MCDR INSPECTION REPORT

1.0 GENERAL

SN	Particulars	Details
1	Name of inspecting office &	Rajesh Kumar Das, Sr. ACOM,
	designation	Indian Bureau of Mines, Raipur
2	Accompanying Mine Official	1. D.K.Mahanta, G.M.(Geology & Mining)
	with Designation	2. B.R.Banjare, Mining Engineer.
3	Date of inspection	26.10.2021
4	Name of the Mine	Shri Bajrang Iron Ore Mines
5	Total Lease Area (Ha) with	Forest : 75.00
	breakup of Non-forest and	Non-Forest : 0.00
	forest land	Total : 75.00
6	Mine Code	30CHG08007
7	IBM Registration Number under rule 45 of MCDR, 1988	IBM/4393/2011
8	Name of the lessee, Address,	M/s. Shri Bajrang Power & Ispat Ltd
	phone, email and fax number	Village: Borjhara, Urla-Guma Road
		Urla Growth Center
		Raipur- 493221
		Chhattisgarh.
		Phone: 0771-4288019/29/39
		Fax: 0771-4288123/2323601
		Email: <u>mining@goelgroup.co.in</u>
9	Village	Hahaladdi & Chahchad
10	Taluka / Mandal / District	Forest Compartment: No 641(P) & 642(P)
		Forest Division: East Bhanupratappur
		Taluka: Durgukondal
1.1		Dist.: Uttar Bastar Kanker
11	State	Chhattisgarh
12	Post office & PIN	Durgukondal
13	Nearest police station	Durgukondal
14	Nearest Railway station	Kewati
15	Date of Grant of Mining Lease	21/11/2014
16	Date of Execution	21/11/2014
17	Date of opening of Mine	09/02/2015
18	Date of first Renewal, if	Not Applicable
	applicable and its period &	
	expiry	
19	Date of second Renewal, if	Not Applicable
	applicable and its period &	
	expiry	
20	Date of submission of	Not Applicable
	renewal application if Mining	
	Operations are continuing	
	under deemed extension	

21	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Shravan Kumar Goyal, Director Village -Borjhara, Urla-Guma Road, Urla Growth Center, Raipur (Chhattisgarh) – 492 221 Email: skgoyal@goelgroup.co.in Phone: 0771 – 4288019/29/39 Fax: 0771 – 4288123/2323601 Date of Appointment: 15/11/2014
22	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri D. K. Mahanta , GM (Geology & Mining) Village -Borjhara, Urla-Guma Road, Urla Growth Center, Raipur (Chhattisgarh) – 492 221 Phone: 0771 – 4288019/ 29/ 39 Mobile No. 9826422310 Email: dk.mahanta@goelgroup.co.in Fax: 0771 – 4288123/ 2323601 Date of Appointment: 17/11/2020
23	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri D. N. Mohanta Kothari Vatshalya,Bhanupratappur, Kanker, Chhattisgarh - Email: debenranath1966@gmail.com Mobile No. – 6264354643 Phone: 0771 – 4288019/ 29/ 39 Fax: 0771 – 4288123/ 2323601 Date of Appointment: 03/04/2015
24	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri Bhojram Banjare Qualification: B.E. (Mining) Experience: More than 13 Years Near Police Station, Durgukondal, Kanker (Chhattisgarh) - 494669 Email: <u>banjare_br@rediffmail.com</u> Phone: 0771 – 4288019/ 29/ 39 Fax: 0771 – 4288123/ 2323601 Date of Appointment: 25/03/2015
25	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	Yes, Name of geologist Shri R. K.Gupta Qualification: M.Sc (Geology) Experience: More than 9 Years Kothari Vatsalya, Salihapara, Near Hospital, Banupratappur, District Kanker, (Chhattisgarh) - 494669 Email: <u>rggeologist06@gmail.com</u> Phone: 0771 – 4288019/29/39 Fax: 0771 – 4288123/2323601 Date of Appointment: 25/03/2015
26	Date of Approval of Mining Plan/Modified/ Review of Mining Plan with five-year period and specific condition, if any.	1 st Mining Plan approved on dated 11/07/2008 vide letter no. KNK/FE/MPLN-995/NGP Nagpur Proposal Period: 2014-15 to 2018-19 Modified Mining Plan approved on dated 30/03/2016 vide letter no. KNK/FE/MPLN-995/NGP/2015 Nagpur Proposal Period: 2014-15 to 2018-19 No specific condition in approval letter.
27	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 approved on Dated – 28/02/2019 vide letter no. KNK/Fe/ MP/1191/2018/ RAIPUR/1460, Proposal Period: in approval letter 2019-20 to 2023-24 Modification in the Approved Review of Mining Plan approved on Dated – 21/04/2021 vide letter no. KNK/Fe/ MP- 1270/2020-RAIPUR Proposal Period: in approval letter 2021-22 to 2023-24 No specific condition in approval letter.
28	Mineral(s) granted in lease and proved for mining	Iron Ore

29	Method of Mining(Opencast, Underground)	Opencast
30	Category (Fully Mechanised, Others or Manual)	Fully Mechanised
31	Captive/Non Captive	Captive
32	Existing EC Limit and validity	MoEF & EC Govt. of India, vide letter No. 248/EC/Kanker/795 Naya Raipur Atal Nagar, dated 18.05.2020 for production of 1.2 MTPA {1.0 MTPA(Above Threshold Value,+45%Fe) and 0.2 MTPA (Below Threshold Value,-45%Fe which is part of overburden)}
33	Status of Financial Assurance as per rule 27 of MCDR, 2017	BG No. 0853619BG0000028 , Date- 20/02/2019 Amount - 5032000/- BG. No. 3074IGPER000519, Date-27/02/2019 Amount - 9800000/- BG No. 0853621BG0000040 , Date- 09/04/2021 Amount - 1626000/- Total = 1,64,58,000/- & Valid up to 31.03.2024

Scientific Mining: 2020-21

Compliance of proposals of approved mining plan/scheme of mining. – **1.0 Exploration (2020-21)**

SN	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year (2019-20)	5 No of Borehole	9 No of Borehole	More than the proposal.
1b	Exploration over lease area for Geological axis 1 or 2.	Under G1 Category: 41.61 Ha Under G2 category: Ha Under G3 category: Ha Under G4 Category: Ha Non- Mineralised: 33.39 Ha	Under G1 Category: 41.61 Ha Under G2 category: Ha Under G3 category: Ha Under G4 Category: Ha Non- Mineralised: 33.39 Ha	Entire potential mineralised area has been explored under G-1
1c	Exploration Agency & Expenditure in lakh Rupees during the year	No Specific Proposal	In 2020-21 no exploration done.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	5 nos bore holes	4 nos bore holes proposed in 2019-20 & 5 bore holes proposed in 2020-21 but total 9 nos bore holes completed in 2019-20	Entire potential mineralised area has been explored under G-1
1e	Balance reserves as on 01.04.2021 (in Million Tonnes)	Under (111): 4.09 Million Tonnes Under (221): 0.98Million Tonnes	Under (111): 4.09 Million tonnes Under (221): 0.98 Million tonnes	
1f	General remarks of inspecting officer on geology, exploration etc.		updated & incorporated ir of Mining Plan approved	

2.0 Development (2020-21)

SN	Item	Proposals	Actual work	Remarks
2a	Location of development	N 2233122 to 2233499	N2232690 to 2233500	

	w.r.t. lease area (Range in UTM/Local Coordinate/Plot No./Location)	E 489825to 489992 N 2232738 to2232858 E 489710 to 489846	E 489734 to 490062	
2b	Separate benches in topsoil, overburden and mineral (Rule 13)	Separate benches were proposed for Ore & OB OB= 4 bench Ore =7 bench	Ore & OB benches are made separately OB= 4 bench Ore = 7 bench	
2c	Stripping ratio or ore to OB ratio (T/m ³)	1:0.21	1:0.22	
2d	Quantity of topsoil generation in m3	3328m ³	1134.2 m ³	Generally Morrum mixed soil is found within the lease area. & Total Quantity has been utilised in plantation purpose
2e	Quantity of overburden generation in m3	211923.00 m ³	204152.82 m ³	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The development in 2020-21 is not as per proposal and there is gap between proposal and actual but same has been incorporated in Modification in the Approved Review of Mining Plan approved on dt.21.4.2021.		

3.0 Exploitation (2020-21)

SN	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	One	One	
3b	Quantity of ROM mineral production proposed	1000000 Tonne	932829.97 Tonne	
3с	Recovery of salable/usable mineral from ROM production	1000000 Tonne	932829.97 Tonne	
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral reject generation and threshold value declared	Threshold value is 45% of Fe content.	Threshold value is 45% of Fe content.	
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	-45 Fe material (Below threshold Value) proposed for utilisation @200000 Tonne/year	Permission for the same still awaited from state Govt.	
3ј	Provision of drilling & blasting in mineral benches	Deep Hole drilling was proposed keeping	Controlled blasting technique with depth	

r		1 1				<u> </u>		
		depth up to 6m,		6 m, spacing 2.5 m				
		spacing 2.5m, burden		& burden 2.0m has				
		2.0m & bla	-		been adopted.			
		proposed a			The rock breakers			
		breaker will be used		have been used for				
		for hard Ore breaking.		hard Ore breaking.				
3k	Provision of mining	Type of	Capacit	No.	Type of	Capacit	No.	
	machineries in mineral	machinery	y of each	of units	machinery	y of each	of units	
	benches		unit	units		unit	units	
		DTH Drill &	110	2	DTH Drill &	100	2	
		Compressor	mm &		Compressor	mm & 450		
			150			cfm 3		
			450 cfm		Hydraulic Excavator	$1.67 M^{3}$	5	
		Hydraulic	1.67M ³	5	Hydraulic	1.2 M^3	6	
		Excavator Hydraulic	1.0-1.2	2	Excavator	257	20	
		Excavator	M ³	2	Dumper Dozer	25T 160 hP	29 2	
		Dumper	14 M ³	15	Loader	2.0 M^3	8	
		Dozer	200hp	1	Rock	125HP	2	
		Loader Rock	300hp 125HP	4	Breaker Mobile	200-	3	1
		Breaker			Screening	250		
		Mobile Screening	200- 250	3	Plant Stationary	TPH 250	1	4
		Plant	TPH		crusher Plant	TPH	1	
		Stationary	250	1	Mobile	150	2	
		crusher Plant Mobile	TPH 150	2	crusher Plant Water	TPH 10KL	2	
		crusher Plant	TPH		Tanker	TORE	2	
		Water Tanker	10KL	2	Hydra Crane	12T	1	
		Hydra Crane	12T	1	-			
31	Whether height of benches in	Yes, it is p	roposed	l to	The bench	height	is	
	overburden and mineral	keep the be	-		broadly as	•		
	suitable for method of mining	height up t		for	proposal b	-	,	
	proposed in MP/SOM	both Ore &			places ben			
		benches.	C O D		collapsed a			
		ochenes.			three benc			
					merged to			
3m	Total area asymptot	22 560 Ha		l a a				
5111	Total area covered	33.560 Ha.	T		12.650 Ha.			
2	under excavation/pits	end of plan	i period		1.0.00			
3n	Ore to OB ratio for the	1:0.21			1:0.22			
	pit/mine during the year							
30	Total area put in use under	Area after p	-					
	different heads at the end of	Area under	Mining	_	Area under	Mining	_	
	year	33.56 Ha			12.65 Ha			
		Waste Dum	p Site –		Waste Dum	p Site –		
		15.90 Ha			7.38 Ha			
		Mineral Sto	orage –		Mineral Sto	orage –		
		3.10 Ha			3.10 Ha			
		Infrastructu	re,		Infrastructu	re,		
		Workshop,		1.	Workshop,		1'	
		Administrat		ding	Administra		ding	
		etc - 0.29 H			etc - 0.29 H			
		Road -2.70			Road -2.70			
		Mineral Sep			Mineral Sep			
		Plants - 0.5		T	Plants - 0.5			
3p	Production of ROM mineral	2016-17:49			2016-17:24			
	during last five-year period,	2017-18: 60			2017-18: 33			
	as applicable (in Metric	2018-19: 60			2018-19: 59			
	Tonnes)	2019-20: 80			2019-20: 59			
		2020-21:100	00000 N	11	2020-21: 93	2829.97	MIT	

3q	General remarks of inspecting officer on method	The method of mining is broadly as per proposal open cast by using shovel- Dumper combination and deep hole drilling
	of mining etc.	blasting.

SN	Item	Proposals	Actual work	Remarks		
4a	Separate dumping of topsoil,	Separate dumping for	Mostly the top soil	Entire		
	OB & mineral reject (Rule	Topsoil &OB are	are utilized for	Quantity of		
	36, 37)	proposed in different	afforestation and	Top soil has		
		location.	waste dumping is br	been utilised		
		No mineral reject		in plantation		
		generation is		purpose		
		proposed.				
4b	Location of topsoil, OB &	OB Dump Proposed	OB Dump Actual			
	mineral reject dumps (Range	Location:	Location:			
	in UTM/Local	N2232180 to 2232520,	N2232180 to 2232462,			
	Coordinate/Plot	E 489632 to 489800	E 489680 to 489998			
	No./Location)	No mineral reject	No mineral reject			
		dump proposed.	dump generated.			
4c	Number of dumps within lease	01 no of dumps	01 Nos of Major			
	area and outside lease area	within the lease area	Dumps within Lease			
			area			
4d	Location of dumps w.r.t.	Proposed beyond	Situated beyond			
	ultimate pit limit (Rule 14)	ultimate pit limit.	ultimate pit limit.			
4e	Number of active & alive dumps	01 No	01 No			
4f	Number of dead dumps	Nil	Nil			
4g	Number of dumps stabilised	Nil	Nil			
4h	Whether Retaining wall or	Yes,	During mine visit it	•		
	garland drain all along dumps		was observed that			
	are there		some places on toe of			
			dump still retaining			
			wall not constructed.			
4i	Length of Retaining wall or	Not mentioned	Total 620 m retaining			
	garland drain all along dump	specifically	wall & 684 m of			
			Garland drain has been			
			constructed around			
			dump			
4j	Number of settling ponds	Nil	Nil			
4k	Specific comments of inspecting officer on waste		t is not proper and some p	laces retaining		
	1 0	wall and stabilisation of dump is not proper.				
	Dump Management					

5.0 Solid Waste Management-Backfilling (2020-21)

SN	Item	Proposals	Actual work	Remarks
5a	Status on part or full	Backfilling has not	Backfilling has not	
	extraction of mineral from	been proposed during	been started because	
	mined out area before	plan period. the part or full		
	starting backfilling		mineralised area has	
			not been mined out	
			completely& not	

5b	Area under backfilling of mined out area	No Such Proposal	matured for backfilling Not applicable.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 36)	No Such Proposal	Not applicable.	Very less lateritic soil has been found and same has been utilised for plantation.
5d	Total area fully reclaimed & rehabilitated	No Such Proposal	Not applicable.	
5e	General remarks of inspecting officer on backfilling, reclamation etc	The area is still not n	natured for backfilling	

6.0 Progressive Mine Closure Plan (2020-21)

SN	Item	Proposals	Actual work	Remarks
ба	Whether Annual report on	To be submitted on	Annual report on	
	PMCP submitted on time and	or before 1 st	PMCP for the year	
	correctly - Rule 23. Details	July,2021	2020-21 has been	
	should be given in the format		submitted on time i.e.	
	as given in Annexure-20.		15.06.2021.	
6b	Management of			
	worked/mined out benches			
	i) Area available for	No proposal	No work done	
	rehabilitation (ha)			
	ii) Afforestation done (ha)	No proposal	No work done	
	iii) No. of saplings planted	No proposal	No work done	
	during the year			
	iv) Cumulative no. of plants	No proposal	No work done	
	v) Any other specific method	No proposal	No work done	
	of rehabilitation			
	vi) Cost incurred on watch &	No proposal	No work done	
	care during the year			
6c	Compliance on reclamation			Area not
	and rehabilitation by			matured for
	backfilling			reclamation
	i) Voids available for	No proposal	No work done	and
	backfilling (L X B X D)			rehabilitation.
	ii) Void filled by	No proposal	No work done	
	waste/tailings			
	iii) Afforestation on the	No proposal	No work done	
	backfilled area			
	iv) Rehabilitation by making	No proposal	No work done	
	water reservoir			
	v) Any other specific means	No proposal	No work done	
6d	Compliance of Rehabilitation			M.L. boundary
	of waste land within lease			SZ Area Gap
	i) Afforestation	1000 Nos	1300 Nos	plantation &
	ii) Area rehabilitated (ha)	No proposal	0.25 Hect	Waste dump
	iii) Method of rehabilitation	By plantation	By plantation	plantation.

6e	Compliance of Environmental monitoring (core zone & buffer zone)	Regular Environmental monitoring has been proposed	Regular Environmental monitoring at 5 locations for ambient air quality & fugitive; 5 locations for water quality; Noise level survey at 5 locations along with 3 nos CAAQMS eastblished.	Monitoring of Environmental parameters in Core as well as buffer zone has been carried out.
6f	General remarks of inspecting officer on PMCP compliance & progressive	Nil		

7.0 Mineral Conservation (2020-21)

	Vineral Conservation (2020-2)	<u>.</u>	1	
SN	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or	Grade-wise & Size-wise	Grade-wise & Size-wise	
	grade-wise sorting within	sorting within lease area	sorting within lease area	
	lease area			
7b	Method of grade-wise	Mechanical	Mechanical	Mechanised
	mineral sorting i.e. manual or			Crushing and
	mechanical			Screening.
7c	Different grade of mineral	+45% Fe=	ROM mineral	
	sorted out at mines	1000000.000MT	Processed	
			Lumps(Tons)	
			500.00 (60-62%)	
			37077.55 (58-60%)	
			236098.94 (55-58%)	
			57077.64 (<55%)	
			Fines	
			1000.00 (60-62%)	
			26200.00 (58-60%)	
			384940.00 (55-58%)	
			211220.00 (<55%)	
7d	Any beneficiation process at mines	Dry Crushing/Screening of ROM through	Dry Screening of ROM through crushing /	
	lillies	crushing/Screening	Screening plants is being	
		plants has been proposed	carried out.	
		to be carried out.		
7e	General remarks of	No beneficiation is done	e within lease area except	crushing &
	inspecting officer on Mineral	Screening for sizing of o	ore.	
	conservation & beneficiation			
	issues			

8.0 Environment (2020-21)

SN	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 36)	No Top Soil. 3328m ³ Lateritic soil to be generated & utilised	1134.2 m ³ Morrum mixed lateritic soil generated & utilised in plantation.	Total Quantity has been utilised in plantation purpose

8b	Concurrent use or storage of topsoil	Storage & Utilisation	Concurrent use of topsoil is being done.	No deviation.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 37)	Separate dumps for overburden and mineral reject stacks, waste rocks are proposed.	Separate dumps for overburden and mineral stacks and other waste rocks like BHQ/Shale are stacked separately	No deviation.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Coir mating is started	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	No work done I waste dump	Area is not matured for reclamation and rehabilitation.
8f	Baseline information on existence of plantation & additional plantation done (Rule 44)	1000 nos. of saplings has been proposed for plantation during 2020-21.	1300 nos. of plants have been plantation during 2020-21.	
8g	Survival rate	No specific proposal,	80%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling has been proposed to control airborne dust.	Regular Water sprinkling through 2 nos Water tanker (10KL each) is being used to control airborne dust.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	Broadly as per proposal	•	·

9.0 Compliance of Rule 45 (2020-21)

S.	Item	COMMENTS	Remarks
Ν.			
	Status of submission of	Annual return H-1 has been submitted within	
	Monthly and Annual returns	due time i.e. on 29.06.2021	
		Monthly return F-1 has been submitted on due	
		time i.e. on 07.10.2021 for the month of Sept.'21	

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	Manager: Shri D.N.Mohanta Geologist: Shri Rajkumar Gupta, Mining Engineer: Shri B.R.Banjare	Manager: Shri D.N.Mohanta Geologist: Shri Rajkumar Gupta, Mining Engineer: Shri B.R.Banjare	

	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current working 12.65 ha., waste disposal 7.38 ha., Infrastructure & roads 3.50 ha., mineral storage 3.10							
9d	Scrutiny of Annual return on Afforestation	Plantation of 1100 nos. of saplings has been reported within lease							
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil			Nil				
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: 10778.00 MT Graded Ore (Lump): Below 55%: 1421 T 55% to58%:14102 T 58% to 60%: 1353 T Graded Ore (Fines): Below 55%: 31806 T 55% to 58%:12240 T 58% to 60%: 201 T							
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex. Mine price & Production cost: Rs 797.12 Per Tonne		Proc	Ex. Mine price & Production cost: Rs 797.12 Per Tonne		ine	This mine is a captive mine & there is no sale of iron ore.	
9i	Scrutiny of Annual return on fixed assets	Rs 251528	521						
9k	Scrutiny of Annual return on mining machineries	Type of machinery	Capacit y of each unit	No. of units	mac	e of chinery	Capacit y of each unit	No. of units	
		DTH Drill & Compressor	100 mm & 450 cfm	2	Con	H Drill & npressor	100 mm & 450 cfm	2	
		Hydraulic Excavator Hydraulic	$1.67M^3$ $1.2M^3$	5	Exc	lraulic avator lraulic	$1.67 M^3$ $1.2 M^3$	5	
		Excavator Dumper	25 T	29	Exc	avator nper	25 T	29	
		Dozer	160 HP	2	Doz		160 HP	2	
		Loader Rock Breaker	2 CUM 125HP	8 2	Loa Roc Brea		2 CUM 125HP	8	
		Mobile Screening Plant	200-250 TPH	3	Mot Scre Plar	eening	200-250 TPH	3	
		Stationary crusher Plant	250 TPH	1	crus	ionary sher Plant	250 TPH	1	
		Mobile crusher Plant	150 TPH	2		sher Plant	150 TPH	2	
		Water Tanker Hydra Crane	10KL 12T	2	Wat Tan Hyd		10KL 12T	2	

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:-

The earlier violation already taken compliance and during present mine inspection Rule 11(1) and 37(1) of MCDR, 2017 found violated.

(Rajesh Kumar Das,