

MCDR INSPECTION REPORT

1.0 GENERAL

SN	Particulars	Details
1	Name of inspecting office & designation	Mr.Rajesh Kumar Das, Sr. Asst Controller of Mines, Indian Bureau of Mines, Raipur
1a	Accompany with Mine Official & Date of Inspection	Shri Chintala Srikant, Agent Mine & Shri Rakesh Singh, Mine Manager, 01.02.2021
1b	Name of the Mine	Rajhara Mech. Mine
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease- 220.42 Ha (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 ANIRBAN DAS GUPTA Director (Project & Business planning) Ispat Bhawan, Lodhi Road, New Delhi -110003 director.rml.sail@gmail.com Date of appointment- 31/07/2020
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri Chintala SRIKANT, Agent cum GM (Mines), IOC Add-Room no-53, Administrative Building, IOC, Rajhara Post- Dalli Rajhara, Dist- Balod, Pin- 491228(C.G) Ph-9407982915

		Email- schintala@sail.in Date of appointment- 04/08/2020
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- rakeshsingh1@sail.in 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- rakeshsingh1@sail.in 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 approved dated 25.05.2018, period 2018-19 to 2022-23
27	Mineral (s) granted in lease and proved for mining	HEMATITE (IRON ORE)
28	Method of Mining(Opencast, 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. –
Exploration

SN	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	05	NIL	
1b	Exploration over lease area for Geological axis 1 or 2.	05	NIL	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Not mentioned	NA	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	NIL	
1e	Balance reserves as on 01.04.2020	21.15 MT	22.84 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.
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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	Actual 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	1:1.36	1:1.32	
2d	Quantity of topsoil generation in m ³	NIL	NIL	
2e	Quantity of overburden generation in Ton	6200000 T	Total- 3648090 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	02	
3b	Quantity of ROM mineral production proposed	2200000 T	1248921.4 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	Hydraulic excavators, tippers,	Hydraulic excavators, tippers, dozers, grader	

	benches	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	125.1 Ha.	125.1 Ha.																					
3n	Ore to OB ratio for the pit/mine during the year Sp. Density of Waste =2.2	1:1.36 (T/M ³)	1:1.32 (T/M ³)																					
3o	Total area put in use under different heads at the end of year	Details attached in last page.																						
3p	Production of ROM mineral during last five-year period, as applicable (2014-19) lease wise (Unit in 000Tonnes)	<table border="1"> <tr><td>2015-16</td><td>1964</td></tr> <tr><td>2016-17</td><td>2100</td></tr> <tr><td>2017-18</td><td>3353</td></tr> <tr><td>2018-19</td><td>2200</td></tr> <tr><td>2019-20</td><td>2200</td></tr> </table>	2015-16	1964	2016-17	2100	2017-18	3353	2018-19	2200	2019-20	2200	<table border="1"> <tr><td>2015-16</td><td>1967</td></tr> <tr><td>2016-17</td><td>1497</td></tr> <tr><td>2017-18</td><td>1717</td></tr> <tr><td>2018-19</td><td>1459</td></tr> <tr><td>2019-20</td><td>1248</td></tr> </table>	2015-16	1967	2016-17	1497	2017-18	1717	2018-19	1459	2019-20	1248	
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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)	NA	NA	
b	Location of topsoil, OB & mineral reject dumps	NA	NA	
4c	Number of dumps within lease area and outside lease area	Within Lease 1dump proposed	Within Lease 1dump but some portion extended outside lease area.	
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	Yes	Yes	
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 of waste dump management	The waste dump management was not proper therefore on that point violation 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 275*180*8 B.200*120*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	Broadly the backfilling is done 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 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 nil	NIL. NIL nil 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 100 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	NIL	NIL	

	(core zone & buffer zone)			
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	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	NA	NA	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	ROM dispatch from lease.		

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	Nil		

	and around mines are	
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9.0 Compliance of Rule 45

S. N.	Item	COMMENTS	Remarks
	Status of submission of Monthly and Annual returns	Being done regularly.AR upto 2019-20 and MR upto 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	Manger & Mining Engineer Shri Rakesh singh, Geologist Shri Sanjay Srivastava		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	given		
9d	Scrutiny of Annual return on afforestation	100 nos		
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil		
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stocks of different grade of lump and fines given	Stocks are there of ROM	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex. Mine price & production cost Rs 1513.49/-		
9i	Scrutiny of Annual return on fixed assets	Rs 449166475/-		
9k	Scrutiny of Annual return on mining machineries	Given in return		

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:-The earlier violation partially compliance and during present inspection the following violations pointed out:

Rule	Nature of Violation observed
11(1)	<p>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/ लोह /खयो-1146/2018-रायपुर dated 26.05.2018 and following deviation was observed during inspection</p> <ol style="list-style-type: none"> There was a proposal of 05 boreholes in 2019-20 and 05 boreholes in 2020-21 but till date the drilling not yet started neither any intimation regarding drilling/exploration given. The proposal of ROM is given for 2.2 million ton whereas actual achievement is only 1.24 million tons which is only 56% of the proposal.

	<p>3. The mine is not developed systematically as per proposals and some places benches area merged with top benches. Benches and bench width is less than height.</p> <p>4. It was observed that faces are not developed as per the proposal and some places overhang and big boulders are hanging and stack near faces.</p>
31(4)	The plans and sections required under these rules have not been maintained up to date within three months in case of category 'A' mines.
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 and extended outside lease area between BP 46 to BP52 & BP52 to BP51.

Rajesh Kumar Das, Senior Assistant Controller of mines