

MCDR INSPECTION REPORT

1.0 GENERAL

SN	Particulars	Details
1	Name of inspecting office & designation	Rajesh Das. Sr Assistant Controller of Mines Indian Bureau of Mines, Raipur
2	Date of inspection	04.12.2020
3	Name of the Mine	Metabodeli Iron Ore Mine
4	Total Lease Area (Ha) with breakup of Non-forest and forest land	25.00 Ha in forest land only
5	Mine Code	30CHG08001
6	IBM Registration Number under rule 45 of MCDR, 1988	4800/2011
7	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
8	Village	Metabodeli, near Chargaon village
8	Taluka / Mandal / District	Tahsil-Pakhanjure, District-Kanker
10	State	Chhattisgarh
11	Post office & PIN	Chargaon, PIN- 494665
12	Nearest police station	Siksod
13	Nearest Railway station	Bhanupratappur
14	Date of Grant of Mining Lease	11.01.2002
15	Date of Execution	17.01.2002
16	Date of opening of Mine	05.07.2002
17	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.
18	Date of second Renewal, if applicable and its period & expiry	Not Applicable
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	Not Applicable
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—17.11.2014
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	Shri Krishankant, Diploma in Mining & First class Mines

	Address, phone, email, fax number and date of appointment in 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 Email -mines.bhanupratappur@necoindia.com 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 Email -mines.bhanupratappur@necoindia.com 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 Sahu Qualification : M Tech. (Applied Geology) Experience : +10years Address: Village- Mulla, near IIT school, Tahsil - Bhanupratappur, District-Kanker (Chhattisgarh) PIN-494669 Email -lokesh.sahu@necoindia.com M-9109118930
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Mining Plan was approved by IBM vide letter no. BST/Fe/MPLN-465/NGP dated 02.04.1996 for years. 1 st scheme of Mining for the period of 2007-08 to 2011-12 was approved by IBM vide letter No BST/Fe/MPLN-465/NGP dated 24.11.2008. 2 nd Mining Scheme for production of approximate 2.0 LTPA was approved by IBM vide letter no BST/Fe/MPLN-465/NGP dated 27.06.2013 for the scheme period 2012-13 to 2016-17. In compliance of New MMDR Amendment Act 2015, 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. Draft Modification of Mining Plan has been submitted to IBM Raipur Dated
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining	NA

	with five-year period and specific condition in approval letter, if any.	
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	Captive
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 upto 04.08.2021 and lodging period upto 04.08.2022. 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.

Scientific Mining: Compliance of proposals of approved mining plan/scheme of mining. –

1.0 Exploration

SN	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	During 2018-19, 10 no of bore hole has been proposed with a grid interval of 50 m up to a maximum 50 m depth each.	Exploration has been completed 2019-20 & 2020-21 17 Nos of Bore Hole has been drilled for covering all ML area for updating mineral reserves	
1b	Exploration over lease area for Geological axis 1 or 2.	Under G1 Category: 25.00 Ha	Broadly the exploration covered in G1 except the non-mineralised area.	Done in the year 2015-16, 2019-2020 & 2020-2021
1c	Exploration Agency & Expenditure in lakh	Not mentioned in the approved document.	M/s Jayaswal Neco Industries Limited by Hiring Drilling machine.	

	Rupees during the year		The total Expenditure for drilling operation- Rs 2111600 /-	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NA	NA	

1e	Balance reserves as on 01.04.2020 (in Million Tonnes)	Under (111) & 122: 6.538 Million Tonnes	Under (111) & 122: 6.62 Million Tonnes	
		Under (211): 3.015 Million Tonnes	Under (211): 3.015 Million Tonnes	
		Under (222): 4.611 Million Tonnes	Under (222): 4.611 Million Tonnes	
		Under (333): 2.389 Million Tonnes	Under (333): 2.389 Million Tonnes	
1f	General remarks of inspecting officer on geology, exploration etc.	The deposit is broadly pocket deposit with some float ore deposit in surface. The area broadly explored in 50X50m grid except the Non-Mineralised area.		

2.0 Development

SN	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area (Range in UTM/Local Coordinate/Plot No./Location)	E-497609, to E 498100 and N 2216052 to 2216483	Broadly As per proposal but the benches area not maintained as per proposal.	
2b	Separate benches in topsoil, overburden and mineral (Rule 13)	NIL	Not Applicable since there is negligible top soil	
2c	Stripping ratio or ore to OB ratio	1:0.014	1:002	
2d	Quantity of topsoil generation in m3	NIL	NIL	
2e	Quantity of overburden generation in m3	13336	4653 tons i.e. CUM 2327	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The bench parameters are not maintained as per proposals.		

3.0 Exploitation

SN	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	1	1	

3b	Quantity of ROM mineral production proposed	2019-20:-950222 Tons	2019-2020: - 950148.96 Tons till Oct 2020-489204.00 Tonnes	
3c	Recovery of saleable/usable mineral from ROM production	2019-20 :- 950222 Tons	2019-2020: - 950148.96 Tons till Oct 2020-489204.00 Tonnes	
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral reject generation and threshold value declared	NA	NA	
3f	Quantity of sub-grade mineral generation	As per approved document 237555 tons subgrade fines will be generated.	For the year 2019-20 330326 tons subgrade fines has been generated.	

3g	Grade of sub-grade mineral generation	As per approved document the grade of subgrade fines is not mentioned.	Below 55 % Fe	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised method by Screening and Crushing.	Mechanised method by Screening and Crushing.	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	As per approved document the beneficiation study has not been proposed	Not Proposed	
3j	Provision of drilling & blasting in mineral benches	As per approved document the provision of drilling & blasting is mentioned.	Not required at present since the formation is easily excavated by excavators due to softness of ore.	
3k	Provision of mining machineries in mineral benches	1. DTH/Wagon Drill: 03 nos. Capacity 63 mm dia. 2. Portable air compressure 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	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 2. Crusher (primary And secondary 150 TPH) 2	

		7Explosive van 8. Double decor Power screen 250 TPH 2. Crusher (primary And secondary 150 TPH) 2		
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	As per approved Mod. Approved Mining plan the height of benches is 6 m in both Ore and O.B.	The height of benches has been maintained 8-10 m in Ore and and width is less than height.	
3m	Total area covered under excavation/pits	10.88 Ha for the plan period	7.5 Ha	
3n	Ore to OB ratio for the pit/mine during the year	1:0.05	1:0.01	
3o	Total area put in use under different heads at the end of year	Pit- 10.88 Ha for the plan period Waste/reject-0.15 Others-1.064	Pit- 7.5 Ha Waste/reject-0.15 Others-1.129	
3p	Production of ROM mineral during last five-year period, as applicable (in Metric Tonnes)	2015-16: 224000 MT	2015-16: 49010 MT	EC granted for 0.05 MTPA
		2016-17: 224000 MT	2016-17: 49950 MT	
		2017-18: 910476 MT	2017-18: 592511 MT	
		2018-19: 931472 MT	2018-19: 850871 MT	EC for one MTPA
		2019-20- 950222 MT	2019-20: 950148.96 MT	
3q	General remarks of inspecting officer on method of mining etc.	The mining method is by open cast method using shovel dumper combination but during mine visit it was observed that the bench parameters are not as per proposal and width of bench is less than height.		

4.0 Solid Waste Management-Dumping

SN	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 36, 37)	As per approved document the generation of waste, top soil and mineral reject is negligible therefore separate dump is not proposed.	For the year 2019-20 about 4653 tons OB has been shifted to dump.	
4b	Location of topsoil, OB & mineral reject dumps (Range in UTM/Local	Top soil-Nil Mineral reject-NIL Waste dump : 498051 to 498080 E	Broadly as per proposal	

	Coordinate/Plot No./Location)	2216530 to 2216570 N		
4c	Number of dumps within lease area and outside lease area .	One number of dump 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	Broadly as per proposal	
4e	Number of active & alive dumps	1	1	
4f	Number of dead dumps	Nil	Not Applicable	
4g	Number of dumps stabilised	NIL	Not Applicable	
4h	Whether Retaining wall or garland drain all along dumps are there	Not mentioned in the approved document.	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.	
4j	Number of settling ponds	Not proposed in approved document	Four nos. of settling pond have been made.	
4k	Specific comments of inspecting officer waste dump management	Nil		

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	Not proposed in approved document	NA	
5b	Area under backfilling of mined out area	Not proposed in approved document	NA	
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	NIL	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Not matured for backfilling.		

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. Details should be given in the format as given in Annexure-20.	As per 26(2) of MCDR 2017 the annual report has to be submitted	Submitted on 01.07.2020.	
6b	Management of worked/mined out benches			
	i) Area available for rehabilitation (ha)	As per approved document rehabilitation is not proposed for the year 2019-20	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	0.00	0.00	

	i) Afforestation	0.00	1600	
	ii) Area rehabilitated (ha)	0.00	1.00	
	iii) Method of rehabilitation	--	--	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Proposal has been given in the approved document for Compliance of Environmental monitoring in core and buffer zone	The regular monitoring of Air Water and noise is being carried out as per condition imposed by CECB and report is submitted.	

6f	General remarks of inspecting officer on PMCP compliance & progressive	Broadly as per proposal
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7.0 Mineral Conservation

SN	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	As per approved document the 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 .	
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- below 55 Fines 55 to 58 Fines 60 to 62	
7d	Any beneficiation process at mines	As per approved document the beneficiation process at mines is not proposed	NA	

7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Broadly entire mineral is used by blending.
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8.0 Environment

SN	Item	Proposals	Actual work	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 2019- 20 Therefore removal and utilization of topsoil is not required.	
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 has been proposed.	About 4653 tons waste generated during 2019-20 for which Separate Dump has been established. Separate fines for below 55% Fe , the stacking yard has been established.	
8d	Use of overburden, waste rock, rejects and fines dumps 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)	Not Proposed for this year	Not Required.	
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 2019-20.	About 1600 saplings have been planted in safety zone area	

8g	Survival rate	Not mentioned specifically.	50%	
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	Nil		

9.0 Compliance of Rule 45

S.N.	Item	COMMENTS	Remarks
	Status of submission of Monthly and Annual returns	M.R. Submitted on 08.11. 2020 for October 2020. A.R. submitted upto- 2018-19 on 29.06.2020	

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	Mining Engineer & Manager: Shri Krishnakant, Geologist Shri Lokesh Kumar Sahu		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	(i) Covered under current (O/C) Workings 7.5ha. (ii) Used for waste disposal 0.150ha. (iii) Occupied by plant, buildings, residential, welfare buildings & roads 0.349 ha. (iv) Other Purpose (Mineral storage, subgrade storage, internal road, mineral separation plant, garland drain) 0.780 ha.		
9d	Scrutiny of Annual return on afforestation	About 1600 No of plants have been planted in safety zone area		
9e	Scrutiny of Annual return on mineral reject generation	NIL		

	(Grade & quantity)			
9f	Scrutiny of Annual return on ROM stock and/or graded ore	As per Annual Return for the year 2019-20 the ROM stock – 11850.015 Tons and graded ore stock-12628.30 tons and below 55% 42505.98 TONS		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Rs 1348/-		
9i	Scrutiny of Annual return on fixed assets	As per annual Return the total fixed assets is Rs. 56620527/-		
9k	Scrutiny of Annual return on mining machineries	Yes Given		

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out: - The earlier violations pointed out taken compliance. During present inspection for processing of Modified Mining Plan 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.</p> <p>The Modified Mining Plan was approved vide letter no. कांकेर/लौह/खयो-1149/रायपुर dated 23.05.2018 and following deviation was observed during inspection</p> <ol style="list-style-type: none"> 1. It was proposed that subgrade generation in 2019-20 is 237555 tons but actually 330326 tons subgrade generation reported which is more than 39% of proposal and the quantity of subgrade reported is found dump in lease area. 2. It was observed that there is working deviation w.r.t the proposal given and bench width is more than bench height and bench height is more than 8-10 meters in many places whereas proposal is given for 6 meter bench height.
37(1)	<p>The existing protective measures taken around waste dump are insufficient and it has been found that the waste material was escaping and washing away from the dumps and was contaminating the nearby area and extending outside lease boundary and no retaining wall constructed. A proper protective measure should be taken to prevent the escape of the material from the existing waste dumps.</p>

(Rajesh Kumar Das, Senior Assistant Controller of Mines)