

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/CR/JJP/MCDR-7/BBS

Mine code : 11ORI19001

- (i) Name of the Inspecting : **S010**) **SHRI G.C. SETHI**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri Awanish Kumar, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 05/02/2021
- (v) Prev.inspection date : 10/01/2020

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **BHIMTANGAR (SUKINDA)**
- (b) **Registration NO.** : **IBM/4376/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : JAJPUR
- Village : BHIMTANGAR
- Taluka : SUKINDAGARH
- Post office : KALARINGATTA
- Pin Code : 755028
- FAX No. : 06726-268734
- E-mail : chiefoffice@tatasteel.com
- Phone : 06726-268763,268734
- (f) Police Station : Kaliapani
- (g) First opening date : 01/12/1960
- (h) Weekly day of rest : SUN
2. Address for : SUKINDA CHROMITE MINE(BHIMTANAGAR)
correspondance M/S TISCO LTD, P.O.KALARANGIATTA
DIST:JAJPUR, ORISSA-755028
3. (a) Lease Number : ORI0241
- (b) Lease area : 406
- (c) Period of lease :
- (d) Date of Expiry : 31/03/2020
4. Mineral worked : PYROXENITE Associated
CHROMITE Main

5. Name and Address of the

Lessee : TATA STEEL LTD.
 KEONJHAR ORISSA
 Phone:
 FAX :

Owner : Sri T.V. Narendran
 Managing Director, M/s TATA
 Steel Jamshedpur, Dist-East
 Singhbhum Jharkhand-831001
 KEONJHAR ORISSA
 Phone: 0657-2423298
 FAX : 0657-2431818

Agent : Rajesh Patel
 M/s Tata Steel Limited
 Post-Kalarangiatta Dist-
 Jajpur, Odisha JAJPUR ORISSA
 Phone: 9238101084
 FAX :

Mining Engineer

Name : Sabyasachy Mishra, Full Time
 Qualification : BE Mining & FCC
 Appointment/ : 01/03/2016
 Termination date

Geologist

Name : Tarun Kumar Chakraborty, Full Time
 Qualification : MSC App. Geology
 Appointment/ : 01/02/2016
 Termination date

Manager

Name : Awnish Kumar
 Qualification : B Tech Mining & FCC
 Appointment/ : 01/01/2018
 Termination date

6. Date of approval of Mining	:	Modif. approved Mining Scheme	05/07/2007
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	02/02/2009
	:	Renewal under rule 24 MCR1960	22/05/2012
	:	Modif. of approved Mining Plan	19/07/2016
	:	MP review under 17(1) MCR 2016	09/11/2017
	:	FMCP under 23C(1)	28/09/2018
	:	MS modif under MCR 1960	14/02/2019
	:	FMCP under 23C(1)	29/04/2019

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	Nil
1b	Exploration over lease area for geological axis 1 or 2	G1 level- 213.323 ha, out of which 29.257ha mineralised & 184.066ha non-mineralised. G2 level- 98.880ha nonmineralised and G3 level- 93.797ha non mineralised.	G1 level- 213.323 ha, out of which 29.257ha mineralised & 184.066ha non-mineralised. G2 level-98.880ha nonmineralised and G3 level- 93.797ha non mineralised.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not applicable	Nil	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	G1 level- 213.323 ha, out of which 29.257ha mineralised & 184.066ha non-mineralised. G2 level- 98.880ha non mineralised and G3 level- 93.797ha non mineralised.	G1 level- 213.323 ha, out of which 29.257ha mineralised & 184.066ha non-mineralised. G2 level-98.880ha non mineralised and G3 level- 93.797ha non mineralised.	Nil

1e	Balance reserve as on 01/04/20	Reserves of chromite are 4.075 million tonnes and Remaining Resource of 91.745 million tonnes. The same for Pyroxinite is for 0.221 million tonnes & 9.911 million tonnes	due to depletion/addition over the period of time the updated chrome ore reserves as on 01.04.2019 are 3.202 mil.t. and resources are 91.74 mil.t. Pyroxinite reserves are for 0.221 million tonnes & 9.911 million tonnes.	Nil
1f	General remarks of inspecting officers on geology, exploration etc		The Sukinda chromite mine is located in southern part of funnel shaped Sukinda valley, which extends from east to west with the open end facing west.	Nil

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	OB-X quarry	OB-X quarry	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No topsoil generation is envisaged. seperate benches in OB and mineral are proposed.	seperate benches in OB and mineral are maintained.	Nil
2c	Stripping ratio or ore to OB ratio			
2d	Quantity of topsoil generation in m3	Not applicable	Nil	Nil
2e	Quantity of overburden generation in m3			

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.	Nil
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1 quarry	1 quarry	Nil
3b	Quantity of ROM mineral production proposed			
3c	Recovery of sailable/usable mineral from ROM production			
3d	Quantity of mineral reject generation			
3e	Grade of mineral rejects generation and threshold value declared.	+10-40% Cr	+10-40% Cr	Nil
3f	Quantity of sub grade mineral generation.	Addressed in mineral rejects	Nil	Nil
3g	Grade of sub grade mineral generation	Not applicable	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised and manual	Mechanised and manual	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable.	Nil	Nil

3j	Provision of drilling and blasting in mineral benches	drilling and blasting is proposed.	drilling and blasting is carried out.	Nil
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.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height of 8-10m proposed.	maintained	Nil
3m	Total area covered under excavation/pits			
3n	Ore to OB ratio for the pit/mine during the year.			
3o	Total area put in use under different heads at the end of year	406 ha	406 ha	Nil
3p	Production of ROM mineral during the last five year period as applicable			
3q	General remarks of inspecting officers on method of mining etc.		production is carried out by opencast mining method.	Nil

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of OB with backfilling and stacks for Mineral Rejects proposed.	Separate dumping of OB with backfilling and stacks for Mineral Rejects are maintained.	Nil
4b	Location of topsoil, OB and mineral reject dumps	Only Back filling of OB II was proposed for OB disposal.	Back filling of OB II was carried out for OB disposal	Nil
4c	Number of dumps within lease area and outside of lease area	No dumping	Nil	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable	Nil	Nil
4e	Number of active and alive dumps.	Not applicable	Nil	Nil
4f	Number of dead dumps.	Not applicable	Nil	Nil
4g	Number of dumps established.	Not applicable	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	provided.	Nil
4i	Length of Retaining wall or garland drain all along dumps	already exists.	Nil	Nil
4j	Number of settling ponds	Already exists.	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management			

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	part of the mined out area is proposed for backfilling.	part of the mined out area is proposed for backfilling.	Nil
5b	Area under backfilling of mined out area			
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not applicable	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	Not proposed.	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.		backfilling in the mined out area is carried out as proposed.	Nil

Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	PMCP report submitted before 1 st July	submitted.	Nil
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	Nil
6c	afforestation done (ha).			
6d	No. of saplings planted during the year			
6e	Cumulative no .of plants	Not specified.	720775 nos	Nil

6f	Any other method of rehabilitation	Not applicable	Nil	Nil
6g	Cost incurred on watch and care during the year			
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D			
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings			
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Not applicable	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable	Not applicable	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Not applicable	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	Not applicable.	Nil	Nil

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not applicable	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable.	Nil	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.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP measures were carried out as proposed.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	grade-wise sorting of mineral is proposed.	Done	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	manual and mechanical	manual and mechanical	Nil
7c	Different grade of mineral sorted out at mines.	+10-40% Cr and +40% Cr	+10-40% Cr and +40% Cr	Nil

7d	Any beneficiation process at mines	Yes propsoed for mineral rejects.	carried out.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		beneficiation is carried out as proposed.	Nil

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not applicable	Nil	Nil
8b	Concurrent use or storage of topsoil	Not applicable	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	separate dumps for waste and mineral rejects is propsoed.	carried out.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	backfilling of mined out pit is proposed.	carried out.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not applicable	Nil	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)			
8g	Survival rate	Not specified.	80%	Nil
8h	Water sprinkling on roads to control airborne dust	water sprinkling on haul roads for dust suppression is proposed	carried out.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Aesthetic beauty in and around the mine is well maintained.	Nil

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.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 17, Diploma Mining Engineer 7, Geologist 5	Graduate Mining Engineer 17, Diploma Mining Engineer 7, Geologist 5	Nil

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings: 170.110 ha, Used for waste disposal: 41.682 ha, Occupied by plant, buildings, residential, welfare buildings & roads: 87.280 ha, Other Purpose (Mineral Storage): 27.880 ha	Covered under current (O/C) Workings: 170.110 ha, Used for waste disposal: 41.682 ha, Occupied by plant, buildings, residential, welfare buildings & roads: 87.280 ha, Other Purpose (Mineral Storage): 27.880 ha	Nil
9d	Scrutiny of Annual return on afforestation			
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)			
9f	Scrutiny of Annual return on ROM stock and/or graded ore			
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost			
9h	Scrutiny of Annual return on fixed assets	Rs. 823191112	Rs. 823191112	Nil

9k	Scrutiny of Annual return on mining machineries	BLAST HOST DRILL 100.000 MM 2, CRANE 30.000 TONNE 1, DOZER 480.000 HP 1, DOZER 360.000 HP 2,DOZER 320.000 HP 7, DOZER 300.000 HP 3, FRONT END LOADER 1.800 CUM 5, etc.,	BLAST HOST DRILL 100.000 MM 2, CRANE 30.000 TONNE 1, DOZER 480.000 HP 1, DOZER 360.000 HP 2,DOZER 320.000 HP 7, DOZER 300.000 HP 3, FRONT END LOADER 1.800 CUM 5, etc.,	Nil
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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

Date :

(SHRI G.C. SETHI)

Indian Bureau of Mines