

MCDR-MIFLOFE/19/2022-BBS-IBM_RO_BBS
INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION

I/21771/2023

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-88/BBS

Mine code : 30ORI08119

- (i) Name of the Inspecting : **VPD**) **VIKRAM DESHPANDE**
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : S/Shri Pratap Tandia, Mines Manager, Basavaraj Bogone
Official with
Designation
- (iv) Date of Inspection : 04/10/2023
- (v) Prev.inspection date : 02/02/2023

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **JAJANG 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 : Jajang
- Taluka : Barbil
- Post office : Barbil
- Pin Code : 758035
- FAX No. : 02242863000
- E-mail : ranjan.nayak@jsw.in
- Phone : 9773322308
- (f) Police Station : JODA
- (g) First opening date : 01/07/2020
- (h) Weekly day of rest : SUN
2. Address for : At+post-Barbil
correspondance Dist-Keonjhar
Odisha-758035
3. (a) Lease Number :
- (b) Lease area :
- (c) Period of lease :
- (d) Date of Expiry :
4. Mineral worked : IRON ORE Main

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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 : Mr.Chandra Shekhar Aikat,Full Time
 Qualification : Btech Mining
 Appointment/ :
 Termination date

Geologist

Name : Mr.Shubhendu Shekhar,Full Time
 Qualification : M. Sc Geology
 Appointment/ :
 Termination date

Manager

Name : Pratap Tandia
 Qualification : BE Mining
 Appointment/ :
 Termination date

6. Date of approval of Mining	:	MP under 16(1) of MCR 2016	19/08/2020
Plan/Scheme of Mining	:	MP modif under 17(3) MCR 2016	20/04/2021
	:	MP modif under 17(3) MCR 2016	18/11/2021

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	72	06	The eastern side of the ML area area was found to be non-mineralized hence further drilling was discontinued the said area is explored at G2 level owing it to be non-mineralized.
1b	Exploration over lease area for geological axis 1 or 2	Nil	37	
1c	Exploration Agencies and Expenditure in lakh rupees during the year		M/S- JSW Steel Limited, amount spent is Rs-276.4 Lakh.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	
1e	Balance reserve as on 01/04/20		(121) 37492356-MT (221) 12623326-MT Total 50115682-MT	Figures as on 01/04/2023

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1f	General remarks of inspecting officers on geology, exploration etc	The general strike of the formation in Northern Singhbhum is NNE-SSW, but gradually changing over to NW-SE in the eastern part and in the adjoining area of Mayurbhanj. Jajang region is observed with the litho-members including basal sandstone, volcanic formation, banded iron formation, banded shale formation, rocks of mixed formation facies and Kolhangroup, laterite, soil and alluvium.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	B Block (N2424720 to N2426760 & E336600 to 337760E) C Block (N2424650 to N2425090 & E337280 to E338300)	Broadly as per per proposal in Block B and not as per per proposal in Block C.	For not carrying work as per proposal during 2022-23 in Block C violation of Rule 11(1) of MCDR 2017 has been pointed out to the lessee vide violation letter dated 10/11/2023.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Not Proposed	The overburden and mineral is found incidental.	
2c	Stripping ratio or ore to OB ratio	1:1.11	1:1.01	Less OB achieved vis-à-vis the production of ROM.

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2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	6125824	4097858	The less OB achieved vis-à-vis the production of ROM.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The mine workings are confined to 2 blocks viz B and C. In block B work is being carried out as per proposals in the approved modification of MP. The less OB achieved is vis-à-vis the production of ROM.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	2	(B Block & C Block).
3b	Quantity of ROM mineral production proposed	12793526 tonnes	9323105 tonnes	
3c	Recovery of sailable/usable mineral from ROM production	11637840 tonnes	8255385 tonnes	
3d	Quantity of mineral reject generation	1155686 tonnes	1067719 tonnes	
3e	Grade of mineral rejects generation and threshold value declared.	MR:45-55% Threshold value-45%	51.70%	
3f	Quantity of sub grade mineral generation.	1155686 tonnes	1067719 tonnes	

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3g	Grade of sub grade mineral generation	45-55%Fe	51.70%	
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.	Nil	Nil	
3j	Provision of drilling and blasting in mineral benches	Yes, provision made.	As proposed.	Drilling and blasting in Mineral benches is done with burden, spacing and diameter of hole of 3m, 4m and 150mm respectively.
3k	Provision of mining machineries in mineral benches	Yes, provision made.	As proposed.	Mining is carried out by Shovel Dumper combination. ROM is excavated and loaded in the 100T dumper by 5.5 m ³ excavators.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height 9m is proposed.	Broadly as per proposal.	
3m	Total area covered under excavation/pits	230.0977 Ha	256.589 Ha	
3n	Ore to OB ratio for the pit/mine during the year.	1:1.11	1:1.01	

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3o	Total area put in use under different heads at the end of year	Particulars Total Area(Ha) Area under Mining 230.977 Overburden/ Waste dumping 36.4406 Mineral Storage 82.428 Infrastructure (Occupied by plants buildings & roads 19.705	Particulars- Total Area(Ha) Area under Mining Overburden/ Waste dumping 35.298 Mineral Storage- 57.927 Infrastructure (Occupied by plants buildings & roads-19.704
3p	Production of ROM mineral during the last five year period as applicable	Year- 2018-19- Nil Year- 2019-20- Nil Year- 2020-21- 12793624 Year- 2021-22- 12794246 Year-2022-23- 12793526 Total-38381396	Year- 2018-19- Nil Year- 2019-20- Nil Year- 2020-21-7194569 Year- 2021-22-11459271 Year-2022-23-9323105 Total-27976945
3q	General remarks of inspecting officers on method of mining etc.	Open-cast fully mechinsed mining method with Shovel-Dumper combination, with 9 m high and width up to 10-12m and deep drilling and blasting is being carried as per approved modified MP.	

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 Nil OB-B2 & C Block Mineral Reject-C Block	Top soil-Nil OB-B2 Mineral Reject-C Block	

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4b	Location of topsoil, OB and mineral reject dumps	Topsoil- Nil OB- B2:N2426460 - 2426850;E33755 2426850;E33755 Mineral Reject- N2424840- N2425240; E337264- E337481	Topsoil- Nil OB-B2:N2426580 - 2426850; E337671 -337896 Mineral Reject-N2424900- N2425160;E3372960- E337450	
4c	Number of dumps within lease area and outside of lease area	Inside Lease-9 Outside Lease- 0 Inside Lease 9 Outside Lease 0	As per proposal	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL	As per proposal	
4e	Number of active and alive dumps.	One	One	Dump B2
4f	Number of dead dumps.	7	7	B Block-3, Block-4 all belonging to the previous lessee.
4g	Number of dumps established.	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes, proposed.	As, per proposal	
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall(m)-145 Garland drain(m)-135	Retaining wall(m)-250 Garland drain(m)-150	
4j	Number of settling ponds	No proposal	NA	

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4k	Specific comments of inspecting officer on waste dump management	Overburden, mineral and mineral reject management is broadly as per proposal are being carried out as per the approved proposals.
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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	NA	
5b	Area under backfilling of mined out area	13.69 Ha	11.44 Ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Nil	Nil	
5d	Total area fully reclaimed and rehabilitated	Nil	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Backfilling is being carried out over the existing backfilled area. However, there is shortfall of backfilling during 2022-23 for which violation of Rule 11(1) of MCDR 2017 has been issued to the lessee vide violation letter dated 10/11/2023.

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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).	Before 1st July of, 2022-23	Yes, Submitted	Annual Report on PMCP returns submitted along with Annual Returns on 30.06.2023
6b	Area available for rehabilitation (ha) .	Nil	NA	
6c	afforestation done (ha).	1.18 Ha	2.40 Ha	
6d	No. of saplings planted during the year	2950	More than proposal	It was reported that around 6000 saplings have been planted.
6e	Cumulative no .of plants	13325	More than proposal.	It was reported that there are around 16375 cummulative number of plants.
6f	Any other method of rehabilitation	Nil	None	
6g	Cost incurred on watch and care during the year		153.86 Lakh	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	6125824 m3	4097858.261 m3	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	6125824 m3	4097858.261 m3	

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6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Afforestation on the backfilled area-1.18 Ha	Afforestation on the backfilled area-1.18 Ha	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	NA	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Nil	NA	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil	
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 will be as per MOEFCC and SPCB guidelines.	Done as per proposal	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			The lessee has done adequate plantation and is regularly monitoring the Environmental Parameters.

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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting by screening and crushing within lease area.	Done as per proposal.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines.		Grade range- 45-50%, 51-55%, 55-58%, 58-60%, 60-62% & 62-65%)	Iron Ore of different size and grade is sorted out and dispatched to different plants.
7d	Any beneficiation process at mines .	Nil	None	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No Beneficiation is carried out by the lessee except Grade wise sorting by screening and crushing within lease area .

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Nil	None	
8b	Concurrent use or storage of topsoil	Nil	None	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes	As per proposal	

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8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Nil	None	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	None	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Plantation-13325	More than proposed.	
8g	Survival rate	70-80%	More than proposed.	
8h	Water sprinkling on roads to control airborne dust	Sprinkling of water on Haul roads and transport roads using Water tanker to suppress the dust.	Done regularly as per proposal.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in & around mines area is good as lessee implementing the PMCP proposal and carried out plantation as per the proposals.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns		Presently regularly submitting the MRs/ARs on-time.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager: Shri Pratap Tandia Mining Engineer: Shri Chandrashekhar Aikat Geologist: Shri Suvendu Shekhar	Observed as proposed.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	(1)Covered under current Workings- 256.589 Ha (2)Used for Waste Disposal- 35.298 Ha (3)Occupied by plant, buildings, residential, welfare, buildings and roads- 19.705 Ha (4)Other Purpose (Mineral Storage) - 57.927 Ha Total- 369.519 Ha	Broadly as per the proposal.
9d	Scrutiny of Annual return on afforestation	Afforestation done- 6000 plants	Broadly as per proposal
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	1067719.24 Tonnes(51.70%) (2022-23)	Appears to be correct.

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9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM 437865 Lumps 795542 45%-51% 793492 55%-58% 2050 Fines 1276873 51%-55% 299728.89 55-58% 836143.48 58%-60% 85217.808 60%-62% 55782.85 CLO 3343230 Below 62% Fe (clo any size) 3332783.58 62-65%(10- 40mm) 10446	Appears to be correct.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Lumps(Ex-mine price) 51-55% 3076 Fines 51-55% 1598.24 55-58% 1781.13 58-60% 2647.87 60-62% 3684.52 CLO <62% (clo any size) 4882.57 62%-65%(clo 10-40mm) 7263 Cost of Production: ?3453.68	Appears to be correct.
9h	Scrutiny of Annual return on fixed assets	Fixed Value of Assets: ?6423940289	Appears to be correct.

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9k	Scrutiny of Annual return on mining machineries	Type of machinery No of machinery	Observed as per information furnished.
		Shovel (Hydraulic) 9	
		Blast Hole	
		Drill 3	
		Crane 1	
		Dozer 3	
		Dumper 24	
		Explosive Van 2	
		Generator 6	
		Jeep/Tractor 5	
		Motor grader 2	
		Other HEMM Machinery 1	
		Water Tanker 1	
		Wheel Loader`` 2	

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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)	10/11/2023			

Date :**(VIKRAM DESHPANDE)**

Indian Bureau of Mines