INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-43/BBS Mine code : 300RI08040

(i) Name of the Inspecting : DJ03) DILIP JAIN

Officer and ID No.

(ii) Designation : Junior Mining Geologist

(iii) Accompaning mine : Sri Ashok Kumar Bhuyan, Agent, Sri Sahadat Mandal (Mi

Official with Designation

(iv) Date of Inspection : 01/04/2019
(v) Prev.inspection date : 15/04/2018

PART-I : GENERAL INFORMATION

1. (a) Mine Name : NUAGAON

(b) Registration NO. : IBM/4132/2011

(c) Category : A Mechanised

 $\text{(d)} \quad \text{Type of Working} \qquad \qquad \text{:} \quad \text{Opencast}$

(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.com
Phone : 06767-270048, 9437041818

(f) Police Station : Barbil

(g) First opening date : 01/01/1959

(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 : 03/03/1999

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/ : 12/08/2012

Termination date

Geologist

Name : RANJAN KUMAR MOHARANA, Full Time

Qualification : Msc. Applied Geology

Appointment/ : 08/08/2016

Termination date

Manager

Name : Sahadat Mandal

Qualification : Diploma in Mining Engg, FCC

Appointment/ : 16/09/2011

Termination date

6. Date of approval of Mining Renewal under rule 22 MCR1960 10/05/2005 Plan/Scheme of Mining Modif.approved Mining Scheme 15/10/2007 Modif.approved Mining Scheme 23/10/2008 Mining Scheme rule 12 MCDR1988 23/06/2009 Modif.approved Mining Scheme 18/08/2010 Mining Scheme rule 12 MCDR1988 05/07/2013 Mining Scheme rule 12 MCDR1988 22/07/2014

FMCP under 23C(1) 20/11/2018

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	A total of 457 BH have been proposed during 2018- 19.	A total of 309 BH have been completed during 2018-19.	Violation for less drilling has been issued on 12/04/2019.
1b	Exploration over lease area for geological axis 1 or 2	As per approved document dated 23/04/2018 a total of 457 boreholes have been proposed during 2018-19 to explore lease area under G1 level of exploration.	A total of 309 boreholes have been drilled in 2018-19.	Violation for less drilling has been issued on 12/04/2019.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No specific proposal of exploration agency in approved document dated 23/04/2018.	Exploration work has been carried out in lease area by: Gemco Kati Exploration Pvt.Ltd and M/s Geo Exploration Pvt ltd.	NIL.
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per approve document dated 23/04/2018 an area of 362.57 ha was to be explored.	A total of 309 BH have been drilled during year 2018-19. Assessment of area explored under G1/G2 was under progress on the dated of inspection.	

2a Location of (Barpada
 development block: E23
 w.r.t.lease area 720/N367-

(Barpada block: E235-S680), (Katasahi Block: E1700-2230/W670-915), (Topadihi block: Gangeigoda Quarry:-W50-E295/N810-1395, Kaliakocha Topadihi Quarry:- E730-1050/N510-680, Sonukocha Quarry:-E540-900/N1010-1830), Dumka Block: W390-1080/N300-530), (Kanhusahi Block: Quarry 1:-W395-60/S1330-1770, Quarry 2:-E650-815/S1140-1310), Guali Block: E10-280/N1880-2080).

The work of development for the year 2018-19 has been carried out within the approved limits for different blocks other than Guali & kanhusahi-Quarry 2. The working as proposed in kanhusahi quarry 2 could not been started due to non avaibility of tree felling order. The Guali block could not be operated because of NH 520 is passing adjacent Quarry:-E470- to the block and no 690/N800-950, permission of blasting.

Also the production to be restricted to 5.62 million tonnes due to non-availability of EC for enhanced production limit of 7.99 million tonnes.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No proposal of top soil generation during 2018-19. Mostly the waste proposed to be generated during the year is of intercalated nature. Side burden is proposed to be removed separately.	Top soil has been removed separately. Benches have been maintained as per proposal.	Unanticipated top soil was encounter during development.
2c	Stripping ratio or ore to OB ratio	1:0.09 CuM/Tonnes	1:0.034 CuM/Tonnes	Ore to waste ratio. Variation in SR is due to less generation of waste.
2d	Quantity of topsoil generation in m3	top soil	234 CuM of top soil has been generated during 2018-19.	Unanticipated top soil was encounter during development.
2e	Quantity of overburden generation in m3	0.684 million cum	0.3218million cum	Less generation of waste is due to less production.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	A total of 10 pits/quarries has been proposed for development during 2018-19.	Development has been carried out in 8 pis/quarries during 2018-19.	The development in kanhusahi quarry 2 and Guali block could not be carried out.

Actual work

Remarks

Propasals

Exploitation:

Item

Sl.No.

3a	Number of pit proposed for production	1 Pit, Katasahi Block: 1 Pit, Topadihi block: 4 Pit,	Barpada block: 1 Pit, Katasahi Block: 1 Pit, Topadihi block: 4 Pit, Dumka Block: 1 pit Kanhusahi Block: 1 Pit, Excavation work has been carried out in 8 pis/quarries during 2018-19.	The working as proposed in kanhusahi quarry 2 could not been started due to non-availability of tree felling order. The Guali block could not be operated because of NH 520 is passing adjacent to the block and no permission of blasting.
3b	Quantity of ROM mineral production proposed	7.59 million tonnes.	5.61 million tonnes.	Less production is in account of not having EC of enhanced production of 7.99 million tonnes and non-availability of tree felling and blasting permission as stated above.
3c	Recovery of sailable/usable mineral from ROM production	6.13 million tonnes.	5.52 million tonnes.	As stated above.
3d	Quantity of mineral reject generation	1.45 million tonnes	0.099 million tonnes or 99400MT	As reported during site inspection.
3e	Grade of mineral rejects generation and threshold value declared.	Mineral Reject Grade is between 45-58% Fe.	45% Fe to 58% Fe.	NIL.
3f	Quantity of sub grade mineral generation.	1.45 million tonnes	0.099 million tonnes or 99400MT	Same figures also reflected in 3d for Mineral Reject.

3g	Grade of sub grade mineral generation	Mineral Reject Grade is between 45-58% Fe.	45% Fe to 58% Fe.	NIL.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanical.	Mechanical.	NIL.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposal of any Beneficiation Study during 2018-19. A processing plant of 2.0MTPA capacity per annum for Iron Ore has been established within the lease area.	Not applicable as no proposal of any fresh beneficiation study.	NIL.
3 j	Provision of drilling and blasting in mineral benches	Blast holes of 115 mm dia have been proposed. Deep hole drilling & blasting with use of HEMMs. Controlled blasting with NONEL system of Initiation has been proposed for blasting.	Drilling and blasting has been carried out as per the proposal.	NIL.
3k	Provision of mining machineries in mineral benches	Excavator & Dumper/tipper combination & with crushing & screening units.	Machineries like 0.9cum to 4.3cum excavator, dumper/ tipper 20t to 35t, drilling machine, Loader etc. are deployed.	NIL.

31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM		The height of benches has been maintained as per the proposal.	NIL.
3m	Total area covered under excavation/pits	As per approved document dated 23/04/2018 an area of 206.586 Ha been proposed under excavation/pit s at the end of the plan period.	An area of around 178.226 Ha has been covered under pits as on 01/04/218.	Actual figure as reported during site inspection.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.09 CuM/Tonnes	1:0.034 CuM/Tonnes	Ore to waste ratio. Variation in SR is due to less generation of waste.
30	Total area put in use under different heads at the end of year	As per approved document dated 23/04/2018, Total area put in use under different heads is 330.33 Ha at the end of the plan period.	Total of around 303.181 Ha area has been degraded under different heads as on 01/04/2018.	Actual figure as reported during site inspection.
3p	Production of ROM mineral during the last five year period as applicable	mT 2015-16:5.62	2014-15:1.06 mT 2015-16:4.07 mT 2016-17:5.61 mT 2017-18:5.60 mT 2018-19:5.61 mT	NIL.

NIL.

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

mechanized method of been proposed to win the

Ore.

Fully mechanized method of mining is in practice

to win Ore.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	top soil generation during 2018- 19. Separate dumping of waste and	Around 234 CuM of top soil have been generated during 2018-19 has been stored and 150CuM has been utilized for plantation. Waste and Mineral reject has been kept separately.	NIL.
4b	Location of topsoil, OB and mineral reject dumps	top soil generation during 2018- 19. A total of		NIL.

4c	Number of dumps within lease area and outside of lease area	There are total five location of waste dumps are already exists in addition to newly proposed 3 waste dumps. All the dumps area proposed within lease area.	No waste dumping outside of the lease has been observed.	NIL.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Except proposed dump PD-1, other dumps have been proposed within UPL.	As on date of inspection only dump PD-1 has been commenced.	NIL.
4e	Number of active and alive dumps.		There are one active dump at katasahi & another backfilling at Gangaiguda quarry.	NIL.
4f	Number of dead dumps.	No specific proposal in relation to dead dumps.	Not applicable as no proposal.	NIL.
4g	Number of dumps established.	Waste dump 27 and 28 has been proposed for plantation.	Plantation has been carried out as per proposal.	NIL.
4h	Whether Retaining wall or garland drain all along dumps are there.	Other than existing retaining wall and garland drain, the same has been proposed along waste dump and MR dumps.	Retaining wall has been observed along the old dump. However, retaining wall and garland drain has not been observed along waste dump PD-1.	Violation for not construction retaining wall and garland drain has been issued on 12/04/2018.

4i	Length of Retaining wall or garland drain all along dumps	wall-4185 m & Garland drain-	Retaining wall-550 m & Garland drain-535 m	Violation for not construction retaining wall and garland drain has been issued on 12/04/2018.
4 j	Number of settling ponds	2 number of settling pond to be constructed in the Year 2018-2019.	been constructed as per proposal.	Violation issued on 12/04/2018.
4k	Specific comments of inspecting officer on waste dump management	top soil generation during 2018- 19. A total of	Top soil generated initially stored near magazine. Dumping of the waste has been as per proposal. Dumping of waste at dump PD-3 has been started. Waste dumps as proposed PD1 and PD-2 have not been commenced as waste generated has been utilized for haul road maintenance.	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.	Gangaigoda quarry has been exhausted partly.	During the financial year 2018-19 Gangaigoda Quarry has been backfilled partly.	NIL.
5b	Area under backfilling of mined out area	An area of 0.8 Ha of Gangeigoda quarry has been proposed for backfilling.	Backfilling has been observed in Gangeigoda quarry as per proposal.	NIL.

5c		top soil generation during the	Around 234 CuM of top soil have been generated during 2018-19 has been stored and out of that 150CuM has been utilized for plantation.	NIL.
5d	Total area fully reclaimed and rehabilitated		Not applicable as no proposal of fully reclamation and rehabilitation.	NIL.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Ha of Gangeigoda quarry has	Backfilling has been observed in Gangeigoda quarry.	NIL.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
ба	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	26(2) of MCDR, 2017, PMCP report to be	Annual report of PMCP has been submitted for the year 2017-18.	NIL.
6b	Area available for rehabilitation (ha) .	7.90 Ha have been proposed for Bench Plantation and	Around 5.18 hectare of area has been covered under Bench, Safety Zone and Waste dump plantation in the year 2017-18.	NIL.

6c	afforestation done (ha).	have been proposed for Bench	Around 5.18 hectare of area has been covered under Bench, Safety Zone and Waste dump plantation in the year 2017-18.	NIL.
6d	No. of saplings planted during the year	As per approved PMCP a total of 9000 Numbers of sapling has been proposed to plant during 2018-19.	12551 nos within lease area as reported during site inspection.	NIL.
6e	Cumulative no .of plants	commutatively 9000 Numbers	During the year 2018-19, a total of 12551 nos of sapling within lease area has been plant as reported during site inspection.	NIL.
6f	Any other method of rehabilitation	No specific method of rehabilitation other than Plantation.	Not applicable as no proposal.	NIL.
6g	Cost incurred on watch and care during the year	3.7 Lakhs	3.5 Lakhs	NIL.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Ha of Gangeigoda quarry has been proposed for	Backfilling has been observed in Gangeigoda quarry.	NIL.

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	An area of 0.8 Ha of Gangeigoda quarry has been proposed for backfilling.	Backfilling has been observed in Gangeigoda quarry.	NIL.
6ј	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area		No afforestation has been carried out in the backfilled area.	NIL.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal has been given.	Not applicable as no proposal has been given	NIL.
61	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Other than backfilling and plantation, no specific proposal.	Not applicable as no proposal.	NIL.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	An area of 2.05 Ha has been proposed to rehabilitate during 2018-19 (safety zone planation).	Afforestation has been carried out as per proposal.	NIL.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	An area of 2.05 Ha has been proposed to rehabilitate during 2018-19 (safety zone planation).	Afforestation has been carried out as per proposal.	NIL.
60	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Afforestation has been proposed as a method of rehabilitation .	Afforestation has been carried out as per proposal.	NIL.

бр	Compliance of environmental monitoring (core zone and buffer zone)	, Noise level	Environmental monitoring was carried out in Core and buffer zone for the reporting year.	NIL.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	was proposed to backfilled during reporting year	Backfilling has been observed in Gangeigoda quarry. Environment monitoring carried out regularly.	NIL.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting within lease area has been proposed.	Grade wise sorting has been observed within lease area.	NIL.
7b	Method of grade- wise mineral sorting i.e. manual or mechanical.	Mechanical sorting of Iron Ore by Crushing and screening,	Mechanical method has been adopted by Crushing and screening at Mines.	NIL.
7c	Different grade of mineral sorted out at mines.	Iron Ore: 45 to 55%Fe, >55%Fe.	Iron Ore of Grades 45-55%Fe, 55-58%Fe, 58-60%Fe, 60-62%Fe, 62-65%Fe has been sorted out in the Mines.	NIL.
7d	Any beneficiation process at mines .	A processing plant of 2.0MTPA capacity per annum has been established within the lease area.	No beneficiation/processing of ore during the year 2018-19.	

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Sub-grade material generated during excavation and processing of ROM has been stacked separately for future use.	NIL.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Top Soil given	Around 234 CuM of top soil have been generated during 2018-19 has been stored and out of that 150CuM has been utilized for plantation.	Unanticipated top soil was encounter during development.
8b	Concurrent use or storage of topsoil		Around 234 CuM of top soil have been generated during 2018-19 has been stored and out of that 150CuM has been utilized for plantation.	Unanticipated top soil was encounter during development.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps have been proposed for waste dumping and mineral reject.	Separate dumps for overburden, rejects and fines have been observed.	NIL.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	to backfill Gangoigoda Quarry by	A quantity of 95160 mt or 47580 CuM of waste have been utilized for restoring of the Gangoigoda Quarry.	NIL.

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	An area of 0.8 Ha of Gangeigoda quarry has been proposed for backfilling.	Backfilling has been observed in Gangeigoda quarry.	NIL.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	9000 number of sapling have been proposed to plant during 18-19.	During the year 2018-19, a total of 12551 nos of sapling within lease area has been planted as reported during site inspection.	NIL.
8g	Survival rate	No specific Proposal	75% as reported.	NIL.
8h	Water sprinkling on roads to control airborne dust	sprinkling has been proposed	Fixed water sprinkler of around 2900m length along the haul road has been observed. Beside that we have one 15KL, one 16 KL, four 12KL. & one 8 KL. Water tanker for frequently water spraying on haul road and quarry area.	NIL.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	aesthetic beauty of	Plantation has been carried out in Safety Zone and Dump as per proposal to improve aesthetic beauty in and around lease area.	NIL.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	of MCDR ,	Monthly and annual returns are being submitted regularly.	Scrutiny of AR 2017-18.

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, Mines Manager and geologist has been appointed at the mine.	Scrutiny of AR 2017-18.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	area has been furnished under lease	The land use pattern is found to be in order.	Scrutiny of AR 2017-18.
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.	Scrutiny of AR 2017-18.
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.	Scrutiny of AR 2017-18.
9f	Scrutiny of Annual return on ROM stock and/or graded ore		ROM stock furnished in AR of 2017-18 was found to be in corrected.	Scrutiny of AR 2017-18.
9h	Scrutiny of Annual return on fixed assets		The value of fixed asset furnished was found to be satisfactory.	Scrutiny of AR 2017-18.
9k	Scrutiny of Annual return on mining machineries		Shovel, dumpers, loaders, water tanker, Compressor, drill machine etc.	Scrutiny of AR 2017-18.

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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 Complianc	e on	Rule	NO.	Issued on Compliance on
MCDR17 Rule 11(1)	12/04/2019		MCDR17	Rule	11(112/04/2019

Date: (DILIP JAIN)

Indian Bureau of Mines