

## MCDR INSPECTION REPORT

### 1.0 GENERAL

SN	Particulars	Details
0	Inspecting officer & date of Inspection	B.L.Gurjar DCOM 7/10/2016
1	Name of the Mine	NANDINI MINE (LIMESTONE)
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	526.34 HACT NON-FOREST LAND
3	Minecode	381213003
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/5662/2011
5	Name of the lessee, Address, phone, email and fax number	Shri K.Maity Director (RM&L) SAIL New Delhi
6	Village	AHIWARA,PITHORA,DEOJHAL,NANDINI-KUNDINI
7	Taluka/Mandal	DHAMDHA
8	District	DURG
9	Pincode	490036
10	State	CHHATTISGARH
11	Post office	NANDINI
12	Nearest police station	NANDINI
13	Nearest Railway station	BHILAI
14	Date of Grant of Mining Lease	12.01.2005
15	Date of Execution	28.06.2005
16	Date of opening of Mine	15.06.1958
17	Date of first Renewal, if applicable and its period & expiry	1.1.79 & 31.3.87
18	Date of second Renewal, if applicable and its period & expiry	N.A.
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	27.03.2015
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri K.Maity Director (RM&L) SAIL New Delhi
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri T.G.Ullaskumar Dy General Manager I/c (Flux) 9407983604 Fax No. 07821-257233 Date of appointment
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri V.K.Singh Sr.Mgr. Qr.No. 3B, Stree No. 28, Nandini Mines 9407982944 Date of appointment 30.05.2016

23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri Pramod Kumar B.E.(Mining) 9 Years Qr.No.3A, Street No.28, Nandini Mines 9407981275 Date of appointment 16.12.2012
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Shri Manish Dubey M.Sc., M.Phil 8 Years Date of appointment 01.07.2008
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Mining plan 1997-2017 Letter No. 314(3)/99-MCCM@/MP-5 Dated 02/11/1999
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Mining Scheme 2012-17 Letter No. 314/(3)/2011-MCCM(CZ).MS-72/220 Dated 22.11. 12.
27	Mineral(s) granted in lease and proved for mining	526.34 HACT. FOR LIMESTONE
28	Method of Mining(Open cast, Underground)	OPENCAST
29	Category (Fully Mechanised, Others or Manual)	MECHANISED
30	Captive/Non Captive	CAPTIVE

Scientific Mining: Compliance of proposals of approved mining plan/scheme of mining. –  
Exploration

SN	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL 36 Hole 1200 Meters	28 Hole 1500 Meters	
1b	Exploration over lease area for Geological axis 1 or 2.	1	1	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	M/s Mineral Exploration Corporation Ltd. Rs. 75,00,000/-	M/s Mineral Exploration Corporation. Rs.78,13,419/-	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	NIL	
1e	Balance reserves as on 01.04.2016.	-	102.49 MT	
1f	General remarks of inspecting officer on geology, exploration etc.	Lease area is explored thoroughly.		

## 2.0 Development

SN	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	BFQuarry and BS Quarry	As proposed location BFQuarry and BS Quarry . presently working is concentrated on top bench due to water logging of main pit.	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separate benches for overburden and mineral.	Practically there is no OB in the area . Small thickness at places is removed separately. Development is lagging.	
2c	Stripping ratio or ore to OB ratio	1:0.39	1 : 0.25	
2d	Quantity of topsoil generation in m3	NIL	NIL	
2e	Quantity of overburden generation in m3	250363 m3	207727 m3	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Development of top benches are lagging.		

## 3.0 Exploitation

SN	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	BFQuarry and BS Quarry	BFQuarry and BS Quarry	
3b	Quantity of ROM mineral production proposed	1423188 Ton	1794329 Ton	Modified mp submitted 15/4/2014 for enhanced production
3c	Recovery of salable/usable mineral from ROM production	85%	80%	
3d	Quantity of mineral reject generation	200166	410450	
3e	Grade of mineral reject generation and threshold value declared	Cao<34%	Cao<34%	
3f	Quantity of sub-grade mineral generation	NIL	NIL	
3g	Grade of sub-grade mineral generation	NA	NA	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	

3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	NO	In year 2013-14 ,03 Ton of reject has been send to RDCIS Ranchi for possible use of rejects in future.	
3j	Provision of drilling & blasting in mineral benches	Drilling and blasting for fragmentation of mineral.	Drilling and blasting is in practice.	
3k	Provision of mining machineries in mineral benches	Shovel and dumper combination.	Shovel and dumper combination	

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	
3m	Total area covered under excavation/pits	149.48	138.10 ha	
3n	Ore to OB ratio for the pit/mine during the year	1:0.37	1:0.25	
3o	Total area put in use under different heads at the end of year	Pit-149.48 Waste/reject Others-376.86	Pit-138.10 Waste/reject Others-388.24	
3p	Production of ROM mineral during last five-year period, as applicable	Yr 12-13=286125 Yr 13-14=285250 Yr-14-15=285688 Yr-15-16=285687 Yr-16-17=280438 TOTAL = 1423188	Yr 12-13=431326 Yr 13-14=406499 Yr-14-15=457680 Yr-15-16=366943 Yr-16-17=131881 ## upto Sept'16 TOTAL = 1794329	
3q	General remarks of inspecting officer on method of mining etc.	Lessee submitted modified scheme of mining on 15/4/2014 for enhancement of production from .28 million tonnes to 0.7 million tonnes at Nagpur Office.		

#### 4.0 Solid Waste Management-Dumping

SN	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	OB = 01. Reject = 01.	OB = 01. Reject = 01	
4b	Location of topsoil, OB & mineral reject dumps	OB = BFQ area Reject = Near dumper road.	OB = BFQ area Reject = Near dumper road.	
4c	Number of dumps within lease area and outside lease area	OB = 12 Nos. Reject = 04 With in ML	OB = 12 Nos. Reject = 04 With in ML	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Out side UPL	Out side UPL	
4e	Number of active & alive dumps	OB = 1, Reject =1	OB = 1, Reject =1	
4f	Number of dead dumps	OB dead dump=11	OB dead dump=11	

		Active =1	Active =1	
4g	Number of dumps stabilised	Stabilised = 11	Stabilised = 11	
4h	Whether Retaining wall or garland drain all along dumps are there	To be provided.	Nil	
4i	Length of Retaining wall or garland drain all along dump	Proposed.	Nil	
4j	Number of settling ponds	NIL	NIL	
4k	Specific comments of inspecting officer	There is large quantity of mineral reject/ screen reject and last year 82595 tonnes of mineral reject was generated.		

### 5.0 Solid Waste Management-Backfilling

SN	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	N.A.	N.A.	
5b	Area under backfilling of mined out area	NIL	NIL	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	NIL	NIL	
5d	Total area fully reclaimed & rehabilitated	59.88	70.88 ha waste and reject dumps	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Waste and reject dumps are rehabilitated with plantation		

### 6.0 Progressive Mine Closure Plan

SN	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E(2). Details should be given in the format as given in Annexure-20.	Yes	No report is submitted.	
6b	Management of worked/mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific	OB One Bench ORE Two Bench  Not planed  15 Hact.  14500 (2012-17)	OB One Bench ORE Two Bench  Nil  15 Hact.  14500 (2012-17)	

	method of rehabilitation vi) Cost incurred on watch & care during the year	16 Lakh	Not available.	
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	Nil	Nil	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	Nil	Nil	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Quarterly Monitoring scheduled for Air, Water & Noise.	Monitoring done as the scheduled & elements are within with the limit.	
6f	General remarks of inspecting officer on PMCP compliance & progressive	EMP parameters are monitored.		

### 7.0 Mineral Conservation

SN	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Yr-15-16=285687 Yr-16-17=280438 TOTAL = 1423188	Yr-15-16=366943 Yr-16-17=131881 ## upto Sept'16 TOTAL = 1794329	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	MECHANISED	MECHANISED	
7c	Different grade of mineral sorted out at mines	One grade	One grade	
7d	Any beneficiation process at mines	Sizing and screening	Sizing and screening	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Normal		

## 8.0 Environment

SN	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Top soil stored at specific area/dump	Top soil stored at specific area/dump	
8b	Concurrent use or storage of topsoil	Nil	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	To be maintained	Maintained	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	O/B dump will be Rehabilitated through Afforestation.	O/B dump Rehabilitated through Afforestation.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)		56.16 Hact Dump rehabilitated	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	15 Hect. 16500 (2012-17)	15 Hect. 14500 (2012-17) Plantation done 2015-16 & 16-17	
8g	Survival rate	100 %	80%	
8h	Water sprinkling on roads to control airborne dust	To be done through Water sprinkler.	Maintained	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	General greenery is developed		

## 9.0 Compliance of Rule 45

S. N.	Item	COMMENTS		Remarks
	Status of submission of Monthly and Annual returns	M.R. Submitted upto – August'16 A.R. submitted upto- 2015-16		
S. N.	Item	Details GIVEN in A.R.	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information	Appointed	Found in order	

	on Mining Engineer, Geologist and Manager			
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	2.6 ha already excavated pit , 149.48 ha under mining, 56ha rehabilitated , 59ha under afforestation	Found in order	
9d	Scrutiny of Annual return on afforestation	given	Found in order	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	62100 tonnes reject	Found in order	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Zero stock of ROM	Found in order	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	RS 844.52 /of limestone	Cost is higher side due to high overhead cost	
9i	Scrutiny of Annual return on fixed assets	Given	Found in order	
9k	Scrutiny of Annual return on mining machineries	Given	Found in order	

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:-

Violation of rule 23 E(2) for not submitting return and 15(2) for not maintaining Overburden benches sufficiently in advance so that their working do not interfere with the working of ore/minerals issued.

B.L.Gurjar  
DCOM , IBM Raipur