INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

MCDR INSPECTION REPORT

Bhubaneshwar regional office

	Mine :	file No : ORI/GRPH/NU	P/M	CDR-6/BBS	Mine code : 280RI24006
	(i)	Name of the Inspecting Officer and ID No.	r :	DEY) NARENDRA MOHA	N DEY
	(ii)	Designation	:	Assistant Mining Engin	eer
	(iii)	Accompaning mine Official with Designation	:	S/SHRI R K MISHRA, GEN	ERAL MANAGER & JAGADISH DAS, MI
	(iv)	Date of Inspection	:	10/08/2017	
	(v)	Prev.inspection date	:	16/01/2014	
		PA	RT-	I : GENERAL INFORMATI	ON
1.	(a)	Mine Name	:	GANDABAHALI & KIRKITA(35.
	(b)	Registration NO.	:	IBM / 4400 / 2011	
	(c) (d) (e) (f) (g)			A Other than Fully Mec Opencast ORISSA NAWAPARA GANDABAHALI KHARIAR GANDABAHALI 0663-2403251 Pratyush_agi@hotmail.c 0663-2403251 SINAPALI VIA KHARIAR 22/06/2006	
	(h)	Weekly day of rest		TUE	
2.		ess for espondance	:	Gandabahali-(village & Nuapara- Dist Odisha-766118	Po), Sinapali- Tahsil,
3.	(a) (b) (c) (d)	Lease Number Lease area Period of lease Date of Expiry	:	ORI0675 20.23 20	
4.	Miner	ral worked	:	GRAPHITE	Main

- 5. Name and Address of the Lessee : PROMOD KUMAR AGRAWAL SAMBALPUR ORISSA SAMBALPUR ORISSA Phone: FAX :

 Owner
 :

 M/S P.K. AGARWAL

 AT-PATTNAIKPARA PO/DIST-SAMBALPUR ORISSA Phone: FAX :
- 6. Date of approval of Mining : Mining Scheme rule 12 MCDR1988 29/03/2016 Plan/Scheme of Mining

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
la	Backlog of previous year	AS PER SCHEME OF MINING APPROVED ON 29.03.2016 FOR THE PERIOD 2016- 17 TO 2020- 21, THE EXPLORATION PROPSAL WAS AS FOLLOWS: 2016-17 : 8 BOREHOLE, 2017-18: 9 BH & 2018-19: 9 BH	NO BH WAS DRILLED DURING 2016-17	VIOLATION UNDER RULE 11(1) OF MCDR, 2017 FOR NOT DRILLING BH AS PER PROPOSAL, HAS BEEN POINTED OUT TO THE LESSEE.
1b	Exploration over lease area for geological axis 1 or 2	PROPOSAL	NO BH DRILLED DURING 2016-17. HOWEVER LESSEE HAS DRILLED PREVIOUSLY CUMULATIVE 16 DTH / NON- CORE VERTICAL DRILL HOLES BY THE HELP OF 100 MM DIA DRILL UPTO 34 M DEPTH FROM SURFACE LEVEL. TOTAL METERAGE DRILLED 455.5 M. IN ADDITION 7 TRENCHES AND 2 TRIAL PITS HAVE BEEN DEVELOPED UPTO 5.5 M DEPTH EACH FROM SURFACE LEVEL.	
lc	Exploration Agencies and Expenditure in lakh rupees during the year		NO BH DRILLED DURING 2016-17. HOWEVER, PREVIOUSLY TOTAL METERAGE DRILLING IS 455.5 M. UNIT COST OF DRILLING MADE BY THE LESSEE @ Rs.450 / M TOTAL EXPENDITURE INCURRED 455.5 M X Rs.450 / M = Rs.204975 / NON-CORE / DTH DRILLING HAS BEEN CARRIED OUT BY THE LESSEE CON-CURRENTLY WITH THE MINING OPERATION.	

1d Balance area to OUT OF TOTAL 35.409 HA, UNEXPLORED be explored to LEASE AREA LEASE AREA EXPLORED AS bring Geological 25.904 HA PER UNFC NORMS UNDER G2 axis in 1 or 2 2016-17: 8 LEVEL 7.935 HA , UNDER вн, 2017-18: G3 LEVEL 1.570 HA (NO 9 BH & 2018-ORE BEARING AREA) AND 19: 9 BH AS UNEXPLORED LEASE AREA PER S O M 25.904 HA APPROVED ON TOTAL ALREADY 16 DTH / 29.03.2016 NON-CORE VERTICAL DRILL FOR THE HOLES HAVE BEEN PUT , PERIOD WITH TOTAL METERAGE 2016-17 TO DRILLED 455.5 M. 2020-21 1e Balance reserve AS PER S O M APPROVED as on 01/04/20ON 29.03.2016, THE RESERVES AS PER UNFC IS AS FOLLOWS : 122: 217845 TONNE, 332: 27519 TONNE, 333: 46971 TONNE, TOTAL 292335 TONNE AS PER ANNUAL RETURN 2016-17, THE RESERVES MENTIONED AS FOLLOWS: 122 : 210215 TONNE, 332 : 27519 TONNE, 333 : 46971 TONNE 1f General remarks EXPLORATION NO BH DRILLED DURING HOWEVER PREVIOUSLY of inspecting PROPOSAL WAS 2016-17. ALREADY 16 DTH/ officers on 2016-17: 8 DURING INSPECTION IT WAS NON-CORE VERTICAL BH, 2017-18: INFORMED THAT SOME BORE DRILLHOLES HAVE qeology, exploration etc 9 BH & 2018-HOLES HAVE BEEN DUG BBEN PUT WITH 19: 9 BHM DURING 2016-17. TOTAL METERAGE OVER UN-LESSEE HAS BEEN ADVISED DRILLING 455.5 M. EXPLORED TO FURNISH THE LEASE AREA ALREADY LEASE AREA INFORMATION WITH EXPLORED AS PER 25.904 HA SUPPORTNING DOCUMENTS. UNFC UNDER G2 LEVEL 7.935 HA, G3 LEVEL 1.570 HA AND UNEXPLORED LEASE AREA 25.904 HA.

Devel	opment :			
Sl.No.	Item	Propasals	Actual work	Remarks

2a Location of EXISTING AT QUARRY-1 PIT TOP DEVELOPED AS PER LEVEL :RL 247 M & PIT development QUARRY-1 PROPOSAL. w.r.t.lease area PROPOSED TO BE BOTTOM LEVEL: RL 239 M DEVELOPED LATERALLY AS WELL AS TOWARDS DEPTH. IN ADDITION TO QUARRY-1, QUARRY-2 PROPOSED TO BE DEVELOPED DURING 2016-17 2b Separate benches YES, SEPARATE SEPARATE BENCHES IN TOP in topsoil, BENCHES IN TOP SOIL, OB & MINERALS overburden and SOIL, OB & minerals (Rule MINERALS 15) 2c Stripping ratio 1:4.1 1:2.0 or ore to OB ratio Quantity of 6135 CUM 600 CUM 2d topsoil generation in m3 Quantity of 37735 CUM 7123 CUM DEVELOPMENT WORK 2e overburden WAS LESS. generation in m3 2f General remarks EXISTING MINE RE-OPENED ON DEVELOPMENT OF PIT of inspecting QUARRY -1 24.08.2015 WAS VERY LESS PROPOSED TO BE PIT TOP LEVEL : RL 247 M AGAINST THE officers on development of DEVELOPED & PIT BOTTOM LEVEL: 239 PROPOSAL, SO THE pit w.r.t. type LATERALLY AS M, AS PER PROPOSAL. TOP SOIL REMOVAL & of deposit etc WELL AS DEPTH. OB GENERATION WAS IN ADDITION TO VERY LESS. QUARRY-1, QUARRY-2 PROPOSED TO BE DEVELOPED .

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	ONE PIT	ONE PIT	

3b Quantity of ROM 2016-17: 7629.9 TONNE mineral ROM = 19562production TONNE (13041 proposed TONNE BENEFICIABLE ORE + 6521 TONNE MINERAL REJECT CONSIDERED AS SUB - GRADE) 13041 TONNE 7629 TONNE BENEFICIABLE 3c Recovery of sailable/usable BENEFICIABLE ORE mineral from ROM ORE + 6521 production TONNE MINERAL REJECT CONSIDERED AS SUB-GRADE = 19562 TONNE ROM 3d Quantity of 6521 TONNE NIL mineral reject MINERAL REJECT CONSIDERED AS generation SUB-GRADE 3e Grade of mineral THRESHOLD SAME IS MAINTAINED. rejects VALUE OF generation and GRAPHITE ORE threshold value IS 3% F C. declared. MINERAL REJECT CONTAINING +3% TO - 5% F C IS CONSIDERED AS SUB-GRADE ORE. 3f Quantity of sub 6521 TONNE NIL grade mineral generation. Grade of sub +3 % TO - 5% F SAME IS MAINTAINED 3q grade mineral С generation Manual / MANUAL AS WELL MANUAL 3h Mechanised AS MECHANISED method adopted for segregating from ROM

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	MINERAL REJECT CONSIDERED AS	GENERATION OF MINERAL REJECT / SUB-GRADE DURING 2016-17: NIL
3j	Provision of drilling and blasting in mineral benches	OF DRILLING AND BLASTING IN MINERAL BENCHES. AT PLACES, WHERE HARD ROCH IS COUNTERED, DRILLED BY DTH DRILL OF 100 MM DIA AND BLASTED BY HIGH / POWER	OF 100 MM DIA ASSOCIATED WITH COMPRESSOR OF CAPACITY
3k	Provision of mining machineries in mineral benches	WAGON DRILL (100 MM) AND COMPRESSOR (350 CFM) FOR DRILLING HYDRAULIC EXCAVATOR (0.9CUM BUCKET CAPACITY) , JCB / FRONT- END LOADER &TIPPER (10 TONNE)	WAGON DRILL 100 mm DIA, COMPRESSOR 350 cfm FOR DRILLING HYDRAULIC EXCAVATOR 0.9 CUM , JCB / FRONT-END LOADER & TIPPER 10 TONNE ARE USED.
31		BENCHES IN OB AND MINERAL 5	5 M HEIGHT IN OB & MINERAL SUITABLE FOR METHOD OF MINING AS PROPOSED IN S O M.
3m	Total area covered under excavation/pits	0.250 HA	0.250 HA AREA COVERED UNDER EXCAVATION.

3n	Ore to OB ratio for the pit/mine during the year.	1 : 4.1	1 : 2.0	
30	Total area put in use under different heads at the end of year	UNDER O/C WORKING : 0.250 HA, USED FOR WASTE DISPOSAL: 0.240 HA & OCCUPIED BY ROAD & BUILDING : 0.710 HA	O / C WORKING : 0.250 HA, USED FOR WASTE DISPOSAL: 0.240 HA & OCCUPIED BY ROAD ETC: 0.710 HA	
đξ	Production of ROM mineral during the last five year period as applicable	2016-17: 19562 TONNE, 2017-18 TO 2020-21: 21357 TONNE EVERY YEAR		MINE RE-OPENED ON 24.08.2015 AFTER CLEARANCE E C.
3q	General remarks of inspecting officers on method of mining etc.			OPEN CAST METHOD OF MINING IS ADOPTED IN THE MINE WITH THE DEPLOYMENT OF MACHINES LIKE JACK-HAMMER DRILL, WAGON DRILL, COMPRESSOR, HYDRAULIC EXCAVATOR, FRONT- END LOADER, TIPPER ETC. HEIGHT AND WIDTH OF THE BENCHES KEPT AT 5 M AND 8 M RESPECTIVELY. WHEREEVER HARD ROCK PATCHES ARE ENCOUNTERED, BLASTING IS CARRIED OUT FOR EASE IN EXCAVATION WITH BURDEN & SPACING OF 1.75 M & 2.40 M RESPECTIVELY. ROM ORE & OB ARE EXCAVATED & LOADED IN THE TIPPER BY 0.9 CUM CAPACITY EXCAVATOR.

Solid	Waste	Management	-	Dumping:
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Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	SEPARATELY DUMPING OF TOP SOIL, OB & MINERAL REJECTS PROPOSED.	SEPARATELY DUMPED.	
4b	Location of topsoil, OB and mineral reject dumps	SOUTHERN SIDE OF THE LEASE	SEPARATE DUMP OF OB, MINERAL REJECTS CONSIDERED AS SUB-GRADE AND TOP SOIL	
4c	Number of dumps within lease area and outside of lease area		TWO DUMPS WITHIN LEASE AREA AND NO DUMP OUTSIDE OF LEASE AREA.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	BEYOND ULTIMATE PIT LIMIT	BEYOND ULTIMATE PIT LIMIT	
4e	Number of active and alive dumps.		TWO ACTIVE DUMPS	
4f	Number of dead dumps.	NO DEAD DUMP	NIL	
4h	Whether Retaining wall or garland drain all along dumps are there.	350 M AND GARLAND DRAIN	NOT CONSTRUCTED.	VIOLATION UNDER RULE 11(1) OF MCDR, 2017 FOR NG CONSTRUCTING RETAINING WALL & GARLAND DRAIN AS PER PROPOSAL , HI BEEN POINTED OUT TO THE LESSEE.
4i	Length of Retaining wall or garland drain all along dumps	RETAINING WALL : 350 M AND GARLAND DRAIN : 250 M	NIL	
4j	Number of settling ponds	ONE	NIL	
4k	Specific comments of inspecting officer on waste dump management		TWO DUMPS ONE APPROXIMATELY 10 FEET HEIGHT ANOTHER APPROXIMATELY 30 FEET HEIGHT , AFTER RE-OPENING OF THE MINE ON 24.08.2015. RETAINING WALL & GARLAND DRAIN HAVE NOT BEEN CONSTRUCTED AROUND THE DUMP TO ARREST THE WASH	VIOLATION UNDER RULE 11(1) OF MCDR, 2017 FOR NO CONSTRUCTING RETAINING WALL & GARLAND DRAIN AS PER PROPOSAL HAS BEEN POINTED OUT TO THE LESSEE.

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	NO PROPOSAL	NIL,	PART OR FULL EXTRACTION OF MINERAL FROM MINE NOT COMPLETED. SINCE MINERAL HAS NOT BEEN EXHAUSTED FROM MINE , BACKFILLING DOES NOT ARISE.
5b	Area under backfilling of mined out area	NO PROPOSAL	NIL	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	NO PROPOSAL	NIL	
5d	Total area fully reclaimed and rehabilitated	NO PROPOSAL	NIL	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			MINERAL HAS NOT BEEN EXHAUSTED FROM THE MINE. MINE IS NOT MATURED FOR BACK FILLING.

Solid Waste Management - Backfilling:

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).	NOT SUBMITTED	NO WORK DONE	VIOLATION UNDER RULE 26(2) OF MCDR, 2017 FOR NOT SUBMITTING ANNUAL REPORT ON PMCP, HAS BEEN POINTED OUT TO THE LESSEE.
6b	Area available for rehabilitation (ha) .	NO PROPOSAL	NIL	

6c	afforestation done (ha).	250 NUMBER SAPLINGS TO BE PLANTED OVER 0.140 HAAREA DURING 2016-17	65 PLANTATION DONE	
6d	No. of saplings planted during the year	250 SAPLINGS PROPSED TO BE PLANTED DURING 2016-17	65 NO PLANTATION DONE	
бе	Cumulative no .of plants	350 NO. OF PLANTATION	596 NO. OF PLANTATION	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		MINE RE-OPENED ON 24.08.2015 AFTER DISCONTINUANCE SINCE 2009. ANNUAL RETURN ON PMCP NOT SUBMITTED FOR THE YEAR 2016-17.	VIOLATION UNDER RULE 26 (2) OF MCDR, 2017, HAS BEEN POINTED OUT TO THE LESSEE, FOR NON-SUBMISSION OF ANNUAL RETURN ON PMCP CUMULATINE PLANTATION DONE 596 NOS OVER AN AREA 0.238 HA. VIOLATION UNDER RULE 11(1) OF MCDR, 2017 FOR NOT CONSTRUCTING RETAINING WALL & GARLAND DRAIN , HAS BEEN POINTED OUT.

Mineral Conservation:

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Sl.No.	Item	Propasals	Actual work	Remarks

7a ROM Mineral 2016-17: 19562 2016-17: 7629.9 TONNE dispatch or TONNE (13041 2017-18: 3578.5 TONNE grade-wise T BENEFICIABLE UPTO JULY, 2017. sorting within ORE + 6521 T lease area MINERAL REJECT CONSIDERED AS SUB-GRADE) 2017-18: 21357 TONNE (14238 T BENEFICIABLE ORE + 7119 T MINERAL REJECT CONSIDERED AS SUB-GRADE) 7b Method of grade- MANUAL MANUAL wise mineral sorting i.e. manual or mechanical. 7c Different grade GRAPHITE GRAPHITE ORE OF THIS ORECONTAINING MINE IS LOW GRADE TYPE of mineral sorted out at MORE THAN 5% AND CONTAINS 6.35% FC FC PROPOSED ON AN AVERAGE. mines. TO BE MINERAL REJECT OF GRADE BENEFICIATED +3% TO - 5% FC DIRECTLY AS CONSIDERED AS SUB-GRADE. BENEFICIABLE ROM ORE. THRESHOLD VALUE OF GRAPJITE ORE IS 3% F C. 7d AT MINE NO GRAPHITE ORE PRODUCED Any beneficiation BENEFICIATION FROM MINE OF GRADE 6.35% F C ON AN AVERAGE IS process at mines PROCESS. BENEFICIATED IN THE BENEFICIATION PLANT LOCATED AT ADJACENT LEASE AREA OF THE LESSEE FOR SEMI-ENRICHMENT OF GRAPHITE.

MOSTLY IN RAINY

SEASON

General remarks of inspecting officer on Mineral conservation and beneficiation issues

7e

CUT-OFF GRADE IS 5% FC. THRESHOLD VALUE OF GRAPHITE ORE IS 3% FC GRADE +3% TO - 5% F C CONSIDERED AS SUB-GRADE , INITIALLY STACKED AND SUBSEQUENTLY BENEFICIATED FOR SEMI-ENRICHMENT IN LEAN PERIOD

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	SOIL PROPOSED	600 CUM	
8b	Concurrent use or storage of topsoil	6135 CUM TOPSOIL PROPOSED TO BE STORED DURING 2016-17.	600 CUM	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	SEPARATE DUMP FOR OB AND MINERAL REJECT PROPOSED	TWO OB DUMPS HAVE BEEN CONSTRUCTED AND ONE MINERAL REJECT DUMP CONSIDERED AS SUB-GRADE.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	250 NUMBER OF SAPLINGS PROPOSED TO BE PLANTED DURING 2016-17 OVER 1000 SQM AREA	65 NO. OF SAPLINGS PLANTED DURING 2016-17.	

Water sprinkling WATER WATER IS SPRINKLED ON 8h on roads to SPRINKLING ON ROADS TO CONTROL control airborne ROAD PROPOSED AIRBORNE DUST. dust 8i General remarks CUMULATIVE 365 NO OF MINING WORKING IS TREES HAVE BEEN PLANTED ON A VERY SMALL of inspecting officer on OVER AN AREA 0.146 HA IN SCALE. aesthetic beauty SIDE LEASE AND AESTHETIC BEAUTY in and around 231 NO. OF TRRES HAVE IN AND AROUND MINE BEEN PLANTED OVER 0.092 mines area HAS BEEN HA OUT SIDE MINING LEASE MAINTAINED AND IS SATISFACTORY.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	MINE ON 10.08.2017. MONTHLY RETURN FOR THE MONTH	IN THE MONTHLY RETURN OF JULY, 2017 THE PRODUCTION REPORTED AS 1971.300 TONNE. IN THE ANNUAL RETURN OF THE YEAR 2016-17, THE PRODUCTION REPORTED AS 7629.900 TONNE.	NUMBER OF DAYS THE MINE WORKED DURING THE YEAR 2016-17 : 294 DAYS
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	MANAGER SHRI NIRMAL KUMAR HAS BEEN APPOINTED.	NO MINING ENGINEER AND NO GEOLOGIST HAS BEEN APPOINTED.	VIOLATION UNDER RULE 55.3.(iii) OF MCDR, 2017 FOR NOT APPOINTING MINING ENGINEER & GEOLOGIST HAS BEEN POINTED OUT TO THE LESSEE.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	HA, USED FOR WASTE DISPOSAL : 0.240 HA AND	SAME AS REPORTED THE ANNUAL RETURN.	

9d	Scrutiny of Annual return on afforestation	TREES PLANTED	SAME AS MENTIONED IN THE A R.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	: 7629.900	SAME AS REPORTED IN THE A R.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Rs.2234070 /- Ex- MINE PRICE : Rs.300 /-	SAME AS REPORTED IN THE A R.
9h	Scrutiny of Annual return on fixed assets	MENTIONED AS	FIXED ASSETS MENTIONED AS 0
9k	Scrutiny of Annual return on mining machineries		NO MINING MACHINERY.

	Violatior	n observed		Show co	ouse position
Rule N	ю.	Issued on	Compliance on	Rule NO.	Issued on Compliance on
MCDR17	Rule 11(1)	18/08/2017			
MCDR17	Rule 26(2)	18/08/2017			
MCDR17	Rule 31(1)	18/08/2017			

Date :

(NARENDRA MOHAN DEY)

Indian Bureau of Mines