

MCDR INSPECTION REPORT

1.0 GENERAL

SL.N	PARTICULARS	DETAILS
1	File No.	CHG/BLD/FE-1/NGP/30MPR13002
2	Name & Designation of the inspecting officer	Shri Arun Kumar, Regional Controller of Mines & Shri Rudra N Mishra, Senior Mining Geologist.
3	Date of Inspection	09/03/2022 (MCDR)
4	Accompanying mine personnel	Shri P M Sirpurkar GM i/c cum Agent (DMM & DMNL), Shri Birendra Kumar, Mine Manager, Dalli Mech. Shri Dhananjay Singh (Jharandalli Mech.Mine) Shri Vinod Kumar Singh, Dalli Mech. Mine
5	Date of Last Inspection & Officer	02/02/2021, Shri R.K. Das (Sr. ACOM)
6	Name of the Mine	Dalli Mech. Mine & Jharandalli Mech.Mine
7	Total Lease Area (Ha) with breakup of non-forest and forest land	Forest Land: 283.60 Ha Non-Forest Land: 436.00 Ha Total Land: 719.60 Ha
8	Mine code	30MPR13002
9	IBM Registration Number under rule 45 of MCDR, 2017	IBM/5662/2011
10	Name of the lessee, Address, phone, email and fax number	Steel Authority of India Limited (SAIL) Bhilai Steel Plant Ispat Bhawan, Lodhi Road, New Delhi -110003.
	Village	Kondekasa
	Taluka/Mandal	Taluka –Dalli-Rajhara
	District	Balod
	Pin code	491228
	State	Chhattisgarh
	Post office	Dalli Rajhara
11	Nearest police station	Dalli Rajhara
12	Nearest Railway station	Dalli Rajhara
13	Date of Grant of Mining Lease	05.11.1962, ML Grant 03.01.2005
14	Date of Execution	Lease deed execution 18.10.2005
15	Date of opening of Mine	05.11.1962
16	Date of first Renewal, if applicable and its period & expiry	First Renewal: 1988 (Period 01.06.88 to 31.05.98)
17	Date of submission of renewal application if Mining Operations are continuing under deemed extension	Second Renewal: 1998 (Period 01.06.98 to 31.05.2003) Third Renewal: 01-06-2003 Period: 20years

		Expiry: 31-05-2023
18	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Anirban Das Gupta Director In charge Bhilai Steel Plant, Ispat Bhawan Bhilai, Dist.-Durg, Chhattisgarh Phone : 07882862001 Email anirbandasgupta@sail.in Date of apponitment : 30/09/2020
19	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri P M Sirpurkar GM i/c cum Agent (DMM & DMNL), Off Address: Dalli Administrative Building, Dalli Rajhara, Dist-Balod, Pin491228(C.G) Phone-9407983906 Email: pshirpurkar@sail.in Date of appointment- 04/08/2020. Shri R C. Behra, (Jharandalli Mech.Mine) Add-Room no-50, Administrative Building, IOC, Rajhara Post- Dalli Rajhara, Dist.- Balod, Pin- 491228(C.G) Email- rcbehra@sail.in Date of appointment- 04/08/2020
20	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri Birendra Kumar, Mine Manager, Dalli Mech. Mine, Off Address: Dalli Administrative Building, Phone: - 07882851804(Off), Mob.9407982925 Email: birendrakumar@sail-bhilaisteel.com Date of appointment- 03/07/2019 Shri Dhananjay Singh (Jharandalli Mech.Mine) Add-Room no-49, Administrative Building, IOC, Rajhara Post- Dalli Rajhara, Dist-Balod, Pin- 491228(C.G) Ph- 9407982902 Id -dhananjaysingh2@sail-bhilaisteel.com Date of appointment- 18/10/2018
21	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri Vinod Kumar Singh, Dalli Mech. Mine BE (Mining), 15 yrs exp in various mines. Off Address: Dalli Administrative Building, Mob. 09407982944, Email- vk Singh6@sail-bhilaisteel.com Date of appointment- 01/03/2021
22	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	YES Shri P. Marathe (Geologist)

23	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Mining Plan: 15/12/2005 Modified Mining Plan: 23/01/2007
24	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Review of Mining Plan -03/08/2016 (2013-14 to 2017-18), No. Durg/Iron/Mining-8/Nag/5-Raipur/255 dated 03-08-2016 Modified Mining Plan approved vide No BLD/FE/MPLN-1229/2019-RPR dated 24/01/2020 (1/02/2020 to 31/03/2023)
25	Mineral(s) granted in lease and proved for mining	Hematite
26	Method of Mining (Opencast, Underground)	Opencast
27	Category (Fully Mechanized, Others or Manual)	Fully Mechanized
28	Captive/Non-Captive	Captive
29	EC for ROM Prod:	14.00 million tones
30	FA amount Rs Valid up to:	Rs 12.60 Crore Valid Up to 31.03.2023

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

1.0 EXPLORATION

SN	ITEM	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	REMARKS
1a	Backlog of previous year	Bore holes Nos-35, Total Mtrs=3130m	BH= 0 Mtrs = 0	35 Bore holes proposed in 2020-2021 Violation Pointed out
1b	Exploration over lease area for Geological axis 1 or 2.	G4 area to Convert G1 Category based on the analysis report	Nil	Lowest level of exploration 259mRL
1c	Exploration Agency & Expenditure in lakh Rupees during the year	No proposal	Nil	Exploration not yet done.
1d	Balance area to be explored to bring Geological axis in 1 or 2	G1 Category: 260.40Ha G4 Category: 264.51Ha Unexplored Area:194.67Ha	Nil	Balance Area remain same
1e	Balance reserves as 01.04.2021	Nil	Mineral Reserves : 2150000 tonnes,	As per AR submitted for the year 2020-21.

				Lump Ore Grade 65.25% Fe and for Fines 63.71% Fe.
1f	General remarks of inspecting officer on geology, exploration etc.	Violation pointed out due to exploration not carried out during the FY 2020-2021. G1 Category: 260.40Ha, G4 Category: 264.51Ha & Unexplored Area:194.67Ha.		

2.0 DEVELOPMENT

SN	ITEM	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	REMARKS
2a	Location of development w.r.t. lease area	The eastern pit will be deepened up to 450 Mrl and central pit will be excavated laterally at 500 Mrl. (Pit-1 DMM) Between 530 to 445 Bench level (Pit-2 JMM)	Same as proposal actual work is being carried out. DMM Konde A lowest level is 460 mRL.	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	yes	Being maintained	Overburden-7 and 16 Mineral-6 & 14
2c	Stripping ratio of ore to OB ratio (t / t)	1: 0.50	1: 0.73	Bulk Density t/m3: Ore: 3.5 (avg) OB: 2.7(avg)
2d	Quantity of topsoil generation in m ³	NIL	NIL	
2e	Quantity of overburden generation in Tons	3140000 T	36598467 T	as per Annual Return
2f	General remarks of inspecting officer on development of pit wrt. type of deposit etc.	Mining carried out by fully mechanized open cast bench mining method with deployment of HEMM and in conjunction with deep hole drilling & blasting.		

3.0 EXPLOITATION

S.N.	ITEM	PROPOSAL (2020-21)	ACTUAL WORK (2020-21)	REMARK
3a	Number of pits proposed for production	One Pit in JMM and one pit in DMM proposed Total – 2 pits proposed	2 Pit developed Total – 2 pits developed	As per proposal

3b	Quantity of Iron Ore production proposed	6250000 T	4732274.700 T	
3c	Recovery of saleable/usable mineral from Iron Ore production	5312500 T (15% Loss after Washing)	Actual = 4210680 T	Loss after washing approx. 15%
3d	Quantity of mineral reject generation	No proposal	Nil	As per AR submitted for the year 2020-21.
3e	Grade of mineral reject generation and threshold value declared	Threshold value: Fe 45%	Threshold value: Fe 45%	As per AR submitted for the year 2020-21.
3f	Quantity of sub-grade mineral generation	No proposal	Nil	
3g	Grade of sub-grade mineral generation	45-55 Fe %	50 Fe %	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method proposed for segregating from ROM	Mechanized method adopted for segregating from ROM	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No study Proposed	No such study carried out	Nil
3j	Provision of drilling & blasting in mineral benches	Provision of Drilling and blasting is made in Mineral benches for hard strata	Drilling and blasting carried out by combination of slurry and Nonel Detonators	Drill m/c of 152mm dia. with spacing -3.0 – 4.0mts, burden 5.5 -4.5 mts & depth of 11 to 12 mts
3k	Provision of mining machineries in mineral benches	Hydraulic excavators and Dumper combination Proposed	Mining is carried out by using Hydraulic excavators and 50 to 60 Tonner Dumper.	Drill Machine: 07 Nos, Dumpers: 10 Nos. Shovel:10 No, Dozer :06 Nos, Water Tankers:28000 Lt & 10000 Lt total 04 & 03 numbers respectively.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height of 10 m and width of 11.91 m proposed	Average Bench height of 10m and bench width of 11.00 m	
3m	Total area covered under excavation/pits	155.07 Ha at the end of plan period	148.240 Ha at the end of reporting year	Nil
3n	Stripping ratio of ore to OB ratio (tones /tones)	1: 0.50	01: 0.73	Nil

3o	Total area put in use under different heads at the end of year	Area Under Pit: 155.07 ha, Waste dump-72.83 Ha, Mineral storage: 15.96Ha, Infrastructure-16.66 Ha, roads - 28.70ha, Railways:7.59ha, Mineral separation plant:118.96ha Pipe line: 3.18 Ha at the end of plan period	Covered under working pit-148.240 Ha, Reclaimed and Rehabilitated area: 9.00 ha Use for waste disposal: 59.350 ha Occupied by plant, building residential, welfare building and roads:61.230 ha and other purpose: 3.960 ha at the end of reporting year	Nil
3p	Production of Iron Ore during last Five -year period, as applicable	2016-17-4575474.00Tons	2016-17-4575474.00Tons	Actual production within the proposed limits
		2017-18-5750000 Tons	2017-18-5109944.00Tons	
		2018-19-5494837 Tons	2018-19-5036137.00 Tons	
		2019-20-5361820 Tons	2019-20-5080892.00Tons	
		2020-21-6250000 Tons	2020-21-4732275.00Tons	
3q	General remarks of inspecting officer on method of mining etc.	Method of mining is Open cast mechanized mining with shovel dumper combination. Subgrade mineral blended with Saleable ore.		

4.0 SOLID WASTE MANAGEMENT-DUMPING

SN	ITEM	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	REMARKS
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dumping for OB proposed	Separate dump of OB maintained	Nil
b	Location of topsoil, OB & mineral reject dumps	Topsoil dump NA OB dump = WD1 6100N- 6225N/6250E- 6470E Mineral reject dumps – Hitkasa Tailing Dam	OB dump = WD1 Mineral reject dumps – Hitkasa Tailing Dam	Waste is being dump at earmarked place as per approved documents.
4c	Number of dumps within lease area and outside lease area	Within lease area-01 Nos. Outside lease area- Nil	Within lease area-01 Nos Outside lease area- Nil	

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside of ultimate pit limit	Outside of ultimate pit limit	
4e	Number of active & alive dumps	1	1	
4f	Number of dead dumps	No proposal	Nil	
4g	Number of dumps stabilized	No proposal	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there	Yes	Yes	
4i	Length of Retaining wall or garland drain all along dump	Retaining wall 500Mtrs proposed	Retaining wall 500 Mtrs constructed.	
4j	Number of settling ponds	No proposal	Nil	
4k	Specific comments of inspecting officer	Waste is being dump at earmarked place as per approved documents.		

5.0 SOLID WASTE MANAGEMENT-BACKFILLING

SN	ITEM	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	REMARKS
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No Proposal	Nil	Area is not matured for backfilling.
5b	Area under backfilling of mined out area	No Proposal	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No Proposal	Nil	
5d	Total area fully reclaimed & rehabilitated	No Proposal	Nil	
5e	General remarks of inspecting officer on backfilling, reclamation etc	The Mineral is not exhausted and the area is not matured for backfilling.		

6.0 PROGRESSIVE MINE CLOSURE PLAN

SN	ITEM	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	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.	PMCP report to be submitted by 1 st of July every year.	PMCP report 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	No Proposal	i) Nil ii) Nil iii) Nil Departmental	
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	No Proposal Waste NA NA NA	Nil Waste NA NA NA	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	No Proposal NA NA	Nil NA NA	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Proposed Environmental monitoring in core and Buffer Zone.	Environmental monitoring in core and Buffer Zone is carried out regularly.	Monitoring carried out by M/s SAIL. All the parameters were observed to be within permissible limits.
6f	General remarks of inspecting officer on PMCP compliance & progressive	PMCP report submitted and environmental monitoring compliance done as per proposal.		

7.0 MINERAL CONSERVATION

SN	ITEM	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	REMARKS
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting proposed within the lease area	Grade-wise sorting done within the lease area	Subgrade mineral generated is blended simultaneously with high grade mineral during

				feeding to the crushing plant.
7b	Method of grade-wise mineral sorting i.e., manual or mechanical	Mechanical sorting proposed.	Mechanical method adopted for grade wise sorting.	ROM dispatch to Rajhara/Dalli Crushing Plant for processing
7c	Different grade of mineral sorted out at mines	Below 55 Fe%, 55 to 58 Fe%, 58 to 60 Fe%, 60 to 62 Fe%, 62 to 65 Fe% 65%and above	Below 55 Fe%, 55 to 58 Fe%, 58 to 60 Fe%, 60 to 62 Fe%, 62 to 65 Fe% 65%and above	
7d	Any beneficiation process at mines	No proposal	Nil	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Crushing is being done for sizing of ore.		

8.0 ENVIRONMENT

SN	ITEM	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	REMARKS
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	Nil	
8b	Concurrent use or storage of topsoil	No proposal	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping for OB proposed	Separate dump for OB maintained	
8d	Use of overburden, waste rock, rejects and fines dump for restoring the land to its original use	No proposal	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc.)	No proposal	Nil	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	10000 Sapling	Within lease area- 13200 saplings, Outside Lease area: Nil saplings.	,
8g	Survival rate	Survival rate 90%	Survival rate 90 %	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads proposed to control airborne dust.	Water Tankers were deployed to control the airborne dust on haul roads and screening plants.	07 nos of water tankers of 28000 lt and 10000

				Lt capacity deployed.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	The aesthetic beauty in and around the mine is maintained		

9.0 COMPLIANCE OF RULE 45

S. N.	Item	Comments	Remarks
9a	Status of submission of monthly and Annual returns	M.R. Submitted up to-Feb -2021 A.R. submitted for the year 2020-21	AR Submitted on 30/06/2021
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Shri P. Marathe (Geologist) Shri Vinod Kumar Singh, Mining Engineer	Same Mining Engineer & Geologist were present during the course of inspection.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under working pit-148.240 Ha, Reclaimed and Rehabilitated area: 9.00 ha Use for waste disposal: 59.350 ha Occupied by plant, building residential, welfare building and roads:61.230 ha and other purpose: 3.960 ha at the end of reporting year	Appears to be correct
9d	Scrutiny of Annual return on afforestation	Within lease area-13200 saplings, Outside Lease area: Nil saplings. Survival rate 90 %	
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Nil	Nil
9f	Scrutiny of Annual return on ROM stock and/or grade ore	ROM Stock: Opening Stock: 339601.780T Production: 4732274.700T. Closing stock: 100327.770 T	Appears to be correct
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production costs	Lumps & Fines: Cost of production: Rs.1310.30/Ton Captive use, Ex-Mine price and Cost of production same.	
9i	Scrutiny of Annual return on Fixed assets	Value of Fixed Assets: Rs 449120883 (As per reported in AR)	
9k	Scrutiny of Annual return on mining Machineries	Drill Machine: 07 No, Dumpers: 10 Nos. Shovel:10 No, Dozer :06 Nos, Water Tankers:28000 Lt & 10000 Lt total 04 & 03 numbers respectively.	

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out: - Violations observed during Inspections under Rule 11(1).

Earlier violation pointed out have been complied. Four stars rated during self-appraisal. It's also validated after inspection.

Date: 04/04/2022

Shri Arun Kumar
Regional Controller of Mines.