

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/MN/MCDR-9/BBS

Mine code : 40ORI08023

- (i) Name of the Inspecting : **S010**) **SHRI G.C. SETHI**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Saroj Dash, Qualified Person
Official with
Designation
- (iv) Date of Inspection : 11/01/2018
- (v) Prev.inspection date : 15/07/2016

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KATASAI**
- (b) **Registration NO.** : **IBM/4585/2011**
- (c) Category : A Manual
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : KATASAI
- Taluka : BARBIL
- Post office : CHORMALDA
- Pin Code :
- FAX No. : 91 6767 276161
- E-mail : rungta_bbl@yahoo.co.in
- Phone : 06767 275221 / 275481
- (f) Police Station :
- (g) First opening date : 13/02/1957
- (h) Weekly day of rest : TUE
2. Address for : KATASAI MANGANESE MINE, M/S RUNGTA SONS (P) LTD
correspondance P.O.CHORMALDA, DIST :KEONJHAR
ORISSA-758035
3. (a) Lease Number : ORI0185
- (b) Lease area : 196.86
- (c) Period of lease :
- (d) Date of Expiry : 31/03/2020
4. Mineral worked : MANGANESE ORE Main

5. Name and Address of the

Lessee : M/s Rungta Sons (P) Ltd
 Rungta House P.O.
 Chaisabasa SINGHBHUM
 (WEST) JHARKHAND
 Phone:(06582) 56861/56761
 FAX :91 6582 56442

Owner : RUNGTA SONS (P) LTD.
 RUNGTA HOUSE CHAIBASA
 SINGHBHUM (WEST) JHARKHAND
 Phone: 06582-56861,567
 FAX : 91-6582-56442

Agent : D.R.OJHA
 C/O BICO LTD AT O.P.BARBIL
 KEONJHAR ORISSA
 Phone: 06596-62321,62221
 FAX :

Mining Engineer

Name : R.C.B.SRIVASTAVA,Full Time
 Qualification : BE MINING
 Appointment/ :
 Termination date

Mining Engineer

Name : N.S.BANDARA,Full Time
 Qualification : PERMIT MANAGER
 Appointment/ :
 Termination date

Geologist

Name : S. GHOSH,Full Time
 Qualification : M.SC GEOLOGY, M.TECH IN MINERAL EXPLORAT
 Appointment/ : 16/10/2000
 Termination date

Geologist

Name : S.RAHA,Full Time
 Qualification : M.Sc (GEO)
 Appointment/ :
 Termination date

Manager

Name : N.S.BANDARA
 Qualification : PERMIT MANAGER
 Appointment/ :
 Termination date

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	19/09/2000
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	06/07/2010
	:	Mining Scheme rule 12 MCDR1988	07/04/2015
	:	MP modif under 17(3) MCR 2016	06/09/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	During the year 2016-17, it was proposed to drill 41 nos. of core drill holes as envisaged in the modification of the mining plan approved on 06.09.2016.	41 nos. of boreholes were drilled with total meterage of 1244.20m	No deviation in the proposed exploration schedule during the year 2016-17.
1b	Exploration over lease area for geological axis 1 or 2	G1 level: 110.00ha, G2 level: 11.00ha & G3 level: 10.50ha	G1 level: 110.00ha, G2 level: 11.00ha & G3 level: 10.50ha	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	The lessee M/s Rungta Sons (P) Ltd. is the exploration agency for this mine and there is no specific proposal for expenditure on account of exploration.	During the year 2016-17, there are 41 nos. of bore holes were drilled in the mine.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per the modification of the mining plan, the balance area of 65.36ha has not been explored.	The balance area of 65.36ha to be explored.	Nil

1e	Balance reserve as on 01/04/20	In the modification of mining plan approved on 06.09.2016, the reserves/resources for manganese have been estimated and the same is as follows:- (i) Proved mineral reserves (111)-345886 tonnes (ii) Probable mineral reserves(122) - 8855 tonnes & (iii) Total remaining resources- 425830 tonnes.	In the modification of mining plan approved on 06.09.2016, the reserves/resources for manganese have been estimated and the same is as follows:- (i) Proved mineral reserves (111)-345886 tonnes (ii) Probable mineral reserves(122)- 8855 tonnes & (iii) Total remaining resources- 425830 tonnes. As the modification was approved on the middle of the financial year 2016-17, the production for the months from October 2016 to March 2017 has not been depleted for erroneous reserves/resources figures	Nil
1f	General remarks of inspecting officers on geology, exploration etc	In the modification of the mining plan approved on 06.09.2016, only 41 nos. of bore holes were proposed to be drilled in the year 2016-17.	The exact number of boreholes were drilled during 2016-17.	Nil

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	(i) E/W(-15) to E/W (-170) & N/S 550 to N/S 215 (ii) E/W (-1100) to E/W (-1360) & N/S 1290 to N/S 1480 (iii) E/W (-310) to E/W (-375) & N/S 500 to N/S 560 (iv) E/W (-360) to E/W (-300) & N/S 400 to N/S 510.	(i) E/W(-250) to E/W (-420) & N/S 25 to N/S 120 (ii) E/W (-1140) to E/W (-1360) & N/S 1310 to N/S 1480 (iii) E/W (-310) to (-380) & N/S 500 to N/S 550 (iv) E/W (-390) to E/W (-510) & N/S 880 to N/S 940 (v) E/W (-790) to E/W (-850) & N/S 1280 to N/S 1360 (vi) E/W (-200) to E/W(-300) & N/S 400 to N/S 500.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	There is no top soil in the mine. However, separate benches for overburden & ore zone were proposed as envisaged in the modification of mining plan.	There is no top soil in the mine. However, separate benches for overburden & mineral zone are made.	Nil
2c	Stripping ratio or ore to OB ratio	The proposed Ore:OB ratio was for 1:1.041 (t/cum)	The actual Ore:OB ratio is for 1:0.013 (t/t) during the year 2016-17.	The achieved Ore:OB ratio is in lower side due to low production during the year 2016-17 due to the lack of market demand for low grade manganese ore.
2d	Quantity of topsoil generation in m3	Nil	Nil	Nil

2e	Quantity of overburden generation in m3	It was proposed to generate 18531 cum of overburden material was proposed in the year 2016-17..	During the year 2016-17, 17896 tonnes of overburden material was generated.	No deviation.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No comments on the proposed development of the mine during the year 2016-17.	The production of manganese was lagging behind the proposal envisaged in the modification of mining plan due to lack of market demand.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	6 nos. of pits.	6 nos. of pits.	Nil
3b	Quantity of ROM mineral production proposed	19291 tonnes during 2016-17. (During the year 2016-17, only 242 tonnes of maganese production was reported.	Th manganese production was much in lower side of the proposed quantities during the year 2016-17 dure to lack of market demand.
3c	Recovery of sailable/usable mineral from ROM production	The recovery of manganese is proposed for 7% of the ore zone excavation.	Reportedly 7% of the ore zone.	Nil
3d	Quantity of mineral reject generation	Nil	Nil	Nil
3e	Grade of mineral rejects generation and threshold value declared.	Nil	Not applicable.	Nil

3f	Quantity of sub grade mineral generation.	3858 tonnes	Nil	No sub-grade generation was reported since during the year 2016-17, only 242 tonnes of manganese was produced against the production proposal of 19291 tonnes.
3g	Grade of sub grade mineral generation	10-25%Mn.	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Manual	The same practice is being followed in the mine.	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposal.	Not applicable.	Nil
3j	Provision of drilling and blasting in mineral benches	Provisions for drilling by jackhammer drills and blasting by putting the explosives in the drilled holes in the minerals as well as in overburden benches are envisaged.	The same practice is being followed in the mine as found during the field visit.	Nil

3k	Provision of mining machineries in mineral benches	The fleet of mining machineries proposed to be deployed in the mine is as given below: (i) Excavator-0.9 cum(2 nos.) (ii) Jackhammer drills 33mm dia (2 nos.) (iii) Tippers (12 nos.) (iv) Wagon drill & trator compressor (1 no.) (v) Explosive van 5 tonner (1 no.) (vi) Water tanker 12000 ltr (1 no.) etc.	As per the annual return submitted by the party for the year 2016-17, the following mining machineries were deployed in the mine. (i) Backhoe-0.9 cum(1 no.) (ii) Blast hole drill 110mm dia (1 no.) (iii) Dumpers (3 nos.) (iv) Trator/Jeep (1 no.) etc.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	The height of the benches are proposed from 3-4m and with proporsionate to height as per the modification of the mining plan.	The height of the benches both in overburden and in ore zone varies from 4-6m depending upon the thickness of the ore zone and compactness of the starata condstions.	Nil
3m	Total area covered under excavation/pits	At the end of 2019-20, an extent of 50.606ha of area is proposed to be covered under excavation/pit	An extent of 44.486ha has been degraded by opencast working so far as per the annual return 2016-17.	Nil

3n	Ore to OB ratio for the pit/mine during the year.	The proposed Ore:OB ratio was for 1:1.041 (t/cum)	The actual Ore:OB ratio is for 1:0.013 (t/t) during the year 2016-17.	The achieved Ore;OB ratio is in lower side due to low production during the year 2016-17 due to the lack of market demand for low grade manganese ore.
3o	Total area put in use under different heads at the end of year	Item wise land use under different heads at the end of the year 2016-17 has not been furnished in the modification of the mining plan. However, the land use at the end of the modification period i.e 2019-20 is as given below:- (i) Excavation for mining- 50.606ha (ii) dump-8.679ha (iii) Mineral storage-7.09ha (iv) Infrastructure -0.06ha (v) Roads-3.396ha (vi) Green belt-3.44ha & (vii) Mine camp-2.24ha.	As per the annual return submitted by the party for the year 2016-17, the land degradation status in different counts is as given below:- (i) Current opencast working- 44.486ha (ii) Reclaimed/rehabilitated - Nil (iii) Waste disposal-7.039ha (iv) Occupied by plant, buildings etc.-3.220ha & (v) mineral storage- 8.530ha.	Nil

3p	Production of ROM mineral during the last five year period as applicable	As per the modification of mining plan, dated 06.09.2016, the proposed production of manganese from 2015-16 & 2016-17 is as follows: 2015-16: 13469 tonnes & 2016-17: 19291 tonnes.	The achievements in production of manganese during 2015-16 & 2016-17 is as given below:- 2015-16: 112 tonnes & 2016-17: 242 tonnes.	During all the above two years, the achievements in production for manganese is lagging behind the proposals, due to lack of market demand.
3q	General remarks of inspecting officers on method of mining etc.	The method of mining was proposed for other than fully mechanised open cast methods in the modification of the mining plan.	The mining operations were carried out by other than fully mechanised opencast methods.	Nil

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	There is no proposal for top soil generation from the mine. However, the OB/waste generated from the mine is proposed to dump separately as envisaged in the modification of the mining plan	No topsoil was generated from the mine during the year 2016-17 & no separate dumps for the same was made. The OB /waste generated were dumped in dump-1.	Nil

4b	Location of topsoil, OB and mineral reject dumps	The OB was proposed to be dumped in dump-1.	The OB generated from the mine were dumped in dump-1 during the year 2016-17.	Nil
4c	Number of dumps within lease area and outside of lease area	Dump-1 & dump-2 are the existing dumps within the lease area as envisaged in the modification of the mining plan.	There are two active dumps are found in the mine viz. dump-1 & dump-2.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	The dump 1 & dump 2 are proposed beyond the ultimate pit limits as per the modification of the mining plan.	The dump 1 & dump -2 are found located beyond the ultimate pit limit.	Nil
4e	Number of active and alive dumps.	There are two active dumps viz. dump 1 & dump 2.	The dumps 1 & 2 are active dumps as found during th field visit.	Nil
4f	Number of dead dumps.	No such proposal.	Not seen in the lease area.	Nil
4g	Number of dumps established.	No such proposal.	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining walls for the dumps are proposed as envisaged in the modification of the mining plan.	Concrete retaining wall all along the toes of both the dumps are made.	Nil
4i	Length of Retaining wall or garland drain all along dumps	No specific proposal.	Retaining walls & garland drains all around the toes of the dumps are made as found during the field visit.	Nil
4j	Number of settling ponds	No specific proposal.	No settling tank seen.	Nil

4k	Specific comments of inspecting officer on waste dump management	Waste dumping was proposed in dump 1 & dump 2 as per the proposal.	Dumping is being done in dump 1 & 2 as observed during the inspection.	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 proposal for backfilling during 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 such proposal.	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	No specific proposal.	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No comments.	The mine was in opration intermitently during 2016-17.	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).	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).	2500 saplings in safety zone and on the slopes of D1 & D2 in 2016-17 but the extent of plantation area has not been specified.	1000 saplings were planted in safety zone and also on the slopes of D1 & D2 during 2016-17.	Nil
6d	No. of saplings planted during the year	2500 number of saplings.	A total of 1000 number of saplings were planted during reporting year.	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	No such specific proposal.	Not available.	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 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 proposal.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No comments.	Plantation has been carried out over the matured slope of the dumps D1 & D2.	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 manganese is proposed within lease area.	Grade wise sorting observed during the field visit.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual.	Manual.	Nil
7c	Different grade of mineral sorted out at mines.	Medium Grade: Mn % between 25 to 38. Low grade : Mn % between 10 to 24.	High Grade: Mn % between 35 to 46. Medium Grade: Mn % between 25 to 35.	Nil
7d	Any beneficiation process at mines .	The ROM proposed to sort and size by Manual means.	No mechanical beneficiation. The ROM is being sorted and Sized by Manual means.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No comments.	There is no mineral conservation problems in the mine.	Nil

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Nil	Nil	Nil
8b	Concurrent use or storage of topsoil	No topsoil generation proposal.	Nil	Nil

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of overburden/waste rock has been proposed.	As per proposal.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Nil	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)	2500 nos.of saplings proposed along the safety zone and on the dump slope.	1000 nos.of saplings planted along the safety zone and on the dump slope.	Nil
8g	Survival rate	No such specific proposal.	98%	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 plantation is carried out over the matured slope of the dump as well as along the safety zone enhances the aesthetic beauty of the mine.	Nil

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
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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	Graduate Mining Engineer: 01, Geologist: 01, Surveyor: 01	As mines falls under A category mine as per MCDR,2017, a full time Mining engineer and Geologist has been appointed.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	1.Open cast wroking-land use pattern 44.486ha. 2.waste disposal- 7.039ha. 3.Infrastructure- 3.22ha 4.Mineral storage/green belt- 8.530ha	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 1000 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)	The quantity of mineral reject is indicated to be Nil.	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 was for 242 tonnes.	Only 242 tonnes of Mn ROM was produced as indicated in annual return of the year 2016-17.	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. 65063.88 per tonnes.	The cost of production furnished in annual return appears to be not correct.	Nil

9h	Scrutiny of Annual return on fixed assets	Value of fixed asset furnished in annual return is Rs. 1282870.00	The Value of fixed asset furnished in annual return for the year 2016-17, was not available for verification during field visit.	Nil
9k	Scrutiny of Annual return on mining machineries	Backhoe- 01, dumper- 06, Blast hole drill-01 & Jeep/Tractor- 01.	The deployment status of mining and other machineries furnished in annual return appears to be correct.	Nil

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