

MCDR INSPECTION REPORT

1.0 GENERAL

SN	Particulars	Details
1	Name of inspecting office & designation	Shri R.K.Das, Sr.ACOM Indian Bureau of Mines, Raipur
2	Date of inspection, Accompanying person	18.01.2021, Shri Pankaj Kumar, DGM Cum Mine Manager & Shri Manish Dubey Geologist
3	Name of the Mine	Nandini Mine (Limestone)
4	Total Lease Area (Ha) with breakup of Non-forest and forest land	526.34 Hact. Total Non forest land
5	Mine Code	38MPR13003
6	IBM Registration Number under rule 45 of MCDR, 1988	IBM/5662/2011
7	Name of the lessee, Address, phone, email and fax number	Steel Authority of India Limited (SAIL) Bhilai Steel Plant Corporate office –Ispat Bhavan, Lodhi Road, New- Delhi 011-24367015, sailco@vsnl.com
8	Village	Deorjhal, Ahiwara, Pithora, Nandini-Kundini
8	Taluka/Mandal/District	Dhamdha District Durg
10	State	Chhattisgarh
11	Post office & PIN	Nandini Nager 490036
12	Nearest police station	Nandini police thana
13	Nearest Railway station	Power House, 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 ,its period & expiry	(1) 174.45 Ha. 01.01.59 to 31.12.78, 20 Years (2) 446.00 Ha. 31.03.67 to 30.03.87, 20 Years
18	Date of second Renewal, if applicable and its period & expiry	526.34 Ha. (Both the Mining leases was Amalgamated) 2 nd Renewal 31.03.1997 to 30.03.2017, 20 Years. Supplementary lease extension upto 31.12.2028.
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	N.A.
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Anirban Das Gupta Director Incharge-BSP Steel Authority of India Limited (SAIL) Phone no-07882200999 Dt of Appointment 30.09.2020
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri V.B.Singh General Manager Cum Agent Nandini Mine (Limestone) Bhilai Steel Plant Appointment 28.03.2019 Working Experience : 30 years
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri Pankaj Kumar DGM Cum Mine Manager, Mobile No. 9407982945 e-mail : pankajkumar1@sail.in Fax No. 07821-257224

	Appointment 30.10.2017. Working Experience : 20 years
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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 Mining Engineer, Mobile No. 9407981275 e-mail : pramodkumar4@sail.in Fax No. 07821-257233 Appointment 16.12.2012 Working Experience : 13 years
4	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55& carrying out their duties as per rule 56&57.	Shri Manish Dubey Geologist, Mobile No. 9407984113 Fax No. 07821-257233 Appointment 01.07.2008. Working Experience : 12 years
2	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	26.12.2016 Modifications in Mining Plan For 2017-18 to 2021-22
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	N.A.
27	Mineral(s) granted in lease and proved for mining	LIMESTONE
28	Method of Mining(Open cast, Underground)	OPENCAST
29	Category (Fully Mechanised, Others or Manual)	Fully Mechanised
30	Captive/Non Captive	Captive

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

1.0 Exploration

SN	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NIL	Sufficient Exploration done.
1b	Exploration over lease area for Geological axis 1 or 2.	Nil	Nil	G1
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	NA	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NA	NA	
1e	Balance reserves as on 01.04.2020	Under (111): 47.36 Million Tonnes Under (211): 53.76 Million Tonnes		
1f	General remarks of inspecting officer on geology, exploration etc.	Broadly total area covered in G1 category of exploration.		

2.0 Development

SN	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area (Range in UTM/Local Coordinate/Plot No./Location)	BFQ (N-W) 541650 (E) 2363560(N)to 542100(E)2363790 (N) BFQ (S-W) 541880(E) 2362880(N) to 541510(E) 2363025(N) BSQ (N-E) 542590(E)2364025 (N) to 542600(E)2363800 (N)	Broadly within proposed area	
2b	Separate benches in topsoil, overburden and mineral (Rule 13)	Yes	Maintained. Top soil is not being encountered.	
2c	Stripping ratio or ore to OB ratio	1:0.20	1:0.76	
2d	Quantity of topsoil generation in m ³	NA	Top soil is not being encountered	
2e	Quantity of overburden generation in m ³	201479 T	235073T	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Pit is developed in one face whereas proposal is given in two faces.		

3.0 Exploitation 2019-2020

SN	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	2	2	
3b	Quantity of ROM mineral production proposed	1006666T	308245 T	
3c	Recovery of salable/usable mineral from ROM production	80 %	78.18 %	
3d	Quantity of mineral reject generation	201323 T	68634 T	
3e	Grade of mineral reject generation and threshold value declared		CaO-36.70% MgO-7.20% SiO ₂ -8.60%	
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	NA	NA	
3j	Provision of drilling & blasting in mineral benches	IDM-30 (150 mm) ICM-260 (100mm)	IDM-30 (150 mm) ICM-260 (100mm)	
3k	Provision of mining machineries in mineral benches	Excavator,Dozer, Drill,Dumper	Excavator,Dozer, Drill,Dumper	
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	2.6 He	0.9 He	
3n	Ore to OB ratio for the pit/mine during the year	1:0.20	1:0.76	
3o	Total area put in use under different heads at the end of year	Pit- 2.6 He Waste dump-1.3He	Pit- 0.9 He Waste dump-0.7He	
3p	Production of ROM mineral during last five-year period, as applicable (Tonnes)	Yr-15-16: 285687 Yr-16-17: 280438 Yr-17-18:1002288 Yr-18-19:1006391 Yr-19-20:1006666	Yr-15-16: 366943 Yr-16-17: 260425 Yr-17-18: 396278 Yr-18-19:402660 Yr-19-20-:308245	
3q	General remarks of inspecting officer on method of mining etc.	Method of mining is broadly as per proposal by Shovel Dumper combination and deep hole drilling.		

4.0 Solid Waste Management-Dumping

SN	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 36, 37)	Top soil : NIL OB : yes M/Reject : yes	Top soil : NIL OB : yes M/Reject : yes	
4b	Location of topsoil, OB & mineral reject dumps (Range in UTM/Local Coordinate/Plot No./Location)	Top soil : NIL OB : 201479 M/Reject : 201333	Top soil : NIL OB : 235073T M/Reject -68634	
4c	Number of dumps within lease area and outside lease area	With in ML OB : 02 M/Reject :2	With in ML OB : 02 M/Reject :2	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 14)	With in UPL	With in UPL	
4e	Number of active & alive dumps	OB : 02 M/Reject :2	OB : 02 M/Reject :2	
4f	Number of dead dumps			
4g	Number of dumps stabilised			
4h	Whether Retaining wall or garland drain all along dumps are there		Yes	
4i	Length of Retaining wall or garland drain all along dump		Retaining wall-155 mtrs.	

			Garland drain 200 mtrs.	
4j	Number of settling ponds	NA	NA	
4k	Specific comments of inspecting officer on waste dump management	It was observed that there is no proper terracing and both the dump is near to lease boundary but still no proper retaining wall is constructed nor any control measures for dump stability.		

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	NA	NA	
5b	Area under backfilling of mined out area	NA	NA	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 36)	NA	NA	
5d	Total area fully reclaimed & rehabilitated	NIL	NIL	CUM-56.16 HA
5e	General remarks of inspecting officer on backfilling, reclamation etc	Area not matured for backfilling.		

6.0 Progressive Mine Closure Plan

SN	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23. Details should be given in the format as given in Annexure-20.	Submission dt 30.06.2020	Yes Dt 30.06.2020	
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 method of rehabilitation vi) Cost incurred on watch & care during the year	NIL	NIL	
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	N.A.	N.A.	

	iv) Rehabilitation by making water reservoir v) Any other specific means			
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	2.50 Ha(5650 trees) Nil NA	1.10 Ha outside lease area (1550)trees Nil NA	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	As per Statute	As per Statute	
6f	General remarks of inspecting officer on PMCP compliance & progressive	Nil		

7.0 Mineral Conservation

SN	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	1006666 T ROM	308245 TONNES	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines	Single Grade S. P. Grade	Single Grade S.P. Grade	
7d	Any beneficiation process at mines	No	No	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Low grade mineral is scattered in mine and stock in dump. No mineral Beneficiation is done except crushing & Screening.		

8.0 Environment

SN	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 36)	NA	12350 T	
8b	Concurrent use or storage of topsoil	NIL	NIL	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 37)	Yes	Yes	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	NA	NA	

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NA	NA	
8f	Baseline information on existence of plantation & additional plantation done (Rule 44)	2.50 Ha	1.10 Ha	
8g	Survival rate	90%	90 %	
8h	Water sprinkling on roads to control airborne dust	Regular	Regular	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	Nil		

9.0 Compliance of Rule 45

S.N	Item	COMMENTS	Remarks
.	Status of submission of Monthly and Annual returns	M.R. Submitted upto- 30.06.2020 A.R. submitted upto-2019-20	M.R. submitted up to Dec-2020

S. N.	Item	Details GIVEN in A.R.	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Yes given	Shri Pramod Kumar, Mining Engineer, Shri Pankaj Kumar, Manager, Shri Manish Dubey, Geologist	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Yes given	O/C working 138.6 ha., reclaimed & rehabilitated 56.16 ha., waste disposal 96.43ha., infrastructure & road 21.41 ha., other purpose 131.39 ha.	
9d	Scrutiny of Annual return on afforestation	Nil		
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	68634 tons, CaO 34.20, MgO 7.64 & SiO ₂ 8.41		
9f	Scrutiny of Annual return on ROM stock and/or graded ore	16778 tons		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex. Mine price & production cost Rs 909.54		
9i	Scrutiny of Annual return on fixed assets	Rs133766867/- reported		
9k	Scrutiny of Annual return on mining machineries	Yes given		

Name Of Equipment	Capacity	No. Of Machines
Excavators/Shovels	4.50 cum M	3
Dumpers	50 & 60 T	3 & 3
Drill	150 mm dia	1
Drill	100 mm dia	1
Dozer	420 HP	2
Locomotive	1400 HP	2
Motor Grader	197 HP	1
Water sprinkler	28000 L	1

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:- The earlier violations taken compliance and during present inspection Rule 11(1),37(1) & 37(2) found violated.

Shri R.K.Das ,Sr.Asstt.Controllar,IBM Raipur