

MCDR INSPECTION REPORT

1.0 GENERAL

SN	Particulars	Details
1	Name of the Mine, Name of Inspecting officer, Accompanying person & Date of Inspection ,File No.	Rajhara Mech. Mine, Rajesh Kumar Das,Senior Assistant Controller of Mines, Shri P.M.Shirpurkar,Agent(Mine) & Shamsad Raza,DGM(Geology) & 04.02.2020,CHG/BLD/Fe-1/NGP
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease- 220.42 Ha (Part of Pandridalli and Rajhara Pahar Lease) Mine control Boundary 220.42 Ha. Under Forest- 100.76 Ha Non-forest- 119.66 Ha
3	Mine code	30MPR13005
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/5662/2011
5	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 director.rml.sail@gmail.com
6	Village	Pandridalli
7	Taluka/Mandal	Dondi
8	District	Balod
9	Pincode	491228
10	State	Chhattisgarh
11	Post office	Dalli Rajhara
12	Nearest police station	Dalli Rajhara
13	Nearest Railway station	Dalli Rajhara
14	Date of Grant of Mining Lease	01.06.1958
15	Date of Execution	05.03.1962
16	Date of opening of Mine	31.12.1959
17	Date of first Renewal, if applicable and its period & expiry	01.06.1988 to 31.05.1998
18	Date of second Renewal, if applicable and its period & expiry	01.06.1998 to 27.04.2003 28.04.2003 to 27.04.2023

19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	NA
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri VIVEK GUPTA (Director , RM&L) Ispat Bhawan, Lodhi Road, New Delhi -110003 director.rml.sail@gmail.com Date of appointment- 27/03/2019
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri P.M.Shirpurkar, Agent cum GM (Mines),IOC Add-Room no-53, Administrative Building, IOC, Rajhara Post- Dalli Rajhara, Dist- Balod, Pin- 491228(C.G) Ph-9407983609 Email- pshirpurkar@sail-bhilaisteel.com Date of appointment- 27/10/2018
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri Rakesh Singh Add-Room no-51 , Administrative Building, IOC, Rajhara Post- Dalli Rajhara, Dist- Balod, Pin- 491228(C.G) Ph- 9407982855 Email- rakeshsingh@sail-bhilaisteel.com Date of appointment- 18/10/2018
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri Rakesh Singh Qualification-Degree In Mining Engineering, Experience- 15 yrs Add-Room no-51, Administrative Building, IOC, Rajhara Post- Dalli Rajhara, Dist- Balod, Pin- 491228(C.G) Ph- 9407983618 Email- rakeshsingh@sail-bhilaisteel.com Date of appointment- 18/10/2018
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	YES
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	MINING PLAN – 9.01.2006 No 314(3)/2004-MCCM(CZ)/MP-23
26	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 in 25.05.2018 for the period 2018-19 to 2022-23
27	Mineral (s) granted in lease and proved for mining	HEMATITE (IRON ORE)
28	Method of Mining(Open cast, Underground)	OPENCAST
29	Category (Fully Mechanised, Others or Manual)	FULLY MECHANISED
30	Captive/Non Captive	CAPTIVE

Exploration

SN	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	2018-19
1b	Exploration over lease area for Geological axis 1 or 2.	Nil	Nil	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NIL	NIL	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	NIL	
1e	Balance reserves as on 01.04.2019	23.35 MT	24.10 MT	
1f	General remarks of inspecting officer on geology, exploration etc.	The ore deposit of Rajhara comprises of 2 distinct blocks- Rajhara main and kokan west. Rajhara main contains mostly massive ore. The general dip of the ore body along with the associated rock is 40-45 degree due N-NW, general strike of the massive ore body is E-W. The exploration is carried in Rajhara is nearly 174 bore holes in bore core & Rc reported.		

2.0 Development

SN	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Co-ordinates E9855, N7690 E9950, N7350 E10660, N7450 E10710, N8050	Broadly work has been performed Within Proposed Area	
2b	Separate benches in topsoil, overburden and mineral (Rule 13)	NIL	Being maintained	
2c	Stripping ratio or ore to OB ratio (T/M ³) Sp. Density of Waste =2.2	1:1.28	1:1.67	
2d	Quantity of topsoil generation in m ³	NIL	NIL	
2e	Quantity of overburden generation in Ton	6200000 T	Total- 5386329.27 T	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Broadly work has been performed Within Proposed Area.		

	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	02	01	
3b	Quantity of ROM mineral production proposed	2200000 T	1459170 T	
3c	Recovery of salable /usable mineral from ROM production	Full recovery	Full recovery	
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral reject generation and threshold value declared	Nil	Nil	
3f	Quantity of sub-grade mineral generation	Nil	Nil	
3g	Grade of sub-grade mineral generation	Nil	Nil	
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	Blast hole drilling using IDM-30 & ICM-260 drill machines.	Blast hole drilling using IDM-30 & ICM-260 drill machines.	
3k	Provision of mining machineries in mineral benches	Hydraulic excavators, tippers, dozers, grader.	Hydraulic excavators, tippers, dozers, grader	

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	YES (10 Mtrs.)	YES	
3m	Total area covered under excavation/pits	54.83 Ha.	54.03 Ha.	
3n	Ore to OB ratio for the pit/mine during the year Sp. Density of Waste =2.2	1:1.28 (T/M ³)	1:1.67 (T/M ³)	
3o	Total area put in use under different heads at the end of year	Item details	Proposed area.(ha)	Actual area (ha)
		i) Area under mining	123.70	124.90
		iii)Waste dump site	36.26	38.26
		v) Infrastructure – workshop, administrative building etc.	0.32	0.32
		vi) Roads	3.5	4.5
		xii) Others (to specify) (A)area not considered for reclamation & Rehabilitation (B)Undisturbed area	11.15 45.49	11.15 41.29
		xiii) Total in ha	220.42	220.42
3p	Production of ROM mineral during last five-year period, as applicable (2014-19) lease wise (Unit in 000Tonnes)	2014-15 1759 2015-16 1964 2016-17 2100 2017-18 3353 2018-19 2200	2014-15 1759 2015-16 1967 2016-17 1497 2017-18 1717 2018-19 1459	
3q	General remarks of inspecting officer on method of mining etc.	The method of mining is by open cast method using HEMM and deep hole drilling blasting.		

4.0 Solid Waste Management-Dumping

SN	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	No proposal of top soil generation & mineral reject	NA	
b	Location of topsoil, OB & mineral reject dumps	NA	NA	
4c	Number of dumps within lease area and outside lease area	Within Lease 1	Within Lease 1	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	NA	NA	
4e	Number of active & alive dumps	1	1	
4f	Number of dead dumps	Nil	Nil	

4g	Number of dumps stabilised	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there	Not mentioned specifically yearwise	Not done properly	
4i	Length of Retaining wall or garland drain all along dump	Nil	Nil	
4j	Number of settling ponds	NIL	NIL	
4k	Specific comments of inspecting officer on waste dump management	During the mine visit it was observed that existence of huge dump without proper protective measures i.e. terracing, retaining wall and accordingly violation has been issued		

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	A .420*300*12 B.380*160*12	A 250*150*8 B.150*100*8	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 36)	NA	NA	
5d	Total area fully reclaimed & rehabilitated	NA	Nil	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Backfilling was done broadly within proposed area.		

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 E(2). Details should be given in the format as given in Annexure-20.	As per guideline	Submitted	.
6b	Management of worked/mined out benches i) Area available for	NIL	NIL.	

	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 600	NIL 150 205200	
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	A.420*300*12 B.380*160*12 Waste 100 plants	A 250*150*8 B.150*100*8 Waste 50 plants	

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)	Yes	Yes	
6f	General remarks of inspecting officer on PMCP compliance & progressive	Broadly complied		

7.0 Mineral Conservation

SN	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM	ROM	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	NIL	NIL	
7c	Different grade of mineral sorted out at mines	Nil	Nil	
7d	Any beneficiation process at mines	No	No	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	No such beneficiation except crushing and screening.		

8.0 Environment

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

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	NIL	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	Nil	Within ML =87 Ha. Outside ML =169Ha. Total = 256 Ha.	
8g	Survival rate	Nil	Survival rate = 97%(Within ML) =90 %(Outside lease)	
8h	Water sprinkling on roads to control airborne dust	Proposed	Being done	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	No adverse impact observed during mine visit due to mining on aesthetic beauty.		

9.0 Compliance of Rule 45

S. N.	Item	COMMENTS	Remarks
	Status of submission of Monthly and Annual returns	AR upto 2018-19 and Monthly report upto December 2019 submitted	

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 Rakesh Singh is Mining Engineer & Manager & Sanjay Srivastava is geologist	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Yes	Already exploited by O/C working -38.97 ha., Covered under current working-95.36 ha., Reclaimed and rehabilitated area -5 ha.	
9d	Scrutiny of Annual return on afforestation	given	150nos reported	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil		
9f	Scrutiny of Annual return on ROM stock and/or graded ore	125132 tons reported		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex-Mine price Rs1157/- for lumps & 1190/- for fines reported & cost of production 1270.60 Rs	The cost of production cannot be more than Ex-mine price as it is captive use	

		reported		
9i	Scrutiny of Annual return on fixed assets		Rs 509705166/- reported	
9k	Scrutiny of Annual return on mining machineries	given	Excavator-4.5 & 5.0 cum capacity Dumper- ^0 tons , Dozer 410 HP, Grader, Drill M/C 152 mm diameter.	

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:- The earlier violations pointed out already complied . During present inspection following violations were found:

Rule	Nature of Violation observed
11(1)	Mining operations should have been undertaken in accordance with the approved Mining Plan/Review of Mining Plan. The Review of Mining Plan was approved vide letter no. बलोद/ लौह /खयो-1146/2018-रायपुर dated 26.05.2018 and following deviation was observed during inspection 1. There was a proposal of 05 boreholes in 2019-20 but till date the drilling not yet started neither any intimation regarding drilling/exploration given. 2. The backfilling was not done as per proposal and only 30% of the proposal is implemented. 3. The plantation is proposed 600 nos saplings in 2018-19 and 8725 nos in 2019-20 but negligible afforestation done and for 2018-19 only 150 reported in annual return.
37(2)	The dumps shall be properly secured to prevent escape of material there from in harmful quantities which may cause degradation of environment and to prevent causation of floods. It was observed that there is no proper terracing and the OB/waste dump is near to lease boundary but still no proper retaining wall is constructed nor any control measures for dump stability.
45(5)(c)(i)	While scrutiny of Annual returns 2018-19 it was observed that The Ex-mine price is given as Rs 1157/- for lump and 1190/- for fines and the cost of production is mentioned as Rs1270/- .As the mine is of captive used therefore Ex-mine price and cost of production should be same. There are other deficiencies observed i.e. land use and reserve/resource is different w.r.t approved document. In the return it is mentioned that the mine is having 9 benches and depth of working is 90 meter whereas actually the difference between top and bottom RL is more 150 meter.

(Rajesh Kumar Das, Senior Assistant Controller of Mines)