

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

MCDR inspection REPORT

Kolkata regional office

Mine file No : KOL/JHK/SB(W)/FE(V-1)

Mine code : 30JHK18015

- (i) Name of the Inspecting : **G004**) **OM PRAKASH GOPAL**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Sh. Debashish Mukherjee Mines Manager, Ajoy Kumar Nan
Official with
Designation
- (iv) Date of Inspection : 27/07/2021
- (v) Prev.inspection date : 19/12/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **VIJAY - II IRON ORE MINE**
- (b) **Registration NO.** :
- (c) **Category** : A Fully Mechanised
- (d) **Type of Working** : Opencast
- (e) **Postal address**
- State : JHARKHAND
- District : SINGHBHUM (WEST)
- Village : GHATKURI
- Taluka : NOAMUNDI
- Post office : BARAJAMADA
- Pin Code : 833221
- FAX No. : 0657-2386056
- E-mail : rajesh.rajan@tatasponge.co
- Phone : 0657-7102462
- (f) **Police Station** :
- (g) **First opening date** : 16/08/2005
- (h) **Weekly day of rest** :
2. **Address for** :
correspondance
3. (a) **Lease Number** : JHK0047
- (b) **Lease area** : 155.08
- (c) **Period of lease** : 50
- (d) **Date of Expiry** : 17/08/2055
4. **Mineral worked** : IRON ORE Main

5. Name and Address of the

Lessee : TATA STEEL LONG PRODUCTS LTD.
 AT & P.O.- JODA, KEONJHAR
 ORISSA
 Phone:
 FAX :

Owner : ASHISH ANUPAM
 M/S TATA STEEL LONG
 PRODUCTS LTD., 11 FLOOR,
 TATA CENTRE, 43, JN ROAD,
 KOLKATA KOLKATA WEST BENGAL
 Phone:
 FAX :

Agent : Mr. Sahabji Kuchroo
 Tata steel Long Products
 Ltd. Po - Joda, Dist -
 Keonjhar Odisha - 778034
 SINGHBHUM (WEST) JHARKHAND
 Phone:
 FAX :

Mining Engineer

Name : Debashish Mukherjee, Full Time
 Qualification : B.E. in Mining Engineering
 Appointment/ : 07/01/2021
 Termination date

Mining Engineer

Name : RAMASHISH KUMAR, Full Time
 Qualification : DEGREE IN MINING ENGINEERING
 Appointment/ : 03/07/2019
 Termination date

Mining Engineer

Name : SURESH KUMAR JENA, Full Time
 Qualification : DEGREE IN MINING ENGINEERING
 Appointment/ : 03/07/2019 07/01/2021
 Termination date

Geologist

Name : Debasis Das, Full Time
 Qualification : M.Sc. Geology
 Appointment/ : 03/07/2019
 Termination date

Geologist

Name : Ajoy Kumar Nandi, Full Time
 Qualification : M.Tech in Geo Exploration
 Appointment/ : 20/01/2021
 Termination date

Manager

Name : NAVEEN SRIVASTAVA
 Qualification : Degree in Mining
 20/02/2020

Appointment/ :
Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Modif.of approved Mining Plan	06/01/2009
		Mining Scheme rule 12 MCDR1988	20/08/2010
		Modif.approved Mining Scheme	14/06/2013
		MP modif under 17(3) MCR 2016	22/09/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	It was proposed to drill 20 boreholes in 2019-20 and 17 in 2020-21 .	No Boreholes were drilled	-
1b	Exploration over lease area for geological axis 1 or 2	G1	Exploration not done.	Deviation from approved proposals communicated to lessee through violation letter.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such proposal	-	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	59.14 ha	No exploration done over balance area.	-
1e	Balance reserve as on 01/04/20	Balance Reserves as on 1/4/2020 : 36.35 million tonnes (111)	-	-
1f	General remarks of inspecting officers on geology, exploration etc	-	-	Vijay II iron ore mine is situated in the western limb of the Regional horse shoe shaped synclinorium. Iron ore occurs as tabular body underlain by BHQ, Phyllite etc. Deposit generally trend NNE SSW with westerly dip. Exploration not done as per approved proposal for want of entry permission from forest department.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t. lease area	<p>i) Area lying between section lines 2A-2A' to 4A-4A'.</p> <p>ii) Area between section lines 6A -6A' to 12A- 12A' and</p> <p>iii) Area lying between section lines 23 A- 23A to 25-25'</p>	<p>Production and development not done from the area lying between section lines 23 A- 23A to 25-25'. A new fines stack was created over the site proposed for excavation (in between section lines 24- 24' to 26A-26A') for which there was no proposal in approved document. Besides, Development of pit faces both laterally and vertically not done on other locations too as per approved proposals.</p>	<p>Deviation from approved proposals were communicated to lessee through violation letter.</p>
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes	Yes	-
2c	Stripping ratio or ore to OB ratio	0.21	0.06	-
2d	Quantity of topsoil generation in m3	NIL	-	-
2e	Quantity of overburden generation in m3	513141 m3	141077 m3	-
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	<p>Pit is being development by mechanised means and involving drilling and blasting with showell dumper combination for loading and transport. Since ore is softer in nature only 30% material requires blasting. Bench height of about 9 m is being maintained.</p>

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	Two	Two	-
3b	Quantity of ROM mineral production proposed	2.5 million tonnes	2.5 million tonnes	-
3c	Recovery of sailable/usable mineral from ROM production	95%	95%	-
3d	Quantity of mineral reject generation	NIL	NIL	-
3e	Grade of mineral rejects generation and threshold value declared.	No such proposal	-	-
3f	Quantity of sub grade mineral generation.	NIL	NIL	-
3g	Grade of sub grade mineral generation	No such proposal	-	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	-
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No	No	-
3j	Provision of drilling and blasting in mineral benches	Yes	Yes	-
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	-
3m	Total area covered under excavation/pits	44.97 ha	47.506 ha	-
3n	Ore to OB ratio for the pit/mine during the year.	0.21	0.06	-

3o	Total area put in use under different heads at the end of year	Open cast workings: 44.97 ha, Mineral Storage: 5.13 ha, Mineral Storage 5.13 ha, Roads: 0.50 ha, Infrastructure : 0.21 ha.	Open cast workings: 44.5 ha, Mineral Storage: 5.13 ha, Mineral Storage 5.13 ha, Roads: 0.50 ha, Infrastructure: 0.42 ha.	-
3p	Production of ROM mineral during the last five year period as applicable	2016-17 : 2.5 million tonnes 2017-18 : 2.5 million tonnes 2018-19 : 4 million tonnes 2019-20 : 4 million tonnes 2020-21 : 2.5 million tonnes	2016-17 : 24,96,483 tonnes 2017-18 : 24,99,121 tonnes 2018-19 : 24,96,005 tonnes 2019-20 : 17,70,365 tonnes 2020-21 : 24,99,753 tonnes	-
3q	General remarks of inspecting officers on method of mining etc.	-	-	Opencast mechanised mines. Production and development are by involving drilling and blasting with showell dumper combination for loading and transport. Since ore is softer in nature only 30% material requires blasting. Bench height of about 9 m is being maintained.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Yes	Yes	-
4b	Location of topsoil, OB and mineral reject dumps	Generation of top soil not envisaged and backfilling of generated OB over mined out area proposed.	Backfilling of generated OB/SB/IB as proposed.	-

4c	Number of dumps within lease area and outside of lease area	None	None	-
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable - as there is no proposal for external dumping.		-
4e	Number of active and alive dumps.	None	None	-
4f	Number of dead dumps.	None	None	-
4g	Number of dumps established.	None	None	-
4h	Whether Retaining wall or garland drain all along dumps are there.	To arrest wash off construction of retaining wall all along backfilled area is proposed.	Retaining wall constructed .	-
4i	Length of Retaining wall or garland drain all along dumps	310 m	31 m	-
4j	Number of settling ponds	-	-	-
4k	Specific comments of inspecting officer on waste dump management	-	-	In view of constraints of availability of nonmineralised area there is no scope for external dumping. Generated waste are backfilled over mined out area.

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.	Full	Full	-

5b	Area under backfilling of mined out area	0.81 ha	0.468 ha	Removal of 5,13,141 cum of OB/SB/IB was proposed during 2020-21 but only 1,41,077 cum of OB/SB/IB was removed as a result less backfilling than approved proposals.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No such proposal	-	-
5d	Total area fully reclaimed and rehabilitated	0.6 ha	0.12 ha	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.	-	-	-

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 PMCP report was submitted in time.	-
6b	Area available for rehabilitation (ha) .	0.6 ha	0.12 ha	-
6c	afforestation done (ha).	0.9 ha	0.12 ha	-
6d	No. of saplings planted during the year	2250 saplings	1500 saplings (approx)	-
6e	Cumulative no .of plants	-	-	-
6f	Any other method of rehabilitation	-	-	-

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	0.97 ha	-	-
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	0.81 ha	0.468 ha	-
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	0.6 ha	0.12 ha	-
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.	None	None	-
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	-

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 are being done through private agencies namely Mahabal Enviro Engineers Pvt Ltd (Air, water and noise monitoring) and Anacon labs	-
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	-	-	-

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting	Grade wise sorting	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	-
7c	Different grade of mineral sorted out at mines.	-	Grade wise production during 2020-21 are: Lumps: 55% to below 58% Fe : 58% to below 60% Fe : 4,03,926 tonnes 60% to below 62% Fe : 3,74,359 tonnes Fines: 55% to below 58% Fe : 4,90,873 tonnes 58% to below 60% Fe : 4,83,836 tonnes 60% to below 62% Fe : 2,18,935 tonnes 62% to below 65% Fe : 47,881 tonnes	-

7d	Any beneficiation process at mines	None	None	-
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	-	-	-

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Generation of top soil not envisaged during reporting period	Generation of top soil not reported	-
8b	Concurrent use or storage of topsoil	No such proposal as generation of top soil not envisaged during reporting period.	Generation of top soil not reported	-
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No proposal for external dumping of OB and waste rocks.	Generated OB and waste rocks are being backfilling over mined out area. Fines are stacked over earmarked area.	-
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Restoration of land through backfilling of vmined out voids.	Voids created by mining are being restored by backfilling .	-
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Yes	Phased restoration of mined out area by way of backfilling followed by plantation and rehabilitation.	-

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Plantation of 2250 saplings	About 1500 saplings planted	-
8g	Survival rate	-	-	-
8h	Water sprinkling on roads to control airborne dust	Yes	Yes	-
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	-	-	-

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	-	Monthly and Annual Returns submitted in time	-
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer:Sh. Debashish Mukherjee Geologist: Sh. Ajay Kumar nandi	Mining Engineer and Geologist are in post.	-
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area covered under Pit: 47.506 ha. Reclaimed Area: 1.17 ha Infrastructur: 1.12 ha Mineral Storage: 5.16 ha.	Land Use pattern as reported in Annual Returns are in order.	-
9d	Scrutiny of Annual return on afforestation	2554 saplings planted within lease area.	Plantation done over backfilled area.	-
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Reject generation :NIL	There is no reject generation thus details furnished in Annual Return are in order.	-

9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Opening 2,16,665.45 tonnes ROM Closing Stocks: 6,96,608.686 tonnes	ROM stocks are available at mine site.	-
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex Mine Price : Reported price of Lumps varies Rs. 1247/- to 1505/- per tonnes and of fines from Rs. 898/- to 1179/- per tonnes depending on its grade. Production cost: Rs. 1354/- per tonnes	Quoted Production cost appears to be in higher side.	-
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: Rs.3289154442/-	-	-
9k	Scrutiny of Annual return on mining machineries	Rock Drill: 2 nos., Dozers: 03 nos., Motar grader : 01 nos., Dumpers: 27 nos., Front end loaders: 07 nos. Backhoe; 09 nos.	Mining Machenary details are 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)	12/08/2021			

Date :

(OM PRAKASH GOPAL)

Indian Bureau of Mines