

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/SNG/MCDR-12/BBS/13/01

Mine code : 30ORI13018

- (i) Name of the Inspecting : **DEY**) **NARENDRA MOHAN DEY**
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine : **SHRI T C SEI, GENERAL MANAGER** , **SHRI H K SAHOO, MINE**
Official with
Designation
- (iv) Date of Inspection : 17/07/2016
- (v) Prev.inspection date : 04/08/2015

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **RAIKELA**
- (b) **Registration NO.** : **IBM/135/2011**
- (c) Category : A Manual
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : RAIKELA
- Taluka : BONAI
- Post office : DENGULA
- Pin Code :
- FAX No. : 06767- 275362
- E-mail : snmbbsr@sify.com / snmbblc
- Phone : 36767-212164 / 277530
- (f) Police Station : koira
- (g) First opening date : 03/04/1982
- (h) Weekly day of rest : SAT
2. Address for : RAIKELA IRON MINES OF S.N.MOHANTY
correspondance AT-RAIKELA
PO-PENGULA, DIST-SUNDERGARH
3. (a) Lease Number : ORI0149
- (b) Lease area : 18.15
- (c) Period of lease : 30
- (d) Date of Expiry : 02/04/2012
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : S.N.MOHANTY
 STATION ROAD AT/PO:BARBIL
 PO NO.21 KEONJHAR ORISSA
 Phone:30362 (OFFICE),30254(R)
 FAX :

Owner : PROBODH MOHANTY
 PROBODH MOHANTY,MINES OWN
 AT-STATION ROAD,BARBIL
 DIST-KEONJHAR.758035
 KEONJHAR ORISSA
 Phone:
 FAX :

Agent : T.C.SEI
 M/S BISRA STONE LIME CO LTD
 BIRAMITRAPUR SUNDARGARH
 ORISSA
 Phone:
 FAX :

Mining Engineer

Name : LALIT KUMAR BEURIA,Full Time
 Qualification : BACHLOR ENGG
 Appointment/ : 19/05/1997
 Termination date

Manager

Name : P.N.NAIK
 Qualification : PERMIT MANAGER
 Appointment/ : 03/12/1996
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	30/11/1998
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	12/04/2005
		Mining Scheme rule 12 MCDR1988	15/12/2008

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	MINING PLAN WAS APPROVED ON 27.02.2012 FOR THE PERIOD 2012-13 TO 2016-17. EXPLORATION PROPOSAL WAS AS FOLLOWS: 2012-13: TWO BH, 2013-14 : ONE BH, 2014-15 TO 2016-17 : NO PROSAL.	NO BH DRILLED DURING 2012-13 AND 2013-14 AS PROPOSED.	MINING OPERATION HAS BEEN STOPPED WITH EFFECT FROM .3.04.2012 BY DDM, KOIRA DUE TO COMPLETION OF ML PERIOD ON 02.04.2012 AND DUE TO WANT OF STATUTORY CLEARANCE.. NOTICE OF TEMPORARY DISCONTINUANCE HAS BEEN SUBMITTED TO IBM. IN THE MEANTIME LESSEE HAS OBTAINED ALL THE STATUTORY CLEARANCES , THEY WILL RESUME THE MINING OPERATION AFTER GETTING CLEARANCE FROM GOVT.
1b	Exploration over lease area for geological axis 1 or 2	DURING 2012-13 AND 2013-14 PROPOSAL WAS TWO BH AND ONE BH RESPECTIVELY. THERE WAS NO PROPOSAL FOR THE PERIOD 2014-15 TO 2016-17.	NO BH WAS DRILLED DURING 2012-13, 2013-14 , 2014-15, 2015-16. HOWEVER LESSEE HAS DRILLED PREVIOUSLY CUMULATIVE 12 NO. BH AT A GRID INTERVAL 100 M UPTO A MAX DEPTH 50 M AND MIN DEPTH 20 M WITH TOTAL METERAGE 344 M OVER AN AREA 14 HA OUT OF TOTAL LEASE AREA 18.315 HA.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year		NO INFORMATION.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	4.315 HA	NIL	MINING OPERATION HAS BEEN STOPPED / DISCONTINUED SINCE 03.04.2012.

1e	Balance reserve as on 01/04/20	AS PER UNFC 111: 3101625 MT + 121: 348750 MT = 3450375 MT 221: 293625 MT + 222: 81000 MT = 374625 MT AS PER MINING PLAN APPROVED ON 27.02.2012 AND ANNUAL RETURN 2015- 16.	NO PRODUCTION SINCE 03.04.2012.
1f	General remarks of inspecting officers on geology, exploration etc		OUT OF TOTAL LEASE AREA 18.315 HA LESSEE HAS ALREADY CARRIED OUT EXPLORATION OVER 14 HA. FOR BALANCE AREA LESSEE HAS PROPOSED EXPLORATION. PRESENTLY MINING OPERATION HAS BEEN STOPPED / DISCONTINUED SINCE 03.04.2012.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	NORTH SIDE OF THE LEASE	NO WORK SINCE 03.04.2012 DUE TO SUSPENSION OF MINING OPERATION.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	SEPARATE BENCHES IN OB AND MINERAL	SEPARATE BENCHES IN OB 2 NOS AND IN ORE 1 NO	
2c	Stripping ratio or ore to OB ratio	1 : 0.066	NIL NO WORK SINCE 03.04.2012.	
2d	Quantity of topsoil generation in m3	NIL	NIL	
2e	Quantity of overburden generation in m3	11400 CUM	NIL NO WORK SINCE 03.04.2012	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	DEVELOPMENT OF PIT WITH REFERENCE TO TYPE OF DEPOSIT HAS BEEN CARRIED OUT PRIOR TO 03.04.2012 i.e DATE OF SUSPENSION / DISCONTINUATION OF MINING OPERATION. AFTER THAT NO MINING OPERATION HAS BEEN CARRIED OUT.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	ONE	NO WORK SINCE APRIL 2012	
3b	Quantity of ROM mineral production proposed	187200 MT	NIL NO WORKING SINCE APRIL 2012.	
3c	Recovery of sailable/usable mineral from ROM production	187200 MT	NIL NO WORK SINCE APRIL 2012.	
3d	Quantity of mineral reject generation	NIL	NIL	
3e	Grade of mineral rejects generation and threshold value declared.	NIL	NIL	
3f	Quantity of sub grade mineral generation.	8320 CUM	NIL NO WORKING SINCE APRIL 2012	
3g	Grade of sub grade mineral generation	MORE THAN 45% FE TO LESS THAN 55% FE ACCOUNTED FOR SUB-GRADE	NIL NO WORKING SINCE APRIL 2012.	

- 3h Manual / Mechanised method adopted for segregating from ROM MANUAL SIZING AND SORTING AT THE QUARRY SITE NO WORK SINCE APRIL 2016
- 3i Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. NO SUCH PROPOSAL. SUB-GRADE MINERAL ie +45% FE TO - 55% FE STACKED SEPARATELY AND MARKETED IN FUTURE AS PER CONSUMER DEMAND NIL NO WORK SINCE APRIL 2012.
- 3j Provision of drilling and blasting in mineral benches YES, FOR THE EXCAVATION OF IRON ORE DRILLING OF BLAST HOLES HAS BEEN PROPOSED BY JACK HAMMER DRILLS AND TO CARRY OUT BLASTING OPERATION CLASS -III(SPECIAL GELATIN 80% STRENGTH) AND CLASS -VI EXPLOSIVE (DETONATOR & SAFETY FUSE OF STANDARD LENGTH) HAS BEEN PROPOSED TO BE UTILISED IN THE MINE NIL NO WORK SINCE APRIL 2012.

3k	Provision of mining machineries in mineral benches	JACK HAMMER EXISTING 2 NOS HAVING 32 MM EXTRA REQUIRED 3 NOS COMPRESSOR EXISTING 1 NO CAPACITY 50 HP EXTRA REQUIRED 4 NOS TIPPERS EXISTING 5 NOS HAVING CAPACITY 10 T EACH EXTRA REQUIRED 12 NOS EXCAVATORS EXISTING 1 NO HAVING CAPACITY 0.9 CUM EXTRA REQUIRED 1 NO WATER TANKER EXISTING 1 NO HAVING CAPACITY 10 KL EXTRA REQUIRED 1 NO.	NO WORK SINCE APRIL 2012.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	YES, HEIGHT OF BENCHES IN OB IS 6 M AND IN MINERAL 6 M SUITABLE FOR METHOD OF MINING PROPOSED.	NO WORK SINCE APRIL 2012.
3m	Total area covered under excavation/pits	7.75 HA	5.11 HA CUMULATIVE NO WORK SINCE APRIL 2012.
3n	Ore to OB ratio for the pit/mine during the year.	1 : 0.066	NIL NO WORK SINCE APRIL 2016.

3o	Total area put in use under different heads at the end of year	COVERED UNDER OPENCAST WORKING : 5.952 HA + USED FOR WASTE DISPOSAL : 0.550 HA + OCCUPIED BY ROAD & BUILDING ETC: 0.90 HA + OTHER PURPOSES: 0.727 HA	SAME AS MENTIONED CUMULATIVE NO WORK SINCE APRIL 2012.	
3p	Production of ROM mineral during the last five year period as applicable	2012-13: 115200 MT, 2013-14: 133200 MT, 2014-15: 171000 MT, 2015-16: 187200 MT & 2016-17: 299880 MT	NIL NO WORK SINCE APRIL 2012 DUE TO SUSPENSION OF MINING OPERATION.	
3q	General remarks of inspecting officers on method of mining etc.	OTHER THAN FULLY MECHANISED METHOD	NO WORK	MINING OPERATION HAS BEEN SUSPENDED / DISCONTINUED WITH EFFECT FROM 03.04. 2012, SO PRODUCTION SINCE THEN.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	SEPARATE DUMPING OF OB INCLUDING INTERCALATED WASTE PROPOSED DURING 2015-16 : OB: 3840 CUM + INTERCALATED WASTE : 12480 CUM = 16320 CUM	NO WORK SINCE APRIL 2012.	

4b	Location of topsoil, OB and mineral reject dumps	WASTE DUMP ON THE SOUTHERN SIDE OF THE LEASE	NO WORK
4c	Number of dumps within lease area and outside of lease area	WITHIN LEASE AREA DUMP -1 AND DUMP -2 NO DUMP OUT SIDE LEASE AREA.	NO WORK SINCE 03.04.2012.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	LOCATION OF DUMPS BEYOND ULTIMATE PIT LIMIT	NO WORK SINCE APRIL 2012.
4e	Number of active and alive dumps.	2	DUMPS 2 NO ALIVE NO WORK SINCE APRIL 2012.
4f	Number of dead dumps.	NIL	NIL
4g	Number of dumps established.	ONE	ONE
4h	Whether Retaining wall or garland drain all along dumps are there.	RETAINING WALL AND GARLAND DRAIN ALL ALONG DUMPS HAVE BEEN CONSTRUCTED PROPOSAL FOR MAINTANANCE ONLY	NO WORK
4i	Length of Retaining wall or garland drain all along dumps	ALREADY EXISTING 530 M X 2 M X 2 M RETAINING WALL AND GARLAND DRAIN NO PROPOSAL FOR 2015-16 ONLY MAINTENANCE	NO WORK

4j	Number of settling ponds	THREE ALREADY CONSTRUCTED ADDITIONALLY 2 SETTLING TANK PROPOSED AROUND THE DUMP AND 3 SETTLING TANK PROPOSED AROUND THE QUARRY	NO WORK SINCE APRIL 2012.	
4k	Specific comments of inspecting officer on waste dump management	BESIDES EXISTING RETAINING WALL, GARLAND DRAIN AND SETTLING TANK, LESSEE HAS PROPOSED ANOTHER 5 SETTLING TANKS IN THE MINE AND THEIR MAINTENANCE.		SINCE NO MINING OPERATION WITH EFFECT FROM 03.04.2012 DUE TO SUSPENSION / DISCONTINUANCE , NO WORK HAS BEEN CARRIED OUT AS PROPOSED.

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.	AREA TO BE BACKFILLED OVER 1.241 HA DURING 2012-13 TO 2016-17 OVER THE EXHAUSTED QUARRY .	NO BACK FILLING AS NO MINING OPERATION SINCE APRIL 2012. HOWEVER THE BACK FILLING HAS BEEN CARRIED OUT IN THE SOUTHERN PART OF OLD EXISTING QUARRY OVER 1.7 HA OUT OF 2.797 HA AS PROPOSED DURING LAST SCHEME PERIOD 2008-09 TO 2011-12	
5b	Area under backfilling of mined out area	DURING 2015-16 PROPOSAL FOR BACK FILLING 0.131 HA	NIL NO WORK SINCE APRIL 2012.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	NIL	NIL	

5d	Total area fully reclaimed and rehabilitated	PROPOSAL FOR 2008-09 TO 2011-12 : 2.797 HA PROPOSAL FOR 2012-13 TO 2016-17: 1.241 HA	FULLY RECLAIMED AND REHABILITATED DURING 2008-09 TO 2011-12 : 1.697 HA OUT OF 2.797 HA NO BACKFILLING DURING 2012-13 TO 2016-17 AS NO MINING OPERATION	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			AS NO MINING OPERATION WITH EFFECT FROM 03.04.2012 NO BACK FILLING HAS BEEN CARRIED OUT SINCE THEN . HOWEVER LESSE HAS RECLAIMED 1.697 HA PRIOR TO SUSPENSION OF MINING OPERATION AND HAS BEEN REHABILITATED BY PLANTATION OVER 1.697 HA.

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).	ANNUAL REPORT ON PMCP UNDER RULE 23E (2) SUBMITTED ON TIME AND CORRECTLY.	NO WORK AS THE MINING OPERATION IS UNDER SUSPENSION / DISCONTINUANCE SINCE 03.04.2012.	
6b	Area available for rehabilitation (ha) .	0.131 DURING 2015-16	NIL	
6c	afforestation done (ha).	0.10 HA	0.10 HA	
6d	No. of saplings planted during the year	160	2000	
6e	Cumulative no .of plants	NOT MENTIONED	29200	
6f	Any other method of rehabilitation	BACKFILLING	NO	

6g	Cost incurred on watch and care during the year	Rs.2000 /-	Rs.2000 /-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	0.131 HA	NIL
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NO	NIL
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	NO	NIL
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NO	NIL
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NO	NIL
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	NO	NIL

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NO	NIL	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NO	NIL	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	PROPOSAL WAS ONLY FOR BACKFILLING OVER 0.131 HA ON MINED OUT AREA AND AFFORESTATION (GREEN BELT) OVER 0.10 HA WITH 160 SAMPLING DURING 2015-16.	NO BACCK FILLING AFFORESTED OVER 0.10HA WITH 2000 SAMPLINGS.	SINCE MINE IS UNDER SUSPENSION WITH EFFECT FROM 03.04.2012 NO WORK HAS BEEN CARRIED OUT.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	187200 MT	NO PRODUCTION / DESPATH MINE IS UNDER SUSPENSION SINCE 03.04.2012	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	MANUAL	NO WORK	
7c	Different grade of mineral sorted out at mines.	62 TO 65 % FE AND ABOVE 65% FE	NIL NO WORK	

7d	Any beneficiation process at mines .	MANUAL SIZING AND SORTING AT THE QUARRY SITE. A 200 TPH MOBILE IRON ORE SCREENING UNIT TO RETRIEVE IRON ORE FROM OLD EXISTING DUMP	NIL	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	MANUAL BREAKING, SIZING AND SORTING BY COMMON MINING IMPLEMENTS LIKE HAMMER, CROEBARS, BASKETS & SPADES ETC. A 200 TPH MOBILE IRON ORE SCREENING UNIT IS SET UP IN THE MINE TO RETRIEVE IRON ORE FROM OLD EXISTING DUMP.	NO WORK.	SINCE MINING OPERATION IS UNDER SUSPENSION / DISCONTINUED WITH EFFECT FROM 03.04.2012 NO WORK HAS BEEN CARRIED OUT .

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	NO	NIL	
8b	Concurrent use or storage of topsoil	NO	NIL	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	SEPARATE DUMPS FOR OB / WASTE ETC	TWO OB DUMP HAVE BEEN MAINTAINED OVER NON-MINERALISED LAND	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	USE OF OB / WASTE ROCK FOR RESTORING THE LAND TO ITS ORIGINAL USE	1.697 HA RECLAIMED BY PLANTATION	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	1.697 HA	DURING 2015-16 : NIL 1.697 HA MATURED FOR RECLAMATION AND REHABILITATED BY PLANTATION CUMULATIVE.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)		OUT OF TOTAL LEASE AREA 18.315 HA FOREST LAND COVERS 17.474 HA AND NON FOREST LAND 0.841 HA EXISTENCE OF PLANTATION IS SCANTY. HOWEVER LESSEE HAS PLANTED 29200 NO OF PLANTS CUMULATIVE.	
8g	Survival rate		70%	
8h	Water sprinkling on roads to control airborne dust	YES, PROPOSAL IS THERE TO SPRINKLE WATER ON ROAD TO AIRBORNE DUST	BEING CARRIED OUT	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			AESTHETIC BEAUTY IN AND AROUND THE MINES HAS BEEN ENHANCED BY AFFORESTING 29200 NO OF PLANTS.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		I HAVE INSPECTED THE MINE ON 17.07.2016. OBSERVED THAT MONTHLY RETURN FOR THE MONTH OF JUNE, 2016 AND ANNUAL RETURN FOR THE YEAR 2015-16 SUBMITTED.	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	ANNUAL RETURN FOR THE YEAR 2015-16 WAS SCRUTINISED.	SHRI B B SAMAL , MINING ENGINEER, SHRI A MOHAPATRA, GEOLOGIST AND SHRI H K SAHOO MANAGER HAVE BEEN APPOINTED.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.		AREA UNDER PITS : 5.952 HA, USED FOR WASTE DISPOSAL : 0.550 HA, OCCUPIED BY ROAD AND BUILDING 0.727 HA
9d	Scrutiny of Annual return on afforestation		NUMBER OF TREES PLANTED DURING THE YEAR 3000.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)		NO MINERAL REJECT GENERATED.
9f	Scrutiny of Annual return on ROM stock and/or graded ore		CLOSING STOCK AT MINE HEAD AS FOLLOWS: 60% TO 62% FE: 3715.001 MT + 62% TO 65% FE: 218.774 MT + ABOVE 65% FE: 257.010 MT= 4190.785 MT LUMP 60% TO 62% FE : 1.300 MT + 65% & ABOVE: 19209.383 MT= 19210.683 MT FINES
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost		SALE VALUE : NIL EX-MINE PRICE : NIL PRODUCTION COST NIL
9h	Scrutiny of Annual return on fixed assets		FIXED ASSETS: Rs.3003000 /-
9k	Scrutiny of Annual return on mining machineries		NO MINING MACHINERIES

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 :

(NARENDRA MOHAN DEY)

Indian Bureau of Mines