

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/MN/SNG/MCDR-2/BBS

Mine code : 40ORI13008

- (i) Name of the Inspecting : **S010**) **SHRI G.C. SETHI**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri A.K.Behera, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 16/07/2019
- (v) Prev.inspection date : 15/04/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KANTHER-KOIRA**
- (b) **Registration NO.** : **IBM/4562/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : KANTHER-KOIRA
- Taluka : BONAI
- Post office : KOIRA
- Pin Code :
- FAX No. : 06767-276651
- E-mail : bbloffice@rungtamines.com
- Phone : 06767-276651
- (f) Police Station : Koira
- (g) First opening date : 15/12/1945
- (h) Weekly day of rest : SUN
2. Address for : PO:KOIRA, DIST: SUNDERGARH
correspondance : ORISSA
PIN-770048
3. (a) Lease Number : ORI0206
- (b) Lease area : 73.65
- (c) Period of lease : 20
- (d) Date of Expiry : 31/12/1999
4. Mineral worked : MANGANESE ORE Main

5. Name and Address of the

Lessee : Rungta Mines Ltd
 Rungta House P.O.Chaibasa
 SINGHBHUM (WEST) JHARKHAND
 Phone:06582-56461,56561,56661,56761
 FAX :91-6582-56442

Owner : M/S Rungta Mines Ltd
 M/S Rungta Mines Ltd Rungta
 House At P.O.Chaibasa
 SINGHBHUM (WEST) JHARKHAND
 Phone: 06582- 56461,56
 FAX : 91- 6582 - 5644

Agent : A.S.MAHAPATRA
 Rungta Office, Main Road,
 Barbil Keonjhar, Orissa
 KEONJHAR ORISSA
 Phone: 06767-276651
 FAX : 06767-276651

Mining Engineer

Name : A.K.BEHERA,Full Time
 Qualification : AMIE MINING
 Appointment/ : 01/07/2017
 Termination date

Geologist

Name : Rajesh Roy,Full Time
 Qualification : Msc.(Geology)
 Appointment/ : 21/06/2010
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 22 MCR1960	19/09/2000
		Mining Scheme rule 12 MCDR1988	18/05/2007
		Mining Scheme rule 12 MCDR1988	01/04/2010
		Mining Scheme rule 12 MCDR1988	25/02/2015
		MS modif under MCR 1960	01/08/2017
		MP modif under 17(3) MCR 2016	13/07/2018
		FMCP under 23C(1)	04/10/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No backlog of exploration in 2018-19.	In 2018-19, total 35 number of bore holes have been drilled by lessee covering the entire lease area of 73.658ha.	No backlog.
1b	Exploration over lease area for geological axis 1 or 2	G1/G2 Level of exploration.	In 2018-19, total 35 number of bore holes have been drilled by lessee under G1/G2 Level of exploration.	In 2018-19, total 35 number of bore holes have been drilled by lessee under G1/G2 Level of exploration.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified.	In 2018-19, the exploration agency involved in drilling was M/s Geovision Pvt Ltd and M/s V.K.S Mining Services.	Exploration agency involved in drilling was M/s Geovision Pvt Ltd and M/s V.K.S Mining Services.
1d	Balance area to be explored to bring Geological axis in 1 or 2	The entire leased out are was proposed to be explored ,under G2 level of exploration upto the end 2018-19.	In 2018-19, total 35 number of bore holes have been drilled by lessee covering the entire lease area under G1/G2 level of exploration.	Nil
1e	Balance reserve as on 01/04/20	Balance reserve as per Modified mining plan approved on 01/08/2017 was 417930T under proved (111) category and 14971T was under feasibility resources (211) category.	Balance reserve as on 01/04/2019 under proved category was 408612.717 tonnes of Manganese ore and remaing resources of 83776 tonnes.	Nil

1f	General remarks of inspecting officers on geology, exploration etc	35 number of bore holes in 2018-19 covering the lease area.	In 2018-19, total 35 number of bore holes have been drilled by lessee covering the entire lease area.	Nil
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Main pit- S 584/669 and E 200/550.	The development is concentrated in Main pit between grid S 584/669 and E 200/550.	The development is concentrated in Main pit between grid S 584/669 and E 200/550
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB and ore zone with bench height of 6m. No top soil bench as no topsoil exists in the location proposed for mine excavation.	Separate benches in OB and ore of 6m height have been maintained. No bench for topsoil maintained.	No topsoil exists.
2c	Stripping ratio or ore to OB ratio	1:25.43 t/cu.m	1:34.97 t/cu.m	Average stripping ratio varries due to irregular & pocket nature of the manganes ore deposit.
2d	Quantity of topsoil generation in m3	Not applicable as no topsoil exists in the location proposed for mining.	Not applicable.	There is no top soil generation during 2018-19.
2e	Quantity of overburden generation in m3	509256 cu.m in 2018-19	312794.014 cu.m waste generated during 2018-19.	Less quantity of OB generated due to irratic nature of the ore body and less production of ROM during 2018-19.

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The development is proposed in single pit i.e Main pit.	Development is concentrated in single pit i.e main pit in 2018-19.	Nil
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Single pit i.e. main pit	Working is concentrated in single pit i.e main pit.	Nil
3b	Quantity of ROM mineral production proposed	20025 tonnes in 2018-19.	Only 8943.504 tonnes of ROM production was reported during 2018-19.	ROM production is less due to low market demand and irratic nature of the ore body.
3c	Recovery of sailable/usable mineral from ROM production	18023tonnes in 2018-19.	Only 8823.504 tonnes of saleable Mn ore was reportedly produced during 2018-19.	Nil
3d	Quantity of mineral reject generation	910 cum. in 2018-19. The mineral reject is considered as sub-grade.	Mineral reject/sub grade generated during 2018-19 was only for 120 tonnes.	The lowerside generation of the subgrade/mineral reject is due to irregular nature of the ore body as well as less production of manganese during 2018-19.
3e	Grade of mineral rejects generation and threshold value declared.	10-25% Mn	10-25% Mn	Nil
3f	Quantity of sub grade mineral generation.	910 cum. in 2018-19. The mineral reject is considered as sub-grade. No separate generation proposals for mineral reject and sub-grade.	120 tonnes during 2018-19.	The mineral reject is considered as sub-grade. No separate generation proposals for mineral reject and sub-grade.

3g	Grade of sub grade mineral generation	10-25% Mn	10-25% Mn	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Manual.	Manual.	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable.	Not applicable.	Nil
3j	Provision of drilling and blasting in mineral benches	DTH drilling of 110mm dia. Blast hole with emulsion/slurry explosive as column charge and booster alongwith delay detonator.	Drilling and blasting is done with IR drill ML-100. Blast hole with emulsion/slurry explosive as column charge and booster alongwith delay detonator.	Nil
3k	Provision of mining machineries in mineral benches	Excavator-2 nos, tippers 20 tonners 12 nos., Wagon drill 110mm dia. & tractor compressor-1no. and rock breaker-1 no.,	Excavator-2 nos, tata hyva 20 tonners 8 nos., IR drill ML-100-1no. and rock breaker-1	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height-6m both in OB and in ore zone.	Bench height-6m both in OB and in ore zone.	Nil
3m	Total area covered under excavation/pits	14.00 ha during approved plan period upto 2019-20.	About 12.818 ha. has been covered under excavation pits upto 2018-19.	Nil

3n	Ore to OB ratio for the pit/mine during the year.	1:25.43 t/cu.m	1:34.97 t/cu.m	Average stripping ratio varies due to irregular & pocket nature of ore deposit.
3o	Total area put in use under different heads at the end of year	Total area proposed under different heads are Pit-14.00 ha, waste dump-8.50 ha, mineral storage-1.20ha and road-1.44ha, by end of 2019-20 as envisaged in the modification of mining plan.	Area covered under different heads are Pit-12.818 ha, waste dump-6.400 ha, Plant, residential & building, roads-0.936ha & others -2.170 ha. and dump plantation under PMCP-1.00ha	Nil
3p	Production of ROM mineral during the last five year period as applicable	2014-15:20025 tonnes 2015-16: 20025 tonnes 2016-17: 20025tonnes 2017-18: 20025 tonnes 2018-19:20025 tonnes	2014-15: 584.538 tonnes 2015-16: 6767.73 tonnes 2016-17: 9306.27 tonnes 2017-18: 9317.283 tonnes 2018-19:8943.504 tonnes	ROM Production is less due to low market demand and irratic nature of the ore body.
3q	General remarks of inspecting officers on method of mining etc.	DTH drilling of 110mm dia. Blast hole with emulsion/slurr y exlplosive as coloumn charge and booster alongwith delay detonator.	The ROM production has been carried out single pit i.e main pit. DTH drilling of IR drill ML-100. Blast hole with emulsion/ slurry exlplosive alongwith delay detonator is being practiced for drilling and blasting.	Nil

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping for overburden and mineral reject are envisaged. No topsoil generation proposal as no topsoil exists in the location proposed for excavation planning in 2018-19.	Separate dumping for overburden and mineral reject are done. No topsoil generated during 2018-19.	There is no top soil generation. Overburden is dumped on active dump-D2 as proposed.
4b	Location of topsoil, OB and mineral reject dumps	Active dump-D2 between grid N266 to S200 and E654 to E1000 and MR dump between grid S250 to E825.	Overburden is dumped on active dump-D2 between grid N266 to S200 and E654 to E1000 and MR dump between grid S250 to E825.	Nil
4c	Number of dumps within lease area and outside of lease area	One	One	Overburden is dumped on active dump-D2 between grid N266 to S200 and E654 to E1000 lies within lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Active dump-D2 between grid N266 to S200 and E654 to E1000, which is beyond the ultimate pit limit.	Dump D2 is located outside ultimate pit limit.	Nil
4e	Number of active and alive dumps.	One active dump.	One active dump.	Nil
4f	Number of dead dumps.	There is one dead dump D1 which is fully rehabilitated by plantation.	There is one dead dump D1 which is fully rehabilitated by plantation.	Nil
4g	Number of dumps established.	There is one dead dump D1 which is fully rehabilitated by plantation.	There is one dead dump D1 which is fully rehabilitated by plantation.	Nil

4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall of 1900m and garland drain of 1700m around dump-D2.	Retaining wall of 1900m and garland drain of 1700m around dump-D2.	Nil
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall of 1900m and garland drain of 1700m around dump-D2.	Retaining wall of 1900m and garland drain of 1700m around dump-D2.	Nil
4j	Number of settling ponds	03 settling ponds.	03 settling ponds as proposed has been competed.	Nil
4k	Specific comments of inspecting officer on waste dump management	Separate dumping for overburden and mineral reject.	Separate dumping for overburden and mineral reject are made. Slope of the dead dump has been stabilised by plantation. The dead dump has been fully rehabilitated by plantation. The retaining wall and garland drain has been constructed around the dump.	Nil

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.	Pit is not matured for reclamation.	Mineralisation is continue in the working pit and the pit is not matured for reclamation.	Nil
5b	Area under backfilling of mined out area	Pit is not matured for reclamation.	Mineralisation is continue in the working pit and the pit is not matured for reclamation.	Nil

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Mineralisation is continue and pit is not matured for reclamation. Hence, not applicable.	Not applicable.	Nil
5d	Total area fully reclaimed and rehabilitated	Mineralisation is continue and pit is not matured for reclamation.	Not applicable.	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Mineralisation is continue and pit is not matured for reclamation.	Mineralisation is continue in the pit and the pit is not matured for reclamation. About 1.0 ha area of old dump-D1 has been fully rehabilitated by plantation.	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).	Annual return on PMCP has been submitted.	Annual return on PMCP has been submitted.	Nil
6b	Area available for rehabilitation (ha) .	Mineralisation is continue in the working pit and the pit is not matured for reclamation.	Not applicable.	Nil
6c	afforestation done (ha).	1.0 ha.	In 2018-19, total area cover under afforestation is about 1.0 ha.	Nil
6d	No. of saplings planted during the year	1500 saplings in 2018-19	In 2018-19, total 4000 nos. of saplings were planted during 2018-19.	Nil
6e	Cumulative no .of plants	No such proposal.	Cumulatively 116473 nos. of saplings were planted in the lease area.	Nil

6f	Any other method of rehabilitation	None	Not applicable.	Nil
6g	Cost incurred on watch and care during the year	Rs 1.75 lakh.	Rs 1.45lakh cost incurred on watch and care.	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	Not applicable since mineralisation is continues and pit is not matured for reclamation.	Not applicable.	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not applicable.	Mineralisation is continue and pit is not matured for reclamation.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Mineralisation is continue and pit is not matured for reclamation.	Not applicable.	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable.	Mineralisation is continue and pit is not matured for reclamation.	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Mineralisation is continue and pit is not matured for reclamation.	Not applicable.	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not applicable.	Not applicable.	Nil

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not applicable.	Not applicable.	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable.	Not applicable.	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring envisaged.	Quarterly monitoring of air, water and noise level are being practised in the mine.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		In 2018-19, total 4000 nos. of saplings have been planted by lessee. Area has not been matured for reclamation & rehabilitation and afforestation has been carried out along slope of waste dump & safety zone.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Gradewise sorting envisaged	Gradewise sorting practised.	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.	25% to 46% Mn and +46% dioxide grade.	25% to 46% Mn and +46% dioxide grade.	Nil

7d	Any beneficiation process at mines .	None	Not applicable.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Gradewise Sorting of 25% to 46% Mn and +46% dioxide grade.	Cut off grade of Mn ore for the mine is +25%. Different grades of minerals sorted out at mines are +10% to 46% & above of Mn .	Cut off grade of Mn ore for the mine is +25%. Different grades of minerals sorted out at mines are +10% to 46% & above of Mn .

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No topsoil exists. Hence, not applicable.	No top top soil generated during 2018-19.	Nil
8b	Concurrent use or storage of topsoil	Not applicable.	No top top soil generated during 2018-19.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for overburden on dump-D2.	Separate dump for overburden on dump-D2.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not applicable.	Area is not matured for reclamation and rehabilitation.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Area is not matured for reclamation and rehabilitation .	Area is not matured for reclamation and rehabilitation.	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Plantation proposed along the slope of waste dump & safety zone.	Total 116473 nos. saplings have been planted by end of the year 2018-19.	Nil
8g	Survival rate	Not specified.	90%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkler are used to control air borne dust.	Water sprinkler are used to suppress the air borne dust.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Aesthetic beauty in and around mined area is maintained. In 2018-19, total 4000 nos of saplings have been planted by lessee. As reported cumulatively 116473 nos. of saplings were planted by end of 2018-19.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly & Annual returns are submitted by the lessee on regular basis.	The annual return for the year 2018-19 submitted in time.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer, geologist and Mine Managers are deployed.	The deployment status is found to be in order.	Nil

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area covered under different heads are Pit-12.818 ha, waste dump-6.400 ha, Plant, residential & building, roads-0.936ha,mineral storage-0.790ha, green belt-1.380 ha. and dump plantation under PMCP-1.00ha.	Area covered under different heads are Pit-12.818 ha, waste dump-6.400 ha, Plant, residential & building, roads-0.936ha,mineral storage-0.790ha, green belt-1.380 ha. and dump plantation under PMCP-1.00ha.	Nil
9d	Scrutiny of Annual return on afforestation	Total 4000 nos. saplings have been planted in 2018-19.	Found to be in order.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	120 tonnes	Found to be in order.	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing stock maintained below 25% Mn, 25-46% Mn and above 46% and dioxide grade.	Closing stock maintained below 25% Mn, 25-46% Mn and above 46% and dioxide grade.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	The avarage Ex mine price between grade 25% - 46% & abobe Mn is Rs. 14643.58.	The avarage ex-mine price is found to be in order.	Nil
9h	Scrutiny of Annual return on fixed assets	Net closing balance as furnished in AR is Rs 12920730/-	Net closing balance as furnished in AR is Rs 12920730/-	Nil

9k	Scrutiny of Annual return on mining machineries	Excavators-2 nos., Tata Hyva-8 nos., Rock breaker-1 no and IR Drill LM-100-1 no.	Excavators-2 nos., Tata Hyva-8 nos., Rock breaker-1 no and IR Drill LM-100-1 no.	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
MCDR17	Rule 35(2)	25/07/2019	13/08/2019			

Date :

(SHRI G.C. SETHI)

Indian Bureau of Mines