# INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

#### MCDR inspection REPORT

#### Jabalpur regional office

Mine file No: MP/KTN/LST-50 Mine code: 38MPR18049

(i) Name of the Inspecting :  ${\tt N007}$  ) <code>PUKHRAJ NENIVAL</code>

Officer and ID No.

(ii) Designation : Regional Controller Mines

(iii) Accompaning mine : Shri Anand Mukul Pandey, DGM (Mines), Shri Abhay Kuma

Official with

Designation

(iv) Date of Inspection : 20-MAR-23
(v) Prev.inspection date : 21-NOV-19

PART-I : GENERAL INFORMATION

. (a) Mine Name : KUTESHWAR

(b) Registration NO. : IBM/5662/2011

(c) Category : A Fully Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : MADHYA PRADESH

District : KATNI

Village : MARWA, JARARODA Taluka : VIJAYRAGHAVGARH

Post office : BARHI Pin Code : 483770

FAX No. : 07626-273251

E-mail : sailktr@yahoo.co.in

Phone : 07626-273251

(f) Police Station :

(g) First opening date : 30-JAN-76

(h) Weekly day of rest : THU

2. Address for : STEEL AUTHORITY OF INDIA LTD.

correspondance P.O. BARHI, DIST. KATNI (M.P.)

483770

3. (a) Lease Number : MPR0523 (b) Lease area : 91.14

(c) Period of lease : 20

(d) Date of Expiry : 14-MAY-22

4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee Steel authority of India Ltd.

G. OJHA, DIR(PER & I/C RMD)

LODHI RD, ISPAT BHAWAN NEWDELHI-110003 KATNI

MADHYA PRADESH Phone:07626-273211 FAX :07626-273201

Owner : STEEL AUTHORITY OF INDIA LTD.

> AT & P.O. BARHI, DIST.KATNI M.P KATNI MADHYA PRADESH Phone: 07626-273211/25 FAX : 07626-273201

Agent : H.S.PRASAD, GM(FLUX), KTR

> At & P.O.katni, Kuteshwar, Barhi Dist.Katni MP> KATNI

MADHYA PRADESH Phone: 07626-273211 FAX : 07626-273201

6. Date of approval of Mining Plan/Scheme of Mining

Renewal under rule 22	MCR1960	12-JUN-03
PMCP under 23B(2) for	Existing	29-DEC-05
Mining Scheme rule 12	MCDR1988	14-JUN-07
Modif.approved Mining	Scheme	24-SEP-09
Mining Scheme rule 12	MCDR1988	09-SEP-11
MP modif under MCR 19	960	04-APR-16
	PMCP under 23B(2) for Mining Scheme rule 12 Modif.approved Mining Mining Scheme rule 12	Renewal under rule 22 MCR1960 PMCP under 23B(2) for Existing Mining Scheme rule 12 MCDR1988 Modif.approved Mining Scheme Mining Scheme rule 12 MCDR1988 MP modif under MCR 1960

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

### Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	56 Bore holes	19 Bore holes	Violation pointed out under rule 11(1).
1b	Exploration over lease area for geological axis 1 or 2	Kati	M/s Gemco Kati Exploration Pvt. Ltd.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	1.42 Cr	42 Lakhs	
1d	Balance area to be explored to bring Geological axis in 1 or 2	G1	G1	
1e	Balance reserve as on 01/04/20		111 91 121 NIL 122 NIL 211 47.69 221 15.15 221(Pre feasibility mineral resources below cut-off) 14.54 222 NA 331 51.18 332 NA 333 NA 334 NA	
1f	General remarks of inspecting officers on geology, exploration etc			There was a proposal of 56 nos. of core boreholes during the year 2021-22 & 2022-23 (total 3000 mtrs) but only 19 nos.(1235 mtrs) of core boreholes are dug. Violtion pointed out out for same.
Deve	elopment :			
Sl.No.	Item	Propasals	Actual work	Remarks

2a	Location of development w.r.t.lease area	Gairtalai, Marwa & Jararoda Pit	Gairtalai, Marwa & Jararoda Pit	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Total Eight benches. 1st two of OB. Topmost bench contains Soil.	Total Eight benches. 1st two of OB. Topmost bench contains Soil.	
2c	Stripping ratio or ore to OB ratio	1: 0.55 M3/Tonnes	1: 0.11 M3/Tonnes	
2d	Quantity of topsoil generation in m3	130535 cubic meter	221581 cubic meter	
2e	Quantity of overburden generation in m3	146601 cubic meter	145851 cubic meter	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Lease area is divided into 3 blocks namely Gaitalai, Marwa & Jaroda blok. Dimension of Marwa block-702876M2 x 48m depth, Gairtalai block-48735M2 x 17m depth & Jarado block - 126276M2 x 25m depth.

## Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	one pit	one pit	
3b	Quantity of ROM mineral production proposed	1907739 Tones	1258179 Tones	
3c	Recovery of sailable/usable mineral from ROM production	1449882 Tons	979180 Tons Around 67%	
3d	Quantity of mineral reject generation	457857 Tones	269684 Tones	violation has been pointed for lesser production

3e	Grade of mineral rejects generation and threshold value declared.	Mineral reject of quantity of 100mm of cement grade above thrshold value proposed	Cement grade of 47.18% CaO acheived	
3f	Quantity of sub grade mineral generation.	Not Proposed	Nil	
3g	Grade of sub grade mineral generation	Not Proposed	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanical method was proposed	By way of screening plant	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not Proposed	Screening of ROM practised	
3ј	Provision of drilling and blasting in mineral benches	Drilling 100mm dia by wagon drill & 32mm by jack hammer	Deilling blasting carried out as per the proposals	
3k	Provision of mining machineries in mineral benches	IR Drill - 100mm, Rock Breaker-32mm, Excavator-2.7 CuM, Dozer- 420HP, Dumpers-18/22 Tonner, etc	Mining operation being carried out by deploying IR Drill - 100mm, Rock Breaker-32mm, Excavator-2.7 CuM, Dozer-420HP, Dumpers-18/22 Tonner, etc machineries	Machineries both contractual as well as in-house.
31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM		Proposed height of 6m in OB & 6m in limestone are being maintained.	
3m	Total area covered under excavation/pits	88.72 На	80.665 На	
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.55 M3/Tonnes	1: 0.11 M3/Tonnes	

30	Total area put
	in use under
	different heads
	at the end of
	year

Area under mining-80.665 Ha OB, IB, Fines dumps-36.81 Ha Mineral Stacks-6.33Ha Infrastructure-121.96 Ha

Production of 2015-16-: 3p ROM mineral 2314474 during the last 2016-17-: five year period 1865100 as applicable 2017-18-: 1978200 2018-19-: 20,57,376 2019-20-: 1825450 2020-21-: 1822439

2016-17-: 1596158 2017-18-: 1460717 2018-19-: 1252545 2019-20-: 1650183 2020-21-: 1028553 2021-22-: 1258179

2015-16-: 2314474

3q General remarks
 of inspecting
 officers on
 method of mining
 etc.

Mining operation being carried out by opencast fully mechanised method by deploying HEMM for excvation, drilling, blasting & transportation of material.

#### Solid Waste Management - Dumping:

2021-22-: 1907739

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	OB & mineral rejects dumping was proposed towards Southern barrier zone and fines gerated proposed to be dumped at central part	Dumping carried the proposals.	
4b	Location of topsoil, OB and mineral reject dumps	E3437830 to 3437200 & N709100 to 708890, IB dumping- E3438080 to E3438520 with avg height of 7 to 8mts	Dumping of OB & IB carried out as per the proposals	

4c	Number of dumps within lease area and outside of lease area	overburden &	Marwa Block-04 overburden & IB dumps Jarorada Block- 03 overburden & IB dumps Gairtalai Block-01 overburden dump
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	As per the approved document proposed beyond ultimate pit limit	Minor portions of dumps in Marwas, Gairtalai & Jarorada bloks falling under ultimate pits limits.
4e	Number of active and alive dumps.	Marwa Block-04 overburden & IB dumps are active	Marwa Block-04 overburden & IB dumps are active
4f	Number of dead dumps.	Jarorada Block- 03 overburden & IB dumps & in Gairtalai Block-01 overburden dump are dead dumps	Jarorada Block- 03 overburden & IB dumps & in Gairtalai Block-01 overburden dump are dead dumps
4g	Number of dumps established.	Proposal for construction of garland drain along the periphery of waste dump has been given.	carried out as per proposals
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes proposed	Constructed as per proposal
4i	Length of Retaining wall or garland drain all along dumps		100 mtr
4j	Number of settling ponds	Proposed	01

4k Specific comments of inspecting officer on waste dump management

Huge quantity of overburden & Interburden are being generated during mining operations, hence more emphasis need to be given on systematic dumps management & this aspect was discussed during inspection accordingly.

#### 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.	Full extration of mineral is not occured in any pits & no such proposals given	Not Applicable	
5b	Area under backfilling of mined out area	Not Proposed	None of the pits area has been backfilled as of now	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No Proposals of top soil during the year 2021-22	Not Applicable	
5d	Total area fully reclaimed and rehabilitated	Not Proposed	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Limestone is not ehausted in any pits so far, hence scope of backfilling and reclaimation doenot exists. Fines material below threshold value generated during crushing/screening can be very well utilized for backfilling in future.

#### 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).	To be submitted before 1st July of every year	Annual PMCP report submitted well within time limit	
6b	Area available for rehabilitation (ha) .	No area is proposed for rehabilitation	Within the lease, no such area is available for rehabilitation as of now.	
6c	afforestation done (ha).	Total 10000 saplings proposed to be planted over 4Ha with 80% survival rate	During the year 2022, total 1500 saplings were planted with cummuative survival rate of 85%.	
6d	No. of saplings planted during the year	Total 10000 saplings proposed to be planted over 4Ha with 80% survival rate	During the year 2022, total 1500 saplings were planted with cummuative survival rate of 85%.	
6e	Cumulative no .of plants		Total 58100 nos.	
6f	Any other method of rehabilitation	Not Proposed	Nil	
6g	Cost incurred on watch and care during the year	Not Proposed	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Not Proposed	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not Proposed	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	Not Proposed	Nil	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	Nil	
61	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not Proposed	Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not Proposed	Nil	
бn	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not Proposed	Nil	
60	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not Proposed	Nil	
бр	Compliance of environmental monitoring (core zone and buffer zone)	Environmental parameters monitoring proposed at regular interval in core zone and in buffer zone	Environmental parameters monitoring being carried out at regular interval in core zone as well as in buffer zone.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP report in prescribed form submitted and PMCP works carried out as per the proposals. Significant plantation have been carried out by the lessee in & around the mine.

Propasals Actual work

Remarks

Mineral Conservation:

Sl.No. Item

7a	ROM Mineral dispatch or grade-wise sorting within lease area	Before despatch ROM subjected to mechanical screening/crus hing. No grade wise sorting is proposed	ROM dispatched after mechanical screening/crushing. No grade wise sorting is done.	
7b	Method of grade- wise mineral sorting i.e. manual or mechanical.	Grade wise sorting is not proposed.	Grade wise sorting not done.	
7c	Different grade of mineral sorted out at mines.	No grade wise sorting is not proposed.	Not applicable	
7d	Any beneficiation process at mines .	No benification is proposed. Limestone crushing/scree ning proposed	Benificiation not done only limestone crushing/screening is done	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			33.58 lakh tone mineral reject existing inside the lease are above the threshold limit. The limestone has been classified under mineral reject by virtue of its size i.e below 10 mm as it cannot be used in the steel furnance. The CaO content of the Mineral reject is about 48% to 49%.

#### Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	this top OB	Top overburden generated utilized as per the proposals.	

8b	Concurrent use or storage of topsoil	Not Proposed	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps proposed as per approved documents	Dumping carried out as per the proposals	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not Proposed	No mined out area matured for backfilling, hence OB, mineral rejects & fines are being stacked separately on earmarked locations	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed	Not done	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Total 10000 nos of saplings proposed to be planted with 85% survival	Total 1500 nos of saplings planted	
8g	Survival rate	Proposed 85%	Achieved 85%	
8h	Water sprinkling on roads to control airborne dust	sprinkling	Water sprinkling done	Two water tankers of 16KL are dedicately provided for water sprinkling purpose on mine haul road to arrest airborn dust.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The general aesthetic beauty of the area is good, the lease area is surrounded by the the catchment area of Bansagar dam. Significant plantation are also done in an around mines area.

### Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		M.R. submitted upto-Feb -2023 A.R. submitted upto- 2021-22	Annual Return for the year 21-22 submitted within time limit.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager		Mining Engineer & Geologist have not been appointed	Violation pointed out under rule 55(1)
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.		Area under mining-80.665 Ha OB, IB, Fines dumps- 36.81 Ha Mineral Stacks-6.33Ha Infrastructure-121.96 Ha	
9d	Scrutiny of Annual return on afforestation		Total 1500 saplings planted with 80% survival rate	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)		Total 269684 tonnes mineral rejects genereated during the year	
9f	Scrutiny of Annual return on ROM stock and/or graded ore		BF Grade limestone:  O/S-10154 MT  Despatch-988495.670 MT  C/S-10154 MT  Cement Grade Limestone  O/S-2904984.120 MT  Despatch-Nil  C/S-3174667.780 MT	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost		BF - 629.02/- cement - 550.10/-	
9h	Scrutiny of Annual return on fixed assets		Value of Fixed Assets (in .) - 241418735/-	

9k Scrutiny of
Annual return on
mining
machineries

ROCK DRILL (NONELEC.)-115.000 MM - 3 nos EXPLOSIVE VAN - 4.700 TONNE - 1Nos CRANE - 16.000 TONNE -1 Nos DOZER - 420.000 HP - 2 Nos CRUSHER - 200.000 T/H -1 Nos MOTOR GRADER - 145.000 HP - 1 Nos WATER TANKER - 9000.000 LITRE -1 Nos FRONT END LOADER - 3.900 CUM - 1 Nos

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# Details of violations observed during current inspection and compliance position of violation pointed out $\frac{1}{2}$

Violation	observed	Show couse position		
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on	
MCDR17 Rule 11(1)	27-MAR-23			
MCDR17 Rule 55(1)(3	27-MAR-23			

Date: (PUKHRAJ NENIVAL)

Indian Bureau of Mines