

**MCDR INSPECTION REPORT
BHUBANESWAR REGIONAL OFFICE**

MINE CODE : 30OR113073

Part-I: General

S. N.	Particulars	Details
1	Name of the Mine	NADIDIHI IRON & MANGANESE ORE MINE
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease area- 117.206 Ha Forest Land- 85.829 Ha
3	Mine code	30OR113073
4	IBM Registration Number under rule 45 of MCDR,	IBM/329/2011
5	Name of the lessee, Address, phone, email and fax number	M/s ESL STEEL LIMITED At-Siyaljori, Post-Jogidih PS-Chandankyari BOKARO, JHARKHAND-828303 Email Id-Navanath.Vhatte@vedanta.co.in
6	Village	RENGALBEDA & NADIKASIRA
7	Taluka/Mandal	KOIRA/BONAIGARH
8	District	SUNDARGARH
9	Pin code	770048
10	State	ODISHA
11	Post office	KOIRA
12	Nearest police station	KOIRA
13	Nearest Railway station	BARBIL
14	Date of Grant of Mining Lease	17.11.2021
15	Date of Execution	20.11.2021
16	Date of opening of Mine	26.11.2021
17	Date of first Renewal, if applicable and its period	NA
18	Date of second Renewal, if applicable and its period & expiry	NA
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	MR. NAVNATH LAXMAN VHATTE AT-SIYALJORI, PO-JOGIDIH, TALUKA-BOKARO, DISTRICT-BOKARO JHARKHAND-828303 Email Id-Navanath.Vhatte@vedanta.co.in Date of Appointment- 25.11.2022
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Mr. Tanmoy Ghoshal B.E. (Mining Engineering) AT-SIYALJORI, PO-JOGIDIH, TALUKA-BOKARO, DISTRICT-BOKARO JHARKHAND-828303 Email Id-Tanmoy.Ghoshal@vedanta.co.in Date of Appointment- 28.03.2022
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Mr. SANDEEP NAIK ESL Steel Limited, Siyaljori, PO-Jogidih, OP-Bangaria Bokaro steel city JHARKHAND-828303 Email-Id- Sandeep.Naik3@vedanta.co.in Mob.no. -9307019758 Date of Appointment- 01.12.2021

23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Mr. Vivek Sambrekar Diploma in Mining & Mine Surveying Experience- 30 years ESL Steel Limited, Siyaljori, PO-Jogidih, OP-Bangaria Bokaro steel city JHARKHAND-828303 Email-Id- Vivek.Sambrekar@vedanta.co.in Mob.no. -9923176906 Date of Appointment- 20.01.2022
24	Name of the Geologist, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Mr. Abani Kumar Dash M.Phil. (Geology) Experience- 18 years ESL Steel Limited, Siyaljori, PO-Jogidih, OP-Bangaria Bokaro steel city JHARKHAND-828303 Email-Id- Abani.Dash@vedanta.co.in Mob.no. -9765391978 Date of Appointment- 20.01.2022
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Mining Plan approved on 12.05.2022 Mining Plan Period : 2021-22 to 2025-26 Working Proposal : 2022-23 to 2025-26
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	NIL
27	Mineral(s) granted in lease and proved for mining	IRON & MANGANESE ORE
28	Method of Mining (Opencast, Underground)	Opencast
29	Category (Fully Mechanized, Others or Manual)	Fully Mechanized
30	Captive/Non-Captive	Non-Captive

PART II-
Scientific Mining:

Exploration:

S.N.	Item	Proposal	Actual work	Remarks
1a	Backlog of previous year	Nil	NA	The mine is an auction block and executed on 20.11.2021. The lessee has submitted the draft mining plan on 01.04.2022 and hence there was no approved proposal for 2021-22.
1b	Exploration over lease area for Geological axis 1 or 2.	Nil	NA	The mine is an auction block and executed on 20.11.2021. The lessee has submitted the draft mining plan on 01.04.2022 and hence there was no approved proposal for 2021-22.
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Nil	NA	The mine is an auction block and executed on 20.11.2021. The lessee has submitted the draft mining plan on 01.04.2022 and hence there was no approved proposal for 2021-22.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	NA	The mine is an auction block and executed on 20.11.2021. The lessee has submitted the draft mining plan on 01.04.2022 and hence there was no approved proposal for 2021-22.

1e	Balance resources as on 01.02.2022		As on 26.11.2021, the resource are : Iron ore: 18.659 Million tonnes. Mn Ore: 0.06 million tonnes.	
1f	General remarks of inspecting officer on geology , exploration etc.			The mine is an auction block and executed on 20.11.2021. The lessee has submitted the draft mining plan on 01.04.2022 and hence there was no approved proposal for 2021-22.

Development:

S.N.	Item	Proposal	Actual work	Remarks
2a	Location of development w.r.t. lease area	Nil	319430E to 319950E 2429550N to 2429850N	No proposal as this mine is granted to lessee on 20.11.2021 through auction. However actual working location is given for the period between 11.02.2022 upto 31.03.2022.
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Nil	Type No. of Benches <u>North Pit:</u> Topsoil 0 Overburden 8	No of benches provided is for existing pits as there was no proposal for the year 2021-22.
2c	Stripping ratio or ore to OB ratio (Tonnes/Cubic meter)	Nil	1:0.073	No proposal as this mine is granted to lessee on 20.11.2021 through auction. However actual working location is given for the period between 11.02.2022 upto 31.03.2022.
2d	Quantity of topsoil generation in m ³	Nil	0	
2e	Quantity of overburden generation in m ³	Nil	17232 m ³	No proposal as this mine is granted to lessee on 20.11.2021 through auction. However actual working location is given for the period between 11.02.2022 upto 31.03.2022.
2f	General remarks of inspecting officer on development of pit w.r.t type of deposit etc.			No proposal as this mine is granted to lessee on 20.11.2021 through auction. However actual working location is given for the period between 11.02.2022 upto 31.03.2022.

Exploitation

S.N.	Item	Proposal	Actual work	Remarks
3a	Number of pits proposed for production	Nil	One pit (South pit). Also area above pit head was levelled to prepare stockpile area.	There are two working pits already exist within the lease by the previous lessee.
3b	Quantity of ROM mineral production proposed	Nil	236018 Tonnes	No proposal as this mine is granted to lessee on 20.11.2021 through auction. However actual ROM produced is for the period between 11.02.2022 upto 31.03.2022.

3c	Recovery of salable/usable mineral from ROM production	Nil	Feed: 209736 Tonnes	Mobile Screening plant is used to recover saleble mineral. For Feed quantity ff 209736 tonnes, Lumps generated are 32886 tonnes & fines are 176850 tonnes.
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	Nil	NA	
3g	Grade of sub-grade mineral generation	Nil	NA	
3h	Manual / Mechanized method adopted for segregating from	Nil	Mechanized	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Nil	NA	
3j	Provision of drilling & blasting in mineral benches	Nil	No Drilling & Blasting conducted for the period 2021-22.	
3k	Provision of mining machineries in mineral benches	Nil	Excavator: 2 nos, Dumpers: 6 nos,	Excavator Capacity: 2.1 m3 bucket capacity; 320TPH. Dumpers capacity: 35 tonnes, 125TPH.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Nil	Yes	
3m	Total area covered under	Nil	36.752 Ha	
3n	Ore to OB ratio for the pit/mine during the year	Nil	1:0.073	
3o	Total area put in use under different heads at the end of year	Nil	Area under Mining- 36.752 Ha O/B waste dumping- 20.478 Ha Infrastructure- 0.657 Ha Roads- 2.041 Ha	
3p	Production of ROM mineral during the last five-year period as applicable.	Nil	NA	Mine is granted to lessee on 20.11.2021 through auction. Date of Notice of opening of mine is 26.11.2021.

3q	General remarks of inspecting officers on method of mining etc.			Mine is granted to lessee on 20.11.2021 through auction. Date of Notice of opening of mine is 26.11.2021. However actual ROM produced is for the period between 11.02.2022 upto 31.03.2022.
----	---	--	--	---

I/7411/2023

Solid Waste Management-Dumping:

S.N.	Item	Proposal	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Nil	No Topsoil encountered. OB is dumped separately.	17232 m ³ of overburden is produced during period 11.02.2022 upto 31.03.2022.
4b	Location of topsoil, OB & mineral reject dumps	Nil	2430450N to 2430550N 319900E to 320100E	
4c	Number of dumps within lease area and outside lease area	Nil	1 no. of dump is present within the lease area.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Nil	NE Part of lease area 2430450N to 2430550N	
4e	Number of active & alive dumps	Nil	1	
4f	Number of dead dumps	Nil	0	
4g	Number of dumps stabilized	Nil	0	
4h	Whether Retaining wall or garland drain all along dumps are there	Nil	Yes	
4i	Length of Retaining wall or garland drain all along dump	Nil	Retaining wall: 1400m, Garland drain: 900m	Retaining wall and garland drains are existing. No new drains or walls are constructed during the period 21-22
4j	Number of settling ponds	Nil	4	Settling pond are existing. No new ponds are constructed during the period 21-22
4k	Specific comments of inspecting officer on waste dump management			The mine is an auction block and executed on 20.11.2021. The lessee has submitted the draft mining plan on 01.04.2022 and hence there was no approved proposal for 2021-22.

Solid Waste Management-Backfilling:

S.N.	Item	Proposal	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Nil	NA	Not applicable since Mine is granted to lessee on 20.11.2021 through auction. Date of Notice of opening of mine is 26.11.2021.
5b	Area under backfilling of mined out area	Nil	NA	

5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Nil	NA	
5d	Total area fully reclaimed & rehabilitated	Nil	NA	
5e	General remarks of inspecting officers on backfilling and reclamation etc			The mine is an auction block and executed on 20.11.2021. The lessee has submitted the draft mining plan on 01.04.2022 and hence there was no approved proposal for 2021-22.

Progressive Mine Closure Plan:

S.N.	Item	Proposals	Actual work	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.	Nil	NA	Not applicable since Mine is granted to lessee on 20.11.2021 through auction. Date of Notice of opening of mine is 26.11.2021.
6b	Area available for rehabilitation (ha)	Nil	NA	
6c	Afforestation done (ha)	Nil	NA	
6d	No. of saplings planted during the year	Nil	NA	
6e	Cumulative no. of plants	Nil	NA	
6f	Any other specific method of rehabilitation	Nil	NA	
6g	Cost incurred on watch & care during the year	Nil	NA	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L X B X D).	Nil	NA	
6i	Compliance on reclamation and rehabilitation by backfilling	Nil	NA	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area.	Nil	NA	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir.	Nil	NA	

6l	Compliance on reclamation and rehabilitation by backfilling (v) Any other specific means	Nil	NA	
6m	Compliance of Rehabilitation of waste land within lease (i) Afforestation	Nil	NA	
6n	Compliance of Rehabilitation of waste land within lease (ii) Area rehabilitated (ha) Method of rehabilitation	Nil	NA	
6o	Compliance of Rehabilitation of waste land within lease (iii) Method of rehabilitation	Nil	NA	
6p	Compliance of Environmental monitoring (core zone & buffer zone)	Nil	NA	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			The mine is an auction block and executed on 20.11.2021. The lessee has submitted the draft mining plan on 01.04.2022 and hence there was no approved proposal for 2021-22. However, environmental monitoring is being carried out the lessee within the core and buffer zone of the mining lease area.

Mineral Conservation:

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Nil	Grade of 58-60 % Fe content of fines & lumps is sorting carried out within lease area.	No dispatch was done for the period upto 31.03.2022.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Nil	Mechanical	
7c	Different grade of mineral sorted out at mines	Nil	58-60 % Fe content	
7d	Any beneficiation process at mines	Nil	Mobile Screening Plant are used.	Capacity: 350TPH; Feed size: - 70mm; screen size: 30mm top deck/10mm bottom deck.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			This mine is an Auction Block. Mine is opened since 26.11.2021. Lessee has submitted draft mining plan on 01.04.2022. Hence proposal for 2021-22. However, only dry beneficiation is being practiced through mobile screening plants.

I/7411/2023

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Nil	Nil	No top soil is removed as working is done in already broken area.
8b	Concurrent use or storage of topsoil	Nil	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Nil	Dumps and fines are stacked separately. No mineral rejects is encountered during the period.	
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	7.54 ha is covered with plantation	Area covered under plantation is referred from Last approved mining plan.
8g	Survival rate	Nil	Nil	
8h	Water sprinkling on roads to control airborne dust	Nil	Water sprinkling is carried out using water tanker	Capacity of tanker: 16KL.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			This mine is an Auction Block. Mine is opened since 26.11.2021. Lessee has submitted draft mining plan on 01.04.2022.Hence proposal for 2021-22. However, lessee has watch and care of the existing plantation within the lease area planted by the previous lessee prior to the auction.

Compliance of Rule 45

S.N.	Item	Proposals	Actual	Remarks
9a	Status of submission of Monthly and Annual returns	Annual return is due for submission. Monthly returns are being submitted online	Nil	Annual return is due for submission and montly returns are being submitted online.

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Annual return is due for submission	Monthly returns are being submitted	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Annual return is due for submission	Monthly returns are being submitted	
9d	Scrutiny of Annual return on Afforestation	Annual return is due for submission	Monthly returns are being submitted	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Annual return is due for submission	Monthly returns are being submitted	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Annual return is due for submission	Monthly returns are being submitted	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost etc.	Annual return is due for submission	Monthly returns are being submitted	
9h	Scrutiny of Annual return on fixed assets	Annual return is due for submission	Monthly returns are being submitted	
9i	Scrutiny of Annual return on mining machineries	Annual return is due for submission	Monthly returns are being submitted	

Details of violations observed during current inspection and compliance position of violation pointed out					
Violation observed			Show cause position		
Rule No.	Issued on	Compliance on	Rule No.	Issued on	Compliance on
Nil					

Date : 31.03.2023

(Rajani Kanta Rautaray)
INDIAN BUREAU OF MINES