

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

MCDR INSPECTION REPORT

Bhubaneswar regional office

Mine file No : ORI/IRON/SNG/MCDR-1/BES

Mine code : 30ORI13001

- (i) Name of the Inspecting : S010) SHRI G.C. SETHI
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : S.C.Nayak, Qualified Person & Shri A.K.Sinha, G.M (Mi
Official with
Designation
- (iv) Date of Inspection : 05/04/2019
- (v) Prev.inspection date : 04/10/2018

PART-I : GENERAL INFORMATION

1. (a) Mine Name : BARSUA
- (b) Registration NO. : IBM/5662/2011
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : BARSUA
- Taluka : BONAI
- Post office : TENSA
- Pin Code : 770042
- FAX No. : 06625-236031
- E-mail : rmdcal@giascl.vsnl.net.in
- Phone : 06625-236026
- (f) Police Station : Lahunipara
- (g) First opening date : 06/01/1960
- (h) Weekly day of rest : SUN
2. Address for correspondence : BARSUA IRON MINE OF SAIL
AT/PO-BARSUA
DIST-SUNDERGARH
3. (a) Lease Number : ORI0155
- (b) Lease area : 77.92 2486.383 ha
- (c) Period of lease : bph 05.01.2030
- (d) Date of Expiry : 01/03/2020 05.01.2030
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : STEEL AUTHORITY OF INDIA LIMITED
 PURNAPANI LIMESTONE MINE
 SUNDERGARH DISTRICT -770
 ORISSA SUNDARGARH ORISSA
 Phone:0661-728121
 FAX :

Owner : VIVEK GUPTA
 M/s SAIL, Ispat Bhawan Lodi
 Road, New Delhi SUNDARGARH
 ORISSA
 Phone: 011-24367481
 FAX : 011-24367015

Agent : A K SINHA
 M/s SAIL, At/Po-Tensa, PS-
 Lahunipara Dist-Sundargarh
 Odisha SUNDARGARH ORISSA
 Phone: 06625-236026
 FAX : 06625-236031

Mining Engineer

Name : SHRI S K KHANDE, Full Time
 Qualification : B E (MINING)
 Appointment/ : 08/07/2016
 Termination date

Geologist

Name : SHRI R P MONDAL, Full Time
 Qualification : MSC (GEOLOGY)
 Appointment/ : 08/07/2016
 Termination date

Manager

Name : SHRI B K SOREN
 Qualification : BSC (MINING)
 Appointment/ : 01/06/2016
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	22/02/2002
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	04/10/2007
	:	Renewal under rule 24 MCR1960	28/07/2008
	:	Mining Scheme rule 12 MCDR1988	04/09/2015

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No backlog.	No exploration undertaken during 2018-19.	Nil
1b	Exploration over lease area for geological axis 1 or 2	An extent of 925.064ha has been explored upto G1 level for ML 130.	An extent of 925.064ha has been explored upto G1 level.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Exploration carried out by MECL and cost incurred was 117 lakh.	Exploration carried out by MECL and cost incurred was 117 lakh.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	An area of 925.064 ha has been explored upto G1 level as on 01.04.2019 and balance 1561.319 ha yet to be explored for ML 130.	An area of 925.064 ha has been explored upto G1 level as on 01.04.2019 and balance 1561.319 ha yet to be explored in ML 130.	Nil
1e	Balance reserve as on 01/04/20	As per approved document dated 30.04.2019, the position of reserves and resources as on 01/04/2019 the reserves/ resources for Barsua block is as follows: UNFC (111)-89.053 mT, UNFC(121)-64.949 mT and remaining resources of 85.690 mT	As per approved document dated 30.04.2019, the position of reserves and resources as on 01/04/2019 the reserves/ resources for Barsua block is as follows: UNFC (111)-89.053 mT, UNFC(121)-64.949 mT and remaining resources of 85.690 mT	mT Stands for million tonnes.

1f	General remarks of inspecting officers on geology, exploration etc	The regional geological set up of iron ore series of the area constitutes a part of the precambrian meta sedimentary sequences. The regional structure of the sedimentary iron ore bearing formations was assumed as an asymmetrical overturned synclinorium plunging. The western limb of the structure comprising of Bonai iron ore range (Kiriburu-Bolani, Kalta-Taldih-Barsua) and dips at high angle (30-70 degree) westward with regional strike of the area NNE-SSW. No exploration done in 2018-19.	Nil
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Block A & C	Block A & C	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No top soil exists in the area proposed under excavation planning. However, seperate benches in OB/waste and ore zone are proposed with bench height of 10 m.	No top soil is generated during 2018-19 and seperate benches in OB/waste and ore zone are maintained.	Nil.
2c	Stripping ratio or ore to OB ratio			

2d	Quantity of topsoil generation in m3	No topsoil exists in the location of excavation in 2018-19	No topsoil generated during 2018-19.	Nil.
2e	Quantity of overburden generation in m3	Nil	No waste was generated during 2018-19.	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		The development of the mine is not carried out as per approved document for the year 2018-19.	Violation under rule 11(1) of MCDR, 2017 was pointed out and subsequently, the mine was suspended vide letter No. ORI/IRON/SNG/MCDR-1/BBS, VOL-III, dated 29.03.2019. A court case also launched in the Hon'ble Cour of SDJM, Bhubaneswar.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Block A & C for the year 2018-19.	Block A & C for the year 2018-19 but the excavation was done in the location proposed for the year 2015-16 to 2017-18.	Violation under rule 11(1) of MCDR, 2017 was pointed out and subsequently, the mine was suspended vide letter No. ORI/IRON/SNG/MCDR-1/BBS, VOL-III, dated 29.03.2019. A court case also launched in the Hon'ble Cour of SDJM, Bhubaneswar.
3b	Quantity of ROM mineral production proposed	2.4 mT for the year 2018-19.	1.95 mT for the year 2018-19.	mT stands for million tonnes.
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Nil

3d	Quantity of mineral reject generation.	1.14 million tonnes (sub-grade) in 2018-19 with reference to the scheme of mining approved on 04.09.2015.	0.39 million tonnes of mineral reject (sub-grade) was generated during 2018-19.	Nil
3e	Grade of mineral rejects generation and threshold value declared.	+45 to -57%Fe	+45 to -57%Fe	Nil
3f	Quantity of sub grade mineral generation.	1.14 million tonnes for the eyar 2018-19.	0.39 million tonnes in 2018-19.	Same figure has also been reflected in Mineral reject.
3g	Grade of sub grade mineral generation	+45-57%Fe	+45-57%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.	Not applicable.	NIL.
3j	Provision of drilling and blasting in mineral benches	drill machine: 150 mm, class-II,III with NONEL initiation for blasting are proposed.	drill machine: 150 mm, class-II,III with NONEL initiation for blasting are proposed.	Nil

3k	Provision of mining machineries in mineral benches	Excavator, Dozer, Wagon Drill, Compressor, Rock breaker, Tripper, Crushing and Screening unit, Water tanker, Generator, wet screening plant, weigh bridge, DG set etc.	Machineries have been deployed as per proposal.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	height of bench proposed is 10 m and suitable.	The height of benches has been maintained as per the proposal.	Nil
3m	Total area covered under excavation/pits	177.8 ha at the end of plan period 2019-20.	An area of around 169.28 Ha has been covered under pits as on 01/04/219.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.0 CuM/Tonnes	1:0.0 CuM/Tonnes	NIL.
3o	Total area put in use under different heads at the end of year	Total area: 319.62 ha at the end of plan period 2019-20, excavation: 177.8 ha, sub grade stack: 68.71 ha, roads&infra: 23.67 ha, green belt: 49.44 ha.	Total area: 319.62 ha at the end of plan period 2019-20, excavation: 177.8 ha, sub grade stack: 68.71 ha, roads&infra: 23.67 ha, green belt: 49.44 ha.	Nil

3p	Production of ROM mineral during the last five year period as applicable	2014-15:2.50 mT 2015-16:5.99 mT 2016-17:4.98 mT 2017-18:4.76 mT 2018-19:2.45 mT	2014-15:0.27 mT 2015-16: NIL mT 2016-17:0.081 mT 2017-18:0.086 mT 2018-19: 1.95mT	Due to non availability of Forest clearance of adjoining lease (ML-162) in which processing is carried out, mine could not produced iron ore from 2015-16 to 2016-17. mT stands for million tonnes.
3q	General remarks of inspecting officers on method of mining etc.	Fully mechanized method of mining has been proposed to win the Ore.	Fully mechanized method of mining is in practice to win Iron Ore.	Nil

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 and waste generation during 2018-19. Separate dumping of sub-grade has been proposed.	Top soil and waste has not been generated during the year. The sub-grade (Mineral reject) has been kept separately.	Nil
4b	Location of topsoil, OB and mineral reject dumps	Not applicable as no topsoil and waste handling during 2018-19	No top soil and waste generated during the year 2018-19. The sub-grade/mineral reject generated has been dumped separately.	Nil

4c	Number of dumps within lease area and outside of lease area	As per approved document 9 waste dumps are exist in the lease area which has been converted to Sub-grade dump due to change in threshold value. All are within lease area.	No waste dumping outside of the lease has been observed. All sub-grade dumps are within lease area.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No waste generation proposal during the year 2018-19. Hence, no proposal of waste dumping during 2018-19.	No fresh waste dump in the mine.	Nil
4e	Number of active and alive dumps.	No active dumping for the year 2018-19.	Not applicable.	Nil
4f	Number of dead dumps.			
4g	Number of dumps established.	Not applicable	Not applicable	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall has been observed.	Retaining wall has been observed.	Nil.
4i	Length of Retaining wall or garland drain all along dumps	No fresh proposal in 2018-19.	Not applicable as no proposal for 2018-19.	Nil
4j	Number of settling ponds	No proposal of construction of settling tank.	Not applicable as no proposal.	Nil

4k	Specific comments of inspecting officer on waste dump management	No proposal of top soil and waste generation during 2018-19. Separate dumping of Mineral reject has been proposed.	Top soil and waste has not been generated during the year. Sub-grade (Mineral reject) has been kept separately.	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.	No area matured for backfilling.	No area matured for backfilling.	Nil
5b	Area under backfilling of mined out area	Not applicable.	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No topsoil exists in the area proposed under mining.	No generation of top soil during 2018-19.	Nil
5d	Total area fully reclaimed and rehabilitated	Fully reclamation and rehabilitation during 2018-19 is not applicable.	Not applicable as no proposal of fully reclamation and rehabilitation.	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No proposal of backfilling during the plan period as no area is matured for backfilling.	No backfilling was undertaken during 2018-19 as no area matured for reclamation.	Nil

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Annual return on PMCP for 2018-19 has not been submitted as on the date of inspection, which is due for submission on or before 1st July 2019.	The annual return on PMCP was not due for submission as on the date of inspection.	Nil
6b	Area available for rehabilitation (ha) .	The annual return on PMCP was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	Nil	Nil
6c	afforestation done (ha).	The annual return on PMCP was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	Nil	Nil
6d	No. of saplings planted during the year	The annual return on PMCP was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	Nil	Nil
6e	Cumulative no .of plants	296002 nos	296002 nos.	Nil

6f	Any other method of rehabilitation	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6g	Cost incurred on watch and care during the year	Rs. 50000.00	Rs.60000.00	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No area matured for reclamation and rehabilitation .	Not applicable.	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No waste land.	Not applicable.	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring of environmental parameters are proposed.	Quarterly environmental monitoring in core zone & buffer zone is being done. Air,Water,Soil,Noise,Dust fall tests done in every quarter as per SPCB & CPCB guidelines)	Nil

6g	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	The annual return on PMCP has not been submitted as on the date of inspection, which is due for submission on or before 1st July 2019.	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	The ROM produced is subjected for screening to segregate different size of grade of iron ore before despatch to the Steel plant.	The ROM produced is subjected for screening to segregate different size of grade of iron ore before despatch to the Steel plant.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical sorting of Iron Ore by Crushing and screening,	Mechanical sorting of Iron Ore by Crushing and screening,	Nil
7c	Different grade of mineral sorted out at mines.	Iron Ore :- 45- 57%Fe and more than 57% Fe.	Only iron ore having garde between 45 to 57% Fe has been generated.	Nil
7d	Any beneficiation process at mines .	2.50 MTPA processing plant has along with a wet beneficiation plant is exists in the lease area.	2.50 MTPA processing plant has along with a wet beneficiation plant is exists in the lease area.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Sub-grade material generated during excavation has been stacked separately for future use.	Nil

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No topsoil exists.	No top soil generated during the year 2018-19.	Nil
8b	Concurrent use or storage of topsoil	Not applicable.	Not applicable.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Seperate dumps for sub grade/mineral rejects.	No waste generation during the year 2018-19 and mineral reject has been stacked separately.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal of use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use.	Not applicable as no proposal.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)			
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Cumultaive of 296002 nos of plantation carried out.	Cumultaive of 296002 nos of plantation carried out.	Nil
8g	Survival rate	85%.	85% as reported.	Nil
8h	Water sprinkling on roads to control airborne dust	water sprinkling by water sprinklers on haul roads proposed.	water sprinkling by water sprinklers on haul roads practised.	Nil

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Plantation has been carried out to improve aesthetic beauty in and around lease area.	Nil
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Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	As per rule 45 of MCDR, 2017 , monthly and annual returns have to be submitted to IBM.	he party has submitted all the monthly returns for the year 2018-19 but the annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the insection dose not arise
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the insection dose not arise	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the insection dose not arise	Nil

9d	Scrutiny of Annual return on afforestation	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise	Nil

9h	Scrutiny of Annual return on fixed assets	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019..	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise	Nil
9k	Scrutiny of Annual return on mining machineries	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise

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 : 13-08-2019

No violation.

(SHRI G.C. SETHI)

Indian Bureau of Mines