

MCDR INSPECTION REPORT

1.0 GENERAL

Sl.N	PARTICULARS	DETAILS
1	File No.	CHG/KNK/FE-7/30CHG08008
2	Name & Designation of the inspecting officer	Shri Rudra N. Mishra, Senior Mining Geologist
3	Date of Inspection	13/07/2021 (MPI)
4	Accompanying mine personnel	Mr Ganga Ram Verma (Mine Agent) Mr J B Singh (Mine Manager) Mr Shailendra Suryavanshi (Mining Engineer)
5	Date of Last Inspection & Officer	05/02/2021, Shri R. K. Das, Sr.ACOM
6	Name of the Mine	Kachche Aridongri Iron ores Mine
7	Total Lease Area (Ha) with breakup of Non-forest and forest land	Non- forest – 11.560 hect. Forest Land: 127.40 hect. Total Land: 138.960 hect.
8	Mine code	30CHG08008
9	IBM Registration Number under rule 45 of MCDR, 2017	IBM/4342/2011
10	Name of the lessee, Address, phone, email and fax number	Kachche Aridongri Iron Ores Mines Village: Kachche, Taluka: Bhanupratappur, District: Kanker State: Chhattisgarh Fax : 0771-4082709, 4082765 Email id vinod.pillai@hiragroup.com
	Village	Kachche
	Taluka/Mandal	Bhanupratappur
	District	Uttar Baster, Kanker
	Pincode	494635
	State	Chhattisgarh
	Post office	Kachche
11	Nearest police station	Kachche
12	Nearest Railway station	Gudum
13	Date of Grant of Mining Lease	30.09.2008 Date of Expiry: 29.09.2058
14	Date of Execution	03.09.2015(Amalgamated Lease)
15	Date of opening of Mine	16.01.2009 & 09/09/2015 (After amalgamation of both lease 106.60ha & 32.36 ha)
16	Date of first Renewal, if applicable and its period & expiry	NA
17	Date of submission of renewal application if Mining Operations are continuing under deemed extension	NA

18	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Mr Vinod Pillai B-7 Sahni Vihar, Raipur Phone -0771-4082706, fax – 0771-4057601 Email id vinod.pillai@hiragroup.com Appointment date 28.07.2009
19	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Mr Ganga Ram Verma H.NO. – 168, Capital city phase 1 Saddu Raipur Phone No 07714082765/7004502568 Email id gangaram.verma@hiragroup.com Date of Appointment: 11.09.2019
20	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Mr J B Singh Kachche Aridongri Iron Ore Mine Village- Kachche, Tehsil- Bhanupratappur, Dist. Kanker (C.G.) Mobile No 9685090986
21	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Mr Shailendra Suryavanshi Kachche Aridongri Iron Ore Mine Village- Kachche, Tehsil- Bhanupratappur, Dist. Kanker (C.G.) Mobile No 9685090602
22	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Mr Ghanshya Namdeo (Geologist) Mr Shailendra Suryavanshi (Mining Engineer)
23	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Modification of Mining Pan Plan Period 2015-16 to 2019-20 Modification Period 2017-18 to 2019-20
24	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Letter No. Knk/Fe/MPLN-1138/2017/RPR Dated 05.03.2018 Letter No. Knk/Fe/MPLN-1227/2019/RPR Dated : 09/01/2020
25	Mineral(s) granted in lease and proved for mining	Iron ore
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: Date of Issue:	2.35 million Tonne dated 23 rd June 2021
30	FA amount Rs Valid up to:	Rs.37252290.00 Valid up to: 31/03/2025

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	Nil	Nil	During 20-21, Proposal was nil.
1b	Exploration over lease area for Geological axis 1 or 2.	Proposal Not given	Nil	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Proposal Not given	NA	
1d	Balance area to be explored to bring Geological axis in 1 or 2	-	39.74 Ha	
1e	Balance reserves as 01/04/2021	<p>Magnetite: Category 111: 8.023 million tonnes Category 122: 3.151 million tonnes Specularite: Category 111: 8.089 million tonnes Category 122: 0.005 million tonnes Banded Magnetite Quartzite: Category 111: 8.158 million tonnes Category 122: 0.555 million tonnes Total Reserve: 30.251 million tonnes</p> <p>Magnetite: Category 211: 0.402 million tonnes Category 222: 2.630 million tonnes Specularite: Category 211: 1.105 million tonnes Category 222: 0.009 million tonnes Banded Magnetite Quartzite: Category 211: 0.106 million tonnes Category 222: 0.012 million tonnes Total Resources:4.266 million tonnes</p>		
1f	General remarks of inspecting officer on geology, exploration etc.	<p>Iron ore in the area is associated with Dharwarian rocks and is overlain by hard massive ferruginous quartzite. The underlying formation is either quartz mica schist or highly weathered basic intrusive. Ore consists of Magnetite and Micaceous hematite. Micaceous Hematite patches occur within the ore and don't have any pattern of occurrence. The strike of the ore body is almost NE-SW with the Dip varying from 80° to 85° towards west. The strike length of the Ore body is about 800m with minimum and maximum width is about 20m to 50 m respectively. The Iron ore</p>		

	observed in the area is mostly magnetic with micaceous nature and can be broadly classified into massive and Laminated type. Due to metamorphism iron ore has been remobilized and at places converted into Magnetite.
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2.0 DEVELOPMENT

SN	ITEM	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	REMARKS
2a	Location of development w.r.t. lease area	From 506700E to 507000 E & 2257300N to 2256300N	From 506700E to 507000 E & 2257300N to 2256300N	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Yes	Yes	
2c	Stripping ratio or ore to OB ratio in m ³	1:1.29	1:2.11	
2d	Quantity of topsoil generation in m ³	Nil	Nil	
2e	Quantity of overburden generation in m ³	1806000	2954525.575 m ³	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Overburden generation is high.		

3.0 EXPLOITATION

S.N.	ITEM	PROPOSAL (2020-21)	ACTUAL WORK (2020-21)	REMARK
3a	Number of pits proposed for production	1	1	
3b	Quantity of Iron Ore production proposed	1400159	1399971.09	
3c	Recovery of saleable/usable mineral from Iron Ore production	Proposal not given	90%	
3d	Quantity of mineral reject generation	12792	Nil	
3e	Grade of mineral reject generation and threshold value declared	NA	NA	
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	Nil	Nil	

3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Nil	Nil	
3j	Provision of drilling & blasting in mineral benches	Deep hole drilling by 110 mm dia Drill at 2.7 m burden & 2.8 m spacing, 83 mm cartridge slurry explosives for blasting	Deep hole drilling by 115 mm dia Drill at 1.5 to 2.0 m burden & 2 to 2.5 m spacing, 83 mm cartridge slurry explosives for blasting For 150 mm drill, burden is 2.5-3 m ^ Spacing is 3-3.5 m, 125 mm dia cartridge slurry explosive is being used	
3k	Provision of mining machineries in mineral benches	Excavators: 1.0 – 1.8 cu. M Tippers: 20t/25 T Drill: 110 mm Dozer , Grader, Water Tankers	Excavators: 1.8 – 3.5 cu. M Tippers: 25t/31t Drill: 115 mm/150 mm Dozer , Grader, Water Tankers, Rock breakers, wheel loaders etc.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	
3m	Total area covered under excavation/pits	39.762 Ha	39.762 Ha	
3n	Ore to OB ratio for the pit/mine during the year	1:1.29	1:2.11	
3o	Total area put in use under different heads at the end of year	Area of excavation: 37.762 ha, Overburden dump: 49.846 ha, Infrastructure (Office, Rest shelter & pumping station): 13.075ha, Other purpose: 3.768 ha		
3p	Production of Iron Ore during last Five -year period, as applicable	2016-17	1147385.00 T	985178.40 T
		2017-18	1343575.00 T	1207018.00 T
		2018-19	1399890.00 T	1182025.24 T
		2019-20	1399900.00 T	1347258.84 T
		2020-21	1400159.00 T	1399971.09 T
3q	General remarks of inspecting officer on method of mining etc.	The method of working is broadly as per proposal and it is opencast mining with deep hole drilling blasting		

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)	Yes	Low grade materials, BMQ are being stacked separately. Top soil generation is nil.	
b	Location of topsoil, OB & mineral reject dumps	Yes	OB generation very high	Low grade materials, BMQ etc. are being stacked separately
4c	Number of dumps within lease area and outside lease area	3	3	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside the Ultimate Pit Limit	Dumps are located outside the Ultimate Pit Limit	
4e	Number of active & alive dumps	3	3	
4f	Number of dead dumps	Not given in proposal	NA	
4g	Number of dumps stabilized	Not given in proposal	NA	
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	Not given in proposal	Retaining wall: 115 m Garland drain: 640 m	
4j	Number of settling ponds	Not given in proposal	Nil, maximum area covered by dump.	
4k	Specific comments of inspecting officer	Waste generation is very high, VL Pointed out		

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	Not given in proposal	Area not matured for backfilling	
5b	Area under backfilling of mined out area	Not given in proposal	NA	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Top soil generation is Nil	Top soil generation is Nil	

5d	Total area fully reclaimed & rehabilitated	Nil	Nil	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Area is not mature for backfilling and reclamation etc.		

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.	Yes	Yes	
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	Ultimate pit limit is not yet reach; therefore, rehabilitation of active benches could not be done
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	NA	NA	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	2810 1.124ha Plantation	10900 4.41 ha Plantation	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Complied	Complied	
6f	General remarks of inspecting officer on PMCP compliance & progressive	Broadly 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 of ore	Three stages of crushing of ore	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Three stages of crushing of ore	
7c	Different grade of mineral sorted out at mines	Not Mentioned	Maximum fines generation from the Lumpy ROM	
7d	Any beneficiation process at mines	Nil	crushing & grinding is carried out at Mines	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	There are no beneficiation facilities within lease area and only crushing & grinding is carried out at Mines. Maximum fines generation from the Lumpy ROM. VL pointed out		

8.0 ENVIRONMENT

SN	ITEM	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	REMARKS
8a	Separate removal and utilization of topsoil (Rule 32)	Nil	Nil	No topsoil is generated during the period, Low grade materials, BMQ are being stacked separately.
8b	Concurrent use or storage of topsoil	Nil	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes	Yes	
8d	Use of overburden, waste rock, rejects and fines dump for restoring the land to its original use	NA	NA	
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)	No. of Plants: 2810 Area: 1.124 Ha	No. of Plants: 10900 Area: 4.41 Ha	
8g	Survival rate	Not mentioned	75%	
8h	Water sprinkling on roads to control airborne dust	Yes	Yes	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	EMP parameters are regularly being monitored.		

9.0 COMPLIANCE OF RULE 45

S. N.	Item	Comments	Remarks		
9a	Status of submission of monthly and Annual returns	M.R. Submitted upto– June_2021			
		A.R. submitted upto- 2020-2021			
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Yes			
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area of excavation: 37.762 ha, Overburden dump: 49.846 ha, Infrastructure (Office, Rest shelter & pumping station): 13.075ha, Other purpose: 3.768 ha			
9d	Scrutiny of Annual return on afforestation	10900 saplings within lease, Survival Rate: 75%			
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Nil			
9f	Scrutiny of Annual return on ROM stock and/or grade ore	Magnetite Opening Stock: 190813.620 T Production: 1293553.96 T. Closing stock: 254.890 T Hematite Opening Stock: 0.0 T Production: 106417.13 T. Closing stock: 45.41 T			
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production costs	Cost of production: Rs 1694.00 per ton Ex Mine price: Rs 1623.29 VL pointed out.			
9i	Scrutiny of Annual return on Fixed assets	Value of Fixed Assets: Rs 508997.00 (mentioned in AR)			
9k	Scrutiny of Annual return on mining Machineries	Type of Machinery		Nos. of Unit	Capacity
		Shovel (Hydraulic)		6	2.600 CUM
		Shovel (Hydraulic)	7	3.100 CUM	
		Shovel (Hydraulic)	4	1.400 CUM	
		Shovel (Hydraulic)	4	1.600 CUM	
		Shovel (Hydraulic)	3	0.060 CUM	
		Dozer	5	165.000 HP	
		Air Compressor	4	450 CUM/MN	
		Wheel Loader	6	175 CUM/MN	
		Dumper	6	20.00 T	
		Dumper	51	25.00 T	
		Rock Drill	4	115.00MM	
Rock Drill	4	150.00MM			

10- Details of violations observed during current inspection

नियम	उल्लंघन के प्रकार का विस्तृत ब्यौरा
Rule 11 (1)	<p>Mining Operation are not being carried out in accordance with the Mining plan approved vide No Letter No. Knk/Fe/MPLN-1227/2019/RPR Dated: 09/01/2020 to the extent below:</p> <p>i) As per approved Mining Plan, Proposed Quantity of overburden generation in 1806000 m³ , but in F.Y 2020-21 Quantity of overburden increased up to 2954525.575 m³.</p> <p>ii) ROM Lamp ore 70% and fine ore 30 % and grade is more than 65% fe where as in the returns after three stages of crushing more than 90% fines generated from below 55% fe grade to above 65% fe reported.</p> <p>iii) Proposal of Iron ore is 1400159.00 T but whereas dispatched 1683832.64 T more than proposal given in mining plan.</p>
Rule 35 (2)	<p>The softcopy (in the standard format), of high-resolution satellite images obtained from CARTOSAT-2 Satellite LISS-IV sensor on the scale of cadastral map has not been submitted.</p>
Rule 45 (5) (c)	<p>While scrutiny of the annual return 2020-21, few discrepancies observed</p> <p>i) The cost of production is mentioned as Rs1694.00 whereas the Ex-mine price is given Rs 1623.29. the mine is captive mine therefore Ex-mine Price will be equal to the cost of production.</p> <p>ii) Value of Fixed Assets: Rs 508997.00 only mentioned</p> <p>iii) that Part -V Reserves and resources estimated at the end of year is not correct. which needs to be corrected.</p>

No earlier Violations outstanding. Star Rating of the mines also validated

Date: 26/07/2021

Rudra Narayan Mishra
Senior Mining Geologist