INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON-MN/KJR/MCDR-83/BBS Mine code : 300RI08104 (i) Name of the Inspecting : DEY) NARENDRA MOHAN DEY Officer and ID No. (ii) Designation : Assistant Mining Engineer (iii) Accompaning mine : SHRI P C DAS, MINING MATE AND SHRI S DAS Official with Designation (iv) Date of Inspection : 14/07/2016 (v) Prev.inspection date : 24/01/2016 PART-I : GENERAL INFORMATION 1. (a) Mine Name : DALPAHAR (4.84H) (b) Registration NO. : IBM / 476 / 2011 : A Fully Mechanised (C) Category (d) Type of Working : Opencast Postal address (e) : ORISSA State District : KEONJHAR Village : DALPAHAR : BARBIL Taluka Post office : VICHAKUNDI Pin Code : 758035 FAX No. : 06767-273089 E-mail : rbdas@yahoo.in Phone : 0671-2617676 (f) Police Station : : 07/07/2010 (g) First opening date Weekly day of rest : (h) 2. Address for : PO- DALPAHAR correspondance DISTT- KEONJHAR ORISSA (a) Lease Number : ORI0886 3. (b) Lease area : 4.84 (c) Period of lease : 30 (d) Date of Expiry : 06/01/2040 Mineral worked Associated 4. : MANGANESE ORE IRON ORE Associated

5. Name and Address of the

Lessee	:	SRI R.B. DAS
		KUNDRUPANI IRON-MN MINE
		DIST: KEONJHAR ORISSA
		KEONJHAR ORISSA
		Phone:
		FAX :
Owner	:	R.B.DAS
		S.C.NAYAK (COMPLEX) AT/PO:
		JODA KEONJHAR ORISSA

Phone:

FAX : 6. Date of approval of Mining : Modif.of approved Mining Plan 23/05/2011 Plan/Scheme of Mining Mining Scheme rule 12 MCDR1988 30/07/2015

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
la	Backlog of previous year	8 BH DURING 2015-16	NIL	MINING OPERATION WAS SUSPENDED NEARLY 10 MONTHS FROM 01.04.2015 TO 23.09.2015 BY GOVT. OF ODISHA AND FROM 12.12.2015 TO 31.03.2016 BY IBM,
1b	Exploration over lease area for geological axis 1 or 2	2016-17: 10	2015-16: NIL TOTAL LEASE AREA 4.840 HA HAS ALREADY BEEN EXPLORED UNDER G2 LEVEL AS PER UNFC NORMS . DURING 2014-15 NUMBER OF BH DRILLED 6 WITH GRID INTERVAL 100 M ALONG THE STRIKE METERAGE DRILLED 120 M OVER TOTAL LEASE AREA 4.84 HA.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year		EXPENDITURE INCURRED Rs.586312 /- (Rs 467712 /- FOR DRILLING + Rs.118650 /- FOR SAMPLING & CHEMICAL ANALYSIS)	
1d	Balance area to be explored to bring Geological axis in 1 or 2	2015-16: 8 2016-17:10 TO KNOW THE DEPTH WARD CONTINUITY OF ORE , CONVERT RESOURCE / RESERVE FROM G2 TO G1	2015-16 : NIL	AS THE MINING OPERATION WAS SUSPENDED NEARLY 9 MONTHS DURING 2015-16, EXPLORATION WAS NOT CARRIED OUT.
le	Balance reserve as on 01/04/20		RESERVE AS ON 25.12.2014 AS PER SCHEME OF MING APPROVED ON 30.07.2015. IRON :122: 68310 MT + 222 : 154170 MT = 222480 MT (+ 45% FE) MANGANESE : 122 : 126204 MT + 222 : 106314 MT = 232518 MT (+10% MN))

1f General remarks of inspecting officers on geology, exploration etc

TOTAL LEASE AREA 4.84 HAS ALREADY BEEN EXPLORED UNDER G2 LEVEL AS PER UNFC. TO KNOW THE DEPTH WARD CONTINUITY OF ORE, CONVERT RESOURCE / RESERVE FROM G2 TO G1 , EXPLORATION PROPOSAL TO DRILL 18 BH IN THE ENTIRE LEASE AREA DURING 2015-16 (8BH) AND 2016-17 (10BH) AT 50 M TO 100 M INTERVAL.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	QUARRY -1 MANGANESE ORE ZONE	QUARRY - 1 MANGANESE	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	BENCH NO OB BENCH	BENCHES IN ORE 3 NOS IN MANGANESE QUARRY -1.	
2c	Stripping ratio or ore to OB ratio	IRON ORE : 1 : 0.30 MANGANESE : 1 : 2.37	IRON ORE NO PRODUCTION MANGANESE : 1 : 2.55	MINING OPERATION WAS SUSPENDED FOR NEARLY 9 MONTHS FROM 01.04.2015 TO 23.09.2015 AND 12.12.2015 TO 31.03.2016.
2d	Quantity of topsoil generation in m3	NO PROPOSAL	NIL	
2e	Quantity of overburden generation in m3	: 2650 CUM	IRON ORE ZONE NIL MANGANESE ZONE: 7446 CUM AND CUMULATIVE 38655 CUM.	MINING OPERATION WAS SUSPENDED FOR NEARLY 9 MONTHS

2f	General remarks of inspecting	IRON ORE QUARRY 2 & 3	NO WORK IN IRON ORE QUARRY	MINING OPERATION WAS UNDER
	officers on	MANGANESE	NEARLY 3 MONTHS WAS IN	SUSPENSION FROM
	development of	QUARRY 3	OPERATION IN MANGANESE	01.04.2015 TO
	pit w.r.t. type		QUARRY 1	23.09.2015 AND
	of deposit etc			12.12.2015 TO
				31.03.2016.
				SO DEVELOPMENT OF
				PIT WAS VERY LESS
				IN MANGANESE AND
				NO WORK IN IRON
				QUARRY.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	IRON ORE ZONE QUARRY 2 & 3 MANGANESE QUARRY 1	MANGANESE QUARRY 1 FOR NEARLY 3 MONTHS NO WORK IN IRON QUARRIES	MINING OPERATION WAS SUSPENDED FOR NEARLY 9 MONTHS
3b	Quantity of ROM mineral production proposed	IRON : 11475 MT MANGANESE : 20384 MT	MANGANESE : 5615 MT	MINING OPERATION WAS SUSPENDED FOR NEARLY 9 MONTHS
3c	Recovery of sailable/usable mineral from ROM production		IRON : NIL MANGANESE: BELOW 25 % MN : 5584 MT 25% TO 35% MN : 27 MT 35% TO 46% MN: NIL DIOXIDE : 4.5 MT	
3d	~ 1	IRON : 225 CUM MANGANESE: 560 CUM	NIL	
3e	Grade of mineral rejects generation and threshold value declared.	THAN 45% FE	NIL	

3f	Quantity of sub grade mineral generation.	SUB-GRADE IRON ORE / MINERAL REJECTS ARE NOT SALEABLE AT PRESENT DUE TO ITS GRADE : 225 CUM SUB GRADE MANGANESE / MINERAL REJECTS ARE INTERMITTENTLY SALEABLE: 560 CUM	NIL
3g	Grade of sub grade mineral generation	IRON ORE : 45% FE TO - 55% FE MANGANESE : LESS THAN 10% MN	NIL
3h	Manual / Mechanised method adopted for segregating from ROM		MANUAL FOR MANGANESE
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	STUDY PROPOSED	SUB GRADE IRON ORE (+ 45% TO -55% FE) / MINERAL REJECTS STACKED FOR SALE IN FUTURE BEFORE OR AFTER BLENDING DEPENDING UPON THE MARKET DEMAND . FINES GENERATED DURING CRUSHING AND SCREENING STACKED SEPARATELY AND DESPATCHED ON MARKET DEMAND MANGANESE ORE LUMPS OF VARIOUS SIZES PREPARED MANUALLY WITH THE HELP OF HAMMER
3k	Provision of mining machineries in mineral benches	OF CAPACITY 0.9 CUM,	CAPACITY 0.9 CUM, DUMPER 2 NOS OF CAPACITY 10 TONNE AND FRONT END LOADER 1 NO OF CAPACITY

31 Whether height NO OF BENCHES IN ORE : 3 NO OF OB of benches in BENCHES NIL HEIGHT 6 M, WIDTH 6 M overburden and NO OF BENCHES SUITABLE FOR METHOD OF mineral suitable IN ORE : 3 MINING AS PROPOSED IN HEIGHT 6 M THE SOM for method of mining proposed WIDTH 6 M in MP/SOM Total area 1.481 HA 1.481 HA 3m covered under excavation/pits Ore to OB ratio IRON ORE : 1: MANGANESE : 1 : 2.55 3n for the pit/mine 0.65 during the year. MANGANESE : 1: 2.55 Production of IRON ORE : PRODUCTION IS IN 3p IRON ORE : ROM mineral 2010-11: 60165 2010-11: 58355 MT, 2011- LOWER SIDE DUE TO during the last MT, 2011-12: 12: 49570 MT, 2012-13: NON-AVAILABILITY 72965 MT, 2013-14: 26460 five year period 144113 MT, OF MORE SPACE FOR as applicable 2012-13: MT, 2014-15: 7455 MT , WASTE DUMPING 2015-16: NIL 142380 MT, 2013-14: MANGANESE : 120014 MT, 2010-11: 11011 MT, 2011-2014-15: 99068 12: 14757 MT, 2012-13: MT, 2015-16: 14936 MT, 2013-14: 10227 MT, 2014-15 : 6149 MT, 11475 MT MANGANESE: 2015-16: 5615 MT 2010-11: 30114 MT, 2011-12: 48132 MT, 2012-13: 48048 MT, 2013-14: 40026 MT, 2014-15: 40026 MT, 2015-16: 20384 MT 3q General remarks OTHER THAN OTHER THAN FULLY of inspecting FULLY MECHANISED METHOD officers on MECHANISED ON EIGHT HOURLY method of mining METHOD AND SHIFT BASIS INVOLVEMENT OF DEPLOYING BACK etc. HOE, DUMPER , MANUAL OPERATION FRONTEND LOADER AND ALSO MANNUALLY SIZING OF MANGANESE ORE LUMPS WITH THE HELP OF HAMMER

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	DUMPING SEPARATE	SEPARATE DUMPING OF OB AND MINERAL REJECTS	
4b	Location of topsoil, OB and mineral reject dumps	DUMPING PROPOSAL	OB / WASTE DUMP IN SIDE LEASE AREA AT ITS NORTHERN END PROVED BARREN , OUT SIDE ULTIMATE PIT LIMIT.	
4c	Number of dumps within lease area and outside of lease area	DUMPS DUMP -1,	NO DUMP OUT SIDE LEASE AREA. DUMP 4 & 5 ARE ON THE NON-MINELISED LAND.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	DUMP 4& 5 NEAR PILLAR C BEYOND ULTIMATE PIT LIMIT	DUMP 4& 5 NEAR PILLAR C BEYOND ULTIMATE PIT LIMIT	
4e	Number of active and alive dumps.	DUMP 4& 5	DUMP 4 & 5	
4f	Number of dead dumps.	NIL	NIL	

4g	Number of dumps established.	EXISTING DUMP 3 PROPOSED DUMP 2	DUMP 4 & 5	
4h	Whether Retaining wall or garland drain all along dumps are there.	AND GARLAND	RETAING WALL AND GARLAND DRAIN HAVE BEEN CONSTRUCTED AROUND DUMP NO.4 & 5	
4i	Length of Retaining wall or garland drain all along dumps	RETAINING WALL / GARLAND		MINING OPERATION WAS SUSPENDED FOR NEARLY 9 MONTHS.
4j	Number of settling ponds	ONE	ONE	
4k	Specific comments of inspecting officer on waste dump management	DUMP 4 & 5	BESIDE EXISTING DUMP 1,2 & 3 DUMP 4 & 5 HAVE BEEN CONSTRUCTED. ON THE NON- MINERALISED ZONE. TOTAL AREA COVERED DUMP 0.396 HA OB REMOVED DURING THIS TEAR 4964 CUM	RETAINING WALL, GARLAND DRAIN & SETTLING TANK HAVE BEEN MADE. OVER NON - MINERALISED LAND

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.	NO PART OR FULL EXTRACTION OF MINERAL	NIL	
5b	Area under backfilling of mined out area	500 SQ M.	NIL	MINE WAS UNDER SUSPENSION FOR NEARLY 9 MONTHS.

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.		

PROPOSAL FOR BACK FILLING 500 SQ.M MINED OUT AREA . DURING 2015-16. BUT DUE TO SUSPENSION OF MINING OPERATION FOR NEARLY 9 MONTHS , THE SAME WAS NOT DONE.

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).	RECEIVED	ANNUAL REPORT ON PMCP UNDER RULE 23E (2) HAS BEEN RECEIVED.	
6b	Area available for rehabilitation (ha) .	0.075 НА	0.01 HA	
бс	afforestation done (ha).	0.075 НА	0.01 HA	
6d	No. of saplings planted during the year	188 SAPLINGS	300 SAPLINGS	
бе	Cumulative no .of plants		1669 NO OF TREES OVER 0.281 HA	
6f	Any other method of rehabilitation	NO	NO	
бд	Cost incurred on watch and care during the year			

Compliance of ENVIRONMENTAL ENVIRONMENTAL MONITORING бр environmental MONITORING ON WATER, AIR & NOISE monitoring (core PROPOSED ARE BEING CARRIED OUT . zone and buffer zone) General remarks 1669 NOS TREES бq of inspecting HAVE BEEN PLANTED officers on PMCP OVER AN AREA 0.281 compliance and HA , RETAINING progressive WALL, GARLAND closure DRAIN & SETTLING operations etc. TANK HAVE BEEN CONSTRUCTED.MINING OPERATION WAS SUSPENDED FOR NEARLY 9 MONTHS.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	IRON ORE : 11475 MT MANGANESE : 20384 MT	IRON ORE NIL MANGANESE : 5615.500 MT GRADE - WISE : BELOW 25% MN : 5584 MT , 25% TO - 35% MN : 27 MT , DIOXIDE ORE : 4.500 MT	MINE WAS UNDER SUSPENSION FOR NEARLY 9 MONTHS FROM APRIL,2015 TO SEPTEMBER, 2015 AND DECEMBER, 2015 TO MARCH, 2016.
7b	Method of grade- wise mineral sorting i.e. manual or mechanical.	MECHANICAL	MANGANESE : MANUAL	
7c	Different grade of mineral sorted out at mines.	FINES OF BELOW	MANGANESE : BELOW 25% MN, 25 TO -35% MN, DIOXIDE ORE.	

7d	Any beneficiation process at mines			SUB-GRADE IRO ORE (+ 45% TO -55% FE) / MINERAL REJECT STACKED SEPARATELY FOR SALE IN FUTURE BEFORE OR AFTER BLENDING DEPENDING UPON MARKET DEMAND.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	SUSPENSION OF MINING OPERATION WAS ISSUED ON 07.12.2015 FOR STACKING OF MINERAL IN THE	NOW THE LESSEE HAS APPLIED VIDE THEIR LETTER NO. DIMM/IBM/F- 01/2016-17 DATED 16.12.2016 FOR FULL REVOCATION OF ORDER OF SUSPENSION INTIMATING COMPLIANCE OF VIOLATIONS THE SAME IS UNDER PROCESS.	SUB-GRADE ORE (+45% FE TO -55% FE) / MINERAL REJECT STACKED SEPARATELY FOR SALE IN FUTURE BEFORE OR AFTER BLENDING DEPENDING UPON THE MARKET DEMAND. RUN -OFF IRON ORE RAISED FROM THE MINE SCREEN (150 TPH) FOR SEPARATION OF IRON ORE INTO VARIOUS SIZES

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	NO PROPOSAL	NIL	
8b	Concurrent use or storage of topsoil	NO PROPOSAL	NIL	

8c Separate dumps YES SEPARATE DUMPS FOR OB / for overburden, WASTE , THREE EXISTING waste rock, DUMPS DUMP 1,2 &3 AND rejects and TWO NEW DUMPS DUMP 4 & fines (Rule 33) 5. SUB GRADE FE ORE / MINERAL REJECT STACKED SEPARATELY 8d Use of PROPOSAL FOR NOT DONE MINE WAS UNDER overburden, BACK FILLING SUSPENSION NEARLY 9 MONTHS waste rock, 500 SQ.M MINED rejects and OUT AREA fines dumps for DURING 2015-16 restoring the land to its original use 8f Baseline THE ENTIRE ML AREA 4.84 information on HA IS LOCATED IN RESERVE existence of FOREST. plantation and ADDITIONAL PLANTION DONE additional 1669 NOS OVER AN AREA 0.281 HA INSIDE MINING plantation done (Rule 41) LEASE. 8g Survival rate 80 % WATER IS BEING SPRINKLED 8h Water sprinkling THERE IS ON ROADS TO CONTROL on roads to PROPOSAL control airborne AIRBORNE DUST. dust THE ENTIRE ML AREA 8i General remarks 4.84 HA IS LOCATED of inspecting IN RESERVE FOREST. officer on aesthetic beauty ADDITIONAL in and around PLANTATION HAS mines area BEEN DONE 1669 NOS OVER 0.281 HA INSIDE LEASE AND AESTHETIC BEAUTY HAS BEEN ENHANCED IN AND AROUND THE MINE.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks

Status of 9a SUBMITTED. I HAVE INSPECTED THE submission of MINE ON 14.07.2016. Monthly and MONTHLY RETURN FOR THE Annual returns MONTH OF JUNE, 2016 SUBMITTED. ANUUAL RETURN FOR THE YEAR 2015-16 SUBMITTED. 9b Scrutiny of SHRI A P MOHANTY, MINING ENGINEER, SHRI S Annual return MOHANTY, GEOLOGIST AND for information SHRI M K SAHU, MANAGER on Mining Engineer, HAVE BEEN APPOINTED. Geologist and Manager AREA UNDER PITS : 1.481 9c Scrutiny of HA, USED FOR WASTE Annual return on land use pattern DISPOSA; : 0.396 HA, for area under ROAD & BUILDING ETC : pits, reclaimed 0.253 HA area, dumps etc. 9d Scrutiny of NO OF TREES PLANTED 300 Annual return on afforestation 9e Scrutiny of NIL Annual return on mineral reject generation (Grade and quantity) 9f Scrutiny of ROM STOCK : IRON ORE : Annual return on NIL ROM stock and/or GRADED ORE STOCK : graded ore LUMP: -55% FE: 9372 MT , +55 TO -58% FE : 573 MT, +58 TO -60 % FE: 820 MT , +60 TO -62% FE: 93 MT, +62TO -65% FE: 4 MT. +65% FE & ABOVE : NIL FINES: -55% FE: 52037 MT, +62% FE TO -65% FE : 81 MT ROM STOCK : MANGANESE : NIL GRADED ORE STOCK : BELOW 25% MN : 6120 MT,

> +25 TO -35% MN : 353 MT, +35 TO -46% MN : 169 MT, DIOXIDE ORE : 37 MT

9g Scrutiny of MANGANESE: Annual return on SALE VALUE : RS.3564024 sale value, Ex. /- FOR QUANTITY 2501 Mine price and TONNE GRADE BELOW 25% production cost MN Rs.3560761 /- FOR QUANTITY 2499 TONNE GRADE BELOW 25% MN EX-MINE PRICE : BELOW 25% MN : Rs.1055/-, +25 TO -35% MN : Rs. 4300 /-+35 TO -46% MN : Rs 9240 /-, DIOXIDE ORE : Rs 24000 /-. PRODUCTION COST : Rs.1564.29 /-9h FIXED ASSETS : Rs.520657 Scrutiny of Annual return on / fixed assets 9k Scrutiny of BACK HOE 1 NO OF Annual return on CAPACITY 0.9 CUM, DUMPER 2 NOS OF CAPACITY 10 mining machineries TONNE, FRONT END LOADER 1 NO OF CAPACITY 1.2 CUM, GENERATOR (DIESEL) 1 NO OF CAPACITY 25 KWH.

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

Date :

(NARENDRA MOHAN DEY)

Indian Bureau of Mines