

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

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

Mine code : 30ORI08118

- (i) Name of the Inspecting : **K013**) **KEWAL KRISHAN**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Mine Manager , S. K. Garnaik ,
Official with
Designation
- (iv) Date of Inspection : 07/07/2022
- (v) Prev.inspection date :

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 : 01/07/2020
- (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 :

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/ : 25/02/2021
Termination date

Manager

Name : Sangram Kishori Garnaik
Qualification : AMIE in Mining Engineering
Appointment/ : 04/12/2021
Termination date

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

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	no proposal for the year 2020-21	no backlog	
1b	Exploration over lease area for geological axis 1 or 2	105 nos of Boreholes proposed during the year 2021-22	drilled 06 nos of	issued violation under rule 11(1) of MCDR 2017
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified	South West Pinnacle Pvt. Ltd. Expenditure - 67.21 Lakhs as reported by party	
1d	Balance area to be explored to bring Geological axis in 1 or 2	117.150 Ha	5.5 Ha	
1e	Balance reserve as on 01/04/20		Balance reserves/ resources 01.04.2022 (121) 598783000 T (122) 23729099 T (221) 141479738 T (222) 14576451 T Total Resource & Reserve 778568288 T	

1f General remarks
of inspecting
officers on
geology,
exploration etc

Nuagaon Iron Ore Mine lies over the Upper Shale Formation of the Koirra Group . Litho units like Iron ores of HLO, SLO, lateralized HLO types, Fe-Shale, laterites of both aluminous and ferruginous nature, float ores concealed under soil and alluvial cover at places are mapped in the Nuagaon Iron Ore Mine. Entire lease area has been explored under G1/G2 category. Out of the total lease area, about 650.134Ha has been explored under G1 category and 117.150Ha has been explored under G2 category.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	Barapada E 324400-324900 N 2429800-2430200 Kanhusahi E323700-324000 N2428800-2429000 Katasahi E326000-326300 N2429600-2429800 Gangeigoda E324300-324500 N2431400-2431600 Sonukucha E324700-325000 N2431900-2432200 Topadihi E 324900-325100 N2431000-2431200 MDH E323400-323700 N2430700-2431000	Broadly as per proposal,	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in topsoil, overburden and minerals are proposed	as per proposal	
2c	Stripping ratio or ore to OB ratio	1:0.28	1:0.09	As the total production was on pro-rata basis, the OB is also proportionately reduced
2d	Quantity of topsoil generation in m3	no such proposal	not applicable	
2e	Quantity of overburden generation in m3	1101491	562740	As the total production was on pro-rata basis, the OB is also proportionately reduced

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	mine development is carried out by opencast mining methods as proposed
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	07 nos	07 nos	
3b	Quantity of ROM mineral production proposed	7990268T	6264155T	issued violation under rule 11(1) of MCDR 2017
3c	Recovery of sailable/usable mineral from ROM production	7528197 T	5893841T	
3d	Quantity of mineral reject generation	462071T	370314T	
3e	Grade of mineral rejects generation and threshold value declared.	MR:45-55% Fe Threshold value-45% Fe	MR:45-55% Fe Threshold value-45% Fe	
3f	Quantity of sub grade mineral generation.	462071 T	370314 T	
3g	Grade of sub grade mineral generation	45-55%	45-55%	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	no such proposal	no such proposal	

3j	Provision of drilling and blasting in mineral benches	Drilling and blasting proposed	Drilling and blasting carried out
3k	Provision of mining machineries in mineral benches	Shovel Dumper Combination	Shovel Dumper Combination
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	width 15m height 10m	maintained as proposed
3m	Total area covered under excavation/pits	As per the approved mining plan, 153.901 Ha is proposed to be covered under excavation during the plan period.	Covered under excavation is 141.645 Ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.28	1:0.09

3o	Total area put in use under different heads at the end of year	Area for the Plan Period as per approved document , (i)Area under Mining- 153.901 Ha (ii)Waste Dump- 30.963 Ha (iii)Mineral Storage/ Mineral Processing plant- 180.221 (iv) Infrastructure facilities (parking Plaza, Helipad, Substation, Fuel Station etc-17.317 Ha (v)Roads-5.470 Ha (vi) Proposed Mineral processing plant (Mineral storage area/Crushing/ Grinding- 157.847 Ha (vii)Township area- 7.000 Ha (viii) Green belt- 7.356 Ha (ix)Others (magazine & safety Zone)- 1.109) Covered under current (O/C) Workings-141.645 Ha. (ii) Used for waste disposal-20.694 Ha. (iii) Occupied by plant, buildings, residential, welfare buildings & roads-9.640 Ha. (iv) Other Purpose (Mineral Storage)- 83.827 Ha.
3p	Production of ROM mineral during the last five year period as applicable	Year 20-21= 7999999 T Year 21-22 = 7990268T	Year 20-21= 4214757 T Year 21-22 =6264155 T

3q	General remarks of inspecting officers on method of mining etc.	The method of mining is A category and is fully mechanised. The ROM production is carried out by open cast mining methods.	The method of mining is A category and is fully mechanised. The ROM production is carried out by open cast mining methods.
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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	seperate dumping of OB and mineral reject is Proposed no proposal for general of top soil	as per proposal	

4b	Location of topsoil, OB and mineral reject dumps	Top Soil- No Proposal OB- Katasahi: N 2426600 to 2427000; E 337600 to 338000 Topadihi: N 2431400 to N 2431600; E 324400 to E 324800	as per proposal, broadly	Mineral rejects are generated and temporarily stacked prior to utilization. The mineral rejects are entirely utilized by means of blending
		Mineral Reject- Katasahi- E 326325- 326375 N 2429614- E 2429705 Kanusahi- E 323638- 323807 N 2428648- 2428740 Barapada- E 324623- 324997 N 2429602- 2429880 Topadihi-E 324893- 325028 N 2431254- 2431348 & E 324830- 324938 N 2431454- 2431603		
4c	Number of dumps within lease area and outside of lease area	within lease 02 nos outside lease nil	within lease 02 nos outside lease nil	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	out side the UPL limit	out side the UPL limit	
4e	Number of active and alive dumps.	02 nos	02 nos	

4f	Number of dead dumps.	4 Dumps (by Ex-Lessee) Katasahi -1 Udalwari-3	4 Dumps (by Ex-Lessee) Katasahi -1 Udalwari-3	
4g	Number of dumps established.	no such proposal	no such proposal	
4h	Whether Retaining wall or garland drain all along dumps are there.	proposed along the dump	noticed along the dump	
4i	Length of Retaining wall or garland drain all along dumps	Retaining Wall- 500m Garland drain- 840m	broadly as per per proposal	
4j	Number of settling ponds	no such proposal	no such proposal	
4k	Specific comments of inspecting officer on waste dump management			waste dump management is being carried out as proposed.

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.	no such proposal	no such proposal	
5b	Area under backfilling of mined out area	no such proposal	no such proposal	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	no such proposal	no such proposal	

5d	Total area fully reclaimed and rehabilitated	no such proposal	no such proposal	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		There is no proposal of backfilling / reclamation during plan period.	There is no proposal of backfilling / reclamation during plan period.

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).	To be submitted on Ist july	submitted	
6b	Area available for rehabilitation (ha) .	no such proposal	no such proposal	
6c	afforestation done (ha).	1 Ha	broadly as per proposal	
6d	No. of saplings planted during the year	2500	broadly as per the proposal	
6e	Cumulative no .of plants	2500 nos	2500 nos	
6f	Any other method of rehabilitation	no such proposal	no such proposal	
6g	Cost incurred on watch and care during the year	not specified	126000/- as reported by party	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	no such proposal	no such proposal	

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	no such proposal	no such proposal
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	no such proposal	no such proposal
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	no such proposal	no such proposal
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	no such proposal	no such proposal
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	no such proposal	no such proposal
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	no such proposal	no such proposal
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	no such proposal	no such proposal

6p	Compliance of environmental monitoring (core zone and buffer zone)	periodical monitoring of environmental parameters are proposed in core and buffer zone	being carried out	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			No specific PMCP measures are proposed by party except the environmental monitoring in the core and buffer zone.

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	grade wise sorting within lease	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	mechanised	mechanised	
7c	Different grade of mineral sorted out at mines.	45 to 55 % Fe % +55% Fe	Grade range- 55-58%, 58-60%, , 60-62%, 62-65% & 65% above	Mineral rejects generated are entirely utilized by means of blending.
7d	Any beneficiation process at mines .	no such proposal	NA	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Grade wise sorting is carried out. The mineral rejects are entirely utilized by means of blending with high grade .

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	no top soil generation proposed	not applicable	
8b	Concurrent use or storage of topsoil	no such proposal	no such proposal	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for Overburden, waste rock, Rejects and fines is proposed	Separate dumps for Overburden waste rock, Rejects and fines.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	no such proposal	no such proposal	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	no such proposal	no such proposal	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	2500 nos of plantation	broadly 2500 nos	
8g	Survival rate	90%	broadly as proposed	
8h	Water sprinkling on roads to control airborne dust	Water Sprinkling is proposed on haul road to control airborne dust	Water Sprinkling is proposed on haul road to control airborne dust	

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Aesthetic beauty in and around the mines is good because of plantation carriedout & bytregular sprinkling of water on mine roads to control the dust.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	as per MCDR2017, the monthly return are to be submitted before the 10th day of every month in respect of the proceding month and AR shall be submitted before the 1st day of July each year for the proceding fininial year.	In the monthly returns submitted for the month May 2022 , the information furnished under item no 7 ie production proposal for the current financial year and cumulative production as reported up to the current month are not correct.	issued violation under rule 45(7) of MCDR 2017
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer-09 (including 01 Mines Manager) Diploma Mining Engineer-13 Geologist-4 Surveyor- 2	Graduate Mining Engineer-09 (including 01 Mines Manager) Diploma Mining Engineer-13 Geologist-4 Surveyor- 2	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings- 141.645 Ha. Used for waste disposal- 20.694 Ha. Occupied by plant, buildings, residential, welfare buildings & roads-9.640 Ha. Other Purpose (Mineral Storage)- 83.827 Ha	broadly in order
9d	Scrutiny of Annual return on afforestation	2500nos within lease	broadly in order
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	370314T	broadly in order
9f	Scrutiny of Annual return on ROM stock and/or graded ore	closing stock as reported is 1023 T	closing stock as reported is 1023 T

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	as reported by party Ex-Mines Price-Lumps: 58%-60%: Rs 5780 60%-62%: Rs 7342 62%-65%: Rs 7885 Fines: 55%-58%: Rs 1904.85 58%-60%: Rs 7342 60%-62%: Rs 4856.21 62%-65%: Rs 6529.58 >65%: Rs 8109.78	as reported by party Ex-Mines Price-Lumps: 58%-60%: Rs 5780 60%-62%: Rs 7342 62%-65%: Rs 7885 Fines: 55%-58%: Rs 1904.85 58%-60%: Rs 7342 60%-62%: Rs 4856.21 62%-65%: Rs 6529.58 >65%: Rs 8109.78
9h	Scrutiny of Annual return on fixed assets	as reported by party Fixed Value of Assets- Rs. 8001321360	as reported by party Fixed Value of Assets- Rs. 8001321360
9k	Scrutiny of Annual return on mining machineries	ROCK DRILL (NONELEC) 4 BACK HOE 32 DUMPER 6 TRUCK 59 WHEEL LOADER 15 CRUSHER 1 DOZER 2 MOTOR GRADER 2 CRANE 1 WATER TANKER 9 OTHERS (NON-ELEC.) 37	ROCK DRILL (NONELEC) 4 BACK HOE 32 DUMPER 6 TRUCK 59 WHEEL LOADER 15 CRUSHER 1 DOZER 2 MOTOR GRADER 2 CRANE 1 WATER TANKER 9 OTHERS (NON-ELEC.) 37

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)	15/07/2022			
MCDR17	Rule 45(7)(a)	15/07/2022			

Date :

(KEWAL KRISHAN)

Indian Bureau of Mines