

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/MN/KJR/MCDR-8/BBS

Mine code : 40ORI08019

- (i) Name of the Inspecting : **S010**) **SHRI G.C. SETHI**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri H. Behera, Qualified Person, Shri S.S.Mishra, Mi
Official with
Designation
- (iv) Date of Inspection : 12/10/2017
- (v) Prev.inspection date : 25/04/2015

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **JODA WEST**
- (b) **Registration NO.** :
- (c) Category : A Manual
- (d) Type of Working : Opencast
- (e) Postal address
State : ORISSA
District : KEONJHAR
Village : BICHAKUNDI
Taluka : CHAMPUA
Post office : BICHAKUNDI
Pin Code :
FAX No. : 916767-72010
E-mail :
Phone : 916767-72239
- (f) Police Station :
- (g) First opening date : 04/06/1935
- (h) Weekly day of rest : SUN
2. Address for : JODA WEST MN MINE, M/S TISCO LTD
correspondance P.O.BICHHAKUNDI
DIST-KEONJHAR, ORISSA-758034
3. (a) Lease Number : ORI0056
(b) Lease area : 1437.72
(c) Period of lease :
(d) Date of Expiry : 31/03/2030
4. Mineral worked : MANGANESE ORE Main

5. Name and Address of the

Lessee : TISCO
 Bombay House 24, Homy Mody
 Street Mumbai MUMBAI
 (SUBURBAN) MAHARASHTRA
 Phone:
 FAX :

Owner : M/sTISCO
 Mr. N.P.Sinha M/s TISCO
 singhbhum SINGHBHUM (WEST)
 JHARKHAND
 Phone: 06767-72010
 FAX :

Agent : AMIT KUMAR DUBEY
 KEONJHAR ORISSA
 Phone: 9238101140
 FAX :

Mining Engineer

Name : P.K.MISHRA, Full Time
 Qualification : AMIE WITH F.C.C (REST)
 Appointment/ :
 Termination date

Mining Engineer

Name : B.P.CHOURASIA, Full Time
 Qualification : Dip in Mining Engg, 1st class mining cert
 Appointment/ :
 Termination date

Geologist

Name : B.K.DAS, Full Time
 Qualification : M.Sc (GEO)
 Appointment/ :
 Termination date

Geologist

Name : S.ADHIKARI, Full Time
 Qualification : M.Sc. Applied Geology
 Appointment/ :
 Termination date

Geologist

Name : RAJEEV RANJAN, Full Time
 Qualification : MSC GEOLOGY
 Appointment/ : 16/06/2001
 Termination date

Manager

Name : P.K.MISHRA
 Qualification : A.M.I.E MINING
 Appointment/ : 16/06/2001
 Termination date

Manager

Name : S.PANDA
Qualification : DIP. IN MINING ENGG WITH F.C.C.(REST)
Appointment/ :
Termination date

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	12/03/2002
Plan/Scheme of Mining		Modif.of approved Mining Plan	24/03/2005
		Mining Scheme rule 12 MCDR1988	17/02/2009
		Mining Scheme rule 12 MCDR1988	21/05/2013

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	Nil
1b	Exploration over lease area for geological axis 1 or 2	No such specific proposal in the last scheme of mining approved on 21.05.2013.	An extent of 122.113ha has been explored upto G2 level.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No specific proposal.	Only the drilling activity is outsourced and all other exploration jobs are done in house only.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per the review of mining plan, approved on 09.11.2017, 545ha of area is yet to explored upto G1/G2 level.	545ha.	NIL.

1e	Balance reserve as on 01/04/20	In the review of mining plan approved on 09.11.2017, the Reserve and Resource of the Manganese & iron ore is furnished as on 01.07.2017, the same is as given below:- Manganese:- reserves under (111): 1.062million tonnes & total remaining resources: 5.250 million tonnes. Iron ore:- reserves (121): 27.17 million tonnes & total remaining resources: 79.81 million tonnes.	The Reserve and Resource Nil of the Manganese & Iron ore as on 01.07.2017 is as given below:- Manganese:- reserves under (111): 1.062million tonnes & total remaining resources: 5.250 million tonnes. Iron ore:- reserves (121): 27.17 million tonnes & total remaining resources: 79.81 million tonnes.
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1f	General remarks of inspecting officers on geology, exploration etc	No comments.	The occurrence of the Mn ore in the form of lenses & pockets in association with laterite, cherty and Jaspery quartzite, shale and iron ores. The manganese deposits are of secondary in nature and are derived from manganese shale of iron ore series by the process of leaching, concentration and replacement giving rise to manganese deposits through the agency like circulating water of meteoric origin.	Nil
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Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	(i) E/W 3451- E/W 3664 & N/S 1914-N/S 2213 (ii) E/W 4513- E/W 4897 & N/S 2560-N/S 1938 (iii) E/W 5605- E/W 5749 & N/S 3983-N/S 4162 (iv) E/W 5835- E/W 5960 & N/S 2815-N/S 3008	The excavation in the lease area in between the proposed coordinates.	Nil.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No proposal for generation of topsoil. However, separate benches in OB and Ore has been proposed..	Separate benches being maintained in OB and Ore zone.	Nil

2c	Stripping ratio or ore to OB ratio	1:7.89 T/CuM	1:5.57 T/CuM	The actual stripping ratio is in lower side of the proposed ratio due to low production and waste handling during 2016-17.
2d	Quantity of topsoil generation in m3	Nil	Nil	Nil
2e	Quantity of overburden generation in m3	1578000 CuM	522567 CuM	The lower side deviation in waste handling is due to low production during 2016-17.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No comments.	Nil	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	4 nos. of quarries such as D quaary, H (old & new) quarry, I quarry and Gangaigora quarry were proposed for production in 2016-17.	As per proposal for reporting year 2016-17.	Nil
3b	Quantity of ROM mineral production proposed	200000.00 MT	93778.00 MT	The actual production is in lower side during 2016-17 is due to lack of market demand.
3c	Recovery of sailable/usable mineral from ROM production	170000 MT	93778 MT	This is due to low production of ROM.

3d	Quantity of mineral reject generation	10000 MT	Nil	Nil
3e	Grade of mineral rejects generation and threshold value declared.	Mn>10% &Mn<25%	Not applicable.	Nil
3f	Quantity of sub grade mineral generation.	20000 MT	Nil	Nil
3g	Grade of sub grade mineral generation	Mn>10% &Mn<25%	Not applicable.	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 such proposal.	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	Deep hole Drilling blasting Depth of hole = 8 m +10% subgrade =8.8m Spacing= 3m Burden= 2.5 m Volume= 60 CuM Specific Gravity=2.5 Tonnage/Hole= 150 Tonnes Powder factor= 6.0 kg/Tonne	Drilling and blasting being practices as per approved proposal.	Nil
3k	Provision of mining machineries in mineral benches	Shovel and dumper combination.	Shovel and dumper combination.	Nil

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height : 8 m Bench Width: 8 m	Found to be as per proposal.	Nil
3m	Total area covered under excavation/pits	103.046 ha. (at the end of 31.03.2018)	84.437 Ha area at the end of reporting year 2016-17.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:7.89 T/CuM	1:5.57 T/CuM	Nil
3o	Total area put in use under different heads at the end of year	As per approved document dated 21/05/2013 total area put under different heads i.e. excavation, waste dumping, infrastructure , road etc. was 423.035 Ha., which is upto 31.03.2018	An area around 350.642 Ha is put under different land use like pits, dumps, road, reclaimed, infrastructure etc. at the end of the reporting year 2016-17.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2013-14:164706 MT 2014-15:176471 MT 2015-16:188235 MT 2016-17:200000 MT	2012-13:147647 MT 2013-14:164642 MT 2014-15:123299 MT 2015-16:114583 MT 2016-17:93778 MT	Nil
3q	General remarks of inspecting officers on method of mining etc.	Mining is proposed with opencast method of mining.	The mining operations were carried out by other than fully mechanized opencast methods as per the proposal envisaged in the review of mining plan approved on 21/05/2013.	Nil

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate Dumps for OB, sub-grade and mineral reject has been proposed.	Separate dumps for mineral reject and subgrade has been observed.	OB, Nil
4b	Location of topsoil, OB and mineral reject dumps	(i) E/W 4662- E/W 5280 & N/S1724-N/S 2776 (ii) E/W 3347- E/W 3896 & N/S 1360-N/S 1855 & (iii) E/W 5638- E/W 5780 N/S 2960-N/S 3087	Dumping of waste is being done as per proposal.	Nil
4c	Number of dumps within lease area and outside of lease area	Within Lease area: 03 Out Side Lease area: NIL.	All the waste dumps are within lease area.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	The proposed dumps area outside UPL.	Found to be out side of UPL.	Nil
4e	Number of active and alive dumps.	03	03	Nil
4f	Number of dead dumps.	Nil	Nil	Nil
4g	Number of dumps established.	No specific proposal.	03	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal for reporting year.	Not constructed during the year 2016-17.	Nil
4i	Length of Retaining wall or garland drain all along dumps	Nil	Nil	Nil
4j	Number of settling ponds	No such specific proposal.	Nil	Nil

4k	Specific comments of inspecting officer on waste dump management	No comments.	Waste dumping is being carried out as per proposal. Retaining wall and garland drain has been provided at the bottom of the dump. Plantation and coir matting observed at the matured slope of the dumps.	Nil
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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 specific proposal for 2016-17.	Nil	Nil
5b	Area under backfilling of mined out area	Nil	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No topsoil generation proposal in the approved document, dated 21.05.2013	No topsoil generated during 2016-17.	Nil
5d	Total area fully reclaimed and rehabilitated	Nil	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No comments.	No area has been matured for reclamation as the mineral has not been exhausted in none of the quarries available in the mine.	Nil

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Yearly report of PMCP for the year 2016-17 has been submitted by party under rule 26(2) of MCDR, 2017.	PMCP report for the reporting year 2016-17 has been submitted.	Nil
6b	Area available for rehabilitation (ha) .	No proposal of rehabilitation for reporting year.	Nil	Nil
6c	afforestation done (ha).	3.50ha during 2016-17.	During the year 2016-17, there are 21930 nos. of saplings were plated but the extent of area is not available.	Nil
6d	No. of saplings planted during the year	8750 number of saplings.	A total of 21930 number of saplings were planted during 2016-17.	Nil
6e	Cumulative no .of plants	No specific proposal.	Not available.	Nil
6f	Any other method of rehabilitation	No specific proposal.	Nil	Nil
6g	Cost incurred on watch and care during the year	Nil	Nil	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Nil	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	Nil

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No proposal.	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal.	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal.	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No such proposal.	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal.	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal.	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Monitoring of environmental parameter like water quality, noise quality, air quality etc. are proposed.	Environmental parameters are being monitored as per propos	Nil

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No comments.	Huge planations were carried out in the lease area as well as on the dump slope against the proposal made in the approved scheme of mining.	Nil
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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 proposed within lease area.	Grade wise sorting observed within lease area.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual for ROM.	Manual for ROM.	Nil
7c	Different grade of mineral sorted out at mines.	Grade of salable Mn:>25%Mn Sub Grade : Mn % between 10 to 25. Mineral reject: <10%Mn	Salable Grade of Mn: Mn % > 25. Sub Grade Mn : Mn % < 25. Mineral reject Grade : Mn % < 10.	Nil
7d	Any beneficiation process at mines .	The ROM proposed to sort and size by Manual means. The sub-grade/mineral reject is proposed for mechanical processing.	The same practice is being followed.	Nil

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No comments.	The ROM proposed to sort and size by Manual means. However, the sub-grade/mineral reject is subjected for mechanical processing.	Nil
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Nil	No topsoil was generated during 2016-17.	Nil
8b	Concurrent use or storage of topsoil	Nil	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of overburden, waste rock & mineral reject/sub-grade has been proposed.	The same practice is being followed.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposal.	Nil	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	Nil	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	8750 salplings proposed to be planted during 2016-17.	21930 nos. of saplings were planted during 2016-17.	Nil
8g	Survival rate	No such specific proposal.	85%	Nil
8h	Water sprinkling on roads to control airborne dust	To control the airborne dust water sprinkling is proposed.	Water sprinkling being carried out as per proposal.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No comments.	The aesthetic beauty of the mine is good. The plantation is carried out over the matured slope of the dump, which is a very good initiative.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	As per rule 45 of MCDR, 2017, Monthly and annual returns to be submitted.	Monthly and annual returns being submitted regularly.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	The information on mining engineer, geologist and mine manager has been furnished as required under the statute.	The informatin furnished in the annular return is found to be in order.	Nil

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	1.Open cast wroking- 84.437ha 2. Reclamined/reh abilitated- 34.280ha 3.waste disposal- 86.225ha 4.Infrastructu re- 156.120ha 5.Mineral storage,Top soil storage& green belt- 10.390	The land information furnished in the annual return of the year 2016-17, seems to be in order.	Nil
9d	Scrutiny of Annual return on afforestation	A total of 21930 saplings have been planted.	The status of plantation furnished in the annual return is in order.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Only 14050 tonnes of mineral reject was generated during 2016-17 as per the annual return.	The same is found to be in order.	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	As per AR 2016-17, Mn ROM production for the year 2016-17 was 93777.678 tonnes.	A total of 93777.678 tonnes of Mn ROM was produced and found to be in order.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	The cost of production furnished in AR 2016-17 was Rs. 4108.43 per tonnes.	The cost of production furnished in annual return appears to be correct.	Nil
9h	Scrutiny of Annual return on fixed assets	Value of fixed asset furnished in annual return is Rs. 576162471.00	The Value of fixed asset furnished in annual return for the year 2016-17, seems to be in order.	Nil

9k	Scrutiny of Annual return on mining machineries	Back hoe- 4 nos. Dumpers- 22 nos. Front end loader- 1 no., Dozer- 2 nos., Tippers- 3nos., water tanker-2 nos., Drill machines 100mm dia-2 nos.	The deployment status of mining and other machineries furnished in annual return appears to be correct.	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