

MCDR INSPECTION REPORT

1.0 GENERAL

S N	Particulars	Details
1	File no	CG/kak/Fe/30CHG08001
2	Name of the Mine	Metabodeli Iron Ore Mine
3	Total Lease Area (Ha) with breakup of Non-forest and forest land	25.00 Ha fully in forest land.
4	Mine code	30CHG08001
5	Date of Inspection	08.10.2021
6	Name of inspecting office & designation	Mr. B. L. Gurjar, Regional Controller of Mines & Shri D.Dash Senior Mining Geologist, Indian Bureau of Mines, Raipur
7	Name of official accompanying inspection	Shri T. Prasanna Kumar, President(Mines)
8	IBM Registration Number under rule 45 of MCDR, 1988	4800/2011
9	Name of the lessee, Address, phone, email and fax number	M/s Jayaswal Neco Industries Limited. Siltara Raipur (Chhattisgarh) Phone-07721-264241, 264243 email- spd.mines@necoindia.com
10	Village	Metabodeli, near Chargaon village
11	Taluka / Mandal / District	Tahsil-Pakhanjure, District-Kanker
12	State	Chhattisgarh
13	Post office & PIN	Chargaon, PIN- 494665
14	Nearest police station	Siksod
15	Nearest Railway station	Bhanupratappur
16	Date of Grant of Mining Lease	11.01.2002
17	Date of Execution	17.01.2002
18	Date of opening of Mine	05.07.2002
19	Date of first Renewal, if applicable and its period & expiry	50 Years 17.01.2002 to 16.01.2052 . Supplementary agreement for extended lease period up to 16.01.2052 has been executed.
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Meghpal Singh, Executive Director, Steel Plant Division) Address : Siltara Growth Centre, Siltara Raipur(Chhattisgarh)-493111, Phone-07721-264241. Email :- meghpal.singh@necoindia.com Date of appointment—13.11.2014
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri T. Prasanna Kumar, President(Mines) Address: Village-Bhanupratappur Near Santoshi Mandir on Bhanupratappur Sambalpur road, Tahsil-Bhanupratappur District-Kanker (Chhattisgarh) PIN : 494669. , M. No. 9109119092 Email: tembe.prasanna@necoindia.com Date of appointment—22.03.2017
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri Krishankant, Diploma in Mining & First-class Mines managers competency certificate holder. Experience: 14+ years Address: Village-Bhanupratappur near Gurdwara on Antagarh -Bhanupratappur Road Tahsil- Bhanupratappur

		District-Kanker (Chhattisgarh) PIN-494669 M.No.-9109118939 <u>Email -mines.bhanupratappur@necoindia.com</u> Date of appointment—02.07.2018
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri Vinod Thakur, Qualification: BE(Mining) Experience : +10years Address: Dalli-Bhanupratappur Road at Bhanupratappur District-Kanker (Chhattisgarh), PIN-494669 <u>Email -mines.bhanupratappur@necoindia.com</u> M-9109118925 Date of Appointment – 12.09.2018
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	Shri Lokesh Kumar Sahu Qualification: M Tech. (Applied Geology) Experience : +15years Address: Village- Mulla, near IIT school, Tahsil - Bhanupratappur, District-Kanker (Chhattisgarh) PIN-494669, Email - <u>lokesh.sahu@necoindia.com</u> M-9109118930 Date of Appointment – 24.03.2017
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Modified Mining plan along with progressive Mine closure plan was approved by IBM vide letter no-BST/FE/MPLN-465/NGP/2016/41-Raipur/331 dt.24.08.2016 for period 2017-18 to 2021-22. . Again Modified Mining Plan has been approved vide letter no.Kanker /Lauh/khayo/1149/2018-Raipur /244 dated 23.05.2018 for the period 2018-19 to 2021-22.
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Modified Mining Plan has been approved vide letter no.Kanker /Lauh/khayo-1253/2020-Raipur /954 dated 06.01.2021 for the period 2020-21 to 2021-22 for change in area of production. No specific condition given.
27	Mineral(s) granted in lease and proved for mining	Iron Ore.
28	Method of Mining (Opencast, Underground)	Opencast
29	Category (Fully Mechanised, Others or Manual)	Category 'A' Fully Mechanised
30	Captive/Non-Captive	For Captive use in own plant situated at Siltra Raipur
31	Existing EC Limit and validity	EC is granted for one Million Ton per annum iron ore production. CECB granted consent for five years which is valid upto 04.05.2023.
32	Status of Financial Assurance	The lessee has submitted Financial Assurance of Rs. 357500/- by way of bank Guarantee No 32320IGL0005716 dated 05.08.2016 which was valid

		<p>upto 04.08.2021 and lodging period upto 04.08.2022.</p> <p>Later on as per Rule 27 of MCDR 2017, the financial Assurance for Rs. 4284600/- was to be submitted for A category mines. The additional amount of Rs. 39,27,100/- vide BG no 32320IGL0002117 dated 22.05.2017 has been submitted which is valid up to 04.08.2022.</p> <p>Earlier BG no 32320IGL0005716 for Rs 3,57,500/- valid till 04.08.2022 and BG no 32320IGL0002117 for Rs 39,27,100/- valid till 04.08.2022 has been submitted. Balance FA for Rs 2,36,400/- vide BG no 04990ILG002420 valid till 04.08.2022 has also been submitted on dt 01.01.21 Total BG of Rs 45,21,000/- valid till 04.08.2022 have been submitted with Modified Mining Plan for plan period 2017-18 to 2021-22 & proposal period 2020-21 to 2021-22.</p>
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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	During the year 08 boreholes at grid interval of 50m with total meterage of 159 m have been drilled prior to approval of document	No further proposal of exploration
1b	Exploration over lease area for Geological axis 1 or 2.	Nil	The entire area has been explored by drilling of 34 boreholes. In the process, under G1- 14.965 ha, G2- 0.595 ha have been explored.	No proposal during the year.
1c	Exploration Agency & Expenditure in lakh Rupees during the year	No proposal	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal during the year.	Nil. The entire area has been explored by drilling of 34 vertical boreholes at grid interval of 50 to 100m. During the year 2020-21, 08 boreholes have been drilled prior to approval of document.	

1e	Balance reserves as on 01.04.2021 (in Million Tonnes)	Under (111): Million Tonnes	7.250	
		Under (121): Million Tonnes	0.135	
		Under (122): Million Tonnes	0.000	
		Under (211): Million Tonnes	1.557	
		Under (221): Million Tonnes	0.012	
		Under (222): Million Tonnes	0.000	
		Under (331): Million Tonnes	0.00	
		Under (332): Million Tonnes	0.00	
		Under (333): Million Tonnes	0.000	
		Under (334): Million Tonnes	0.00	
1f	General remarks of inspecting officer on geology, exploration	Iron ore in Hematite form are mostly capped by lateritic ore followed by soft friable ores with strike of NE-SW and dipping 55 to 60 degree due south east. The base of Iron ore is defined by BHQ, Phyllite and quart sericite schist. Complete lease area has been explored by drilling 34 vertical boreholes at a grid interval of 50 to 100m and ore body is completely delineated.		

2.0 Development

SN	Item	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	Remarks
2a	Location of development w.r.t. lease area (Range in UTM/Local Coordinate/Plot No./Location)	E-497570, to E 498115 and N 2216012 to 2216530	E-497570, to E 498115 and N 2216012 to 2216530	Development of quarry is as proposed.
2b	Separate benches in topsoil, overburden and mineral (Rule 13)	NIL	Top hill area already excavated and there is no top soil cover left over	
2c	Stripping ratio or ore to OB ratio	1:0.01	1:0.01	
2d	Quantity of topsoil generation in m ³	NIL	NIL	
2e	Quantity of overburden	9780 cum	5832 Cum	There is no

	generation in m3	17115 tons	10206 tons	overburden. Only side burden waste/intercalated waste are generated.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Work in mine is being carried out by forming benches from side of hillock and reached to top of hill. During mine visit it was advised to carry out mining operation by top slicing method..		

3.0 Exploitation

SN	Item	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	Remarks
3a	Number of pits proposed for production	One pit	Single pit	
3b	Quantity of ROM mineral production proposed	711245Tons iron ore production (01.09.20 to 31.03.2021) plus 284210 tonnes(already achieved till 31.08.21) = 995455	ROM Production was 995411 tonnes and despatched were of 10,06,696 tonnes	VL issued
3c	Recovery of saleable/usable mineral from ROM production	995455 Tons	ROM Production was 995411tonnes and despatched were of 10,06,696 tonnes	
3d	Quantity of mineral reject generation	NIL	NIL	
3e	Grade of mineral reject generation and threshold value declared	NIL	Not applicable as nil quantity of mineral reject generated	
3f	Quantity of sub-grade mineral generation	398182 tons	437600 tons	Sub-grade fines generated are blended and used. Also fed to beneficiat ion plant at outside lease area.
3g	Grade of sub-grade mineral generation	Below 55 % Fe	Below 55 % Fe	

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised method by Screening and Crushing.	Mechanised method by Screening and Crushing through two mobile screening plant of 250 TPH.	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No beneficiation study has been proposed	The sub-grade material is beneficiated at Gidhali on hiring basis and dispatched to plant	Low grade fine is upgraded at Gidhali plant of other party.
3j	Provision of drilling & blasting in mineral benches	As per approved document the provision of drilling & blasting is mentioned.	Iron ore being soft and friable in nature drilling and blasting are not required at present.	No drilling & blasting
3k	Provision of mining machineries in mineral benches	1. DTH/Wagon Drill: 03 nos. Capacity 63 mm dia. 2. Portable air compressor 400 CFM -3 Nos 3. Excavators cum Rock Breaker : 06 nos. Capacity 2.6 cum bucket 4. Dumpers: 14 nos. Capacity 25 Tone 5. Water tanker: 01 nos. Capacity 10000 liters 6. Pay loader 1 No 7. Ripper Dozer: 01 nos. 8. Explosive Van 1 No 9. Double decor Power screen 250 TPH 10. Crusher (primary And secondary 150 TPH Secondary	1. Excavators cum Rock Breaker : 06 nos. Capacity 2.6 cum bucket 2. Dumpers: 8 nos. Capacity 25 Tone 3. Water tanker: 01 nos. Capacity 10000 liters 4. Pay loader 1 No 5. Double decor Power screen 250 TPH 6. Crusher – 1 nos. 250 TPH	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of benches proposed are 6 m in both Ore and O.B.	The height of benches has been maintained 6 m in both Ore and O.B.	
3m	Total area covered under excavation/pits	11.770 Ha for the plan period	9.832 Ha	
3n	Ore to OB ratio for the pit/mine during the year	1:0.01	1:0.01	
3o	Total area put in use	Pit- 11.770 Ha for the plan	Pit- 9.832 Ha	

	under different heads at the end of year	period Waste/reject-0.610 Others-2.690	Waste/reject-0.150 Others-2.992	
3p	Production of ROM mineral during last five-year period, as applicable (in Metric Tonnes)	2016-17: 224000 MT 2017-18: 910476 MT 2018-19: 931472 MT 2019-20- 950222 MT 2020-21- 995455 MT	49950 MT 592511 MT 850871 MT 950149 MT 995411 MT	EC granted for 0.05 MTPA and modified to 1.0 MTPA later on.
3q	General remarks of inspecting officer on method of mining etc.	Production of ROM Iron ore from lease area is per Mining plan approval and despatches were 10,06,696 tonnes. Stock reduced.		

4.0 Solid Waste Management-Dumping

S N	Item	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 36, 37)	As per approved document the top soil and mineral reject generation is negligible therefore separate dump is not proposed. However, side burden of 9780 cum / 17115 tonnes was proposed.	10206 tons of side burden has been shifted to dump.	
4b	Location of topsoil, OB & mineral reject dumps (Range in UTM/Local Coordinate/Plot No./Location)	Top soil-Nil Mineral reject-NIL Waste dump : 498051 to 498080 E 2216530 to 2216570 N	Top soil-Nil Mineral reject-NIL Waste dump : 498051 to 498080 E 2216530 to 2216570 N	
4c	Number of dumps within lease area and outside lease area .	Two number of waste dumps within lease area.	One number of dump within lease area.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 14)	498051 to 498080 E 2216530 to 2216570 N	498051 to 498080 E 2216530 to 2216570 N	
4e	Number of active & alive	Two proposed	Only one existing	

	dumps			
4f	Number of dead dumps	NIL	Not Applicable	
4g	Number of dumps stabilised	NIL	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there	Garland drain along waste dump	Constructed Garland drain around waste dump	
4i	Length of Retaining wall or garland drain all along dump	Not mentioned in the approved document.	Retaining wall constructed about 60 mts	
4j	Number of settling ponds	Not proposed in approved document	Four nos. of settling pond have been made.	
4k	Specific comments of inspecting officer	Necessary protective measures for protection of waste dump have been taken in mines.		

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 proposed in approved document	Mineral is excavated from hill top and no area is matured for back filing.	
5b	Area under backfilling of mined out area	Not proposed in approved document	Not applicable	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 36)	Not proposed in approved document	No top soil has been generated.	
5d	Total area fully reclaimed & rehabilitated	Not proposed in approved document	Not applicable	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Mineral is excavated from hill top and no area is matured for back filing.		

6.0 Progressive Mine Closure Plan

SN	Item	PROPOSALS	ACTUAL	Remarks
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		(2020-21)	WORK (2020-21)	
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23. Details should be given in the format as given in Annexure-20.	As per 26(2) of MCDR 2017 the annual report required to be submitted	Submitted on 22.05.2021	
6b	Management of worked/mined out benches			
	i) Area available for rehabilitation (ha)	No rehabilitation is proposed for the year 2020-21	NIL	
	ii) Afforestation done (ha)	NIL	NIL	
	iii) No. of saplings planted during the year	NIL	NIL	
	iv) Cumulative no. of plants	NIL	NIL	
	v) Any other specific method of rehabilitation	NIL	NIL	
	i) Cost incurred on watch & care during the year	NIL	NIL	
6c	Compliance on reclamation and rehabilitation by backfilling			
	i) Voids available for backfilling (L X B X D)	0.00	0.00	
	ii) Void filled by waste/tailings	0.00	0.00	
	iii) Afforestation on the backfilled area	0.00	0.00	
	iv) Rehabilitation by making water reservoir	0.00	0.00	
	v) Any other specific means	0.00	0.00	
6d	Compliance of Rehabilitation of waste land within lease			
	i) Afforestation	0.00	1000	
	ii) Area rehabilitated (ha)	0.00	0.40 ha	Infill plantation done in safety zone.
	iii) Method of rehabilitation	--	--	

6e	Compliance of Environmental monitoring (core zone & buffer zone)	Proposed.	The regular monitoring of Air Water and noise is being carried out as per condition imposed by CECB
6f	General remarks of inspecting officer on PMCP compliance & progressive	Proposed garland drain, check dam are made in area to prevent wash off from waste dumps.	

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 by crushing and screening is planned to dispatch to end user	The grade wise sorting has been done by Mechanised screening and crushing . Sub-grade ore below 55% Fe is being beneficiated at Gidhali and dispatch to plant.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical by analysing stack on daily basis.	
7c	Different grade of mineral sorted out at mines	Mechanical	Lumps Fe%-60 to 62 Lumps Fe%- 62 to 65 Fines- Fe %below 55 Fines Fe% -55 to 58 Fines Fe%- 58 to 60 Fines Fe%- 60 to 62	
7d	Any beneficiation process at mines	As per approved document the beneficiation process at mines is not proposed	The beneficiation of low-grade mineral below 55% Fe is being carried out at Gidhali which is 100 kms far away from mine.	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Fines of < 10mm, 10 to 20mm and above +20mm separated by screening plant at mining lease area itself and -10mm fine having < 55 % Fe are being beneficiated at Gidhali village which is 100 kms away from mines on hiring basis from M/s Godavari natural resources Pvt Ltd . The apprx. cost of beneficiation varies Rs 300 to Rs 350 per tonnes. Approximately 60% fines are generated from the crushing and		

		screening process.
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8.0 Environment

SN	Item	PROPOSALS (2020-21)	ACTUAL WORK (2020-21)	Remarks
8a	Separate removal and utilization of topsoil (Rule 36)	As per approved document the Top soil is negligible.	No top soil generated during year 2020- 21	
8b	Concurrent use or storage of topsoil	Not Applicable	Not Applicable.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 37)	As per approved document the separate dump and fines have been proposed.	About 10206 tons waste generated during 2020-21 for which Separate Dump has been established. Separate stack for fines below 55% Fe has been established.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	As per approved document the subgrade mineral shall be utilised after blending of higher grade.	The sub-grade mineral below 55% Fe fines are beneficiated at Gidhali.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed for this year	Nil	
8f	Baseline information on existence of plantation & additional plantation done (Rule 44)	Proposed in Safety zone area of 0.1 Ha and 100 saplings for 2020-21.	About 1000 saplings have been planted in safety zone area	
8g	Survival rate	---	85%	
8h	Water sprinkling on roads to control airborne dust	Yes proposed.	Being done on regular basis	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	Found satisfactory		

9.0 Compliance of Rule 45

S.N.	Item	COMMENTS	Remarks
	Status of submission of Monthly and Annual returns	M.R. Submitted on 10.09. 2021 for August 2021. A.R. submitted upto- 2020-21 on 28.06.2021	

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	Graduate Mining Engineer --3 (ii) Diploma Mining Engineer-- 1 (iii) Geologist-- 1 (iv) Surveyor --1 (v) Other administrative and technical supervisory staff-33	Statutory person employed in mine	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	(i) Already exploited & abandoned by opencast (O/C) mining 0.00 (ii) Covered under current (O/C) Workings 9.832 Ha (iii) Reclaimed/Rehabilitated 0.000 (iv) Used for waste disposal 0.150 ha (v) Occupied by plant, buildings, residential, welfare buildings & roads 2.090 ha (vi) Other Purpose (Mineral storage, subgrade storage, internal road, mineral separation plant, garland drain) 0.902 ha (vii) Work done under progressive mine closure plan during the year 0.000	Details furnished found in order	
9d	Scrutiny of Annual return on afforestation	About 1000 No of plants have been planted in safety zone area	Found in order	
9e	Scrutiny of Annual return on mineral reject generation	As per Annual Return total Mineral rejection is NIL however about 437600.00 tons below 55 % Fe	Sub grade used.	

	(Grade & quantity)	generated		
9f	Scrutiny of Annual return on ROM stock and/or graded ore	As per Annual Return for the year 2020-21 the ROM stock – 564.615 Tons and graded ore stock-450.79 tons and below 55% 49176.130 TONS	Found in order	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	As per Annual return the value for Lumps Fe-60 to 62- Rs 1715 Lumps Fe 62 to 65 – Rs 1814 Fines- below 55 –Rs 1220 Fine 55 to 58 –Rs 1375 Fine 58 to 60 – Rs 1527 Fines 60 to 62 –Rs 1612	Appears to be in order.	
9i	Scrutiny of Annual return on fixed assets	As per annual Return the total fixed assets is Rs. 59315711/-		
9k	Scrutiny of Annual return on mining machineries	Provided		

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

The previous Inspection was carried out on 04.12.2020 and violation of Rules 11(1) and 27(1) of MCDR, 2017 was pointed out on 14/1/2021 . Compliance of same was reported vide letter dated 15/2/2021. All rules found complied with. During present inspection violation of Rule 11(1) of MCDR, 2017 was observed and pointed out as below:

नियम	उल्लंघन के प्रकार का ब्यौरा
11(1)	Production and dispatch of 10,06,696 tonnes have been done during the year 2020-21 against proposal of 9,95,455 tonnes as per modification in approved Mining Plan.

11- Star rating- star rating for the year 2020-21 validated.

भवदीय

(बी.एल.गुर्जर)
क्षेत्रीय खान नियंत्रक