

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/MN/SNG/MCDR-5/BBS-24.5.2K

Mine code : 40ORI13014

- (i) Name of the Inspecting : **SRM**) **SHRI SUDIP RANJAN MAZUMDAR**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Shri Nilamani Patel, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 15/02/2020
- (v) Prev.inspection date : 24/12/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **MAHULSUKHA**
- (b) **Registration NO.** : **IBM/5865/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : BHUTRA
- Taluka : BONAI
- Post office : BHUTRA
- Pin Code :
- FAX No. : 033-22364602
- E-mail : contact@aryanmining.in
- Phone : 033-22364601, 033-22370935
- (f) Police Station : Barsuan
- (g) First opening date : 03/02/1945
- (h) Weekly day of rest : SUN
2. Address for : MAHULSUKHA MN MINES, M/S AMTC(P) LTD
correspondance P.O.BHUTUDA, DIST:SUNDERGARH
ODISHA-770041
3. (a) Lease Number : ORI0169
- (b) Lease area : 399.84
- (c) Period of lease :
- (d) Date of Expiry : 31/03/2020
4. Mineral worked : MANGANESE ORE Main

5. Name and Address of the

Lessee : ARYAN MINING & TRADING CO. (P) LTD.
 Multi Apartment, 83A,
 Nayapatti Road, Kolkata-
 700055 KOLKATA WEST BENGAL
 Phone: 033-22364601
 FAX : 033-22364602

Owner : Mr. Praveen Saraf
 Multi Apartment, 83A
 Nayapatti Road, Kolkata-
 700055 KOLKATA WEST BENGAL
 Phone: 033-22364602
 FAX : 033-22364601

Mining Engineer

Name : SHRI NILAMANI PATEL, Full Time
 Qualification : DEGREE IN MINING ENGG
 Appointment/ : 10/09/2019
 Termination date

Geologist

Name : Sri Minaketan Naik, Full Time
 Qualification : M.Sc. Geology
 Appointment/ : 19/01/2009
 Termination date

Manager

Name : SHRI NILAMANI PATEL
 Qualification : DEGREE IN MINING ENGG
 Appointment/ : 10/09/2019
 Termination date

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	25/05/2004
Plan/Scheme of Mining		Modif.of approved Mining Plan	15/02/2007
		Mining Scheme rule 12 MCDR1988	11/06/2010
		Mining Scheme rule 12 MCDR1988	26/06/2015
		MP modif under 17(3) MCR 2016	06/09/2018
		FMCP under 23C(1)	04/12/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	In 2018-19, 17 nos of boreholes have been proposed to be drilled.	In 2018-19, 57 nos of boreholes have been drilled.	In 2018-19, 57 nos of boreholes have been drilled.
1b	Exploration over lease area for geological axis 1 or 2	To explore lease area under G2 level of exploration	As on 01.04.2019, the lease area has been explored under G1/G2 level of exploration. Area under G1: 18 Ha and under G2: 381.838 Ha	As on 01.04.2019, the lease area has been explored under G1/G2 level of exploration. Area under G1: 18 Ha and under G2: 381.838 Ha
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not Specified	Exploration Agency: M/s Gemcokati Exploration Pvt Ltd Expenditure: Rs 170.99 lakhs	Exploration Agency: M/s Gemcokati Exploration Pvt Ltd Expenditure: Rs 170.99 lakhs
1d	Balance area to be explored to bring Geological axis in 1 or 2	To explore lease area under G2 level of exploration	As on 01.04.2019, the lease area has been explored under G1/G2 level of exploration. Area under G1: 18 Ha and under G2: 381.838 Ha	As on 01.04.2019, the lease area has been explored under G1/G2 level of exploration. Area under G1: 18 Ha and under G2: 381.838 Ha

1e	Balance reserve as on 01/04/20	As per the modification of Review of Mining Plan approved dated 06.09.2018, Reserve and Resource as on 01.07.2018 are as follows; Reserve under 111 category: 221360.82 tonnes, 122 category: 477428.76 tonnes. Total Reserve: 698789.58 tonnes. Resources under 211 category: 26192.40 tonnes, 222 category: 61762.38 tonnes. Total Resource: 87954.78 tonnes.	ROM production during 2018-19 was 39523.954 tonnes. Reserve and resource as 01.04.2019 are as follows. Reserve under 111 category: 194939 tonnes, 122 category: 477429 tonnes. Total Reserve: 672368 tonnes, Resources under 211 category: 26192 tonnes, under 222 category: 61762 tonnes. Total Resources: 87954 tonnes.	Data as furnished in annual return for 2018-19. ROM production during 2018-19 was 39523.954 tonnes. Reserve and resource as 01.04.2019 are as follows. Reserve under 111 category: 194939 tonnes, 122 category: 477429 tonnes. Total Reserve: 672368 tonnes, Resources under 211 category: 26192 tonnes, under 222 category: 61762 tonnes. Total Resources: 87954 tonnes.
1f	General remarks of inspecting officers on geology, exploration etc	In 2018-19, 17 nos of boreholes have been proposed to be drilled. To explore lease area under G2 level of exploration.	In 2018-19, 57 nos of boreholes have been drilled. As on 01.04.2019, the lease area has been explored under G1/G2 level of exploration. Area under G1: 18 Ha and under G2: 381.838 Ha	In 2018-19, 57 nos of boreholes have been drilled. As on 01.04.2019, the lease area has been explored under G1/G2 level of exploration. Area under G1: 18 Ha and under G2: 381.838 Ha

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	In 2018-19, development proposed in two quarries namely Nandagira Quarry- 1N and Quarry-1	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance.	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	In 2018-19, there is top soil generation. Some benches are mixed with ore and waste.	In 2018-19, there is top soil generation. Some benches are mixed with ore and waste.	No separate benches in top soil. Some benches are mixed with ore and waste.
2c	Stripping ratio or ore to OB ratio	In 2018-19, as per the modified review of mining plan approved dated 06.09.2018, development proposed in two quarries namely Nandagira Quarry- 1N and Quarry-1. Stripping ratio for Nandagira Quarry- 1N was 1: 7.51 MT/MT and for Quarry-1 was 1: 26.25 MT/MT. Overall stripping ratio for 2018-19 was 1: 10.15 MT/MT	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1was not operated due to want of forest clearance. Stripping ratio achieved in Nandagira Quarry- 1N was 1: 7.15 MT/MT. The overall stripping ratio for the year was 1: 7.15 MT/MT.	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1was not operated due to want of forest clearance. Stripping ratio achieved in Nandagira Quarry- 1N was 1: 7.15 MT/MT. The overall stripping ratio for the year was 1: 7.15 MT/MT.
2d	Quantity of topsoil generation in m3	In 2018-19, there was no proposal of top soil generation.	There was no generation of top soil. However, top soil encountered incidentally have been utilized for plantation over waste dumps	There was no generation of top soil. However, top soil encountered incidentally have been utilized for plantation over waste dumps

2e	Quantity of overburden generation in m ³	In 2018-19, development proposed in two quarries namely Nandagira Quarry- 1N and Quarry-1. In the modified RMP approved dated 06.09.2018, the proposal for waste generation during 2018-19 from Nandagira Quarry-1N was 78820.90 cum and from Quarry-1 was 45364.40 cum. In the modified RMP, in the review part it has been mentioned in para 3.3.3, that the overburden generated from 01.04.2018 to 30.06.2018 was 93083.98 tonnes or 42310.9 cum	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance. The total OB generation during the year 2018-19 was 128416.4 cum.	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance. The total OB generation during the year 2018-19 was 128416.4 cum.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	In 2018-19, development proposed in two quarries namely Nandagira Quarry- 1N and Quarry-1.	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance. The total OB generation during the year 2018-19 was 128416.4 cum.	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance. The total OB generation during the year 2018-19 was 128416.4 cum.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	In 2018-19, development proposed in two quarries namely Nandagira Quarry- 1N and Quarry-1	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance.	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance.
3b	Quantity of ROM mineral production proposed	In the modification of review of mining plan approved dated 06.09.2018, (for the proposal period 2018-19 to 2019-20), the proposed ROM production for 2018-19 was 26897.5 tonnes based on survey dated 30.06.2018 as shown in development plan and sections. The achieved ROM production till 30.06.2018 as mentioned in the para 3.3.3 of the modified review of mining plan approved dated 06.09.2018 was 13102.469 tonnes.	ROM Production during the year 2018-19 was 39523.954 tonnes.	EC has been obtained for production of 0.040 MTPA of Manganese Ore.

3c	Recovery of sailable/usable mineral from ROM production	In the modification of review of mining plan approved dated 06.09.2018 (for the proposal period 2018-19 to 2019-20), the recovery of saleable mineral for the year 2018-19 proposed was 23949.9 tonnes based on survey dated 30.06.2018. The achieved ROM production till 30.06.2018 as mentioned in the para 3.3.3 of the modified RMP dated 06.09.2018 was 13102.469 tonnes.	Recovery of saleable mineral during the year 2018-19 was 39523.954 tonnes.	Recovery of saleable mineral during the year 2018-19 was 39523.954 tonnes.
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3d	Quantity of mineral reject generation	In modification of review of mining plan approved dated 06.09.2018 (for the proposal period 2018-19 to 2019-20), the quantity of mineral reject generation for 2018-19 proposed was 2947.6 tonnes based on survey dated 30.06.2018. The achieved ROM production till 30.06.2018 as mentioned in the para 3.3.3 of the modified RMP dated 06.09.2018 was 13102.469 tonnes.	Quantity of mineral reject generated during the year 2018-19 was 1276 MT. The mineral reject generated have been blended with high grade ROM.	Quantity of mineral reject generated during the year 2018-19 was 1276 MT. The mineral reject generated have been blended with high grade ROM.
3e	Grade of mineral rejects generation and threshold value declared.	>10% Mn & <20%Mn	Avg grade of mineral reject generated Mn%-18.44. The mineral reject generated have been blended with high grade ROM.	Avg grade of mineral reject generated Mn%-18.44. The mineral reject generated have been blended with high grade ROM.

3f	Quantity of sub grade mineral generation.	In modification of review of mining plan approved dated 06.09.2018 (for the proposal period 2018-19 to 2019-20), the quantity of subgrade generation for 2018-19 proposed was 2947.6 tonnes based on survey dated 30.06.2018. The achieved ROM production till 30.06.2018 as mentioned in the para 3.3.3 of the modified RMP dated 06.09.2018 was 13102.469 tonnes.	Quantity of subgrade generated during the year 2018-19 was 1276 MT. The subgrade generated have been blended with high grade ROM.	Quantity of subgrade generated during the year 2018-19 was 1276 MT. The subgrade generated have been blended with high grade ROM.
3g	Grade of sub grade mineral generation	>10% Mn & <20%Mn	Avg grade-Mn%-18.44 , The subgrade generated have been blended with high grade ROM.	Avg grade-Mn%-18.44 , The subgrade generated have been blended with high grade ROM.
3h	Manual / Mechanised method adopted for segregating from ROM	Manual breaking, sorting, sizing, screening and blending	Manual breaking, sorting, sizing, screening and blending	Manual breaking, sorting, sizing, screening and blending
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not Proposed	Nil	Nil

3j	Provision of drilling and blasting in mineral benches	Drilling will be done for blast hole by 85mm dia in manganese ore zone fed by compressed air. These holes will be drilled in staggered pattern with burden and spacing of 2.0m and 2.5m respectively. The explosive column will be blasted under 'V' type blasting pattern initiated by detonator & NONEL and safety fuse.	Drilling and blasting carried out as per proposal.	Drilling and blasting carried out as per proposal.
3k	Provision of mining machineries in mineral benches	Excavation is practised through shovel and dumper combination at benches.	Excavation is practised through shovel and dumper combination at benches. Backhoe (2.5 cum capacity): 1 no; Backhoe (0.9 cum capacity): 2 no; Dumper (30 tonne capacity): 5 nos, front end loader (1.7 cum capacity): 1no etc.	Excavation is practised through shovel and dumper combination at benches. Backhoe (2.5 cum capacity): 1 no; Backhoe (0.9 cum capacity): 2 no; Dumper (30 tonne capacity): 5 nos, front end loader (1.7 cum capacity): 1no etc.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height proposed is 6m	Bench height is suitable for method of mining proposed in modified review of mining plan.	Bench height is suitable for method of mining proposed in modified review of mining plan.

3m	Total area covered under excavation/pits	As per the modification of review of mining plan dated 06.09.2018, the area under excavation at the end of plan period is 27.207 Ha.	Area under excavation at teh end of 2018-19 is 27.207 ha as furnished in annual return for fy 2018-19.	Area under excavation at teh end of 2018-19 is 27.207 ha as furnished in annual return for fy 2018-19.
3n	Ore to OB ratio for the pit/mine during the year.	In 2018-19, as per the modified review of mining plan approved dated 06.09.2018, development proposed in two quarries namely Nandagira Quarry- 1N and Quarry-1. Stripping ratio for Nandagira Quarry- 1N was 1: 7.51 MT/MT and for Quarry-1 was 1: 26.25 MT/MT. Overall stripping ratio for 2018-19 was 1: 10.15 MT/MT	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance. Stripping ratio achieved in Nandagira Quarry- 1N was 1: 7.15 MT/MT. The overall stripping ratio for the year was 1: 7.15 MT/MT.	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance. Stripping ratio achieved in Nandagira Quarry- 1N was 1: 7.15 MT/MT. The overall stripping ratio for the year was 1: 7.15 MT/MT.

3o	Total area put in use under different heads at the end of year	Total area put in use under different heads at the end of plan period is 124.469 Ha.	Lease area (surface area) utilisation as at the end of year (in ha) as furnished in annual return for 2018-19. (1). Area covered under current (O/C) workings: 27.207 Ha, (2). Used for waste disposal: 19.894 Ha, (3). Occupied by plant, buildings, residential, welfare buildings & roads: 3.984 Ha, (4). Other purposes (used for road, nala, stack, processing yard etc.): 55.627 Ha, (5) work done under progressive closure plan during the year : 0.042 Ha	Lease area (surface area) utilisation as at the end of year (in ha) as furnished in annual return for 2018-19. (1). Area covered under current (O/C) workings: 27.207 Ha, (2). Used for waste disposal: 19.894 Ha, (3). Occupied by plant, buildings, residential, welfare buildings & roads: 3.984 Ha, (4). Other purposes (used for road, nala, stack, processing yard etc.): 55.627 Ha, (5) work done under progressive closure plan during the year : 0.042 Ha
3p	Production of ROM mineral during the last five year period as applicable	FY 2017-18:44939 MT FY 2016-17: 44921MT FY 2015-16: 40464MT FY 2014-15: 75036MT	FY 2017-18:39524.00MT FY 2016-17: 39455.591MT FY 2015-16: Nil FY 2014-15: 1947.262MT	FY 2017-18:39524.00MT FY 2016-17: 39455.591MT FY 2015-16: Nil FY 2014-15: 1947.262MT

3q	General remarks of inspecting officers on method of mining etc.	In 2018-19, as per the modified review of mining plan approved dated 06.09.2018, development proposed in two quarries namely Nandagira Quarry- 1N and Quarry-1. Stripping ratio for Nandagira Quarry- 1N was 1: 7.51 MT/MT and for Quarry-1 was 1: 26.25 MT/MT. Overall stripping ratio for 2018-19 was 1: 10.15 MT/MT	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance. Stripping ratio achieved in Nandagira Quarry- 1N was 1: 7.15 MT/MT. The overall stripping ratio for the year was 1: 7.15 MT/MT.	In 2018-19, development carried out in Nandagira Quarry- 1N. Quarry-1 was not operated due to want of forest clearance. Stripping ratio achieved in Nandagira Quarry- 1N was 1: 7.15 MT/MT. The overall stripping ratio for the year was 1: 7.15 MT/MT.
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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	<p>Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)</p>	<p>There is no proposal for generation of top soil. Waste dumping will be done over existing dump-4 and backfilling will be carried out within the exhausted part of quarry-3. Also, 30% of waste generated will be utilized for road maintenance. The proposed mineral rejects will be stored temporarily near camp site over the granted surface right area.</p>	<p>There was no generation of top soil . Quarry-1 was not operated due to want of forest clearance. Waste generated from Nandagira Quarry-1N have been dumped in dump-4. Mineral rejects generated during the course of ROM excavation, has been blended with high grade ROM.</p>	<p>There was no generation of top soil . Waste generated have been dumped in dump-4. Mineral rejects generated during the course of ROM excavation, has been blended with high grade ROM.</p>
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4b	Location of topsoil, OB and mineral reject dumps	There is no proposal for generation of top soil. Waste dumping will be done over existing dump-4 and backfilling will be carried out within the exhausted part of quarry-3. The proposed mineral rejects will be stored temporarily near camp site over the granted surface right area.	No top soil have been generated. However, top soil encountered incidentally have been utilized for plantation over waste dumps. Quarry-1 was not operated due to want of forest clearance. Waste generated from mining operation of Nandagira Quarry-1N have been dumped in dump-4. Mineral rejects generated during the course of ROM excavation has been blended with high grade ROM.	No top soil have been generated. However, top soil encountered incidentally have been utilized for plantation over waste dumps. Quarry-1 was not operated due to want of forest clearance. Waste generated from mining operation of Nandagira Quarry-1N have been dumped in dump-4. Mineral rejects generated during the course of ROM excavation has been blended with high grade ROM.
4c	Number of dumps within lease area and outside of lease area	There are 6 nos of dumps within the lease area.	There are 6 nos of dumps within the lease area.	There are 6 nos of dumps within the lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps are proposed to be outside the UPL.	Dumps developed are outside the UPL.	Dumps developed are outside the UPL.
4e	Number of active and alive dumps.	One Active Dump, namely Dump-4	One Active Dump, namely Dump-4	One Active Dump, namely Dump-4
4f	Number of dead dumps.	Five numbers of dead dump	Five numbers of dead dump	Five numbers of dead dump
4g	Number of dumps established.	Five numbers of dead dump	Five numbers of dead dump	Five numbers of dead dump
4h	Whether Retaining wall or garland drain all along dumps are there.	In 2018-19, as per approved FMCP around 500m length of retaining wall proposed in Ore Stack	In 2018-19, around 610m length of retaining wall constructed in Ore Stack and 655m of retaining wall around dump-4.	In 2018-19, around 610m length of retaining wall constructed in Ore Stack and 655m of retaining wall around dump-4.

4i	Length of Retaining wall or garland drain all along dumps	In 2018-19, as per approved FMCP around 500m length of retaining wall proposed in Ore Stack	In 2018-19, around 610m length of retaining wall constructed in Ore Stack and 655m of retaining wall around dump-4.	In 2018-19, around 610m length of retaining wall constructed in Ore Stack and 655m of retaining wall around dump-4.
4j	Number of settling ponds	In 2018-19, two nos of settling ponds have been proposed to be constructed as per FMCP approved dated 04.12.2018.	One number of settling pond constructed in 2018-19 and another one number of settling tank constructed during the year 2019-20.	One number of settling pond constructed in 2018-19 and another one number of settling tank constructed during the year 2019-20.

4k	Specific comments of inspecting officer on waste dump management	There is no top soil in the mineable area. However, top soil encountered incidentally will be scraped off, transported and spread over the dead portion of the waste dump for concurrent rehabilitation . Waste dumping will be done over existing dump-4 and backfilling will be carried out within the exhausted part of quarry-3. Also, 30% of waste generated will be utilized for road maintenance. In 2018-19, as per approved FMCP around 500m length of retaining wall proposed in Ore Stack	No top soil have been generated. However, top soil encountered incidentally have been utilized for plantation over waste dumps. Quarry-1 was not operated due to want of forest clearance. Waste generated from mining operation of Nandagira Quarry-1N have been dumped in dump-4. There is one active dump-namely dump-4. In 2018-19, around 610m length of retaining wall constructed in Ore Stack and 655m of retaining wall around dump-4.	No top soil have been generated. However, top soil encountered incidentally have been utilized for plantation over waste dumps. Quarry-1 was not operated due to want of forest clearance. Waste generated from mining operation of Nandagira Quarry-1N have been dump waste generated have been dumped in dump-4. There is one active dump-namely dump-4. In 2018-19, around 610m length of retaining wall constructed in Ore Stack and 655m of retaining wall around dump-4.
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Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Backfilling will be carried out within the exhausted part of quarry-3.	Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.	Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.
5b	Area under backfilling of mined out area	In FY 2018-19, 0.44 Ha area have been proposed for backfilling within the exhausted part of quarry-3	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	There is no top soil in the mineable area. However, top soil encountered incidentally during the course of mining will be scraped off, transported and spread over the dead portion of the waste dump for concurrent rehabilitation	Top soils encountered incidentally have been utilized for plantation over waste dumps.	Top soils encountered incidentally have been utilized for plantation over waste dumps.
5d	Total area fully reclaimed and rehabilitated	In FY 2018-19, 0.44 Ha area have been proposed for backfilling within the exhausted part of quarry-	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.

5e	General remarks of inspecting officers on backfilling and reclamation etc.	In FY 2018-19- 0.44 Ha area have been proposed for backfilling within the exhausted part of quarry-3	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.
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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 report on PMCP to be submitted as per Rule 26 (2) of MCDR, 2017	Annual report on PMCP for the year 2018-19 have been submitted timely.	Annual report on PMCP for the year 2018-19 have been submitted timely.
6b	Area available for rehabilitation (ha) .	In FY 2018-19, 0.44 Ha area have been proposed for backfilling within the exhausted part of quarry-3	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was thus less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was thus less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.

6c	afforestation done (ha).	FY 2018-19: (a) For Dump Management: 3.4 Ha and (b) for rehabilitation of waste land within lease area: 0.5 Ha. Total area: 3.9 Ha	FY 2018-19: (a) For Dump Management: 3.58 Ha and (b) for rehabilitation of waste land within lease area: 0.5 Ha. Total area: 4.08 Ha	FY 2018-19: (a) For Dump Management: 3.58 Ha and (b) for rehabilitation of waste land within lease area: 0.5 Ha. Total area: 4.08 Ha
6d	No. of saplings planted during the year	As per approved FMCP, during the year 2018-19 around 1480 nos of saplings have been proposed for plantation.	During the year 2018-19, 5433 nos of saplings have been planted.	During the year 2018-19, 5433 nos of saplings have been planted.
6e	Cumulative no .of plants	Not Specified	Cummulative plantation till Fy 2018-19 was 196599 nos.	Cummulative plantation till Fy 2018-19 was 196599 nos.
6f	Any other method of rehabilitation	Not Proposed	Nil	Nil
6g	Cost incurred on watch and care during the year	Rs 750000/-	Rs 875200/-	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	0.92 Ha	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was thus less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was thus less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	In FY 2018-19, 0.44 Ha area have been proposed for backfilling within the exhausted part of quarry-3	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was thus less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was thus less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	As per approved FMCP, during the year the number of saplings proposed for plantation for reclamation and rehabilitation of mined out area is Nil	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Not Proposed	Nil	Nil

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	As per approved FMCP, during the year 2018-19, around 800 nos of saplings have been proposed for plantation.	During the year 2018-19, around 820 numbers of saplings have been planted	During the year 2018-19, around 820 numbers of saplings have been planted
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.5 Ha	0.5 Ha	Virgin area plantation (safety zone)
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	As per approved FMCP, during the year 2018-19, around 800 nos of saplings have been proposed for plantation over 0.5 Ha area of safety zone.	During the year 2018-19, around 820 nos of saplings have been planted over 0.5 Ha area in safety zone.	During the year 2018-19, around 820 nos of saplings have been planted over 0.5 Ha area in safety zone.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Air, Noise, Surface water and ground water analysis are proposed to be done	Air, Noise analysis has been done daily and Surface water and ground water analysis has been done monthly.	Air, Noise analysis has been done daily and Surface water and ground water analysis has been done monthly.

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	In FY 2018-19, Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was thus less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The Afforestation proposal of backfilling proposed in FY 2018-19: (a) For Dump Management: 3.4 Ha and (b) for rehabilitation of waste land within lease area: 0.5 Ha. Total area: 3.9 Ha. Further, 0.5 Ha area of waste land was proposed for rehabilitation .	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was thus less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance. Afforestation in FY 2018-19: (a) For Dump Management: 3.58 Ha and (b) for rehabilitation of waste land within lease area: 0.5 Ha. Total area: 4.08 Ha.
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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 within the lease area	Grade wise sorting within the lease area	Grade wise sorting within the lease area
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual	Manual
7c	Different grade of mineral sorted out at mines.	Grade wise sorting within the lease area	25% to below 35% Mn as furnished in annual return	25% to below 35% Mn as furnished in annual return

7d	Any beneficiation process at mines .	Not Proposed	Nil	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Grade wise sorting within the lease area	Grade wise sorting within the lease area	Grade wise sorting within the lease area

Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	There is no top soil in the mineable area. However, top soil encountered incidentally during the course of mining will be scraped off, transported and spread over the dead portion of the waste dump for concurrent rehabilitation .	There is no generation of top soil. However, top soil encountered incidentally have been utilized for plantation over waste dumps	There is no generation of top soil. However, top soil encountered incidentally have been utilized for plantation over waste dumps

8b	Concurrent use or storage of topsoil	There is no top soil in the mineable area. However, top soil encountered incidentally during the course of mining will be scraped off, transported and spread over the dead portion of the waste dump for concurrent rehabilitation	There is no generation of top soil. However, top soil encountered incidentally have been utilized for plantation over waste dumps	There is no generation of top soil. However, top soil encountered incidentally have been utilized for plantation over waste dumps
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Waste dumping will be done over existing dump-4 and backfilling will be carried out within the exhausted part of quarry-3. Also, 30% of waste generated will be utilized for road maintenance. The proposed mineral rejects will be stored temporarily near camp site over the granted surface right area.	Mineral rejects generated during the course of ROM excavation, has been blended with high grade ROM. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.	Mineral rejects generated during the course of ROM excavation, has been blended with high grade ROM. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	In FY 2018-19, Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	In FY 2018-19, Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.	Nil. Quarry-3 was not operated due to want of forest clearance. Waste generation was less and total quantity of waste generated from Quarry-1N have been dumped at dump-4. The proposal of backfilling was within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance.

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Plantation proposal during 2018-19: (a). Dump-1: No of Saplings : 300 nos, Area: 1.5 Ha (b). Dump-2: No of Saplings: 100 nos, Area : 0.5 Ha ©.Dump-4: No of Saplings planted: 280 nos, Area: 1.40Ha, (d). Safety Zone: No of Saplings planted: 800 nos, Area: 0.5 Ha. Total number of saplings : 1480 nos.	Plantation done in 2018-19: (a). Dump-1: No of Saplings planted: 540 nos, (Gap filling), Area: 1.5 Ha (b). Dump-2: No of Saplings planted: 130 nos, Area:0.5 Ha ©.Dump-4: No of Saplings planted: 3943 nos, Area: 1.58Ha, (d). Safety Zone: No of Saplings planted: 820 nos, Area: 0.5 Ha. Total number of saplings planted : 5433 nos.	Plantation done in 2018-19: (a). Dump-1: No of Saplings planted: 540 nos, (Gap filling), Area: 1.5 Ha (b). Dump-2: No of Saplings planted: 130 nos, Area:0.5 Ha ©.Dump-4: No of Saplings planted: 3943 nos, Area: 1.58Ha, (d). Safety Zone: No of Saplings planted: 820 nos, Area: 0.5 Ha. Total number of saplings planted : 5433 nos.
8g	Survival rate	Not Specified	Survival rate : 69.36%	Data as furnished in annual return of 2018-19.
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed to be done by Mobile water tanker.	Water sprinkling is being carried out by mobile water tanker.	Water sprinkling is being carried out by mobile water tanker.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Aesthetic beauty in and around mines have been maintained.	Aesthetic beauty in and around mines have been maintained. Total 5433 number of saplings planted during the year 2018-19 within the lease area.	Aesthetic beauty in and around mines have been maintained. Total 5433 number of saplings planted during the year 2018-19 within the lease area.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	Monthly Returns and Annual return for 2018-19 have been submitted.	Monthly Returns and Annual return for 2018-19 have been submitted.	Monthly Returns and Annual return for 2018-19 have been submitted.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information on Mining Engineer, Geologist and Manager furnished in annual return.	Mining Engineer, Manager and Geologist appointed in mines.	Mining Engineer, Manager and Geologist appointed in mines.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Lease area (surface area) utilisation as at the end of year (in ha) as furnished in annual return for 2018-19. (1). Area covered under current (O/C) workings: 27.207 Ha, (2). Used for waste disposal: 19.894 Ha, (3). Occupied by plant, buildings, residential, welfare buildings & roads: 3.984 Ha, (4). Other purposes (used for road, nala, stack, processing yard etc.): 55.627 Ha etc.	Lease area (surface area) utilisation as at the end of year (in ha) as furnished in annual return for 2018-19. (1). Area covered under current (O/C) workings: 27.207 Ha, (2). Used for waste disposal: 19.894 Ha, (3). Occupied by plant, buildings, residential, welfare buildings & roads: 3.984 Ha, (4). Other purposes (used for road, nala, stack, processing yard etc.): 55.627 Ha etc.	Lease area (surface area) utilisation as at the end of year (in ha) as furnished in annual return for 2018-19. (1). Area covered under current (O/C) workings: 27.207 Ha, (2). Used for waste disposal: 19.894 Ha, (3). Occupied by plant, buildings, residential, welfare buildings & roads: 3.984 Ha, (4). Other purposes (used for road, nala, stack, processing yard etc.): 55.627 Ha etc.
9d	Scrutiny of Annual return on afforestation	In 2018-19, number of saplings planted during the year was 5433 nos.	In 2018-19, number of saplings planted during the year was 5433 nos.	In 2018-19, number of saplings planted during the year was 5433 nos.

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral reject generation is Nil	Mineral reject generation is Nil	Mineral reject generation is Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing stock at mine head (in tonne): Grades (% of Mn Content): (2). Below 25% Mn: 85.037 tonnes, (b) 25% to below 35% Mn: 7693.088 tonnes, (c) 35% to below 46% Mn: 3445.537 tonnes, (d) 46% Mn and above: 106.577 tonnes.	Closing stock at mine head (in tonne): Grades (% of Mn Content): (2). Below 25% Mn: 85.037 tonnes, (b) 25% to below 35% Mn: 7693.088 tonnes, (c) 35% to below 46% Mn: 3445.537 tonnes, (d) 46% Mn and above: 106.577 tonnes.	Data as furnished in annual return for 2018-19.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex-mine price (in Rs per tonne) of processed ore: (25% to below 35% Mn: Rs 8310 per tonne	Ex-mine price (in Rs per tonne) of processed ore: (25% to below 35% Mn: Rs 8310 per tonne	Data as furnished in annual return for 2018-19
9h	Scrutiny of Annual return on fixed assets	Value of fixed assests Rs 16431670	Value of fixed assests Rs 16431670	Data as furnished in annual return for 2018-19
9k	Scrutiny of Annual return on mining machineries	Backhoe (2.5 cum capacity): 1 no; Backhoe (0.9 cum capacity): 2 nos; Dumper (30 tonne capacity): 5 nos, front loader (1.7 cum capacity): 1no etc.	Backhoe (2.5 cum capacity): 1 no; Backhoe (0.9 cum capacity): 2 no; Dumper (30 tonne capacity): 5 nos, front loader (1.7 cum capacity): 1no etc.	Backhoe (2.5 cum capacity): 1 no; Backhoe (0.9 cum capacity): 2 no; Dumper (30 tonne capacity): 5 nos, front end loader (1.7 cum capacity): 1no etc.

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
Rule 26(1)	18/02/2020		
Rule 45(5)	18/02/2020		

Date :

(SHRI SUDIP RANJAN MAZUMDAR)

Indian Bureau of Mines