

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

MCDR inspection REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-43/BBS

Mine code : 30ORI08040

- (i) Name of the Inspecting : **DJ03**) **DILIP JAIN**
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine : Mr. Sahadat Mandal (Mines Manager) and Mr. Jawan Kuma
Official with
Designation
- (iv) Date of Inspection : 15-APR-18
- (v) Prev.inspection date : 03-NOV-17

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **NUAGAON**
- (b) **Registration NO.** : **IBM/4132/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : GUALI
- Taluka : BARBIL
- Post office : GUALI
- Pin Code : 758035
- FAX No. : 06767-270049
- E-mail : kjsahluwalia@rediffmail.cor
- Phone : 06767-270048, 9437041818
- (f) Police Station : Barbil
- (g) First opening date : 01-JAN-59
- (h) Weekly day of rest : SUN
2. Address for : VILL% PO: GUALI
correspondance POLICE STATION :BARBIL
DIST: KEONJHAR,ORISSA,PIN:758035
3. (a) Lease Number : ORI0070
- (b) Lease area : 767.28
- (c) Period of lease : 20
- (d) Date of Expiry : 03-MAR-99
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : K.J.S.AHLUWALIA
 AT/PO.BARBIL KEONJHAR
 ORISSA
 Phone:
 FAX :

Owner : K.J.S AHLUWALIA
 AT/PO. BARBIL P.B NO.3
 KEONJHAR ORISSA
 Phone: 06767 75348,756
 FAX : 06767-30348, 30

Mining Engineer

Name : Manoj Kumar,Full Time
 Qualification : BE Mi ning
 Appointment/ : 12-AUG-12
 Termination date

Geologist

Name : RANJAN KUMAR MOHARANA,Full Time
 Qualification : Msc. Applied Geology
 Appointment/ : 08-AUG-16
 Termination date

Manager

Name : Sahadat Mandal
 Qualification : Diploma in Mining Engg, FCC
 Appointment/ : 16-SEP-11
 Termination date

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	10-MAY-05
Plan/Scheme of Mining		Modif.approved Mining Scheme	15-OCT-07
		Modif.approved Mining Scheme	23-OCT-08
		Mining Scheme rule 12 MCDR1988	23-JUN-09
		Modif.approved Mining Scheme	18-AUG-10
		Mining Scheme rule 12 MCDR1988	05-JUL-13
		Mining Scheme rule 12 MCDR1988	22-JUL-14

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	2016-17: 33 BH 2017-18: 43 BH Total: 76 BH	2016-17:64 BH 2017-18:31 BH Total: 95 BH	No backlog for previous year.
1b	Exploration over lease area for geological axis 1 or 2	As per approved document dated 10/11/2016, a total of 194 BH have been proposed from 2014-15 to 2018-19 to explore mineralised area under G1/G2 level of exploration.	As on 01/04/2018, a total of 95 exploratory BH have been completed. The document has been modified vide approval dated 23/04/2018 and proposal for exploration of entire lease area is proposed for G1/G2 level of exploration.	NIL.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal.	Exploration work has been carried out by M/s Geo Exploration, M/s Thriveni Exploration Agency Pvt Ltd and M/s Gemco Kati Exploration .	NIL.
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per approved document, no specific proposal for balance area to be explored.	As per approved document dated 23/04/2018, an area of 362.587 Ha to be explored under G2 level of exploration.	NIL.
1e	Balance reserve as on 01/04/20	As per approved document dated 22/07/2014, the position of reserve and resource was 123.643 and 60.698 million tonnes respectively.	Remaning reserve and resources as on 01/04/2018 was 107.289 and 60.698 million tonnes respectively.	Total depletion since 01/04/2014 to 31/03/2018 was 16.354 million tonnes.

1f	General remarks of inspecting officers on geology, exploration etc	As per approved document dated 10/11/2016, a total of 194 BH have been proposed from 2014-15 to 2018-19 to explore mineralised area under G1/G2 level of exploration.	As on 01/04/2018, a total of 95 exploratory BH have been completed. The document has been modified vide approval dated 23/04/2018 and proposal for exploration of entire lease area is proposed.	NIL.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Barpada block:400N-800S/, 200E-800E, Katesahi block- S700-1050/E1875-2200, Topadihi block:N1520-550/E00-1050, Dumka Block: N250-500/W380-810, Kanhusahi Block: S1780-1500/W90-425, Guali Block: N1830-2100/E100-300.	Development has been carried out in Barpada block, Katesahi block, Topadihi block, Dumka Block, Kanhusahi Block. Guali block was not operated.	NIL.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No proposal of top soil generation. Separate benches in OB and Ore.	Separate benches being maintained in OB and Ore.	NIL.
2c	Stripping ratio or ore to OB ratio	1:0.038 CuM/Tonnes	1:0.017 CuM/Tonnes	Stripping ratio is less due to less production and development.

2d	Quantity of topsoil generation in m3	No specific proposal of top soil generation.	NIL.	NIL.
2e	Quantity of overburden generation in m3	0.235 Million CuM	0.190 Million CuM	Generation of waste is less due to less production.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The deposit is high grade in nature and metamorphosed.	No site deviation has been observed as far as development is concerned.	NIL.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Total 6 blocks have been proposed for exploitation.	Excavation has been carried out in 05 blocks.	Due to lake of market demand.
3b	Quantity of ROM mineral production proposed	6.584 million tonnes	5.60 million tonnes.	Production has been achieved matching with the EC capacity i.e. 5.62 million tonnes.
3c	Recovery of sailable/usable mineral from ROM production	4.939 million tonnes	5.435 million tonnes	Due to irregular behavior of Ore body and encounter of high grade ore zone.
3d	Quantity of mineral reject generation	1.175 million tonnes	0.167 million tonnes.	Less genetaion of SG due to irregular behavior of Ore body.
3e	Grade of mineral rejects generation and threshold value declared.	45 to 58% Fe.	45 to 58% Fe.	NIL.
3f	Quantity of sub grade mineral generation.	NIL.	NIL.	NIL.
3g	Grade of sub grade mineral generation	NIL.	NIL.	NIL.

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised.	Mechanised.	NIL.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal of beneficiation.	NIL.	NIL.
3j	Provision of drilling and blasting in mineral benches	Blast holes of 115 mm dia up to around 6.6/ 8.8 m deep are proposed. Controlled blasting with NONEL system of initiation is proposed.	Drilling and blasting work has been observed as per the proposal.	NIL.
3k	Provision of mining machineries in mineral benches	Dumper and shovel combination.	Dumper and shovel combination.	NIL.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Benche height of 6 mts has been proposed except in Chanaguda - Dhabalgiri quarry where the bench height is proposed 8m.	Height of the benches were maintained as per proposal.	NIL.
3m	Total area covered under excavation/pits	As per approved document dated 22/07/2014, an area of 188.637 ha at the end of plan period.	As on area 01/04/2018, the area put under excavation/pit utilization was 178.226 Ha.	As per AR 2017-18.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.038 CuM/Tonnes	1:0.017 CuM/Tonnes	Stripping ratio is less due to less production.

3o	Total area put in use under different heads at the end of year	As per approved document dated 22/07/2014, total area proposed at the end of the plan period to put under different heads i.e. excavation, waste dumping, infrastructure, road etc was 319.542 Ha.	As on 01/04/2018, area put under different heads i.e. excavation, waste dumping, infrastructure, road etc was 303.181 Ha.	As per AR 2017-18.
3p	Production of ROM mineral during the last five year period as applicable	2013-14:5.61 mT 2014-15:6.49 mT 2015-16:6.58 mT 2016-17:6.58 mT 2017-18:6.58 mT	2013-14:4.81 mT 2014-15:1.06 mT 2015-16:4.07 mT 2016-17:5.61 mT 2017-18:5.60 mT	Less production was due to production as per EC capacity i.e. 5.62 million tonnes and suspension of mining operations.
3q	General remarks of inspecting officers on method of mining etc.	Open cast method of mining has been proposed.	Mining is being done through open cast method of mining.	NIL.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No proposal of top soil generation. Separate dumping of waste and mineral reject was envisaged.	Waste material and mineral reject was dumped separately as per the proposal. No generation of top soil.	NIL.

4b	Location of topsoil, OB and mineral reject dumps	Waste dumping was proposed over three dumps namely PD1(N141-330/W1140-940), PD2 (N465-640/E350-590) and PD3(S335-635/E1890-2070).	In total there are four numbers of OB dumps within lease area. Dump No PD/3 located in Katesahi Block and three other dumps no-27, 28 & 30 are located near Udalwari Quarry which are inactive now.	There is no top soil dump.
4c	Number of dumps within lease area and outside of lease area	There were three nos. of existing dumps in the lease area and another three new waste dumps namely PD1, PD2 and PD3 was proposed.	There are four (04) nos. of OB dumps within lease area. Dump No-PD3 at Katesahi Block and three nos. of dump namely dump no. 27, 28 & 30 at Udalbari Quarry.	NIL.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Three dumps have been proposed outside of the ultimate pit limit.	At present, all the four existing waste dump are located outside ultimate pit limit.	NIL.
4e	Number of active and alive dumps.	Three numbers of OB dumps proposed (PD1, PD2, PD3).	There are no any active dump.	NIL.
4f	Number of dead dumps.	No specific proposal for dead dumps.	At present there are four nos. of dead dumps. Three nos Dump No 27, 28 and 30 near Udalbari Quarry and one dump no PD/3 at Katesahi Block.	NIL.
4g	Number of dumps established.	No proposal.	At present, three numbers of dumps have been stabilised near Udalbari Quarry.	NIL.
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposal of retaining wall and garland drain was observed along the dumps.	Retaining wall and garland drain observed along the dumps.	NIL.

4i	Length of Retaining wall or garland drain all along dumps	For reporting year retaining wall of 550m and garland drain of 600m was proposed.	Retaining wall and garland drain was constructed along the tow of the dumps.	NIL.
4j	Number of settling ponds	No proposal.	02 number of check dams were constructed.	NIL.
4k	Specific comments of inspecting officer on waste dump management	Waste dumping was proposed at three location. Proposal of retaining wall and garland drain etc. was given.	Waste dumps have been properly managed in the mine. To avoid the erosion and rain slides application of natural geotextiles such as coir matting has been undertaken at places. Slope of the dead dumps have been stabilised by plantation.	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.	An area of 1.875 Ha of Chanagoda quarry was proposed for backfilling.	Backfilling could not be undertaken, as proposed quarry area was not exhausted.	NIL.
5b	Area under backfilling of mined out area	Certain portion of the quarry Udalbari, Gangeigoga and Channagoda was proposed to backfilled from 2014-15 to 2017-18.	Previously an area of 1.218 Ha area in Udalbari has been backfilled. Gangeigoda quarry was backfilled with SG Iron Ore. For the reason violation was issued to lessee.	NIL.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal of top soil generation.	NIL.	NIL.

5d	Total area fully reclaimed and rehabilitated	An area of 1.875 Ha of Chanagoda quarry was proposed to reclaim.	Reclamation work could not be undertaken as proposed quarry area was not exhausted. Reclamation was done over 1.218 Ha Udalbadi Quarry.	NIL.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	During the year 2017-18 an area of 1.875 ha was proposed to be reclaimed as envisaged in approved document.	It is observed that reclamation work could not be undertaken, as proposed quarry area was not exhausted. Reclamation was done over 1.218 Ha Udalbadi Quarry.	NIL.

Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	As per rule 26(2) of MCDR, 2017, PMCP report to be submitted for previous year by 1st July.	Annual PMCP report for reporting year i.e. 2017-18 has been submitted.	NIL.
6b	Area available for rehabilitation (ha) .	An area of 1.875 Ha of Chanagoda quarry was proposed for backfilling.	Backfilling could not be undertaken, as proposed quarry area was not exhausted. However, afforestation work was carried out in backfilled area, old dump area, nala and road area. Gap plantation has also been carried out.	NIL.
6c	afforestation done (ha).	An area of 4.185 Ha (backfilled area, old dump, nala, road, gap plantation etc.) was proposed for afforestation.	Afforestation work was carried out in backfilled area, old dump area, nala and road area. Gap plantation has also been carried out.	NIL.

6d	No. of saplings planted during the year	4100 number of saplings.	A total of 7210 number of saplings was planted during 2017-18.	As per PMCP report.
6e	Cumulative no .of plants	Not specified.	Cummulative nos. of saplings planted is about 305907 nos of plants up to 31.03.2018	As per PMCP report.
6f	Any other method of rehabilitation	Not specified.	At few places of the SG dump Coir matting/Geo textile work was carried out.	NIL.
6g	Cost incurred on watch and care during the year	Not specified.	10.648 Lakhs	As reported by mine manager.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	An area of 1.875 Ha of Chanagoda quarry was proposed for backfilling.	Backfilling could not be undertaken, as proposed quarry area was not exhausted.	NIL.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	An area of 1.875 Ha of Chanagoda quarry was proposed for backfilling.	Backfilling could not be undertaken, as proposed quarry area was not exhausted.	NIL.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	0.535 Ha area.	Backfilling could not be undertaken, as proposed quarry area was not exhausted.	Bench plantation has been carried out.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal.	NIL.	NIL.

6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not specified.	NIL.	NIL.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal.	NIL.	NIL.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal.	NIL.	NIL.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal.	NIL.	NIL.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposal has been given for environment monitoring in core and buffer zone.	Environment Monitoring was carried out in core and buffer zone for reporting year.	NIL.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	The proposals for quarry reclamation/backfilling, dump rehabilitation by way of plantation on the dump slope as well as planation over the reclaimed areas were proposed during the year 2017-18.	The backfilling as proposed could not be under taken due to non-exhaustion of the quarry. Plantation work has been carried out as proposed. Coir matting/geo-textile work has also been carried out.	NIL.

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting within lease area was proposed.	Grade wise sorting observed.	NIL.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical.	Mechanical.	NIL.
7c	Different grade of mineral sorted out at mines.	Mainly from 45 to 58% Fe and more than 58% Fe.	Iron Ore having grade Fe Grade from 45 to 55 %, 55% to below 58%, 58% to below 60%, 60% to below 62%, 62% to below 65%, and 65% and above.	NIL.
7d	Any beneficiation process at mines .	2.0MTPA capacity beneficiation plant has been set up in mines.	Not in operation during 2017-18.	NIL.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No comments.	As per market demand as and when required Mineral Reject/Sub-grade material is blended with high grade ore.	NIL.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal of top soil generation during reporting year.	NIL.	NIL.
8b	Concurrent use or storage of topsoil	No proposal.	NIL.	NIL.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of Waste, Mineral reject has been proposed.	Separate dumping of Waste, Mineral reject was observed.	NIL.

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	An area of 1.875 Ha of Chanagoda quarry was proposed to restore through backfilling of waste material.	Backfilling could not be undertaken, as proposed quarry area was not exhausted.	NIL.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	During the year 2017-18 an area of 1.875 ha is proposed to reclaim.	Backfilling could not be undertaken, as proposed quarry area was not exhausted.	NIL.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Not specified.	Cummulative nos. of saplings planted is about 292596 nos of plants up to 31.03.2018	NIL.
8g	Survival rate	Not specified.	75 %	As per AR 2017-18.
8h	Water sprinkling on roads to control airborne dust	To control the airborne dust water sprinkling is proposed on the road.	Fixed and mobile water sprinkling was observed.	NIL.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Backfilling and plantation work was proposed for early reclamation and rehabilitation of mine area.	The backfilling could not be undertaken, as proposed quarry area was not exhausted. Plantation work was undertaken as per proposal. The aesthetic beauty in and around mines area has not been unduly affected by mining.	NIL.

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 rule 45 of MCDR , monthly and annual returns to be submitted.	Monthly and annual returns have been submitted for reporting year. i.e. 2017-18.	NIL.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information has been furnished about Mining Engineer, Geologist, and Manager.	Mining engineer and Geologist are appointed.	NIL.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	A total of 303.181 ha area has been furnished under lease area utilization for area under pits, reclaimed area, dumps etc.	The land use pattern is found to be in order.	NIL.
9d	Scrutiny of Annual return on afforestation	A total of 6250 number of saplings have been planted during 2017-18.	As per PMCP report a total of 7210 saplings have been planted.	NIL.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	0.167 million tonnes.	The status of mineral rejects furnished in annual return for the year 2017-18 is found to be satisfactory.	NIL.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stock furnished at mine head was NIL.	ROM stock furnished in AR of 2017-18 was found to be in corrected.	NIL.
9h	Scrutiny of Annual return on fixed assets	Value of fixed asset furnished is Rs. 93730972/-	The value of fixed asset furnished was found to be satisfactory.	NIL.

9k	Scrutiny of Annual return on mining machineries	Shovel, dumpers, loaders, water tanker, Compressor, drill machine etc.	Shovel, dumpers, loaders, water tanker, Compressor, drill machine etc.	NIL.
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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)	04-MAY-18	MCDR17	Rule 11(1)	04-MAY-18
MCDR17	Rule 14(3)	04-MAY-18	MCDR17	Rule 14(3)	04-MAY-18
MCDR17	Rule 37(5)	04-MAY-18	03-JUL-18	Rule 11(1)	04-MAY-18
	Rule 11(1)	04-MAY-18	MCDR17	Rule 14(3)	04-MAY-18
MCDR17	Rule 14(3)	04-MAY-18			
MCDR17	Rule 37(5)	04-MAY-18	03-JUL-18		

Date :

(DILIP JAIN)

Indian Bureau of Mines