

**INDIAN BUREAU OF MINES  
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/IRON/SNG/MCDR-3/BBS

**Mine code :** 30ORI13010

- (i) Name of the Inspecting : **S010** ) **SHRI G.C. SETHI**  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri A.B.Singh, GM (Mines)  
Official with  
Designation
- (iv) Date of Inspection : 07/02/2021
- (v) Prev.inspection date : 27/11/2019

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **KOIRA**
- (b) **Registration NO.** : **IBM/1289/2011**
- (c) Category : A Manual
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : KOIRA
- Taluka : BONAI
- Post office : KOIRA
- Pin Code : 770048
- FAX No. : 06767-279218,275367
- E-mail : emilbbl@adityabirla.com
- Phone : 06767-279209,275489
- (f) Police Station : Koira
- (g) First opening date : 27/08/1971
- (h) Weekly day of rest : SUN
2. Address for : VILLAGE. KOIRA, PO: KOIRA  
correspondance TALUK. BONAI  
DIST. SUNDERGARH, ORISSA, PIN- 770048
3. (a) Lease Number : ORI0148
- (b) Lease area : 90.14
- (c) Period of lease : 50
- (d) Date of Expiry : 26/08/2021
4. Mineral worked : IRON ORE Main

## 5. Name and Address of the

Lessee : ESSEL MINING& INDUSTRIES LTD.  
 AT/PO: BARBIL KEONJHAR  
 ORISSA  
 Phone:06767-30437  
 FAX :06767-75367

Owner : ASWANI KOTHARI(NOMINATED OWNER)  
 GOLD CORNET,FLOT NO 4 11,  
 NAWRAJEE GAMADIA ROAD  
 MUMBAI MUMBAI (SUBURBAN)  
 MAHARASHTRA  
 Phone:  
 FAX :

Agent : SHRI V SRIKANTH  
 BARBIL KEONJHAR ODISHA  
 KEONJHAR ORISSA  
 Phone: 06767-275367  
 FAX : 06767-275367

## Mining Engineer

Name : Rajesh Kumar Patel,Full Time  
 Qualification : B.Tech (Mining)  
 Appointment/ : 15/11/2016  
 Termination date

## Geologist

Name : JAYHARI MOHANTA,Full Time  
 Qualification : MSC GEOLOGY  
 Appointment/ : 10/12/2011  
 Termination date

## Manager

Name : Ajit Kumar Patra  
 Qualification : B.Tech (Mining)  
 Appointment/ : 15/11/2016  
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	28/05/2005
Plan/Scheme of Mining	:	Renewal under rule 24 MCR1960	27/02/2007
	:	Mining Scheme rule 12 MCDR1988	18/06/2007
	:	Modif.approved Mining Scheme	17/04/2015
	:	Mining Scheme rule 12 MCDR1988	18/03/2016
	:	Modif.approved Mining Scheme	03/11/2016
	:	MP modif under 17(3) MCR 2016	16/08/2018
	:	FMCP under 23C(1)	09/10/2019

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	The entire lease area has been explored upto G1 level.	Not Backlog of exploration.	Nil
1b	Exploration over lease area for geological axis 1 or 2	No exploration proposal is envisaged as the entire lease area already explored upto G1 level.	Not applicable.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified.	Nil	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not applicable	Nil	Nil
1e	Balance reserve as on 01/04/20		The updated iron ore reserves as on 01.04.2019 are 35.28 million tonnes and resources are 18.6 million tonnes.	Nil
1f	General remarks of inspecting officers on geology, exploration etc		The entire lease out area has been explored upto G1 level.	Nil

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Quarry nos. 1 & 6 are proposed for development	The development is carried out as per the proposal.	Nil

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No topsoil exists. Therefore, no top soil generation is envisaged. However, separate benches in OB and iron ore zone are proposed.	No top soil generated. Seperate benches in OB and mineral zone are formed.	Nil
2c	Stripping ratio or ore to OB ratio	1:0.11 t/cu.m	1:0.017 t/cu.m.	Nil
2d	Quantity of topsoil generation in m3	Not applicable	Nil	Nil
2e	Quantity of overburden generation in m3			
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		The mine development is carried out by mechanised opencast mining method. The quarry No. 1 & 6 are merged to form a single quarry as per the proposal.	Nil

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#### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Quarry 1 & 6 as single quarry	Quarry 1 & 6 merged as single quarry operation.	Nil
3b	Quantity of ROM mineral production proposed			
3c	Recovery of sailable/usable mineral from ROM production			
3d	Quantity of mineral reject generation			

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3e	Grade of mineral rejects generation and threshold value declared.	0.48 million tonnes.	0.14 million tonnes.	The variation is due to irregular nature of the orebody.
3f	Quantity of sub grade mineral generation.	There is no separate generation os sub-grade.	The mineral reject is considered as the sub-grade/mineral reject.	Nil
3g	Grade of sub grade mineral generation	+45%-54% Fe	+45%-54% Fe	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable.	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	Provisions for deep hole drilling and blasting is envisaged in mineral benches.	Deep hole drilling and blasting is practised in the mine.	Nil
3k	Provision of mining machineries in mineral benches	Shovel and dumper combination is proposed for excavation and hauling.	Shovel and dumper combination is deployed for excavation and hauling.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	9 m height is proposed.	Avarage 9 m height maintained.	Nil
3m	Total area covered under excavation/pits	36.622 ha till the end of plan period i.e. 2021-22.	32.095 ha	Nil

3n	Ore to OB ratio for the pit/mine during the year.	1:0.11 t/cu.m. 1:0.017 t/cu.m.	Nil
3o	Total area put in use under different heads at the end of year	Total are put to use under different heads till the end of plan period upto 2021-22 is for 76.269 ha	Nil
3p	Production of ROM mineral during the last five year period as applicable		
3q	General remarks of inspecting officers on method of mining etc.	The mining operations were confined to a single quarry by merging quarry 1 & 6. The operations are by mechanised opencast mining method as envisaged in the mining plan.	Nil

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Solid Waste Management - Dumping:

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Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No top soil exists. Therefore, generation of topsoil is not envisaged. The waste materials generated from mines is proposed to be backfilled in the mined out area and the mineral rejects are proposed to be seperately and blended with high grade ore on the basis of requirement.	The waste generated from mines is backfilled in the mined out area and mineral rejects are seperately stacked and blended with high grade as & when required.	Nil
4b	Location of topsoil, OB and mineral reject dumps	The waste generated from mines is proposed to be backfilled in the mined out area and mineral rejects are proposed to be stacked seperately and blended with high grade as and when necessary.	The waste generated from mines is backfilled in the mined out area and mineral rejects are stacked seperately and certain quantities are also blended with high grade ore.	Nil
4c	Number of dumps within lease area and outside of lease area	No waste dumping is proposed, as the waste generated from the mine is proposed to be backfilled in the mined out area	The waste generated from the mine is backfilled in the mined out area.	Nil

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable.	The waste generated from the mine is backfilled in the mined out areas as per the proposal.	Nil
4e	Number of active and alive dumps.	Not applicable as the waste generated from the mine is proposed to be backfilled in the mined out area	The waste generated from the mine is backfilled in the mined out area.	Nil
4f	Number of dead dumps.	Not applicable.	Nil	Nil
4g	Number of dumps established.	Not applicable.	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Not dumping is envisaged, there by no proposal for retaining wall and garland drains.	Not applicable.	Nil
4i	Length of Retaining wall or garland drain all along dumps	Not applicable.	Nil	Nil
4j	Number of settling ponds	Nil	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management		There no dumping in practice. The waste generated from the mine is utilised for backfilling of the mined out areas	Nil

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Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Backfilling of mined out areas is envisaged.	Done	Nil

5b	Area under backfilling of mined out area	Backfilling of mined out areas is envisaged.	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not topsoil exists.	No top soil generated during 2019-20.	Nil
5d	Total area fully reclaimed and rehabilitated	Nil	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.		The exhausted part of the mined out area has been backfilled.	Nil

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	The report on PMCP has to be subitted before 1 st July of the following year for the preceding financial year.	The PMCP report for 2019-20 submitted.	Nil
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	Nil
6c	afforestation done (ha).			
6d	No. of saplings planted during the year	1000 nos	1582 nos	Nil
6e	Cumulative no .of plants	Not specified.	111192 nos. of saplings planted	Nil
6f	Any other method of rehabilitation	Not applicable.	Nil	Nil

6g	Cost incurred on watch and care during the year	Not specified. Not reported.	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( L x B x D		
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings		
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Not specified. Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not applicable Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not applicable Nil	Nil

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not applicable	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Monitoring of environmental parameters is proposed for core and buffer zone.	Monitoring of environmental parameters such as ambient air, water quality, noise levels & vibrations etc. are being done on quarterly basis.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Backfilling of mined out area are undertaken as per the proposal. Besides, monitoring of environmental parameters such as ambient air, water quality, noise levels & vibrations etc. are being done on quarterly basis.	Nil

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#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting is envisaged.	Grade-wise sorting is in practice.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical means.	Mechanical means.	Nil
7c	Different grade of mineral sorted out at mines.	+45%-54% Fe and +54% Fe	+45%-54% Fe and +54% Fe	Nil

7d	Any beneficiation process at mines .	Not applicable.	Nil	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Grade-wise sorting of the iron ore is done in the mine and there is no mineral conservation problem.	Nil

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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil exists, thereby generation of the same is not envisaged.	Not applicable.	Nil
8b	Concurrent use or storage of topsoil	Not applicable	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	The waste generated from the mine is proposed to be backfilled in the mined out area and the mineral rejects are proposed to be stacked seperately & blending with high grade as and when necessary.	The waste generated from the mine is backfilled in the mined out area and mineral rejects are being stacked seperately and blended with high grade as and when required.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	The waste generated from the mine is proposed to be backfilled in the mined out area	The waste generated from the mine is being used for backfilling in the mined out area.	Nil

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Backfilled in the mined out area is envisged.	Backfilling of mined out area is being done.	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)			
8g	Survival rate	Not specified.	90%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on the haul road dust suppression.	Water sprinkling on haul roads is being done as dust suppression is proposed for arrangement.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		The waste generated from the mine is being used for backfilling in the mined out area and the environmental protection measures, which enhances the aesthetic beauty of the mine surroundings.	Nil

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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	The monhtly and annual returns to be submitted as required under rule 45 of MCDR, 2017	The monhtly and annual returns have been submitted as required under rule 45 of MCDR, 2017	Nil

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	The employment status of mining engineers and geologist are found to be in order.	The employment status of mining engineers and geologist are found to be in order.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.		The land degradation status furnished in he annual return is found to be in order.	Nil
9d	Scrutiny of Annual return on afforestation			
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore			
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost			
9h	Scrutiny of Annual return on fixed assets			
9k	Scrutiny of Annual return on mining machineries	The deployment status of mining machineries are found to be in order.	The deployment status of mining machineries are found to be in order.	Nil

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**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

**Date :**

(SHRI G.C. SETHI)

Indian Bureau of Mines