with in stipulated time period.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Gradute mining engineer : 1 (partly employed)	found to be in order.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	under excavation: 7.524 ha waste disposal: 2.948 ha occupied by building, infra: 0.15 ha	found to be in order.	Nil
9d	Scrutiny of Annual return on afforestation	1050 nos	found to be in order.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	found to be in order.	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM closing stock: 4137.412 t closing stock +40%-80% FC: 39.782 t	found to be in order.	Nil

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	production cost Rs.3200.	production cost is Rs.3200	Nil
9h	Scrutiny of Annual return on fixed assets	Nil	plant and land observed during inspection. so violation issued on 28.02.2019.	Nil
9k	Scrutiny of Annual return on mining machineries	tipper: 14 cu.m. - 3 nos air compressor: 1 no	found to be in order.	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)	28/02/2019			
	Rule 45(7)	28/02/2019			

Date :

(RAMKISHAN R)

Indian Bureau of Mines