INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/MN/SNG/MCDR-5/BBS-24.5.2K Mine code : 400RI13014 (i) Name of the Inspecting : SRM) SHRI SUDIP RANJAN MAZUMDAR Officer and ID No. (ii) Designation : Senior Mining Geologist (iii) Accompaning 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 : A Other than Fully Mech. (C) Category (d) Type of Working : Opencast Postal address (e) : ORISSA State : SUNDARGARH District Village : BHUTRA Taluka : BONAI Post office : BHUTRA Pin Code : : 033-22364602 FAX No. E-mail : contact@aryanmining.in Phone : 033-22364601, 033-22370935 (f) Police Station : Barsuan : 03/02/1945 (g) First opening date Weekly day of rest (h) : SUN Address for : MAHULSUKHA MN MINES, M/S AMTC(P) LTD 2 correspondance P.O.BHUTUDA, DIST:SUNDERGARH ODISHA-770041 (a) Lease Number : ORI0169 3. (b) Lease area : 399.84 (c) Period of lease : (d) Date of Expiry : 31/03/2020 Mineral worked 4. : MANGANESE ORE Main

04/12/2018

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 Enginee Name Qualification Appointment/ Termination da	r : : te	SHRI NILAMANI PATEL,Full Time DEGREE IN MINING ENGG 10/09/2019	
	Geologist Name Qualification Appointment/ Termination da	: : te	Sri Minaketan Naik,Full Time M.Sc. Geology 19/01/2009	
	Manager Name Qualification Appointment/ Termination da	: : :	SHRI NILAMANI PATEL DEGREE IN MINING ENGG 10/09/2019	
6.	Date of approval of Plan/Scheme of Minin	Mini g	ng : Renewal under rule 22 MCR1960 Modif.of approved Mining Plan Mining Scheme rule 12 MCDR1988 Mining Scheme rule 12 MCDR1988 MP modif under 17(3) MCR 2016	25/05/2004 15/02/2007 11/06/2010 26/06/2015 06/09/2018

FMCP under 23C(1)

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
la	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
lc	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

le	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.
lf	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
Dev	elopment :	exploration.		381.838 Ha

Sl.No. Item

Propasals Actual work

Remarks

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- 1N and 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 m3	In 2018-19, development proposed in two quarries namely Nandagira Quarry- 1N and 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- IN. 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

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	In the	Recovery of saleable	Recovery of
	sailable/usable	modification	mineral during the year	saleable mineral
	mineral from ROM	of review of	2018-19 was 39523.954	during the year
	production	mining plan	tonnes.	2018-19 was
		approved dated		39523.954 tonnes.
		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		
		20 06 2019		
		The achieved		
		POM production		
		+;11		
		30 06 2018 ag		
		mentioned in		
		the para 3 3 3		
		of the		
		modified RMP		
		dated		
		06.09.2018 was		
		13102.469		
		tonnes.		

ROM.

PAGE : 9

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

3£	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.
31	Whether height of benches in overburden and mineral suitable for method of mining proposed	Bench height proposed is 6m	Bench height is suitable for mtethod of mining proposed in modified review of mining plan.	Bench height is suitable for mtethod of mining proposed in modified review of mining plan.

in MP/SOM

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

30	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
3р	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 remar of inspecting officers on method of mir etc.	cks In 2018-19, as g per the modified hing review of mining plan approved dated 06.09.2018, development proposed in two quarries namely Nandagira Quarry- 1N and Quarry-1N and Quarry-1N was 1: 7.51 MT/MT and for Quarry-1 was 1: 26.25 MT/MT. Overall stripping ratio for	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- lN. Quarry-1 was not operated due to want of forest clearance. Stripping ratio achieved in Nandagira Quarry- lN was 1: 7.15 MT/MT. The overall stripping ratio for the year was 1: 7.15 MT/MT.
	stripping ratio for 2018-19 was 1: 10.15 MT/MT		

Solid Waste Management - Dumping:

Sl.No. Item Propasals Actual work Remarks

4a

of topsoil, OB and mineral

rejects (Rule 32,33)

Separate dumping There is no proposal for generation of was not operated due to top soil. Waste dumping clearance. Waste will be done over existing Quarry-1N have been dump-4 and backfilling will be carried out within the exhausted part blended with high grade of quarry-3. ROM. 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.

There was no generation of top soil . Quarry-1 want of forest generated from Nandagira dumped in dump-4. Mineral rejects generated during the course of ROM excavation, has been

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.

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 Quaryy-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 Quaryy-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 constrcuted during the year 2019-20.

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

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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clearance.

5a Status of part Backfilling Quarry-3 was not Quarry-3 was not or full will be operated due to want of operated due to extraction of carried out forest clearance. Waste want of forest mineral from within the generation was less and clearance. Waste generation was mined out area exhausted part total quantity of waste generated from Quarry-1N less and total before starting of quarry-3. backfilling. have been dumped at quantity of waste dump-4. The proposal of generated from backfilling was within Quarry-1N have the exhausted part of been dumped at quarry-3 and the same dump-4. The proposal of could not be materialized due to lack backfilling was of forest clearance. within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance. 5b Area under In FY 2018-19, Nil. Quarry-3 was not Nil. Quarry-3 was backfilling of 0.44 Ha area operated due to want of not operated due mined out area have been forest clearance. Waste to want of forest proposed for generation was less and clearance. Waste backfilling total quantity of waste generation was within the generated from Quarry-1N less and total exhausted part have been dumped at quantity of waste dump-4. The proposal of of quarry-3 generated from backfilling was within Quarry-1N have the exhausted part of been dumped at quarry-3 and the same dump-4. The could not be proposal of materialized due to lack backfilling was of forest clearance. within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest

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	In FY 2018-19-	Nil. Quarry-3 was not	Nil. Quarry-3 was
	of inspecting	0.44 Ha area	operated due to want of	not operated due
	officers on	have been	forest clearance. Waste	to want of forest
	backfilling and	proposed for	generation was less and	clearance. Waste
	reclamation etc.	backfilling	total quantity of waste	generation was
		within the	generated from Quarry-1N	less and total
		exhausted part	have been dumped at	quantity of waste
		of quarry-3	dump-4. The proposal of	generated from
			backfilling was within	Quarry-1N have
			the exhausted part of	been dumped at
			quarry-3 and the same	dump-4. The
			could not be	proposal of
			materialized due to lack	backfilling was
			of forest clearance.	within the
				exhausted part of
				quarry-3 and the
				same could not be
				materialized due
				to lack of forest
				clearance.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
ба	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.
6Ъ	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.
бе	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
бg	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 На	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.

бi Compliance on reclamation and rehabilitation by backfilling (ii) Voids

filled by waste / tailings

0.44 Ha area have been proposed for backfilling within the of quarry-3

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 exhausted part 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.

il

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on 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
61	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not Proposed	Nil	Nil

Compliance of бm During the year 2018-19, As per During the year approved FMCP, around 820 numbers of rehabilitation 2018-19, around of waste land during the saplings have been 820 numbers of within lease year 2018-19, planted saplings have been (i)afforestation around 800 nos planted of saplings have been proposed for plantation. 6n Compliance of 0.5 Ha 0.5 Ha Virgin area rehabilitation plantation (safety of waste land zone) within lease (ii)Area rehabilitation (ha) 60 Compliance of During the year 2018-19, As per During the year rehabilitation approved FMCP, around 820 nos of 2018-19, around of waste land saplings have been 820 nos of during the within lease year 2018-19, planted over 0.5 Ha area saplings have been (iii)Method of around 800 nos in safety zone. planted over 0.5 rehabilitation of saplings Ha area in safety have been zone. proposed for plantation over 0.5 Ha area of safety zone. бp Compliance of Air, Noise, Air, Noise analysis has Air, Noise environmental Surface water been done daily and analysis has been monitoring (core and ground Surface water and ground done daily and zone and buffer water analysis water analysis has been Surface water and zone) are proposed done monthly. ground water to be done analysis has been done monthly.

6q	General remarks	In FY 2018-19,	Nil. Quarry-3 was not	Nil. Quarry-3 was
	of inspecting	0.44 Ha area	operated due to want of	not operated due
	officers on PMCP	have been	forest clearance. Waste	to want of forest
	compliance and	proposed for	generation was thus less	clearance. Waste
	progressive	backfilling	and total quantity of	generation was
	closure	within the	waste generated from	thus less and
	operations etc.	exhausted part	Quarry-1N have been	total quantity of
		of quarry-3.	dumped at dump-4. The	waste generated
		Afforestation	proposal of backfilling	from Quarry-1N
		proposed in FY	was within the exhausted	have been dumped
		2018-19: (a)	part of quarry-3 and the	at dump-4. The
		For Dump	same could not be	proposal of
		Management:	materialized due to lack	backfilling was
		3.4 Ha and (b)	of forest	within the
		for	clearance.Afforestation	exhausted part of
		rehabilitation	in FY 2018-19: (a) For	quarry-3 and the
		of waste land	Dump Management: 3.58 Ha	same could not be
		within lease	and (b) for	materialized due
		area: 0.5 Ha.	rehabilitation of waste	to lack of forest
		Total area:	land within lease area:	clearance.Afforest
		3.9 Ha.	0.5 Ha. Total area: 4.08	ation in FY 2018-
		Further, 0.5	Ha.	19: (a) For Dump
		Ha area of		Management: 3.58
		waste land was		Ha and (b) for
		proposed for		rehabilitation of
		renabilitation		waste land within
		•		lease area: 0.5
				Ha. Total area:
				4.08 Ha.

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
		•		

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

area.

PAGE : 27

clearance.

In FY 2018-19, Nil. Quarry-3 was not b8 Use of Nil. Quarry-3 was overburden, 0.44 Ha area operated due to want of not operated due waste rock, have been forest clearance. Waste to want of forest rejects and proposed for generation was less and clearance. Waste fines dumps for backfilling total quantity of waste generation was restoring the within the generated from Quarry-1N less and total land to its exhausted part have been dumped at quantity of waste original use of quarry-3 dump-4. The proposal of generated from backfilling was within Quarry-1N have the exhausted part of been dumped at quarry-3 and the same dump-4. The proposal of could not be materialized due to lack backfilling was of forest clearance. within the exhausted part of quarry-3 and the same could not be materialized due to lack of forest clearance. 8e Phased In FY 2018-19, Nil. Quarry-3 was not Nil. Quarry-3 was 0.44 Ha area operated due to want of not operated due restoration, reclamation and have been forest clearance. Waste to want of forest rehabilitation proposed for generation was less and clearance. Waste of lands backfilling total quantity of waste generation was affected by within the generated from Quarry-1N less and total mining exhausted part have been dumped at quantity of waste dump-4. The proposal of operations of quarry-3 generated from (Pits, dumps backfilling was within Quarry-1N have etc) the exhausted part of been dumped at quarry-3 and the same dump-4. The could not be proposal of materialized due to lack backfilling was of forest clearance. within the exhausted part of quarry-3 and the same could not be materialized due

to lack of forest clearance.

8f	Baseline	Plantation	Plantation done in 2018-	Plantation done in
	information on	proposal	19:	2018-19:
	existence of	during 2018-	(a). Dump-1: No of	(a). Dump-1: No of
	plantation and	19:	Saplings planted: 540	Saplings planted:
	additional	(a). Dump-1:	nos. (Gap filling).	540 nos. (Gap
	plantation done	No of Saplings	Area: 1 5 Ha	filling) Area:
	$(\mathbf{P}_{11}) = (\mathbf{A}_{11})$	· 300 nog	(b) Dump-2: No of	1 5 Ha
	(Ruie Hi)	\cdot 500 HOS, Aroa: 1 E Ha	Saplingg planted: 120	(b) Dump 2: No of
		Alea. 1.5 ha	Sapings planced: 150	(b). Dump-2: NO OI
		(D). Dump-Z:	NOS, Alea.0.50 Ha	120 mag Amarice
		NO OL	©.Dump-4. NO OI Saplings	130 nos, Area.0.50
		Saplings: 100	planted: 3943 nos, Area:	Ha
		nos, Area :	1.58На,	©.Dump-4: No of
		0.5 Ha	(d). Safety Zone: No of	Saplings planted:
		©.Dump-4: No	Saplings planted: 820	3943 nos, Area:
		of Saplings	nos, Area: 0.5 Ha. Total	1.58Ha,
		planted: 280	number of saplings	(d). Safety Zone:
		nos, Area:	planted : 5433 nos.	No of Saplings
		1.40Ha,		planted: 820 nos,
		(d). Safety		Area: 0.5 Ha.
		Zone: No of		Total number of
		Saplings		saplings planted :
		planted: 800		5433 nos.
		nos, Area: 0.5		
		Ha. Total		
		number of		
		saplings :		
		1480 nos.		
8g	Survival rate	Not Specified	Survival rate : 69.36%	Data as furnished
				in annual return
				of 2018-19.
8h	Water sprinkling	Water	Water sprinkling is	Water sprinkling
	on roads to	sprinkling	being carried out by	is being carried
	control airborne	proposed to be	mobile water tanker.	out by mobile
	dust	done by Mobile		water tanker.
		water tanker.		
8i	General remarks	Aesthetic	Aesthetic beauty in and	Aesthetic beauty
	of inspecting	beauty in and	around mines have been	in and around
	officer on	around mines	maintained. Total 5433	mines have been
	aesthetic beauty in and around mines area	have been maintained.	number of saplings planted during the year	maintained. Total
				5433 number of
			2018-19 within the lease	saplings planted
			area.	during the year
				2018-19 within the
				lease area.
a		4 -		
Comp.	LIANCE OF RULE	45.		

Sl.No. Item Propasals Actual work Remarks

9a Status of Monthly Returns and Monthly Returns Monthly submission of Returns and Annual return for 2018and Annual return Monthly and Annual return 19 have been submitted. for 2018-19 have Annual returns for 2018-19 been submitted. have been submitted. 9b Scrutiny of Information on Mining Engineer, Manager Mining Engineer, Annual return Mining and Geologist appointed Manager and for information Engineer, in mines. Geologist on Mining Geologist and appointed in Engineer, Manager mines. furnished in Geologist and annual return. Manager 9c Scrutiny of Lease area Lease area (surface Lease area Annual return on (surface area) area) utilisation as at (surface area) land use pattern utilisation as the end of year (in ha) utilisation as at for area under at the end of as furnished in annual the end of year pits, reclaimed year (in ha) return for 2018-19. (1). (in ha) as area, dumps etc. as furnished Area covered under furnished in annual return for in annual current (O/C) workings: return for 27.207 Ha, (2). Used for 2018-19. (1). Area 2018-19. (1). waste disposal: 19.894 covered under Area covered Ha, (3). Occupied by current (O/C)under current plant, buildings, workings: 27.207 (O/C)residential, welfare Ha, (2). Used for workings: buildings & roads: 3.984 waste disposal: 27.207 Ha, Ha, (4). Other purposes 19.894 Ha, (3). (2). Used for (used for road, nala, Occupied by plant, waste stack, processing yard buildings, disposal: etc.): 55.627 Ha etc. residential, 19.894 Ha, welfare buildings (3). Occupied & roads: 3.984 Ha, (4). Other by plant, buildings, purposes (used for residential, road, nala, stack, welfare processing yard buildings & etc.): 55.627 Ha roads: 3.984 etc. Ha, (4). Other purposes (used for road, nala, stack, processing yard etc.): 55.627 Ha etc. 9d Scrutiny of In 2018-19, In 2018-19, number of In 2018-19, number Annual return on number of saplings planted during of saplings afforestation saplings the year was 5433 nos. planted during the planted during year was 5433 nos. the year was 5433 nos.

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

Details of violations observed during current inspection and compliance position of violation pointed out								
Violation observed			Show couse 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