

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

Mining Plan Modification 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 : Shri Rahul Kishore, Agent & Shri D Mukherjee, Manager
Official with
Designation
- (iv) Date of Inspection : 24/11/2021
- (v) Prev.inspection date :

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.coi
Phone : 0657-7102462
- (f) Police Station :
- (g) First opening date : 16/08/2005
- (h) Weekly day of rest :
2. Address for : Ghatkuri, At & PO - Barajamda
correspondance : Jharkhand
833221
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 : RAHUL KISHORE
 Vijay II Irone Ore Mine At
 & PO - Barajamda PS - Gua,
 Dist - West Singhbhum
 SINGHBHUM (WEST) JHARKHAND
 Phone: 9264459020
 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 : Sudipta Das, Full Time
 Qualification : M.Sc. in Geology
 Appointment/ : 27/12/2021
 Termination date

Geologist

Name : Ajoy Kumar Nandi, Full Time
 Qualification : M.Tech in Geo Exploration
 20/01/2021 27/12/2021

Appointment/ :
Termination date

Manager

Name : NAVEEN SRIVASTAVA
Qualification : Degree in Mining
Appointment/ : 20/02/2020
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	Drilling not done for want of permission from forest department
1b	Exploration over lease area for geological axis 1 or 2	G1	Exploration not done	Drilling not done for want of permission from forest department
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such proposal	NIL	NIL
1d	Balance area to be explored to bring Geological axis in 1 or 2	59.14 ha	Drilling not done for want of statutory clearances from forest department	NIL
1e	Balance reserve as on 01/04/20	Balance Reserves as on 1/4/2020 : 36.35 million tonnes (111)	NIL	NIL
1f	General remarks of inspecting officers on geology, exploration etc	NIL	NIL	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) Arealying 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 as per approved proposals.</p>	<p>Deviation from approved proposals were communicated to lessee through violation letter. Based on previous inspection further follow up is under process.</p>
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	One bench in OB and 9 benches in mineral	One bench in OB and 9 benches in mineral	NIL
2c	Stripping ratio or ore to OB ratio	0.21	0.06	NIL
2d	Quantity of topsoil generation in m3	NIL	NIL	NIL
2e	Quantity of overburden generation in m3	513141 m3	141077 m3	NIL
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NIL	NIL	Development is by mechanised means with showell dumper combination. Since ore is softer in nature only 30% material requires blasting. Bench height of 9 m is being maintained.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two	Two	NIL
3b	Quantity of ROM mineral production proposed	2.5 million tonnes	2.5 million tonnes	NIL

3c	Recovery of sailable/usable mineral from ROM production	95%	95%	NIL
3d	Quantity of mineral reject generation	NIL	NIL	NIL
3e	Grade of mineral rejects generation and threshold value declared.	No such proposal	NIL	NIL
3f	Quantity of sub grade mineral generation.	NIL	NIL	NIL
3g	Grade of sub grade mineral generation	No such proposal	NIL	NIL
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	NIL
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No	No	NIL
3j	Provision of drilling and blasting in mineral benches	Yes	Yes	NIL
3k	Provision of mining machineries in mineral benches	Provision for deployment of machineries involving Showel dumper combination.	Showel dumper combination.	NIL
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	9m benches proposed in mineral	Yes 9 m benches are suitable for mining	NIL
3m	Total area covered under excavation/pits	54.47 ha at the end of plan period	47.506 ha	NIL
3n	Ore to OB ratio for the pit/mine during the year.	0.21	0.06	NIL

3o	Total area put in use under different heads at the end of year	NA	Open cast workings: 47.5 ha, Mineral Storage: 5.16 ha, Waste disposal :5.10 ha, Infrastructure: 1.12 ha,	NIL
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	NIL
3q	General remarks of inspecting officers on method of mining etc.	NIL	NIL	Opencast mechanised mines. Production and development are being taken up by deploying showell dumper combination. 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	NIL
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.	NIL
4c	Number of dumps within lease area and outside of lease area	External dumping not proposed	None	NIL

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable as there is no proposal for external dumping	NIL	NIL
4e	Number of active and alive dumps.	None	None	NIL
4f	Number of dead dumps.	None	None	NIL
4g	Number of dumps established.	None	None	NIL
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 being proposed.	Retaining wall constructed	NIL
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall : 310 m Garland drain : NIL	Retaining wall : 31 m Garland drain : 50 m	NIL
4j	Number of settling ponds	NIL	NIL	NIL
4k	Specific comments of inspecting officer on waste dump management	NIL	NIL	In view of constraints of availability of nonmineralised area there is no scope for external dumping. Generated waste are being backfilled over mined out area.

Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Full extraction	Full extraction	NIL

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	NIL	NIL
5d	Total area fully reclaimed and rehabilitated	0.6 ha	0.12 ha	NIL
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NIL	NIL	NIL

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

6g	Cost incurred on watch and care during the year	7.5 lakhs	Rs. 16 lakh	NIL
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	0.97 ha	0.468 ha	NIL
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	0.81 ha	0.468 ha	NIL
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	0.6 ha	0.12 ha	NIL
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NIL	NIL	NIL
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	None	None	NIL
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	NIL	NIL	NIL
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NIL	NIL	NIL

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NIL	NIL	NIL
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental Monitoring in core 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	Environmental monitoring data are within permissible limit.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NIL	NIL	PMCP proposals as are being implemented.

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	NIL
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	NIL
7c	Different grade of mineral sorted out at mines.	Grade wise sorting	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	NIL
7d	Any beneficiation process at mines	None	None	NIL

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

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Generation of top soil not envisaged	Generation of top soil not reported	NIL
8b	Concurrent use or storage of topsoil	Generation of top soil not envisaged	Generation of top soil not reported	NIL
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No proposal for external dumping	Generated OB and waste rocks are being backfilled over mined out area.	NIL
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Restoration of land through backfilling of mined out voids.	Voids created by mining are being restored by backfilling	NIL
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	phased restoration of pits by Backfilling, reclamation and rehabiliation.	Phased restoration of mined out area by way of backfilling followed by plantation and rehabilitation.	NIL
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Plantation of 2250 saplings	1500 saplings (approx).	NIL
8g	Survival rate	NA	79%	NIL
8h	Water sprinkling on roads to control airborne dust	Yes	Yes	NIL

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	NIL	NIL	NIL
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	AR and MR should be submitted within specified time limit	Monthly and Annual Returns submitted in time	NIL
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer:Sh.De bashish Mukherjee Geologist: Sh. Ajay Kumar Nandi	Mining Engineer and Geologist are in post.	NIL
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 /Rehabilitated Area: 1.17 ha Infrastructure : 1.12 ha Temporary Mineral Storage: 5.16 ha.	Land Use pattern as reported in Annual Returns are more or less in order	NIL
9d	Scrutiny of Annual return on afforestation	2554 saplings planted within lease area.	Plantation done over backfilled area	NIL
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Reject generation :NIL	Details furnished in Annual Return are in order.	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening Stocks: 2,16,665.45 tonnes Closing Stocks: 6,96,608.686 tonnes	ROM stocks are available at mine site.	NIL

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex Mine Price: It is captive mine and Lumps: Rs. 1247/- to Rs. 1505/- per tonnes fines :Rs. 898/- to 1179/- per tonnes depending on its grade. Production cost: Rs. 1354/- per tonnes	NIL
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: Rs.3289154442/	NIL
9k	Scrutiny of Annual return on mining machineries	Crusher: 2 nos. Rock Drill: 1 nos. Dozers: 03 nos. Motar grader : 01 nos. Dumpers: 27 nos. Front end loaders: 07 nos. Backhoe; 09 nos.	NIL

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 45(7)(a)	24/12/2021				

Date :

(OM PRAKASH GOPAL)

Indian Bureau of Mines