## INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

## MCDR INSPECTION REPORT

## Bhubaneshwar regional office

	Mine	file No : ORI/IRON-MN/	SN(	G/MCDR-13/BBS Mine code : 300RI13036
	(i)	Name of the Inspecting Officer and ID No.	:	SRM ) SHRI SUDIP RANJAN MAZUMDAR
	(ii)	Designation	:	Senior Mining Geologist
	(iii)	Accompaning mine Official with Designation	:	Shri Satish Mohanty, Geologist
	(iv)	Date of Inspection	:	07/03/2020
	(v)	Prev.inspection date	:	09/02/2020
		PA	RT-	I : GENERAL INFORMATION
1.	(a)	Mine Name	:	NARAYANPOSHI
	(b)	Registration NO.	:	IBM/5865/2011
	(c) (d) (e)	Category Type of Working Postal address State District Village Taluka Post office Pin Code FAX No. E-mail Phone		A Other than Fully Mech. Opencast ORISSA SUNDARGARH NARAYANPOSHI BARBIL KOIRA 03322364602 contact@aryannmining.in 03322364601
	(f)	Police Station	:	KOIRA
	(g)	First opening date	:	03/02/1945
	(h)	Weekly day of rest	:	SAT
2.		ess for espondance	:	NARAYANPOSI IRON MINE OF A.M.TC. AT/PO-KOIRA DIST-SUNDERGARH
3.	(c)	Lease Number Lease area Period of lease Date of Expiry	:	ORI0124 349.25 31/03/2020
4.	Mineı	ral worked	:	MANGANESE ORE Associated IRON ORE Main

5.	Name	and Address of Lessee	the :	M/S A.M.T.C.(P) Ltd. 61,Strand Road KOLKATA WEST BENGAL Phone: FAX :	
		Owner	:	PRADEEP KUMAR SARAF M/S AMTC LTD KOLKATA, WEST BENGAL SUNDARGARH ORISSA Phone: 033 - 2395661 FAX :	
		Mining Enginee	r		
		Name	:	D.PATEL,Full Time	
		~	:	DEGREE IN MINING	
		Appointment/ Termination da	: te	16/08/2013	
		Geologist			
		Name	:	S. C. MOHANTY, Full Time	
		Qualification	:	MSC GEOLOGY	
		Appointment/ Termination da	: te	16/03/2009	
		Manager			
		Name	:	D.PATEL	
		Qualification	:	DEGREE IN MINING	
		Appointment/ Termination da	: te	10/10/2007	
6.		of approval of Scheme of Minin		Ing : Modif.approved Mining Scheme Renewal under rule 22 MCR1960 Modif.of approved Mining Plan Modif.of approved Mining Plan Mining Scheme rule 12 MCDR1988 Modif.approved Mining Scheme Mining Scheme rule 12 MCDR1988 Modif.approved Mining Scheme	06/01/2004 20/05/2004 23/09/2008 10/07/2009 29/04/2010 25/10/2011 27/03/2015 02/06/2016

FMCP under 23C(1)

02/06/2016 03/10/2018

# PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
la	Backlog of previous year	In 2018-19, there was no proposal for exploration.	4 nos. of boreholes have been drilled.	Entire lease area explored under G1/G2 level of exploration.
lb	Exploration over lease area for geological axis 1 or 2	No proposal for exploration in 2018-19.	Entire lease area has been explored under G1/G2 level of exploration. Area explored under G1- 99.387Ha and G2- 249.867Ha.	Entire lease area has been explored under G1/G2 level of exploration. Are under G1- 99.387Ha and G2- 249.867Ha.
lc	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal for exploration in 2018-19.	Exploration Agency: Gemco Kati Exploration Pvt. Ltd. Exploration Cost: Rs : 9.29 Lakhs	Exploration cost of 4 nos of boreholes drilled in 2018-19.
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal for exploration in 2018-19.	Entire lease area has been explored under G1/G2 level of exploration. Area explored under G1- 99.387Ha and G2- 249.867Ha.	Entire lease area has been explored under G1/G2 level of exploration. Area explored under G1-99.387Ha and G2-249.867Ha.

as on 01/04/20

Balance reserve Reserve and Reserve and resource as Data as furnished Resource as on 01.04.2019 are: in annual return per modified Iron ore : Reserve under submitted for schem of 111 category: 15216907 2018-19. and under 122 category: mining approved on 160797984 tonnes. 02.06.2016 is Resources under 211 as follows: category: 2158944 tonnes As on and 222 category: 01.04.2016 10681200 tonnes. Iron Ore Manganese Ore: Reserve Reserve under 122 category: under 111 524930 tonnes and Resources under 222 category: 24206253.91 category: 7880 tonnes tonnes and 122 category: 160797984 tonnes. Iron ore Resources under 211 category : 2158944 tonnes and under 222 category: 10681200 tonnes. Manganese Ore Reserve under 122 category was 534818 tonnes and manganese resources under 222 category was 7880 tonnes. General remarks No proposal Entire lease area has Entire lease area of inspecting been explored under has been explored for officers on exploration G1/G2 level of under G1/G2 level in 2018-19. exploration. Area of exploration. geology, exploration etc explored under G1-Area explored 99.387Ha and G2under G1-99.387Ha 249.867Ha. and G2-249.867Ha. Development :

Sl.No. Item

1f

Location of Q-3: N-2425975 -2426443, Q-3: N-2425975 -Q-3: Ndevelopment 2425986 -E-318400-318804; 2426443, E-318400w.r.t.lease area 2426463, E-Q-4: N 2425643-2426040, 318804; 318400-318806; E-318028-318450; Q-4: N 2425643-0-4: Q-RF: N-2425013-2425298, 2426040, E-N2425643-E-317875-318265; 318028-318450; 2426068, E-Q-5Mn: N2424555 -Q-RF: N-2425013-318028-318453; 2424822, E- 317202-2425298, E-317875-Q-RF: N-317430; 318265; 2424865-Q-5Mn: N2424555 -2425362, E-2424822, E-317837-318267; 317202-317430; Q-5 Mn: N2424544 -2424828, E-317202-317433; 2b Separate benches Separate Separate benches in OB There is no top in topsoil, benches in OB and Ore have been soil benches. overburden and and Ore. There maintained. Some of the minerals (Rule is no proposal top benches are mixed 15) for separate with ore and waste. benches in top soil. Stripping ratio In 2018-19, the In 2018-19, the 2c In 2018-19, or ore to OB the Stripping Stripping ratio for iron Stripping ratio ratio ratio for iron ore achieved was 1: for iron ore ore praposed 0.192 t/t and for achieved was 1: was 1: 0.175 manganese ore: 1: 15.288 0.192 t/t and for t/t and for manganese ore: 1: t/t 15.288 t/t manganese ore: 1: 6.997 t/t 2d Quantity of Not Proposed Nil. There is no There is no topsoil generation of top soil generation of top generation in m3 in 2018-19. soil in 2018-19. 2e Quantity of In 2018-19, During the year 2018-19, During the year overburden there was the actutal gneration of 2018-19, the generation in m3 proposal to waste from Iron Ore Zone actutal gneration was 288062 cum and from of waste from Iron generate 526124 cum of manganese ore zone Ore Zone was (OB/SB/IB) 13797.27cum. 288062 cum and from iron ore from manganese ore zone and zone 13797.27cum. 114535 cum of (OB/SB/IB) from manganese ore zone.

2.a

2f	General remarks	The	Development is carried	Development is
	of inspecting	development is	out within the proposal	carried out within
	officers on	proposed in 04	as the production of	the proposal as
	development of	quarry i.e Q-	iron ore was within the	the production of
	pit w.r.t. type	3,Q-4, Q-RF,Q-	EC limit of 3.0 MTPA as	iron ore was
	of deposit etc	5 Mn	against approved	within the EC
			proposal of 6 MTPA.	limit of 3.0 MTPA
				as
				against approved
				proposal of 6
				MTPA.

# Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	number of Quarries have been proposed	In 2018-19, 04 number of Quarries have been put for production namely Q- 3, Q-4, Q-RF for iron ore and Q-5(Mn) for manganese ore production.	In 2018-19, 04 number of Quarries have been put for production namely Q-3, Q-4, Q-RF for iron ore and Q- 5(Mn) for manganese ore production.
3b	Quantity of ROM mineral production proposed	In 2018-19, production proposed for Iron Ore was 6000150MT and Mn Ore 36012.02MT	In 2018-19, actual production of Iron Ore was 2996966.95MT and Mn Ore was 1985.459 MT	Iron Ore production restricted within 3.0MTPA of approved EC limit.
3c	Recovery of sailable/usable mineral from ROM production	Iron ore- 4534998 MT, Manganese Ore- 32410.818 MT	Iron Ore- 2542429.08 MT, Manganese Ore- 1985.459 MT	Iron Ore production restricted within 3.0MTPA of approved EC limit.
3d	Quantity of mineral reject generation	Iron ore- 1465152 MT, Manganese Ore- 3601.202 MT	Iron ore- 454537.870 MT, Manganese Ore- Nil	Mineral reject generation is low due to less ROM production than proposed.

Grade of mineral Grade of 30 Grade of Mineral Reject Grade of Mineral rejects Mineral Reject generated from Iron Ore Reject generated generation and for Iron Ore :+45-58% Fe, from Iron Ore threshold value :+45-58% Fe, :+45-58% Fe, Thresold value declared. declared for iron ore 45% Fe 3f Quantity of sub Iron ore-Iron ore- 454537.870 MT, Subgrade grade mineral 1465152 MT, generation was low Manganese Ore- Nil generation. Manganese Oredue to less ROM 3601.202 MT production than proposed. 3q Grade of sub Grade of Grade of subgrade Grade of subgrade grade mineral subgrade mineral generated from mineral generated mineral from Iron Ore :+45-58% Fe from Iron Ore generation :+45-58% Fe Iron Ore :+45-58% Fe Mechanized method 3h Manual / Mechanized Mechanized method for Mechanised method for iron ore and manual for for iron ore and method adopted iron ore and manganese ore manual for for segregating manual for manganese ore from ROM manganese ore 3i Any analysis or It has been Beneficiation plant Beneficiation beneficiation could not be established plant could not be proposed to study proposed establish a due to want of EC during established due to and carried out beneficiation 2018-19. However the want of EC during for sub grade plant of 2.0 lessee has established 2018-19. However mineral and MTPA capacity the plant after receipt the lessee has established the rejects. during the of Environment clearance financial year and Consent to establish plant after 2017-18 within from SPCB, Odisha during receipt of the lease area 2019-20. But the Environment to upgrade the beneficiation plant is clearance and iron ore and not operated due to want Consent to make it of Consent to Operate establish from saleable. from SPCB. SPCB, Odisha during 2019-20. But the

> beneficiation plant is not operated due to want of Consent to Operate from SPCB.

Drilling and

blasting have been

3]	Provision of
	drilling and
	blasting in
	mineral benches

3k

31

loosened with DTH drilling of 115 carried out with through mm diameter as per DTH drilling of 115 mm diameter as drilling & proposal. blasting & per proposal. will be fragmented by rock breakers. Drilling will be done for blast hole by 115mm dia DTH in iron ore zone fed by compressed air. High explosives will be loaded by bottom charging or deck charging. The stemming length is proposed to be one third of the hole depth. The explosive column will be blasted under 'V' type blasting pattern initiated by detonator & NONEL and safety fuse. Provision of Excavator, loader Excavation is Excavation is practised through shovel and and dumper are mining proposed machineries in through shovel dumper combination. deployed for mineral benches and dumper winning of ore. combination. Bench Height- Yes, height of benches Whether height Yes, height of of benches in 9m in iron ore is suitable for method benches is overburden and and 6m in of mining proposed in suitable for mineral suitable manganese ore scheme of mining. method of mining for method of proposed in scheme zone. mining proposed of mining. in MP/SOM

Hard iron ore Drilling and blasting

have been carried out

will be

3m	Total area covered under excavation/pits		About 55.058 Ha area has been covered under excavation/pits.	About 55.058 Ha area has been covered under excavation/pits.
3n	Ore to OB ratio for the pit/mine during the year.		<pre>In 2018-19, the Stripping ratio for iron ore achieved was 1: 0.192 t/t and for manganese ore: 1: 15.288 t/t</pre>	In 2018-19, the Stripping ratio for iron ore achieved was 1: 0.192 t/t and for manganese ore: 1: 15.288 t/t
30	Total area put in use under different heads at the end of year	191.907 Ha up to end of scheme period	163.199 Ha upto 31.03.2019	163.199 Ha upto 31.03.2019
3p	Production of ROM mineral during the last five year period as applicable	Iron ore: FY-2018-19- 6000150MT FY-2017-18- 6001080MT FY-2016-17- 6000564MT FY-2015-16- 5035696MT FY-2014-15- 3969330MT Mn ore- FY2018-19- 36012.02MT FY2017-18- 36006.96MT FY2016-17- 35986.72MT FY2015-16- 10373MT FY-2014-15- 39621MT	<pre>Iron Ore : 2018-19 2996966.95 2017-18 2997053.14 2016-17 2995326.70 2015-16 2997270.46 2014-15 833472.667 Manganese Ore 2018-19 1985.459 2017-18 4046.343 2016-17 3856.346 2015-16 Nil 2014-15 Nil</pre>	Nil

3q	General remarks of inspecting officers on method of mining etc.	ROM has been proposed in 04 quarries, namely Q-3,Q-	The ROM production has been carried out in 04 quarries, namely Q-3,Q- 4, Q-RF, Q-5(Mn) within the proposal as the production of iron ore was within the EC limit of 3.0 MTPA as against approved proposal of 6 MTPA for iron ore.	The ROM production has been carried out in 04 quarries, namely Q-3,Q-4, Q-RF, Q- 5(Mn) within the proposal as the production of iron ore was within the EC limit of 3.0 MTPA as against approved proposal of 6 MTPA for iron
				of 6 MTPA for iron ore.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	There is no proposal for top soil generation. Separate dumping for overburden and mineral reject.	Separate dumping for overburden and mineral reject.	There was no generation of top soil.

4b Waste Location of Waste generated from Waste generated generated from Iron ore zone has been topsoil, OB and from manganese mineral reject Iron ore zone dumped in Dump-1 & in quarries were dumps shall be the exhausted part of Qproposed to be 3 for back filling. dumped in existing dumped at Dump-1 and in Waste of Mn Quarry has dump-2 and the exhausted been dumped at Dump-2. proposed new waste part of Q-3 dump-3. During the for back year 2018-19, the filling. Waste manganese generated from production Mn Quarry achieved was only shall be 1985.459 tonnes dumped at against proposal Dump-2 & of 36008.80 tonnes. Therefore, proposed new dump-3 the actual waste generated from manganese zone was only 13797.27 cum against the proposal of 114535 cum. These wastes generated have been dumped in dump-2 and thus

dump-2 and thus proposed dump-3 have not been created. 4c Number of dumps 03 dumps There are two active Waste generated within lease within the dumps within the lease from manganese area and outside lease area area. Proposed new dumpquarries were of lease area 3 have not been created. proposed to be dumped in existing dump-2 and proposed new waste dump-3. During the year 2018-19, the manganese production achieved was only 1985.459 tonnes against proposal of 36008.80 tonnes. Therefore, the actual waste generated from manganese zone was only 13797.27 cum against the proposal of 114535 cum. These wastes generated have been dumped in dump-2 and thus proposed dump-3 have not been created. 4d Location of Dumps are Dumps developed are Dumps developed proposed to be outside the UPL in are outside the dumps w.r.t. ultimate pit outside the accordance with the UPL in accordance limit (Rule 16) UPL. approved SOM. with the approved SOM. 4e Number of active 03 dumps There are two active There are two and alive dumps. dumps, namely Dump-1 and active dumps, Dump-2 lies within the namely Dump-1 and lease area. Proposed Dump-2 lies new dump-3 have not been within the lease created. area. Proposed new dump-3 have not been created. 4f Number of dead Nil There is no dead dump. There is no dead dumps. dump. Number of dumps There is no dead dump. There is no dead 4g Nil established. dump.

been completed in

2019-20.

4h In 2018-19, Retaining Whether Proposal for In 2018-19, Retaining wall retaining wall wall constructed around Retaining wall or garland drain around Dump-1 Dump-1 was 125m. No constructed around all along dumps retaining wall was Dump-1 was 125m. : 133m, constructed in are there. Backfilling No retaining wall area in Q-3: backfilling area in Q-3 was constructed in 380m, Dump-3: and retaining wall backfilling area 525m (proposal proposed around dump-3 in Q-3 and as approved in was not constructed as retaining wall FMCP) dump-3 has not been proposed around created. The balance dump-3 was not contruction of retaining constructed as wall around Dump-1 and dump-3 has not been created. The in backfilling area in Q-3 have been completed balance in 2019-20. contruction of retaining wall around Dump-1 and in backfilling area in Q-3 have been completed in 2019-20. 4i Length of In 2018-19, Retaining Proposal for In 2018-19, Retaining wall retaining wall wall constructed around Retaining wall or garland drain around Dump-1 Dump-1 was 125m. No constructed around all along dumps : 133m, retaining wall was Dump-1 was 125m. Backfilling constructed in No retaining wall area in Q-3: backfilling area in Q-3 was constructed in 380m, Dump-3: and retaining wall backfilling area 525m (proposal proposed around dump-3 in Q-3 and as approved in was not constructed as retaining wall FMCP) dump-3 has not been proposed around created. The balance dump-3 was not contruction of retaining constructed as wall around Dump-1 and dump-3 has not in backfilling area in been created. The Q-3 have been completed balance in 2019-20. contruction of retaining wall around Dump-1 and in backfilling area in Q-3 have

4j Number of settling ponds

In 2018-19, the proposed In the approved FMCP, settling tanks have not there was been created. The proposal to proposed one no of settling tank around construct 3 nos of Dump-1 have been created settling in 2019-20. Settling tanks. One no tank around dump-3 not created as dump-3 itself of settling tank around have not been created. Dump-1, one no Settling tank aound in mineral mineral reject have not rejects and been created as mineral one no of rejects have been stored settling tank only in one of the around Dump-3 proposed locations having existing protective measures.

In 2018-19, the proposed settling tanks have not been created. The proposed one no of settling tank around Dump-1 have been created in 2019-20. Settling tank around dump-3 not created as dump-3 itself have not been created. Settling tank aound mineral reject have not been created as mineral rejects have been stored only in one of the proposed locations having existing protective measures.

4k	Specific comments of inspecting officer on waste dump management	Iron ore zone shall be dumped at Dump-1 and in the exhausted part of Q-3 for back filling. Waste	from manganese quarries were proposed to be	There are two active dumps within the lease area.Waste generated from manganese quarries were proposed to be dumped in existing dump-2 and proposed new waste dump-3. During the year 2018-19, the manganese production achieved was only 1985.459 tonnes against proposal of 36008.80 tonnes. Therefore, the actual waste generated from manganese zone was only 13797.27 cum against the proposal of 114535 cum. These wastes generated have been dumped in dump-2 and thus proposed dump-3 have not been created.
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Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	5	Backfilling has been done in the exhausted part of Q-3	Backfilling has been done in the exhausted part of Q-3

5b Area under In FY 2018-19, In FY 2018-19, an area In FY 2018-19, an backfilling of an area of of 1.56 Ha area have area of 1.56 Ha mined out area 2.21 Ha area been backfilled in Q-3 area have been have been backfilled in Q-3 proposed for backfilling in Q - 35c Concurrent use Not Proposed Nil Thee was no of topsoil for generation of top restoration or soil during 2018rehabilitation 19. of mineral out area (Rule 32) In FY 2018-19, In FY 2018-19, an area 5d Total area In FY 2018-19, an fully reclaimed an area of of 1.56 Ha area have area of 1.56 Ha and 2.21 Ha area been backfilled in Q-3. area have been rehabilitated have been Remaining area have been backfilled in Q-3. proposed for backfilled during 2019-Remaining area backfilling in 20. Saplings have been have been backfilled during Q - 3planted over backfilled area of 2.21 ha in 2019-2019-20. Saplings 20. have been planted over backfilled area of 2.21 ha in 2019-20. General remarks Backfilling of Back filling at 1.56 Ha Back filling at 5e of inspecting 2.21 Ha area area of the exhausted 1.56 Ha area of officers on of part of part of Q-3 have been the exhausted part backfilling and Quarry-3. done in 2018-19. of Q-3 have been reclamation etc. Remaining 0.65 Ha as per done in 2018-19. proposal for 2018-19 Remaining 0.65 Ha have been backfilled in as per proposal 2019-20 and the entire for 2018-19 have 2.21 ha area have been been backfilled in rehabilitated during the 2019-20 and the entire 2.21 ha year 2019-20. area have been rehabilitated during the year 2019-20.

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).	As per rule 26 (2) of MCDR 2017, The holder of mining lease shall submit to the competent authority a yearly report as per the format specified by the Indian Bureau of Mines, before 1st day of July every year setting forth the extent of protective and rehabilitative works carried out as envisaged in the approved mine closure plan, and if there is any deviation, reasons thereof:	Annual return on PMCP has been submitted timely.	Annual return on PMCP has been submitted timely.
6b	Area available for rehabilitation (ha) .	2.21 Ha area as part of	Back filling at 1.56 Ha area of the exhausted part of Q-3 have been done in 2018-19. Remaining 0.65 Ha as per proposal of 2018-19 have been backfilled in 2019- 20 and the entire 2.21 ha area have been rehabilitated during the year 2019-20.	Back filling at 1.56 Ha area of the exhausted part of Q-3 have been done in 2018-19. Remaining 0.65 Ha as per proposal of 2018-19 have been backfilled in 2019-20 and the entire 2.21 ha area have been rehabilitated during the year 2019-20.

6c afforestation 2.21 Ha Nil The plantation done (ha). backfilled over 2.21 ha area in Q3 backfilled area have been done in 2019-20. Plantation in the 6d No. of saplings 14505 saplings 5000nos planted during ( As per FMCP) backfilled area have been done in the year 2019-20. 6e Cumulative no Not Specified Cumulative nos. of Cumulative nos. of .of plants saplings planted in the saplings planted lease area is about in the lease area 15880 is about 15880 6f Any other method Not Proposed Nil Nil of rehabilitation 6q Cost incurred on Rs 200000 Rs 288000 Cost proposal watch and care including watch during the year and care during the year 2018-19 as per approved FMCP. 6h Compliance on Backfilling at Back filling done at Back filling done 2.21Ha area of 1.56Ha area of the reclamation and at 1.56Ha area of rehabilitation exhausted part exhausted part of Q-3. the exhausted part by backfilling of Q-3 of Q-3. (i) Voids available for backfilling ( Lx ВхD 6i Compliance on Backfilling at Back filling done at Back filling done reclamation and 2.21Ha area of 1.56Ha area of the at 1.56Ha area of rehabilitation exhausted part exhausted part of Q-3. the exhausted part by backfilling of Q-3 of Q-3. (ii) Voids filled by waste / tailings Afforestation in бj Compliance on 2.21 Ha in Nil. reclamation and 2018-19 backfilled area done in 2019-20. rehabilitation by backfilling (iii)Afforestati on on backfilled area

6k Compliance on Not Proposed Nil Nil reclamation and during 2018rehabilitation 19. by backfilling (iv) Rehabilitation by making water reservoir 61 Compliance on Not Specified Nil Nil reclamation and rehabilitation by backfilling (v)any other specific means. бm Compliance of Not Proposed Nil There is no rehabilitation proposal of of waste land rehabilitation of within lease waste land. (i)afforestation Compliance of There is no бn Not Proposed Nil rehabilitation proposal of of waste land rehabilitation of within lease waste land. (ii)Area rehabilitation (ha) 60 Compliance of Not Proposed Nil Nil rehabilitation of waste land within lease (iii)Method of rehabilitation бp Compliance of Quarterly Quarterly monitoring of Quarterly environmental monitoring air, water and noise monitoring of air, level are being carried water and noise monitoring (core zone and buffer out. level are being zone) carried out.

бq General remarks Reclamation Back filling at 1.56 Ha Back filling at of inspecting and area of the exhausted 1.56 Ha area of officers on PMCP rehabilitation part of Q-3 have been the exhausted part compliance and by backfilling done in 2018-19. of Q-3 have been and plantation Remaining 0.65 Ha as per done in 2018-19. progressive closure in 2.21Ha area proposal of 2018-19 have Remaining 0.65 Ha operations etc. in exhausted been backfilled in 2019as per proposal of part of Q-3. 20 and the entire 2.21 2018-19 have been backfilled in ha area have been rehabilitated during the 2019-20 and the year 2019-20. entire 2.21 ha area have been rehabilitated during the year 2019-20.

#### 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.	ore and	Manual for Mn ore and mechanised for Iron ore.	Manual for Mn ore and mechanised for Iron ore.
7c	Different grade of mineral sorted out at mines.	-	Different grades of minerals sorted out at mines are >45% Fe & < 58%Fe , >10% Mn & < 20%Mn	Different grades of minerals sorted out at mines are >45% Fe & < 58%Fe , >10% Mn & < 20%Mn

7d	Any beneficiation process at mines	beneficiation plant of 2.0 MTPA capacity during the financial year 2017-18 within the lease area	Beneficiation plant could not be established due to want of EC during 2018-19. However the lessee has established the plant after receipt of Environment clearance and Consent to establish from SPCB, Odisha during 2019-20. But the beneficiation plant is not operated due to want of Consent to Operate from SPCB.	Beneficiation plant could not be established due to want of EC during 2018-19. However the lessee has established the plant after receipt of Environment clearance and Consent to establish from SPCB, Odisha during 2019-20. But the beneficiation plant is not operated due to want of Consent to Operate from SPCB.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	MTPA capacity during the financial year 2017-18 within the lease area	Beneficiation plant could not be established due to want of EC during 2018-19. However the lessee has established the plant after receipt of Environment clearance and Consent to establish from SPCB, Odisha during 2019-20. But the beneficiation plant is not operated due to want of Consent to Operate from SPCB.	Beneficiation plant could not be established due to want of EC during 2018-19. However the lessee has established the plant after receipt of Environment clearance and Consent to establish from SPCB, Odisha during 2019-20. But the beneficiation plant is not operated due to want of Consent to Operate from SPCB.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks

8a There was no Separate removal Not proposed Nil and utilization proposal for of topsoil (Rule generation of top 32) soil. 8b Concurrent use There was no Not proposed Nil or storage of proposal for generation of top topsoil soil. 8c Separate dumps Separate Separate dumping for Separate dumping for overburden, dumping for overburden and mineral for overburden and waste rock, overburden and reject. mineral reject. rejects and mineral fines (Rule 33) reject. 8d Use of Waste About 1.56 Ha area in About 1.56 Ha area generated from Quarry-3 have been overburden, in Quarry-3 have waste rock, Iron ore zone backfilled as against been backfilled as rejects and shall be the proposal of 2.21 ha. against the proposal of 2.21 fines dumps for dumped at restoring the Dump-1 and in ha. land to its the exhausted original use part of Q-3 for back filling. Phased 2.21 H ain Q-3 About 1.56 Ha area in 8e About 1.56 Ha area restoration, Quarry-3 have been in Quarry-3 have reclamation and backfilled as against been backfilled as the proposal of 2.21 ha. rehabilitation against the of lands Plantation over proposal of 2.21 affected by backfilled area hav ha. Plantation mining ebeen done in 2019-20. over backfilled operations area hav ebeen done in 2019-20. (Pits, dumps etc) 8f Baseline Not Specified Total 5000 nos. saplings Total 5000 nos. information on have been planted within saplings have been existence of lease in 2018-19. planted within lease in 2018-19. plantation and Cumulative 15880 nos. additional have been planted by Cumulative 15880 plantation done lessee . nos. have been (Rule 41) planted by lessee . Survival rate Not specified. As reported in annual As reported in 8q return for 2018-19 the annual return for survival rate is 84.5%. 2018-19 the survival rate is 84.5%. 8h Water sprinkling Water Water sprinkler are used Water sprinkler on roads to to control air borne are used to sprinkler control airborne dust. control air borne dust dust.

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8i General remarks Not Specified Aesthetic beauty in and Aesthetic beauty of inspecting around mines area is in and around maintained. Total 5000 officer on mines area is aesthetic beauty nos. saplings have been maintained. Total in and around planted within 5000 nos. saplings lease in 2018-19. mines area have been planted Cumulative 15880 nos. within have been planted by lease in 2018-19. Cumulative 15880 lessee . nos. have been planted by lessee

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	As per rule 45 (5)(b), The holder of a mining lease shall submit online returns in respect of each minea monthly return which shall be submitted before the tenth day of every month in respect of the preceding monthand as per rule 45 (5)(c), an annual return which shall be submitted before the 1st day of July each year for the preceding financial year in	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 The employment Mining engineer, Mining engineer, Annual return status of geologist & mine geologist & mine for information mining managers were employed managers were on Mining engineer, in the mine. employed in the Engineer, qeologist & mine. Geologist and mine manager Manager have been furnished in the annual return submitted for the year 2018-19. 9c Scrutiny of Covered under Area under excavation : Area under Annual return on current (O/C) 55.058 Ha, Storage for excavation : Topsoil: 0.16 Ha, 55.058 Ha, Storage land use pattern Workings : for area under 140.368 Ha, Overburden dump: 6.711 for Topsoil: 0.16 pits, reclaimed Used for waste Ha, Mineral Storage: Ha, Overburden area, dumps etc. disposal: 28.198 Ha, dump: 6.711 Ha, 6.711 Ha, Infrastructure (rest Mineral Storage: Occupied by shelter, weigh bridge, 28.198 Ha, plant, hutting etc.): 5.0 Ha, Infrastructure Road (NH, village road & (rest shelter, buildings, residential, Mine road): 16.12 Ha, weigh bridge, welfare Mineral Separation hutting etc.): 5.0 buildings & Plant: 7.5 Ha, Others Ha, Road (NH, roads : 16.120 (Green belt): 44.452 Ha village road & Mine road): 16.12 Ha, Other Purpose (Used Ha, Mineral for Road, Nala Separation Plant: Etc): 35.957 7.5 Ha, Others Ha (Green belt): 44.452 Ha 9d Scrutiny of Total 5000 Total 5000 nos. saplings Total 5000 nos. Annual return on nos. saplings have been planted in saplings have been planted in 2018afforestation have been 2018-19. planted in 19. 2018-19. 9e Mineral reject Mineral reject Mineral reject Scrutiny of Annual return on 454537.870MT, 454537.870MT, Grade: 454537.870MT, Grade: +55- 58 +55- 58 % Fe Grade: +55- 58 % mineral reject generation % Fe Ŧ٩ (Grade and quantity)

9f Closing stock Closing stock Scrutiny of Closing stock Annual return on maintained, maintained, Below 55%, maintained, Below ROM stock and/or Below 55%, 55% 55% to below 58%, 58% to 55%, 55% to below to below 58%, below 60%, 60% to below 58%, 58% to below graded ore 58% to below 62%, 62% to below 65%, 60%, 60% to below 60%, 60% to 65%Fe and above. 62%, 62% to below below 65%, 65%Fe and 62%, 62% to above. below 65%, 65%Fe and above. 9g Scrutiny of Ex-mine prices Ex-mine prices of Ex-mine prices of Annual return on of Processed Processed ore( IRON ORE Processed ore( sale value, Ex. ore( IRON ORE (Hematite) (in Rs Per IRON ORE Mine price and (Hematite) (in Rs (Hematite) Tonne) Per Tonne) production cost (in Rs Per Lumps Grades (% of Fe Tonne) content) : Lumps Grades (% of a. 60% to below 62%: Rs Fe content) : Lumps Grades (% of Fe 3367.00 a. 60% to below Fines Grades (% of Fe 62%: Rs 3367.00 content) : a. 60% to content) : Fines Grades (% of below 62%: Rs (a). Below 55%: Rs Fe content) : 3367.00 767.00 (a). Below 55%: Rs Fines Grades (b) 55% to below 58% : 767.00 (% of Fe Rs 988.00 (b) 55% to below content) : (c) 60% to below 62% : 58% : Rs 988.00 (a). Below Rs 1993.00 (c) 60% to below 55%: Rs 767.00 (d) 62% to below 65% : 62% : Rs 1993.00 (b) 55% to Rs 1850.00 (d) 62% to below below 58% : Rs 65% : Rs 1850.00 988.00 Production cost- Rs (c) 60% to 1514.49 per tonne Production costbelow 62% : Rs Rs 1514.49 per 1993.00 tonne (d) 62% to below 65% : Rs 1850.00 Production cost- Rs 1514.49 per tonne 9h Scrutiny of Fixed asset as Fixed asset as furnished Fixed asset as Annual return on furnished in in Annual Return is Rs furnished in Annual Return 66366173/-Annual Return is fixed assets is Rs Rs 66366173/-66366173/-

9k Scrutiny of Annual return on mining machineries	CUM: 12Nos, Back Hoe 4.100 CUM: 3Nos, Air Compressor 12.740CUM/MN : 2 Nos,Front end loader	Back Hoe 0.900 CUM: 12Nos, Back Hoe 4.100 CUM: 3Nos, Air Compressor 12.740CUM/MN : 2 Nos,Front end loader 1.800CUM: 8 Nos,Dozer 300.0 HP: 3 Nos, Dumper 30.0 TONNE: 18Nos, Dumper 10.0 TONNE: 13 Nos etc	Back Hoe 0.900 CUM: 12Nos, Back Hoe 4.100 CUM: 3Nos, Air Compressor 12.740CUM/MN : 2 Nos,Front end loader 1.800CUM: 8 Nos,Dozer 300.0 HP: 3 Nos, Dumper 30.0 TONNE: 18Nos, Dumper 10.0 TONNE: 13 Nos etc
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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		

### Date :

## (SHRI SUDIP RANJAN MAZUMDAR)

Indian Bureau of Mines