

**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 Shatrujit Kumar, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 27/11/2019
- (v) Prev.inspection date : 26/08/2019

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 as per the mining plan approved on 16.08.2018.	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.	In hous exploration.	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	As per the approved mining plan, dated 16.08.2018, the iron ore reserves are 39.22 million tonnes and resources of 18.6 million tonnes respectively.	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	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Quarry nos. 1 & 6 are proposed for development during the year 2018-19 as a single quarry.	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, seperate benches in OB and iron ore zone are proposed.	No top soil generated during 2018-19. Seperate benches in OB and mineral zone are formed.	Nil
2c	Stripping ratio or ore to OB ratio	1:0.11 t/cu.m. in 2018-19.	1:0.017 t/cu.m. achieved during 2018-19.	Nil
2d	Quantity of topsoil generation in m3	Not applicable	Nil	Nil
2e	Quantity of overburden generation in m3	47000 cu.m.	69421 cu.m.	Nil
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

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Quarry 1 & 6 as single quarry in the year 2018-19	Quarry 1 & 6 merged as single quarry operation.	Nil

3b	Quantity of ROM mineral production proposed	4 million tonnes.	3.93 million tonnes.	Nil
3c	Recovery of sailable/usable mineral from ROM production	3.51 million tonnes. of saleable ore and mineral rejects of 0.48 million tonnes.	3.79 million tonnes. of saleable ore and mineral rejects of 0.14 million tonnes.	Mineral rejects are blended with high grade ore to make it saleable ore
3d	Quantity of mineral reject generation	0.48 million tonnes.	0.14 million tonnes.	The variation is due to irregular nature of the orebody.
3e	Grade of mineral rejects generation and threshold value declared.	+45%-54% Fe	+45%-54% Fe	Nil
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.	Average 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 degraded by 2018-19.	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 area put to use under different heads till the end of plan period upto 2021-22 is for 76.269 ha	70.833 ha	Nil
3p	Production of ROM mineral during the last five year period as applicable	2014-15: 4 million tonnes. 2015-16: 4 million tonnes. 2016-17: 4 million tonnes. 2017-18: 4 million tonnes. 2018-19: 4 million tonnes.	2014-15: 3 million tonnes. 2015-16: 2.95 million tonnes. 2016-17: 3.99 million tonnes. 2017-18: 3.92 million tonnes. 2018-19: 3.93 million tonnes.	Nil

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:

Sl.No.	Item	Proposals	Actual work	Remarks
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

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.	During the year 2018-19, an extent of 0.51 ha of mined out area hjas been backfilled/reclaimed.	Nil
5b	Area under backfilling of mined out area	0.51 ha	0.51 ha	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not topsoil exists.	No top soil generated during 2018-19.	Nil
5d	Total area fully reclaimed and rehabilitated	An extent of 7.695 ha mined out area has been proposed for backfilling/reclamation by end of the approved mining plan period i.e. 2021-22.	During the year 2018-19, an extent of 0.51 ha of mined out area hjas been backfilled/reclaimed.	Nil

5e	General remarks of inspecting officers on backfilling and reclamation etc.	During the year 2018-19, an extent of 0.51 ha of mined out area has been backfilled/reclaimed by the waste generated from mine as per the proposal.	Nil
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Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	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 submitted before 1 st July of the following year for the preceding financial year.	The PMCP report for 2018-19 submitted.	Nil
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	Nil
6c	afforestation done (ha).	Only 1000 nos. saplings proposed as gap plantation.	Only 1582 nos. of saplings planted as the gap plantation of the existing plantation area during 2018-19.	Nil
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.	Rs 80000	Nil

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	0.51 ha	0.51 ha	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	0.51 ha	0.51 ha	Nil
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

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 propom.	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. During the year 2018-19, an extent of 0.51ha of mined out area has been backfilled/reclaimed.	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)	1000 nos	1582 nos	Nil
8g	Survival rate	Not specified.	91.27%	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. During the year 2018-19, an extent of 0.51ha of mined out area has been backfilled/reclaimed as environmental protection measures, which enhances the aesthetic beauty of the mine surroundings.	Nil

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 monthly retuns from April 2018 to to till date and the annual return for 2018-19 were submitted to this office.	Nil

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	(i) Graduate Mining Engineer - 2 (ii) Diploma Mining Engineer - 9 (iii) Geologist - 3	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.	An extent of 32.095ha has been degraded by opencast working, 3.599ha of area reclaimed, plant, bulidings etc. 13.534ha, material storage 18.555ha & 3.10ha under progressive closure activities.	The land degradation status furnished in he annual return is found to be in order.	Nil
9d	Scrutiny of Annual return on afforestation	1582 nos	1582 nos. of saplings were planted during 2018-19.	Nil
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	ROM production: 3937437.458 tonnes & closing stock is 907147.166 tonnes.	Found to be in order.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost Rs. 887.00	Rs 887	Nil
9h	Scrutiny of Annual return on fixed assets	Rs 311603560	Rs 311603560	Nil

9k Scrutiny of DUMPER 35.000 The deployment status of Nil
Annual return on TONNE - 36 mining machineries are
mining BACK HOE 1.900 found to be in order.
machineries CUM - 4
 BACK HOE 0.900
 CUM - 12
 BACK HOE 1.500
 CUM - 6
 FRONT END
 LOADER 1.700
 CUM - 19
 FRONT END
 LOADER 2.000
 CUM - 3

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
MCDR17	Rule 34(1)	09/12/2019			

Date :

(SHRI G.C. SETHI)

Indian Bureau of Mines