## INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

#### MCDR INSPECTION REPORT

## Bhubaneshwar regional office

Mine file No : ORI/IRON/SNG/MCDR-13/BBS

Mine code : 300RI13025

(i)	Name of the Inspecting Officer and ID No.	:	U11 ) DAYANAND UPADHYAY
(ii)	Designation	:	Sr. Asst. Contrl. Mines
(iii)	Accompaning mine Official with Designation	:	Shri D.K.Saha, Mines Manager
(iv)	Date of Inspection	:	29/12/2019

(v) Prev.inspection date : 18/03/2019

PART-I : GENERAL INFORMATION

#### Mine Name : TANTRA 1. (a) : IBM/6694/2011 (b) Registration NO. : A Mechanised (C) Category (d) Type of Working : Opencast (e) Postal address State : ORISSA : SUNDARGARH District Village : TANTRA : BONAI Taluka Post office : TENSA Pin Code : 770042 FAX No. : 06625-236305 E-mail : onkargroup@hotmail.com Phone : 06625-236305 (f) Police Station : Koira (g) First opening date : 01/09/1986 (h) Weekly day of rest : SUN 2. Address for : AT/PO-KOIRA correspondance DIST- SUNDERGARH ORISSA-770042 3. (a) Lease Number : ORI0132 (b) Lease area : 72.56 (c) Period of lease : 20 (d) Date of Expiry : 21/11/2005

4.	Mineral worked	:	BAUXITE	Associated
			IRON ORE	Main

5.	Name	and Address of th Lessee	he :	M/S KORP RESOURCES PVT LTD 161, RABINDRA SARANI, PS- BURRA BAZAR KOLKATTA KOLKATA WEST BENGAL Phone:03322683832 FAX :03322683832	
		Owner	:	SHRI PRAHLAD ROY GOENKA 161, RABINDRA SARANI, PS- BURRA BAZAR KOLKATA KOLKATA WEST BENGAL Phone: 9831094640 FAX : 03322683832	
		Mining Engineer Name Qualification Appointment/ Termination date	:	SHRI RUDRA MOHAN NAYAK,Full Time B E MINING (AMIE) 01/03/2019	
		Qualification	:	SHRI P K PATHAK,Full Time MSC (GEOLOGY) 05/07/2012	
		Qualification	:	SHRI CHANDRA SEKHAR MISHRA MSC GEOLOGY (FIRST CLASS MINES MANAGER C 15/03/2016	
б.		of approval of M: 'Scheme of Mining		PMCP under 23B(2) for Existing2Mining Scheme rule 12 MCDR19881Modif.approved Mining Scheme0Mining Scheme rule 12 MCDR19881	29/03/2004 22/10/2007 11/12/2008 03/03/2010 19/04/2013 18/05/2018

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
la	Backlog of previous year	15 number of bore holes in 2018-19.	Proposed bore holes ha not been drilled.	ve Proposed bore holes have not been drilled. The deviation of exploration has been pointed out through violation letter.
1b	Exploration over lease area for geological axis 1 or 2	G1/G2 Level of exploration.	Proposed bore holes ha not been drilled.	ve Proposed bore holes have not been drilled. The deviation of exploration has been pointed out through violation letter.
lc	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified.	Proposed bore holes ha not been drilled.	ve Proposed bore holes have not been drilled. The deviation of exploration has been pointed out through violation letter.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Within G2/G3 Level explored area.	Proposed bore holes han not been drilled.	ve Proposed bore holes have not been drilled. The deviation of exploration has been pointed out through violation letter.

le	Balance reserve as on 01/04/20	As per the review of mining plan approved dated 18.05.2018, the reserve is 3.918 million tones and remaining resources is 1.01 million tones. Total Reserve and Resource is 4.928 million tones.	Balance reserve as on 01/04/2019 under 111 category was 3.799 million tones and resources under (211) category was 1010000T.	Balance reserve as on 01/04/2019 under 111 category was 3.799 million tones and resources under (211) category was 1010000T.
lf	General remarks of inspecting officers on geology, exploration etc	15 number of bore holes in 2018-19.	- <b>T</b>	Proposed bore holes have not been drilled. The deviation of exploration has been pointed out through violation letter.

## Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	—	311750/311930 and N	The development is concentrated in single pit between grid E 311750/311930 and N 2420900/241080	The development is concentrated in single pit between grid E 311750/311930 and N 2420900/241080
2b	in topsoil, overburden and	benches in OB	Separate benches in OB and ore of 6 m height have been maintained.	
2c	Stripping ratio or ore to OB ratio	1:0.04 T/cu.m	1:0.02 t/cu.m	Average stripping ratio varies due to irregular nature of ore deposit.

2d	Quantity of topsoil generation in m3	Not proposed.	There is no top soil generation.	There is no top soil generation.
2e	Quantity of overburden generation in m3	8662.19 cum of intercalated waste	7180 cu.m	Quantity of waste varies due to irregular nature of ore deposit.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	311750/311930 and N	The development is concentrated in single pit between grid E 311750/311930 and N 2420900/241080	The development is concentrated in single pit between grid E 311750/311930 and N 2420900/241080

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Single pit	Working is concentrated in single pit as proposed.	Working is concentrated in single pit as proposed.
3b	Quantity of ROM mineral production proposed	239942T	ROM production reported in 2018-19 is 118700.0T	ROM Production is less due to low grade with low market demand.
3c	Recovery of sailable/usable mineral from ROM production		Nil.	Lease area equipped with mostly low grade ore. due to less ROM production and out of total ROM production only 77200 tones of ROM has been processed in screening plant between grade +45% to 58%Fe and ROM production booked in closinf stock.

3d	Quantity of mineral reject generation	97016.57 tones	77200 tones	Less recovery of mineral reject was due to restriction of ROM production within EC limit and further out of 118700 tones of ROM production, only 77200 tones of ROM has been processed in screening plant between grade +45% to 58%Fe.
3e	Grade of mineral rejects generation and threshold value declared.	45 to - 58% Fe	45 to -58% Fe	Lease area equipped with mostly low grade ore.
3f	Quantity of sub grade mineral generation.	97016.57 tones	77200 tones	Less recovery of mineral reject was due to restriction of ROM production within EC limit and further out of 118700 tones of ROM production, only 77200 tones of ROM has been processed in screening plant between grade +45% to 58%Fe.
3g	Grade of sub grade mineral generation	45 to - 58% Fe	45 to - 58% Fe	Lease area equipped with mostly low grade ore.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	Mechanised
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Wet beneficiation plant.	Wet beneficiation plant installed by lessee in the lease area which is not in operation due to want of consent to operate.	Wet beneficiation plant is not in operation due to want of consent to operate.

3j	Provision of drilling and blasting in mineral benches	Blast hole with emulsion/slurr y exlposive as	Drilling and blasting is carried out with DTH drilling of 100 mm dia. Blast hole with emulsion/slurry exlposive as coloumn charge and booster alongwith delay detonator.	Drilling and blasting is carried out with DTH drilling of 100 mm dia. Blast hole with emulsion/slurry exlposive as coloumn charge and booster alongwith delay detonator.
3k	Provision of mining machineries in mineral benches	Excavator, Loader and Dumper are proposed for excavation.	Machaniries equipped at mine sites are SHOVEL 2.0 cu.m- 2, FRONT END LOADER 2.5 cu.m-3, TRUCK 20T -4, WATER TANKER 10& 6KL-2	Excavator, Loader and Dumper are equipped to winning out the mineral.
31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height-6 m	Bench height is suitably matched with the excavator.	Bench height is suitably matched with the excavator.
3m	Total area covered under excavation/pits	10.8 ha proposed during approved plan period.	About 7.85 ha area has been covered under excavation pits.	About 7.85 ha area has been covered under excavation pits.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.04 t/cu.m	1:0.02 t/cu.m	Average stripping ratio varies due to irregular nature of ore
				deposit.

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3p	Production of ROM mineral during the last five year period as applicable	Year wise Production proposal 2014-15: 600000 tones 2015-16: 600000 tones 2016-17: 600000 tones 2017-18: 600000 tones In 2018-19: 239942 tones	Year wise ROM production 2014-15: 114000 tones 2015-16: 115600 tones 2016-17: 119300 tones 2017-18: 106200 tones 2018-19: 118700 tones	ROM Production is within the approved proposal.
Зq	General remarks of inspecting officers on method of mining etc.	311750/311930 and N	The ROM production has been carried out in pit as proposed. DTH drilling of 100 mm dia. Blast hole with emulsion/ slurry explosive alongwith delay detonator is being practiced for drilling and blasting.	The ROM production has been carried out in pit as proposed. DTH drilling of 100 mm dia. Blast hole with emulsion/ slurry explosive alongwith delay detonator is being practiced for drilling and blasting.

# Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	dumping for	Overburden and mineral reject generated during mining are dumped Separately.	· · · <u>-</u>
4b	Location of topsoil, OB and mineral reject dumps	2420890 and E	N2420750 to 2420890 and E 311350 to 311500.	Waste Dump-1, between N2420750 to 2420890 and E 311350 to 311500. Mineral reject- N2420700 to 2421000 and E 311600 to 311700

4c Number of dumps One waste Dump There are one waste dump There are one within lease and two and two mineral reject waste dump and two area and outside mineral reject dump as per proposal. mineral reject of lease area dump as per dump proposal. 4d Location of Waste Dump-1, The waste dump and The waste dump and dumps w.r.t. between mineral reject dump are mineral reject ultimate pit N2420750 to located outside the UPL dump are located 2420890 and E within lease area. outside the UPL limit (Rule 16) 311350 to within lease area. 311500. Mineral reject-N2420700 to 2421000 and E 311600 to 311700 Number of active One waste 4e There are one active There are one and alive dumps. Dump. waste dump in lease active waste dump area. in lease area. 4f Number of dead Not proposed. Nil. There is no dead dumps. dump. Number of dumps 4q Not proposed. Nil. There is no dead established. dump. 4h Whether 175 m of In 2018-19, 175 m of In 2018-19, 175 m retaining wall retaining wall and 175 m of retaining wall Retaining wall or garland drain and 175 m of of garland drain have and 175 m of all along dumps garland drain been constructed. garland drain have are there. been constructed. In 2018-19, 175 m of 4i Length of 175 m of In 2018-19, 175 m Retaining wall retaining wall retaining wall and 175 m of retaining wall or garland drain and 175 m of of garland drain have and 175 m of garland drain been constructed garland drain have all along dumps been constructed 4j Number of Not proposed. There is 01 settling There is 01 settling ponds pond. settling pond. 4k Specific Waste Dump-1, between Waste and mineral Waste Dump-1, comments of between N2420750 to 2420890 and reject have been inspecting N2420750 to E 311350 to 311500. dumped separately. officer on waste 2420890 and E Mineral reject- N2420700 to 2421000 and E 311600 dump management 311350 to 311500. to 311700 Mineral reject-N2420700 to 2421000 and E 311600 to 311700

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Not proposed as pit is not exhausted.	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.
5b	Area under backfilling of mined out area	Not proposed as pit is not exhausted.	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not proposed as pit is not exhausted.	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.
5d	Total area fully reclaimed and rehabilitated	Not proposed as pit is not exhausted.	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Not proposed as pit is not exhausted.	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.

Solid Waste Management - Backfilling:

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
ба		(2) of MCDR,	Annual return on PMCP has been submitted.	Annual return on PMCP has been submitted.
бb	Area available for rehabilitation (ha) .	-	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.
6c	afforestation done (ha).	0.20 Ha.	In 2018-19, total area cover under afforestation is about 0.2 ha.	In 2018-19, total area cover under afforestation is about 0.2 ha.

<b>C</b> ]		F 0 0 F	- 0010 10	
6d	No. of saplings planted during the year	500 nos of saplings	In 2018-19, Within lease area 7800 nos. saplings and Outside lease area 600 nos. saplings have been planted by lessee.	Total 8100 nos. saplings have been planted in 2018- 19.
бе	Cumulative no .of plants	Not specified.	Cumulative nos. of saplings planted in the lease area is about 31570 nos.	Cumulative nos. of saplings planted in the lease area is about 26500 nos.
6f	Any other method of rehabilitation	Not proposed as pit is no exhausted.	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.
бg	Cost incurred on watch and care during the year	Not Specified.	Around Rs 2.12 lakh cost incurred on watch and care.	Around Rs 2.12 lakh cost incurred on watch and care.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Not proposed as pit is no exhausted.	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not proposed as pit is no exhausted.	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	Not proposed as pit is no exhausted.	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed as pit is no exhausted.	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.

61 Pit is not matured for Pit is not matured Compliance on Not proposed reclamation and as pit is no backfilling and for backfilling rehabilitation exhausted. reclamation and reand reclamation by backfilling habilitation. and rehabilitation. (v)any other specific means. бm Compliance of 0.20 ha area 0.20 ha area by 7800 0.20 ha area by rehabilitation by 500 nos. of nos. of saplings. 500 nos. of of waste land saplings. saplings. within lease (i)afforestation 0.20 ha area 0.20 ha area by 500 0.20 ha area by бn Compliance of rehabilitation by 500 nos. of nos. of saplings. 500 nos. of of waste land saplings. saplings. within lease (ii)Area rehabilitation (ha) 60 Compliance of 0.20 ha area 0.20 ha area by 500 0.20 ha area by rehabilitation by 500 nos. of nos. of saplings. 500 nos. of saplings. of waste land saplings. within lease (iii)Method of rehabilitation Compliance of Quarterly Quarterly monitoring of Quarterly бp environmental monitoring air, water and noise monitoring of air, monitoring (core level are being carried water and noise zone and buffer out. level are being zone) carried out. General remarks No proposal of Pit is not matured for Pit is not matured 6q of inspecting backfilling as backfilling and for backfilling officers on PMCP pit is not reclamation and reand reclamation exhausted. habilitation. and recompliance and habilitation. progressive closure operations etc.

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.	Mechanized	Mechanized	Mechanized
7c	Different grade of mineral sorted out at mines.		Different grades of minerals sorted out at mines are 45% to 58% Fe.	Different grades of minerals sorted out at mines are 45% to 58% Fe.
7d	Any beneficiation process at mines		Wet beneficiation plant installed by lessee in the lease area which is not in operation due to want of consent to operate.	Wet beneficiation plant is not in operation due to want of consent to operate.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	-	Different grades of minerals sorted out at mines are -45% to 58% Fe. Cut off grade of iron ore for the mine is +58%.	Wet beneficiation plant is not in operation due to want of consent to operate.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not proposed.	Nil.	No top top soil generation is proposed.
8b	Concurrent use or storage of topsoil	Not proposed.	Nil.	No top top soil generation is proposed.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	mineral	Overburden and mineral reject generated during mining are dumped Separately.	Overburden and mineral reject generated during mining are dumped Separately.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	backfilling as pit is not	Pit is not matured for backfilling and reclamation and re- habilitation.	Pit is not matured for backfilling and reclamation and re- habilitation.

8e Phased No proposal of Pit is not matured for Pit is not matured restoration, backfilling as backfilling and for backfilling reclamation and pit is not reclamation and reand reclamation rehabilitation exhausted. habilitation. and reof lands habilitation. affected by mining operations (Pits, dumps etc) 8f Baseline 500 nos. of In 2018-19, Within lease In 2018-19, Within information on plantation. 4410 nos. lease area area 4410 saplings and Outside nos. saplings and existence of plantation and lease area 1450 nos have Outside lease area additional been planted by lessee. 1450 nos have been plantation done planted by lessee. (Rule 41) Survival rate Not specified. As reported survival As reported 8q rate is 75%. survival rate is 75%. 8h Water sprinkling Water Water sprinkler are used Water sprinkler on roads to sprinkler. to control air borne are used to control airborne control air borne dust. dust dust. In 2018-19, Within lease 8i General remarks 500 nos. of Aesthetic beauty 7800 nos. of inspecting plantation area in and around proposed in officer on saplings and Outside mines area is aesthetic beauty 2018-19. lease area 600 nos. have maintained by in and around been planted by lessee. plantation. mines area Aesthetic beauty in and around mines area is maintained plantation.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly & Annual returns are being regularly submitted by lessee.	Monthly & Annual returns are being regularly submitted by lessee.	After scrutiny of annual return, Violation letter issued in reference Grade- wise Production, Sales/Dispatches and ex mine price.

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	The employment status of mining engineer, geologist & mine manager have been furnished in the annual return submitted for the year 2018- 19.	Mining engineer, geologist & mine managers were employed in the mine.	Mining engineer, geologist & mine managers were employed in the mine.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	different heads are Pist- 7.850ha,	Area covered under different heads are Pist- 7.850ha, waste dump- 0.131ha, building, roads- 1.0ha & others - 13.214 ha.	Area covered under different heads are Pist- 7.850ha, waste dump- 0.131ha, building, roads- 1.0ha & others - 13.214 ha.
9d	Scrutiny of Annual return on afforestation	Within lease area 7800 nos. saplings and Outside lease area 600 nos. saplings. Total 8100 nos. saplings have been planted in 2018-19.	Total 8100 nos. saplings have been planted in 2018-19.	Total 8100 nos. saplings have been planted in 2018- 19.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Quantity: 77200 tones, Grade: 45 to - 58% Fe	Quantity: 77200 tones, Grade: 45 to -58% Fe	Quantity: 77200 tones, Grade: 45 to -58% Fe

9f Closing stock: After scrutiny of annual After scrutiny of Scrutiny of Annual return on Lump Below return, Violation letter annual return, ROM stock and/or 55%issued in reference Violation letter graded ore 23599.080T, Grade-wise Production, issued in 55% to below Sales/Dispatches and ex reference Grade-58%Femine price. wise Production, 28663.145T Sales/Dispatches Fines , Below and ex mine price. 55%-31653.100T, 55% to below 58%-20627.420T 9q Scrutiny of Ex mine price: After scrutiny of annual After scrutiny of return, Violation letter annual return, Annual return on Lump Below sale value, Ex. 55%- Rs issued in reference Violation letter Mine price and 1800.00 , 55% Grade-wise Production, issued in production cost to below Sales/Dispatches and ex reference Grade-58%Fe- Rs mine price. wise Production, 2250.00 Sales/Dispatches Fines , Below and ex mine price. 55%- Rs 750.00 , 55% to below 58%- Rs 900.00 9h Scrutiny of Fixed asset as Fixed asset as furnished Fixed asset as in AR is Rs 153771030/-Annual return on furnished in furnished in AR is fixed assets AR is Rs Rs 153771030/-153771030/-9k Scrutiny of SHOVEL 2.0 SHOVEL 2.0 cu.m- 2, SHOVEL 2.0 cu.m-Annual return on cu.m- 2, FRONT FRONT END LOADER 2.5 2, FRONT END END LOADER 2.5 cu.m-3, TRUCK 20T -4, mining LOADER 2.5 cu.m-3, TRUCK 20T -4, machineries cu.m-3, TRUCK WATER TANKER 10& 6KL-2 20T - 4, WATER WATER TANKER 10& TANKER 10& 6KL-2 6KL-2

Details of violations observed during current inspection and compliance position of violation pointed out					
Viola	tion observed	Show c	ouse position		
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on		

## Date :

## (DAYANAND UPADHYAY)

Indian Bureau of Mines