

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/MN/KJR/MCDR-20/BBS-31/5/21

Mine code : 40ORI08031

- (i) Name of the Inspecting : **U11**) **DAYANAND UPADHYAY**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri A.K. Roul, General manager (Mines)
Official with
Designation
- (iv) Date of Inspection : 26/02/2020
- (v) Prev.inspection date : 28/11/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SILJORA KALIMATI**
- (b) **Registration NO.** : **IBM/5431/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : SILJORA KALIMATI
- Taluka : BARBIL
- Post office : SILJORA
- Pin Code :
- FAX No. : 91 - 6582 - 52442
- E-mail : rungtas@satyam.net.in
- Phone : (06582) 52861,52761,52661,!
- (f) Police Station :
- (g) First opening date : 01/01/1946
- (h) Weekly day of rest : MON
2. Address for : SILJORA KALIMATI MANGANESE MINE
correspondance : DISTRICT KEONJHAR
ORISSA
3. (a) Lease Number : ORI0172
- (b) Lease area : 715.64
- (c) Period of lease : 20
- (d) Date of Expiry : 31/12/2035
4. Mineral worked : MAGNESITE Associated
MANGANESE ORE Main

5. Name and Address of the

Lessee : M/S M.L.Rungta
 Rungta House P.O.Chaibasa
 SINGHBHUM (WEST) JHARKHAND
 Phone:(06582) 52861,52761,52661,52561,52461
 FAX :91 - 6582 - 52442

Owner : M D RUSTAGI
 RUNGTA OFFICE, MAIN ROAD
 BARBIL KEONJHAR, ORISSA
 KEONJHAR ORISSA
 Phone: 06767275221
 FAX : 06767276161

Agent : SHRI D N PARIDA
 RUNGTA OFFICE MAIN ROAD
 BARBIL KEONJHAR KEONJHAR
 ORISSA
 Phone: 06767275221
 FAX : 06767276161

Geologist

Name : RITESH RANJAN,Full Time
 Qualification : MSC GEOLOGY
 Appointment/ : 16/04/2008
 Termination date

Manager

Name : A K ROUL
 Qualification : AMIE (MINING)
 Appointment/ : 01/03/1995
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	16/10/2001
Plan/Scheme of Mining		Renewal under rule 22 MCR1960	13/08/2003
		Mining Scheme rule 12 MCDR1988	07/07/2005
		Modif.approved Mining Scheme	27/01/2010
		Mining Scheme rule 12 MCDR1988	10/05/2010
		Modif.approved Mining Scheme	07/01/2011
		Modif.approved Mining Scheme	20/04/2012
		Mining Scheme rule 12 MCDR1988	25/03/2015
		MP modif under MCR 1960	31/12/2015
		MP modif under 17(3) MCR 2016	25/07/2018
		FMCP under 23C(1)	28/09/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	258 number of bore holes.	In 2018-19, total 258 numbers of bore holes have been drilled by lessee.	There is no backlog.
1b	Exploration over lease area for geological axis 1 or 2	G1/G2 Level of exploration.	In 2018-19, total 258 numbers of bore holes have been drilled by lessee under G1/G2 Level of exploration.	In 2018-18, about 203.689 ha area has been explored under G1/G2 level by putting 258 nos. of bore holes of total meterage 12847m.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Exploration agency not specified prior to execute of proposed drilling.	In 2018-19, total cost incurred in drilling was Rs 14460635/-. Exploration agency involved in drilling was M/s Geotech Pvt Ltd and M/s V.K.S Mining Services.	Exploration agency involved in drilling was M/s Geotech Pvt Ltd and M/s V.K.S Mining Services.
1d	Balance area to be explored to bring Geological axis in 1 or 2	About 203.689 ha area has been proposed to explore upto the end of 2018-19.	About 203.689 ha area has been explored under G1/G2 level by putting 258 nos. of bore holes of total meterage 12847m	In 2018-18, about 203.689 ha area has been explored under G1/G2 level by putting 258 nos. of bore holes of total meterage 12847m.

1e	Balance reserve as on 01/04/20	Balance reserve as per Modification of review of mining plan: Mn ore: 3.836Million T under proved (111) category and 2290 T under 122 category. Iron ore- 0.479 MillionT under proved (111) category and 0.056 T under 122 category.	Balance reserve as on 01/04/2019 Mn ore: under 111 category -3.712 Million T, under 122 category- 2290Tonnes Iron ore- 0.479 MillionT under proved (111) category and 0.056 T under 122 category.	Balance reserve as on 01/04/2019 Mn ore: under 111 category -3.712 Million T, under 122 category- 2290Tonnes Iron ore- 0.479 MillionT under proved (111) category and 0.056 T under 122 category.
1f	General remarks of inspecting officers on geology, exploration etc	258 number of bore holes in 2018-19.	In 2018-19, total 258 numbers of bore holes have been drilled by lessee under G1/G2 Level of exploration.	In 2018-19, total 258 numbers of bore holes have been drilled by lessee under G1/G2 Level of exploration..

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	Block-1, W-160 to E-1200 & S-1080 to S-1800 Block-2, E-910 to E-1400 & S-2150 to S-2720 Block-3, E-1640 to E-1820 & S-1590 to S-1790 Block-4, E-1550 to E-1790 & S-2190 to S-2290 Block-5, E-2120 to E-2440 & S-2100 to S-2550 Block-6, E-2580 to E-2950 & S-2980 to S-3380 Block-6 (Iron), E-2520 to E-2820 & S-3440 to S-3500	The development is carried out in Block-1, W-160 to E-1200 & S-1080 to S-1800 Block-2, E-910 to E-1400 & S-2150 to S-2720 Block-3, E-1640 to E-1820 & S-1590 to S-1790 Block-4, E-1550 to E-1790 & S-2190 to S-2290 Block-5, E-2120 to E-2440 & S-2100 to S-2550	The development is carried out within the approved proposal. The Block-6, containing iron ore not developed due to want of tree felling permission.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB and ore with 6m height, top soil bench- nil.	Separate benches in OB and ore of 6m height have been maintained.	Separate benches in OB and ore of 6m height have been maintained.
2c	Stripping ratio or ore to OB ratio	Mn. Ore - 1:15.56 T/cu.m, Iron ore -1:3.17	Mn. Ore - 1:8.74 T/cu.m, Iron ore -Nil	Average stripping ratio varies due to irregular & pocket nature of ore deposit. The Block-6, containing iron ore not developed due to want of tree felling permission.
2d	Quantity of topsoil generation in m3	Not proposed.	There is no top soil generation.	There is no top soil generation.

2e	Quantity of overburden generation in m3	Mn. Ore block- 5447289 cu.m, Iron ore block -430600cu.m	Mn. Ore block - 859056 cu.m	Less quantity of OB generated due to less production of ROM as proposed. The Block-6, containing iron ore not developed due to want of tree felling permission.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The development is proposed in Block-1, Block-2, Block-3, Block-4, Block-5, Block-6, Block-6 (Iron),	The development is carried out in Block-1, Block-2, Block-3, Block-4, Block-5 within the approved proposal	The development is carried out within the approved proposal. The Block-6, containing iron ore not developed due to want of tree felling permission.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	The production is proposed in Block-1, Block-2, Block-3, Block-4, Block-5, Block-6 for Mn ore & Block-6 (Iron),	The production is carried out in Block-1, Block-2, Block-3, Block-4, Block-5 within the approved proposal.	The Block-6, containing iron ore not developed due to want of tree felling permission.
3b	Quantity of ROM mineral production proposed	Mn ore- 350000T, Iron ore-136000T.	ROM production reported in 2018-19 of Mn ore is 121627.439T	ROM Production is less due to low market demand. Iron ore block not developed due to want of tree felling permission.

3c	Recovery of sailable/usable mineral from ROM production	Mn ore-315000T, Iron ore-122400T.	Mn ore-93176.439T, Iron ore-Nil.	ROM Production is less due to low market demand. Iron ore block not developed due to want of tree felling permission.
3d	Quantity of mineral reject generation	Mn ore-35000T, Iron ore-13600T.	Mineral reject/sub grade of Mn ore generated during 2018-19 is 28451T.	Mineral reject generation is low due to less ROM production as proposed. Iron ore block not developed due to want of tree felling permission.
3e	Grade of mineral rejects generation and threshold value declared.	10-25% Mn ore and +45% to 55% Fe .	Mineral reject/sub grade of Mn ore generated during 2018-19 is 28451T of grade below 19% Mn.	Iron ore block not developed due to want of tree felling permission.
3f	Quantity of sub grade mineral generation.	Mn ore-35000T, Iron ore-13600T.	Mineral reject/sub grade of Mn ore generated during 2018-19 is 28451T.	Mineral reject generation is low due to less ROM production as proposed. Iron ore block not developed due to want of tree felling permission.
3g	Grade of sub grade mineral generation	10-25% Mn ore and +45% to 55% Fe .	Mineral reject/sub grade of Mn ore generated during 2018-19 is 28451T of grade below 19% Mn.	Iron ore block not developed due to want of tree felling permission.
3h	Manual / Mechanised method adopted for segregating from ROM	Manual for Mn ore and Mechanised for iron ore.	Manual for Mn ore.	Iron ore block not developed due to want of tree felling permission.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not proposed.	Only screening and sorting are being carried out at mines site.	Only screening and sorting are being carried out at mines site.

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 carried out with DTH drilling of 110mm dia. Blast hole with emulsion/slurry explosive as column charge and booster alongwith delay detonator.	Drilling and blasting is carried out with DTH drilling of 110mm dia. Blast hole with emulsion/slurry explosive as column charge and booster alongwith delay detonator.
3k	Provision of mining machineries in mineral benches	Excavator, Loader and Dumper combination.	Machineries operated at mine site are SHOVEL (HYDRAULIC) 0.9/1.1/2.1 cu.m- 9, FRONT END LOADER 2.0 cu.m-1, TIPPER 12 cu.m-36, WATER TANKER 20& 8KL-4, Dozer-3.	Excavator, Loader and Dumper are equipped to winning out the mineral.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height- 6m	Bench height is suitably matched with the excavator.	Bench height is suitably matched with the excavator.
3m	Total area covered under excavation/pits	329.139 ha proposed during approved plan period.	About 322.948 ha area has been covered under excavation pits.	About 322.948 ha area has been covered under excavation pits.
3n	Ore to OB ratio for the pit/mine during the year.	Mn. Ore - 1:15.56 T/cu.m, Iron ore -1:3.17	Mn. Ore - 1:8.74 T/cu.m, Iron ore -Nil	Average stripping ratio varies due to irregular & pocket nature of ore deposit. The Block-6, containing iron ore not developed due to want of tree felling permission.

3o	Total area put in use under different heads at the end of year	Total area proposed under different heads are Pit-329.139 ha, waste dump-65.404 ha, Plant, residential & building, roads-27.108 ha & Mineral storage, plantation & others -99.499 ha.	Area covered under different heads are Pits- 322.948 ha, waste dump-62.0 ha, Plant, residential & building, roads-38.474ha, area reclaimed and rehabilitated- 33.330 ha & others - 92.369 ha.	Area covered under different heads are Pits- 322.948 ha, waste dump- 62.0 ha, Plant, residential & building, roads- 38.474ha, area reclaimed and rehabilitated- 33.330 ha & others - 92.369 ha.
3p	Production of ROM mineral during the last five year period as applicable	2015-16: Iron-100914.00 T & Mn -292821.18 T 2016-17: Iron-136005.94 T & Mn -342482.31 T 2017-18: Iron-135859.69T & Mn -318721.85 T 2018-19: Iron-136000T & Mn - 350000T	2015-16: Iron-773.768 T & Mn -93896.4985T 2016-17: Iron-778.28T & Mn -107521.701T 2017-18: Iron-273.017T & Mn -118367T 2018-19: Iron-Nil & Mn - 121627.439T	ROM Production is less due to low market demand.
3q	General remarks of inspecting officers on method of mining etc.	Excavation of ROM has been proposed in Block-1, Block-2, Block-3, Block-4, Block-5 & Block-6 and Block-6 (iron).	The ROM production has been carried out in Block-1, Block-2, Block-3, Block-4, Block-5. DTH drilling of 110mm dia. Blast hole with emulsion/ slurry explosive alongwith delay detonator is being practiced for drilling and blasting.	The ROM production has been carried out in Block-1, Block-2, Block-3, Block-4, Block-5. DTH drilling of 110mm dia. Blast hole with emulsion/ slurry explosive alongwith delay detonator is being practiced for drilling and blasting.

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 mineral reject.	Overburden generated during mining operation has been back filled in block B2, B3,B4,B5,B6, and partially on dump-A & H.	There is no top soil generation proposed.
4b	Location of topsoil, OB and mineral reject dumps	Dump-A, E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400.	Overburden generated during mining operation has been back filled in block B2, B3,B4,B5,B6, and partially on dump-A & H between grid E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400 respectively.	Overburden generated during mining operation has been back filled in in block B2, B3,B4,B5,B6, and partially on dump-A & H between grid E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400 respectively.
4c	Number of dumps within lease area and outside of lease area	Dump-A, E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400.	There are two active dumps i.e Dump-A, E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400. lies within the lease area.	There are two active dumps i.e Dump-A, E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400. lies within the lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dump-A, E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400.	There are two active dumps i.e Dump-A, E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400. lies within the lease area.	There are two active dumps i.e Dump-A, E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400. lies within the lease area.
4e	Number of active and alive dumps.	Two active dumps i.e Dump-A, E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400.	There are two active dumps i.e Dump-A, E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400. lies within the lease area.	There are two active dumps i.e Dump-A, E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400. lies within the lease area.
4f	Number of dead dumps.	Not proposed.	There is two dead dump-D and Dump-E which is rehabilitated by plantation.	There is two dead dump-D and Dump-E which is rehabilitated by plantation.

4g	Number of dumps established.	Not proposed.	There is two dead dump-D and Dump-E which is rehabilitated by plantation.	There is two dead dump-D and Dump-E which is rehabilitated by plantation.
4h	Whether Retaining wall or garland drain all along dumps are there.	500m of retaining wall and 250m Garland drain around waste dumps.	500m of retaining wall and 250m Garland drain around waste dumps has been completed.	500m of retaining wall and 250m Garland drain around waste dumps has been completed.
4i	Length of Retaining wall or garland drain all along dumps	500m of retaining wall and 250m Garland drain around waste dumps.	500m of retaining wall and 250m Garland drain around waste dumps has been completed.	500m of retaining wall and 250m Garland drain around waste dumps has been completed.
4j	Number of settling ponds	Not proposed around waste dump.	Total 08 nos. settling ponds exist within lease area.	Total 08 nos. settling ponds exist within lease area.
4k	Specific comments of inspecting officer on waste dump management	Two active dumps i.e Dump-A, E 800/1600 & S 1400/2100, Dump-H, W 100/E400 & S 1650/2400.	Slope of the dead dump has been stabilized by plantation. The dead dump has been rehabilitated by plantation. The retaining wall and garland drain has been constructed around the waste dump.	Slope of the dead dump has been stabilized by plantation. The dead dump has been rehabilitated by plantation. The retaining wall and garland drain has been constructed around the waste dump.

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.	Total 22.89 ha area was proposed for backfilling in 2018-18 & 2019-20 of Block-B2, Block-B3 and Block-B4, Block-B5, Block-B6 .	Total 5.209 ha has been backfilled as on date of inspection. The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.

5b	Area under backfilling of mined out area	Total 22.89 ha area was proposed for backfilling in 2018-18 & 2019-20 of Block-B2, Block-B3 and Block-B4, Block-B5, Block-B6 .	Total 5.209 ha has been backfilled as on date of inspection. The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not proposed.	Nil	No top soil generation proposed.
5d	Total area fully reclaimed and rehabilitated	6.5 ha over backfill area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Total 22.89 ha area was proposed for backfilling in 2018-18 & 2019-20 of Block-B2, Block-B3 and Block-B4, Block-B5, Block-B6 .	Total 5.209 ha has been backfilled as on date of inspection. The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.

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).	As per rule 26(2) of MCDR 2017.	Annual return on PMCP has been submitted.	Annual return on PMCP has been submitted.
6b	Area available for rehabilitation (ha) .	6.5 ha over backfill area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.
6c	afforestation done (ha).	6.5 ha over backfill area and 4.20 ha dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated by plantation by 30000 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.
6d	No. of saplings planted during the year	8000 nos. of saplings over backfilled area and 30000 nos of saplings over dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated with plantation by 30000 nos. of saplings.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated with plantation by 30000 nos. of saplings.
6e	Cumulative no .of plants	Not specified.	Cumulative nos. of saplings planted in the lease area is 358450.	Cumulative nos. of saplings planted in the lease area is 358450.

6f	Any other method of rehabilitation	Rehabilitation by plantation, 6.5 ha backfill area and 4.20 ha dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated with plantation by 30000 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.
6g	Cost incurred on watch and care during the year	Not specified.	Around Rs 7.5 lakh cost incurred on watch and care.	Around Rs 7.5 lakh cost incurred on watch and care.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Rehabilitation by plantation, 6.5 ha backfill area and 4.20 ha dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated with plantation by 30000 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Rehabilitation by plantation, 6.5 ha backfill area and 4.20 ha dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated with plantation by 30000 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Rehabilitation by plantation, 6.5 ha backfill area and 4.20 ha dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated with plantation by 30000 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Rehabilitation by plantation, 6.5 ha backfill area and 4.20 ha dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated with plantation by 30000 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Rehabilitation by plantation, 6.5 ha backfill area and 4.20 ha dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated with plantation by 30000 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	2.574ha waste land area with 6000nos of plantation.	2.574ha waste land area rehabilitated by 6000nos of plantation.	2.574ha waste land area rehabilitated by 6000nos of plantation.
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	2.574ha waste land area with 6000nos of plantation.	2.574ha waste land area rehabilitated by 6000nos of plantation.	2.574ha waste land area rehabilitated by 6000nos of plantation.
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	2.574ha waste land area with 6000nos of plantation.	2.574ha waste land area rehabilitated by 6000nos of plantation.	2.574ha waste land area rehabilitated by 6000nos of plantation.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring	Quarterly monitoring of air, water and noise level are being carried out.	Quarterly monitoring of air, water and noise level are being carried out.

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Rehabilitation by plantation, 2.19 ha backfilled area by plantation, 6.5 ha backfill area and 4.20 ha dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated with plantation by 30000 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Gradewise sorting	Gradewise sorting is being practiced.	Gradewise sorting is being practiced.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual for Mn ore.	Manual for Mn ore.	Manual for Mn ore.
7c	Different grade of mineral sorted out at mines.	25% to 46% Mn and +46% dioxide grade	Different grades of minerals sorted out at mines are 25% to 46% Mn and +46% dioxide grade .	Different grades of minerals sorted out at mines are 25% to 46% Mn and +46% dioxide grade .
7d	Any beneficiation process at mines	Not proposed.	Only screening and sorting of ROM is being practiced.	Only screening and sorting of ROM is being practiced.
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 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 25% to 46% Mn and +46% dioxide grade .

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not proposed.	Nil.	No top soil generation is proposed.
8b	Concurrent use or storage of topsoil	Not proposed.	Nil.	No top soil generation is proposed.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping for overburden and mineral reject.	Overburden generated during mining operation has been back filled in block B2, B4, B6, and partially on dump-A & H. Separate dumping for overburden and mineral reject are maintained.	Overburden generated during mining operation has been back filled in block B2, B4, B6, and partially on dump-A & H. Separate dumping for overburden and mineral reject are maintained.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Rehabilitation by plantation, 6.5 ha backfill area and 4.20 ha dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated with plantation by 30000 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Rehabilitation by plantation, 6.5 ha backfill area and 4.20 ha dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated with plantation by 30000 nos. of saplings.	The area of backfilling covered less due to less ROM production corresponding less waste generation. Also The block B3 falls under sabik forest and Block B5 has not been exhausted yet.

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	8000 nos. of saplings over backfilled area and 30000 nos of saplings over dump area in 2018-18 & 2019-20.	2.19 ha backfilled area rehabilitated by plantation by 9200 nos. of saplings. 4.2 ha dump area rehabilitated withplantation by 30000 nos. of saplings.	Cumulative nos. of saplings planted in the lease area is 358450. Nos.
8g	Survival rate	Not specified.	As reported survival rate is 96%.	As reported survival rate is 96%.
8h	Water sprinkling on roads to control airborne dust	Four water sprinkler.	Four water sprinkler are used to control air borne dust.	Four water sprinkler are used to control air borne dust.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	8000 nos. of saplings over backfilled area and 30000 nos of saplings over dump area in 2018-18 & 2019-20.	Backfilled area rehabilitated by plantation by 9200 nos. of saplings. Dump rehabilitated with plantation by 30000 nos. of saplings.	Aesthetic beauty in and around mines area is maintained. Cumulative nos. of saplings planted in the lease area is 358450. Nos.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly & Annual returns are being regularly submitted by lessee.	Monthly & Annual returns are being regularly submitted by lessee.	Monthly & Annual returns are being regularly submitted by lessee.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	The employment status of mining engineer, geologist & mine manager have been furnished in the annual return submitted for the year 2018-19.	Mining engineer, geologist & mine managers were employed in the mine.	Mining engineer, geologist & mine managers were employed in the mine.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area covered under different heads are Pits- 322.948 ha, waste dump-62.0 ha, Plant, residential & building, roads- 38.474ha, area reclaimed and rehabilitated- 33.330 ha & others - 92.369 ha.	Area covered under different heads are Pits- 322.948 ha, waste dump-62.0 ha, Plant, residential & building, roads-38.474ha, area reclaimed and rehabilitated- 33.330 ha & others - 92.369 ha.	Area covered under different heads are Pits- 322.948 ha, waste dump- 62.0 ha, Plant, residential & building, roads- 38.474ha, area reclaimed and rehabilitated- 33.330 ha & others - 92.369 ha.
9d	Scrutiny of Annual return on afforestation	Total 28630 nos. saplings have been planted in 2018-19.	Total 28630 nos. saplings have been planted in 2018-19.	Total 28630 nos. saplings have been planted in 2018-19.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral reject 28451T, below 19% Mn.	Mineral reject 28451T, below 19% Mn.	Mineral reject 28451T, below 19% Mn.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing stock: below 25% Mn- 51511.165T, 25-35% Mn- 40268.979T, 35-46%Mn- 1115.563T and above 46%Mn- 73.376T and dioxide grade- 54.200T.	Closing stock: below 25% Mn-51511.165T, 25-35% Mn-40268.979T, 35-46%Mn-1115.563T and above 46%Mn- 73.376T and dioxide grade-54.200T.	Closing stock: below 25% Mn- 51511.165T, 25-35% Mn-40268.979T, 35-46%Mn-1115.563T and above 46%Mn- 73.376T and dioxide grade- 54.200T.

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine price: below 25% Mn-Rs 5718.26, 25-35% Mn-Rs 7963.57, 35-46%Mn-Rs 22491.00 and above 46%Mn-Rs 25436.13 and dioxide grade-Rs 29889.33 Cost of production: Rs 3156.05	Ex mine price: below 25% Mn-Rs 5718.26, 25-35% Mn-Rs 7963.57, 35-46%Mn-Rs 22491.00 and above 46%Mn-Rs 25436.13 and dioxide grade-Rs 29889.33 Cost of production: Rs 3156.05	Ex mine price: below 25% Mn-Rs 5718.26, 25-35% Mn-Rs 7963.57, 35-46%Mn-Rs 22491.00 and above 46%Mn-Rs 25436.13 and dioxide grade-Rs 29889.33 Cost of production: Rs 3156.05
9h	Scrutiny of Annual return on fixed assets	Fixed asset as furnished in AR is Rs 72278800/-	Fixed asset as furnished in AR is Rs 72278800/-	Fixed asset as furnished in AR is Rs 72278800/-
9k	Scrutiny of Annual return on mining machineries	SHOVEL (HYDRAULIC) 0.9/1.1/2.1 cu.m- 9, FRONT END LOADER 2.0 cu.m- 9, TIPPER 12 cu.m-36, WATER TANKER 20& 8KL-4, Dozer-3.	SHOVEL (HYDRAULIC) 0.9/1.1/2.1 cu.m- 9, FRONT END LOADER 2.0 cu.m-1, TIPPER 12 cu.m-36, WATER TANKER 20& 8KL-4, Dozer-3.	SHOVEL (HYDRAULIC) 0.9/1.1/2.1 cu.m- 9, FRONT END LOADER 2.0 cu.m-1, TIPPER 12 cu.m-36, WATER TANKER 20& 8KL-4, Dozer-3.

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 :

(DAYANAND UPADHYAY)

Indian Bureau of Mines