

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-89/BBS

Mine code : 30ORI08118

- (i) Name of the Inspecting : **RKD**) **RAJESH KUMAR DAS**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri Arundeeep Bhattacharjee, Manager(Mine)
Official with
Designation
- (iv) Date of Inspection : 10-AUG-23
- (v) Prev.inspection date : 07-JUL-22

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **NUAGAON IRON ORE BLOCK**
- (b) **Registration NO.** : **IBM/432/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **ORISSA**
- District : **KEONJHAR**
- Village : **Nuagaon**
- Taluka : **Barbil**
- Post office : **Barbil**
- Pin Code : **758035**
- FAX No. :
- E-mail : **biswaranjan.padhi@jsw.in**
- Phone : **9437145415**
- (f) **Police Station** : **BARBIL**
- (g) **First opening date** : **01-JUL-20**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **NUAGAON, BARBIL**
correspondance : **KEONJHAR**
: **ODISHA**
3. (a) **Lease Number** :
- (b) **Lease area** :
- (c) **Period of lease** :
- (d) **Date of Expiry** :
4. **Mineral worked** :

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5. Name and Address of the

Lessee : M/S JSW STEEL LTD
KEONJHAR ORISSA
Phone:
FAX :

Owner : JSW Steel Ltd.
Plot no.-200, Forest Park
Bhubaneswar BHUBNESHWAR
ORISSA
Phone: 9437145415
FAX : 02242863000

Agent : SHRI B.R.K. PADHI
AT-DORAGUDA PO-KUCHEIPADAR
DIST- RAYAGADA RAYGADA
ORISSA
Phone: 06865-287100
FAX : 06865-287040

Mining Engineer

Name : Sangram Kishore Mallick, Full Time
Qualification : AMIE in Mining Engineering
Appointment/ : 25-FEB-21
Termination date

Manager

Name : Sangram Kishori Garnaik
Qualification : AMIE in Mining Engineering
Appointment/ : 04-DEC-21
Termination date

6. Date of approval of Mining :
Plan/Scheme of Mining

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	In 2021-22 105 nos boreholes proposed	only 6 nos done in 2021-22	Violation letter issued under Rule 11(1) of MCDR,2017
1b	Exploration over lease area for geological axis 1 or 2	In 2022-23 no boreholes proposed	backlog of 2021-22 proposal 16 nos bore holes drilled.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not mentioned specifically.	JSW steel limited.Expenditure reported 18920013 Rs	
1e	Balance reserve as on 01/04/20	As per approved modified mining plan as on 01.04.2021 Reserves given 156056189 Tons and proposal given in 2021-22 is 7990268 Tons and 2022-23 is 11991218 Tons.As on 01.04.2023 is 136074703 Tons	Actual as 01.04.2023 is 142675177 Tons	

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1f	General remarks of inspecting officers on geology, exploration etc	Nuagaon Iron ore mine lies over the upper shale formation of the Koira group and lithology of the area comprises of 1 to 1.5m soil occurs in western part and most part of the area is covered by laterite. As per borehole data and exposed quarries top benches are found with lateritic iron ore. . The other lithology found area HLO, SLO, Blue dust. The lease is auctioned in 2020 and broadly the lease area explored in G1 & G2 but the new lessee drilled only 22 boreholes.
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Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	The working proposal is given in seven pit.	The work is done broadly with in proposed area.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes ,The proposal is given in working pit and top soil generation is nil.	Yes, Broadly as per proposal.	
2c	Stripping ratio or ore to OB ratio	1:0.30	1:0.20	

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2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	1769495	706092	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The development is broadly with in proposed area but the quantity is very less w.r.t proposal.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	7 pit	Broadly as per proposal.	
3b	Quantity of ROM mineral production proposed	11991218 Tons	7116857 Tons	
3c	Recovery of sailable/usable mineral from ROM production	11282991 Tons	5893841 Tons	
3d	Quantity of mineral reject generation	708227 Tons	412777 Tons	
3e	Grade of mineral rejects generation and threshold value declared.	45-55%Fe	Avg Grade 51.15% Fe	
3f	Quantity of sub grade mineral generation.	708227 Tons	412777 Tons	
3g	Grade of sub grade mineral generation	45-555 Fe	51.15% Fe	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	

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3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Nil	NA
3j	Provision of drilling and blasting in mineral benches	yes given	Yes deep hole drilling with 152 mm diameter drill hole done and blasting also done.
3k	Provision of mining machineries in mineral benches	Yes deployment of mine machineries is proposed with shovel Dumper combination.	Broadly as per proposal.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height of maximum 10 meter is proposed	Broadly as per proposal and suitable for method of mining.
3m	Total area covered under excavation/pits	As per the approved document 153.901 ha. is proposed to be covered under excavation during the plan period.	Actual area covered under excavation reported 144.235 ha.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.30	1:0.20
3o	Total area put in use under different heads at the end of year	561.184 ha as per plan period.	308.509 ha.
3p	Production of ROM mineral during the last five year period as applicable	2020-21:7999999 Tons 2021-22:7990268 Tons 2022-23:11991218 Tons	2020-21:4214757 Tons 2021-22: 6264155 Tons 2022-23: 7116857 Tons

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

The method of
mining is by
opencast method
using HEMM and
maximum bench
height of 10meter
and width of 15
meter with deep
hole drilling
blasting.

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 nil but for OB/IB and mineral reject seperate dump	Broadly as per proposal.	
4b	Location of topsoil, OB and mineral reject dumps	Top soil : No proposal, OB: E337600- 338000,N 2426600- N2427000, Mineral Reject:E 326320- 326380,N 2429610-E 2429710 , E 324622- 324995,N 2429600- 2429880 & E 324894- 325028,n 2431260- 2431350	Broadly as per proposal.	
4c	Number of dumps within lease area and outside of lease area	Katesahi OB dump	Broadly as per proposal.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	out side ultimate pit	out side ultimate pit	

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4e	Number of active and alive dumps.	One Dump	One Dump	
4f	Number of dead dumps.	4 nos dead dump of Ex-Lessee	4 nos dead dump of Ex-Lessee	
4g	Number of dumps established.	No proposal	All dead dump afforestation and coirmating done.	
4h	Whether Retaining wall or garland drain all along dumps are there.	yes proposed	Broadly done as per proposal	But many place retaining wall filled with silt as in mine more than 6 million tons of material of Ex-lessee stock in lease area.
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall -338m Garland Drain-1370m	Broadly done as	
4j	Number of settling ponds	No proposal	Nil	
4k	Specific comments of inspecting officer on waste dump management			As mentioned above more than 6 million tons are present in lease area and stock are not maintained properly and same for old dumps which are not stabilised properly.

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.	NA	NA	
5b	Area under backfilling of mined out area	Nil	Nil	

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5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	NA	NA	
5d	Total area fully reclaimed and rehabilitated	NA	NA	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Area not matured for backfilling.

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).	Yes	Yes	Annual Report on PMCP returns submitted along with Annual Returns 30.06.2023
6b	Area available for rehabilitation (ha) .	Nil	NA	
6c	afforestation done (ha).	2.50 ha.	3.16 ha.	
6d	No. of saplings planted during the year	6250 nos saplings	7900 nos saplings	
6e	Cumulative no .of plants	11250 nos saplings	10700 nos saplings	
6f	Any other method of rehabilitation	NA	NA	
6g	Cost incurred on watch and care during the year	Not mentioned specifically	Rs 434500/-	

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6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Nil	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Nil	Nil	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Nil	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil	The lease is auctioned in 2020-21 and lessee is new therefore afforestation work only started.

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6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring in Core Zone and buffer Zone as per MOEFCC and SPCB guidelines.	Environmental monitoring in Core Zone and buffer Zone as per MOEFCC and SPCB guidelines.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Broadly complied.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Gradewise sorting by screening and crushing within lease area.	By blending of material of different face and by screening and crushing.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical.	
7c	Different grade of mineral sorted out at mines.	Iron Ore of different size and grade sorted out and dispatched to different plants.Grade range-+55%Fe & 45-55%Fe	Iron ore of different grade and size as per requirement is dispatch.	
7d	Any beneficiation process at mines	Nil	Nil	

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7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Differen grade material blend to get desire grade in which most of low grade also utilised.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Generation of top soil proposal is nil	NA	As the excavation is proposed in existing pit therefore generation of top soil is nil.
8b	Concurrent use or storage of topsoil	NA	NA	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Seperate dump and OB and mineral reject proposed	Broadly as per proposal.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Nil	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	Nil	

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8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	6250 nos afforestation	7900 nos Afforestation	
8g	Survival rate	70-80%	80% reported	
8h	Water sprinkling on roads to control airborne dust	Sprinkling of water on Haul roads and transport road using water tanker for dust suppression	Broadly as per proposal.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The lessee is taking care of all environmental preventive measures as per statute i.e Air, Water, Noise, ground vibration monitoring. The plantation is done and dust suppression water sprinkling is done on regular basis. There is no adverse impact observed during mine visit on aesthetic beauty in mine area.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	As per Rule 45 of MCDR,2017	Submitted as per Rule.	

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9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Yes Given	Manager: Shri Arundeeep Bhattacharjee, Mining Engineer: Shri Sangram Kishore Mallick, Geologist: Shri Mritunjay Jha
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Yes given	Broadly as per actual.
9d	Scrutiny of Annual return on afforestation	Yes given	7900 nos reported within lease
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	from unprocessed ore 286795.61 tons reported, grade 51.15, from processed ore 125982.10 tons of 51.15 grade	During mine visit mineral reject stack observed.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Yes given	ROM stock of 508771.9 tons reported and graded ore of of Lumps and fines also reported.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Yes given	The sale value and Ex-mine price of different grades of lumps and fines give. The Ex-mine price varies from 1496 Rs/ton to 7409 Rs/ton. The cost of production is 4686.01 Rs/ton which include bid premium.
9h	Scrutiny of Annual return on fixed assets	Yes given	Rs 7078327713/-

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9k	Scrutiny of Annual return on mining machineries	Yes given	List of machineries given Annual return: Shovel-0.9 cum, 1 cum & 5.5 cum bucket capacity Dumper-100 tons Tipper-35 Cum Truck-29 Tons Dozer-485 & 452 HP Blast Hole Drill-1727 mm Air Compressor-1.0 cum/mn Water tanker-16 & 50 KL
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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	Compliance on	Rule NO.	Issued on	Compliance on
MCDR17	Rule 11(1)	18-AUG-23			
MCDR17	Rule 37(2)	18-AUG-23			
MCDR17	Rule 48	18-AUG-23			

Date :**(RAJESH KUMAR DAS)**

Indian Bureau of Mines