

## MCDR INSPECTION REPORT (2022-23)

### 1.0 GENERAL

SN	Particulars	Details
1	Name of the Mine	Nandini Mine (Limestone)
2	Date of inspection	10.01.2024
3	Name of inspecting officer & designation	Shri D.Upadhyay, Deputy Controller of Mines, Indian Bureau of Mines, Raipur
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 –IspatBhavan, 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	01.01.1959(Initial grant)
15	Date of Execution	28.06.2005(After Renewal)
16	Date of opening of Mine	01.01.1959
17	Date of first Renewal, if applicable ,its period & expiry	First renewal upto 30/03/2017.
18	Date of second Renewal, if applicable and 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 Both the Mining leases ( total Lease area-526.34 Ha) was Amalgamated) 2 nd Renewal from 31.03.1997 to 30.03.2017, 20 Years. Furthe lease period extended upto 31.12.2028 as per provision of section 8A of MMDR Amendment Act, 2015.
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 Anirben 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 P.EKKA General Manager Cum Agent Nandini Mine (Limestone) Bhilai Steel Plant Appointment 26.07.2021 Mobile No. 9407983594

		e-mail : pekka@sail.in Working Experience : 30 years
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri Birendra Kumar DGM Cum Mine Manager, Mobile No. 9407982925 e-mail : birendrakumar@sail.in Fax No. 07821-257224 Appointment 15.10.2022 Working Experience : 21 years

23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri Alankar Bhivgade Asst. Mine Manager, Mobile No. 9407981054 e-mail : alankarbhivgade@sail.in Fax No. 07821-257233 Appointment 14.08.2021 Working Experience : 15 years
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55& carrying out their duties as per rule 56&57.	Shri Ramesh Kumar Rathore Geologist, Mobile No. 9407984102 Fax No. 07821-257233 Appointment 01.02.2021. Working Experience : 14 years
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Review of Mining Plan approved vide letter no. durg/chup/khayo-1297, dated 07.01.2022 for the period 2022 to 2027
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	
27	Mineral(s) granted in lease and proved for mining	LIMESTONE
28	Method of Mining(Opencast, Underground)	OPENCAST
29	Category (Fully Mechanised, Others or Manual)	Fully Mechanised
30	Captive/Non Captive	Captive
31	Status of Financial Assurance	Amount of BG Rs 113830000/- valid upto 31/03/2027

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

**1.0 Exploration:**

SN	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
1a	Backlog of previous year	Not proposed	Nil	Nil
1b	Exploration over lease area for Geological axis 1 or 2.	Not proposed	Nil	Nil

1c	Exploration Agency & Expenditure in lakh Rupees during the year	Not proposed	Nil	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not proposed	Nil	Nil
1e	Balance reserves as on 01.04.2023	Balance reserves as on 01.04.2023: 47,578,314.00T		
1f	General remarks of inspecting officer on geology, exploration etc.	About 235.70 ha area explored under G1 level and 47.64 ha area explored under G2 level of exploration.		

## **2.0 Development:**

<b>S N</b>	<b>Item</b>	<b>Proposals (2022-23)</b>	<b>Actual work (2022-23)</b>	<b>Remarks</b>
2a	Location of development w.r.t. lease area (Range in UTM/Local Coordinate/Plot No./Location)	BSQ (N-E) E542694 E 542679 N2364271 N2363999 BFQ(SW) E 541568 541742 N 2362931 N 2362925	BSQ (N-E) E542655 E542691 N2364025 2364239 BFQ (SW) E 541573 E 541702 N 2362937 N 2362935	Development is carried out within approved proposal.
2b	Separate benches in topsoil, overburden and mineral (Rule 13)	Yes	Maintained. Top soil is not being encountered.	Separate benches in OB & Ore are maintained as per proposal.
2c	Stripping ratio or OB to ore ratio	1:0.31	1:0.29	OB generated less due to less ROM production.
2d	Quantity of top soil generation in m3	NA	Top soil is not being encountered	OB generated less due to less ROM production.
2e	Quantity of overburden generation in m3	90910cu.m	53892.00 cu.m	OB generated as per proposal.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Developmental is carried out within approved proposal.		

## **3.0 Exploitation :**

<b>SN</b>	<b>Item</b>	<b>Proposals (2022-23)</b>	<b>Actual work (2022-23)</b>	<b>Remarks</b>
3a	Number of pits proposed for production	2	2	02 pits

3b	Quantity of ROM mineral production proposed	650000 T	421686 T	ROM production is consumed to its steel plant.
3c	Recovery of salable/usable mineral from ROM production	75 %	75 %	
3d	Quantity of mineral reject generation	162500 T	100579 T	100579 T
3e	Grade of mineral reject generation and threshold value declared	Cao-34.0-40.0%	Cao-34.0-40.0%	Cao-34.0-40.0%
3f	Quantity of sub-grade mineral generation	Not proposed.	NIL	NIL
3g	Grade of sub-grade mineral generation	Not proposed.	NIL	NIL
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	Mechanized
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Not proposed	NIL	NIL
3j	Provision of drilling & blasting in mineral benches	Drilling and blasting is proposed,	Drilling and blasting is carried out as per proposal.	Drilling and blasting is carried out as per proposal.
3k	Provision of mining machineries in mineral benches	Shovel and dumper combination	Shovel and dumper combination	Excavator, Loader and Dumper are equipped to winning out the mineral.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	Bench height is suitably matched with the excavator.
3m	Total area covered under excavation/pits	At the end of plan period: Pit- 144.12 Ha	As on 31/03/2023 Pit- 139.320 Ha	As on 31/03/2023 Pit- 139.320 Ha
3n	Ore to OB ratio for the pit/mine during the year	1:0.31	1:0.29	OB generated less due to less ROM production.
3o	Total area put in use under different heads at the end of year	At the end of plan period: Pit- 144.12 Ha Waste dump-12.77 Ha Reject- 32.81 Ha	As on 31/03/2023 Pit- 139.320 Ha Waste dump-4.68 Ha Reject-32.80 Ha	Total area put in use under different heads at the end of year are as per proposal
3p	Production of ROM mineral during last five-year period, as applicable (Tonnes)	Yr-18-19:1006391 YR-19-20:1006666 YR-20-21-1004956 YR 21-22-1001202 YR 22-23-650000	Yr-18-19:402660 Yr-19-20-:308245 YR 20-21-270008 YR 21-22-370487 YR 22-23- 421686	ROM production is consumed to its steel plant.

3q	General remarks of inspecting officer on method of mining etc.	The ROM production has been carried out from two pit as per proposal.
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#### 4.0 Solid Waste Management-Dumping

SN	Item	Proposals (2022-23)	Actual work (2022-23)	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	Being done as per proposal
4b	Location of topsoil, OB & mineral reject dumps (Range in UTM/Local Coordinate/Plot No./Location)	Top soil : NIL Dumps: (a)E541900 TO E542000 N2363795 TO 2364045 (b) E542497 TO E 542700 N 2362399 TO N2362515	Top soil : NIL Dumps: (a)E541900 TO E542000 N2363795 TO 2364045 (b) E542497 TO E 542700 N 2362399 TO N2362515	Being done as per proposal
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	Being done as per proposal
4d	Location of dumps w.r.t. ultimate pit limit (Rule 14)	Outside UPL	Outside UPL	Outside UPL
4e	Number of active & alive dumps	OB : 02 M/Reject :2	OB : 02 M/Reject :2	Being done as per proposal
4f	Number of dead dumps	Not proposed.	06 dump stabilized by plantation.	06 dump stabilized by plantation.
4g	Number of dumps stabilised	Not proposed.	06 dump stabilized by plantation.	06 dump stabilized by plantation.
4h	Whether Retaining wall or garland drain all along dumps are there	YES	Yes	Retaining wall is made all along dump
4i	Length of Retaining wall or garland drain all along dump	Retaining wall-250 Garland drain-300 mtrs	Retaining wall-250 Garland drain-300 mtrs	Retaining wall is made all along dump
4j	Number of settling ponds	Not proposed.	Nil	Nil
4k	Specific comments of inspecting officer	Separate dumping of OB is maintained as per proposal. Retaining wall is made all along dump.		

#### 5.0 Solid Waste Management-Backfilling

SN	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
5a	Status on part or full extraction of mineral from mined out area before	Not proposed	NIL	Area is not matured for reclamation and rehabilitation.

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

### 6.0 Progressive Mine Closure Plan

SN	Item	Proposals (2022-23)	Actual work (2022-23)	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.	As per provision of MCDR 2017.	Annual report on PMCP submitted	Annual report on PMCP 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 method of rehabilitation vi) Cost incurred on watch & care during the year	Not proposed	NIL	Area is not matured for reclamation and rehabilitation.
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	Not proposed	NIL	Area is not matured for reclamation and rehabilitation.

6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	Not proposed	NIL	NIL
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Quarterly monitoring	Quarterly monitoring	Quarterly monitoring
6f	General remarks of inspecting officer on PMCP compliance & progressive	Area is not matured for reclamation and rehabilitation.		

### **7.0 Mineral Conservation**

SN	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM mineral dispatched	ROM mineral dispatched	ROM mineral dispatched
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical	Mechanical
7c	Different grade of mineral sorted out at mines	ROM mineral dispatched	ROM mineral dispatched	ROM mineral dispatched
7d	Any beneficiation process at mines	Not proposed.	Nil	No such proposal for mineral beneficiation was proposed during the reporting year.
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	ROM mineral dispatched for its captive plant.		

### **8.0 Environment**

SN	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
8a	Separate removal and utilization of topsoil (Rule 36)	Not proposed	NIL	Topsoil not proposed.
8b	Concurrent use or storage of top soil	Not proposed	NIL	Topsoil not proposed.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 37)	Separate dumps for overburden and rejects	Being done as proposed in mine plan	Being done as proposed in mine plan
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not proposed	Nil	Area is not matured for reclamation and rehabilitation.

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not proposed	Nil	Area is not matured for reclamation and rehabilitation.
8f	Baseline information on existence of plantation & additional plantation done (Rule 44)	In 2022-23, 1.0 ha area proposed for plantation	In 1.0 ha area, 600 nos of saplings planted in 2022-23	600 nos of saplings planted in 2022-23. Cumulative plantation-291170
8g	Survival rate	95%	95 %	Survival rate 95%
8h	Water sprinkling on roads to control airborne dust	Water tanker	One water tanker of 2KL deployed.	One water tanker of 2KL deployed.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	Aesthetic beauty in and around mines area is maintained by plantation.		

### **9.0 Compliance of Rule 45**

S.N	Item	COMMENTS	Remarks
.	Status of submission of Monthly and Annual returns	M.R. Submitted regularly. A.R. submitted for the year-2022-23	Submitted within specified time.

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	Manager- Shri Birendra Kumar Geologist- Shri Ramesh Kumar Rathore Mining Engineer- Shri Alankar Bhivgade	Information on Mining Engineer, Geologist furnished in AR.	Information on Mining Engineer, Geologist furnished in AR.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit- 139.320 Ha Waste dump-4.67 Ha Infrastructure— 21.41 Ha, etc	Pit- 139.320 Ha Waste dump-4.67 Ha Infrastructure— 21.41 Ha, etc	Land use pattern furnished in AR.
9d	Scrutiny of Annual return on afforestation	600 nos of saplings	600 nos of saplings	600 nos of saplings
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Mineral reject: 100579 T	Mineral reject: 100579 T	Mineral reject: 100579 T
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM closing stock 23559.000T	ROM closing stock 23559.000T	ROM closing stock 23559.000T
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex. Mine price & production cost: Rs 1168.99	Ex. Mine price & production cost: Rs 1168.99	Ex. Mine price & production cost: Rs 1168.99
9i	Scrutiny of Annual return	fixed assets	fixed assets	As reported in AR



	on fixed assets	Rs 74715686	Rs 74715686	2022-23
9k	Scrutiny of Annual return on mining machineries	Machineries furnished in AR.	Machineries furnished in AR.	As reported in AR 2022-23

**10-** Details of violations observed during last inspection and the compliance status.

Violation of Rule 11(1) of MCDR, 2017 was observed during the inspection.

Date: 06/03/2024

Signature:  
Name: D. Upadhyay  
Designation: DCOM