

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON-MN/SNG/MCDR28/BBS

Mine code : 30ORI13068

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Indrakant Saha, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 04/07/2021
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **NARAYANPOSI IRON & MN ORE**
- (b) **Registration NO.** :
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
State : ORISSA
District : SUNDARGARH
Village : Narayanposhi
Taluka : Koira
Post office : Koira
Pin Code : 770048
FAX No. :
E-mail :
Phone :
- (f) Police Station :
- (g) First opening date : 01/07/2020
- (h) Weekly day of rest :
2. Address for :
correspondance
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 :

6. Date of approval of Mining : MP under 16(1) of MCR 2016
Plan/Scheme of Mining

08/09/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such specific proposal.	Nil	
1b	Exploration over lease area for geological axis 1 or 2	Not proposed.	Nil	
1c	Exploration Agencies and Expenditure in lakh rupees during the year		Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	165 nos of boreholes were proposed during the plan period i.e. year 2020-21 to 2024-25.	Nil	
1e	Balance reserve as on 01/04/20	As per the approved document dated 05.08.2021, the iron ore reserves are 164.79 mil.t and resources are 16.23 mil.t. manganese reserves are 0.5 mil.t. and resources are 29905 t	as on 01/04/2021 the iron ore reserves are 164.79 mil.t and resources are 16.23 mil.t. manganese reserves are 0.5 mil.t. and resources are 29905 t	
1f	General remarks of inspecting officers on geology, exploration etc		Narayanposhi Iron and Manganese Ore Mine are in the southern end of the western limb of the Horse-shoe shaped Iron Ore Range of West Singhbhum-Keonjhar-Sundargarh district of Jharkhand & Odisha.	

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	RF block, quarry 3&4 for iron ore and quarry-5 for manganese during the year 2020-21.	RF block, quarry 3&4 for iron ore and quarry-5 for manganese	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	no benches in top soil are proposed, seperate benches in OB and mineral are proposed.	no benches in top soil developed and seperate benches in OB and mineral are maintained.	
2c	Stripping ratio or ore to OB ratio	1:0.022 t/cu.m.	1:0.05 t/cu.m.	
2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	246768 cu.m. for the year 2020-21.	354216 cu.m.	both for iron and manganese development. deviation is due to due to irregular nature of ore deposit.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		development is carried out by opencast mining method as propsoed.	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	3	3	
3b	Quantity of ROM mineral production proposed	Iron: 5.99 mil.t., manganese: 36000 t during the year 2020-21.	Iron: 4.47 mil.t., manganese: 497 t	

3c	Recovery of saleable ore sailable/usable 4.12 mil.t. mineral from ROM 4.49 mil.t. production		
3d	Quantity of mineral reject generation	1.49 mil.t.	0.35 mil.t. blended with saleable ore
3e	Grade of mineral rejects generation and threshold value declared.	+45% Fe - 55% Fe, +10%Mn-20% Mn	+45% Fe - 55% Fe, +10%Mn-20% Mn
3f	Quantity of sub grade mineral generation.	Not applicable	Nil
3g	Grade of sub grade mineral generation	Not applicable	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Manual and Mechanised.	Manual and Mechanised.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable	Nil
3j	Provision of drilling and blasting in mineral benches	drilling and blasting is proposed.	carried out
3k	Provision of mining machineries in mineral benches	shovel and dumper combination is proposed for excavation and hauling.	shovel and dumper combination is deployed for excavation and hauling.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	9 m in iron and 6 m in manganese	maintained.

3m	Total area covered under excavation/pits	81.267 ha at the end of plan period i.e. year 2024-25	65.59 ha	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.022 t/cu.m.	1:0.05 t/cu.m.	
3o	Total area put in use under different heads at the end of year	256.742 ha at the end of plan period i.e. 2024-25.	197.49 ha	
3p	Production of ROM mineral during the last five year period as applicable	2020-21: 5.99 mil.t. and Manganese: 36000 t	2020-21: 4.47 mil.t. and Manganese: 497 t	mine operations started in the year 2020-21.
3q	General remarks of inspecting officers on method of mining etc.		production is carried by opencast mining method as proposed.	

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	no top soil generation is envisaged, seperate dumping for OB is proposed and mineral rejects are proposed to be temporarily stacked and blended with high grade ore or stacked. waste is also propsoed to be backfilled.	seperate dumping of OB is carried out. mineral rejects are temporarily stacked and blended with high grade ore or stacked. waste backfilling is also carried out	
4b	Location of topsoil, OB and mineral reject dumps	dump-2	dump-2	

4c	Number of dumps within lease area and outside of lease area	1	1	near manganese quarry
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	within UPL	within UPL	
4e	Number of active and alive dumps.	1	1	
4f	Number of dead dumps.	Not applicable	Nil	
4g	Number of dumps established.	Not applicable	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	proposed	Not carried out.	violation observed and communicated to lessee letter dated 13/07/2021
4i	Length of Retaining wall or garland drain all along dumps	587 m of retaining wall and 580 m of garland drain	not carried out	violation observed and communicated to lessee letter dated 13/07/2021
4j	Number of settling ponds	10	Nil	violation observed and communicated to lessee letter dated 13/07/2021
4k	Specific comments of inspecting officer on waste dump management		dumping of waste and backfilling is carried out.	

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.	proposed.	carried out	
5b	Area under backfilling of mined out area	9.59 ha	1.98 ha	violation observed and communicated to lessee letter dated 13/07/2021

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not applicable Nil	
5d	Total area fully reclaimed and rehabilitated	Not applicable Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		backfilling is carried out

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).	PMCP report to submitted submitted before 1 st July		
6b	Area available for rehabilitation (ha) .	Not applicable Nil		
6c	afforestation done (ha).	1 ha	Nil	violation observed and communicated to lessee letter dated 13/07/2021
6d	No. of saplings planted during the year	2500 nos	Nil	
6e	Cumulative no .of plants		Nil	
6f	Any other method of rehabilitation	Not applicable Nil		
6g	Cost incurred on watch and care during the year		Nil	

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not applicable Nil		
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	9.59 ha	1.98 ha	violation observed and communicated to lessee letter dated 13/07/2021
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Not applicable Nil		
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable Nil		
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not applicable Nil		
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not applicable Nil		
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not applicable Nil		

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical Monitoring as stipulated in Environment Clearance granted by MoEF & CC and Consent to Operate granted by SPCB.	Periodical Monitoring as stipulated in Environment Clearance granted by MoEF & CC and Consent to Operate granted by SPCB is carried out.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		some of the PMCP measures were not carried out. violation observed and communicated to lessee letter dated 13/07/2021

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	grade-wsie sorting is proposed.	carried out	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	manual and mechanical	manual and mechanical	
7c	Different grade of mineral sorted out at mines.	+45% Fe - 55% Fe, +55% Fe, +10%Mn-20% Mn, +20% Mn	+45% Fe - 55% Fe, +55% Fe, +10%Mn-20% Mn, +20%	
7d	Any beneficiation process at mines	Not applicable Nil		

7e General remarks of inspecting officer on Mineral conservation and beneficiation issues

grade-wise sorting of mineral are carried out.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not applicable	Nil	
8b	Concurrent use or storage of topsoil	Not applicable	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	seperate dumping for OB is proposed and mineral rejects are proposed to be temporarily stacked and blended with high grade ore or stacked.	seperate dumping of OB is carried out. mineral rejects are temporarily stacked and blended with high grade ore or stacked.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	proposed.	carried out.	

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	proposed.	carried out
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	2500 nos	Nil
8g	Survival rate		Nil
8h	Water sprinkling on roads to control airborne dust	water sprinkling on haul roads for dust suppression is proposed.	carried out
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		aesthetic beauty in and around the mines area is maintained.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly and annual returns are to be submitted as per rule 45 of MCDR, 2017	submitted.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 9, Diploma Mining Engineer 2, Geologist 3	found to be in order.	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings 65.590 ha,Used for waste disposal 8.280 ha, Occupied by plant, buildings, residential, welfare buildings & roads 57.600 ha etc.,	found to be in order.
9d	Scrutiny of Annual return on afforestation	Nil	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	350059 t	found to be in order.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM closing stock is 987644 t for iron and Nil for manganese	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	production cost is Rs.5405.75/t	production cost is Rs.5405.75/t
9h	Scrutiny of Annual return on fixed assets	Rs.2436804650	Rs. 2436804650
9k	Scrutiny of Annual return on mining machineries	SHOVEL (HYDRAULIC) 4.500 CUM 1, SHOVEL (HYDRAULIC) 3.100 CUM 2, SHOVEL (HYDRAULIC) 0.900 CUM 9, TIPPER 18.000 CUM 8 etc.,	found to be in order.

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)	13/07/2021			

Date :

(RAMKISHAN R)

Indian Bureau of Mines