

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

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/IRON/SNG/MCDR-1/BBS

**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 : Shri B.K.Soren, Mine Manager  
Official with  
Designation
- (iv) Date of Inspection : 04/10/2018
- (v) Prev.inspection date : 09/01/2018

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **BARSUA**
- (b) **Registration NO.** :
- (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 : BARSUA IRON MINE OF SAIL  
correspondance AT/PO-BARSUA  
DIST-SUNDERGARH
3. (a) Lease Number : ORI0155
- (b) Lease area : 77.94
- (c) Period of lease :
- (d) Date of Expiry : 31/03/2020
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 : SHRI KALYAN MAITY  
 ISPAT BHAWAN, LODHI ROAD  
 M/S SAIL LTD, NEW DELHI  
 SUNDARGARH ORISSA  
 Phone:  
 FAX :

Agent : SHRI A K PAL  
 TENSA SUNDARGARH ODISHA  
 SUNDARGARH ORISSA  
 Phone:  
 FAX :

## 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 proposal of exploration for the year 2017-18 as per approved document dated 04/09/2015.	Drilling of 16 nos of boreholes carried out during the year 2017-18.	Nil
1b	Exploration over lease area for geological axis 1 or 2	No proposal of exploration for the year 2017-18 as per approved document dated 04/09/2015.	Drilling of 16 nos of boreholes carried out during the year 2017-18.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No specific proposal of exploration agency in approved document dated 04/09/2015.	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	As per approve document dated 04/09/2015, an area of 1036.383 ha of G3 level exploration has to bring under G2/G1 level of exploration.	An area of 1036.383 Ha to be bring under G2/G1 level; of exploration as no exploration has been carried out during the year scheme period.	Nil

1e	Balance reserve as on 01/04/20	As per approved document dated 04/09/2015, the position of reserve and resource as on 01/04/2015 was as follows: Reserve-64.57 mT and Resource-87.447 mT	As per annual return for the year 2017-18, the position of reserve and resource as on 01/04/2018 was 64.57 mT and 87.447 mT respectively.	mT Stands for million tonnes.
1f	General remarks of inspecting officers on geology, exploration etc	No proposal of exploration for the year 2017-18 as per approved document dated 04/09/2015.	Not applicable as no proposal.	Nil

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Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Development has been proposed at two locations: (1) Area 3: 145W-458E/200N-350N, (2) 511W-114W/2531S-2825S.	The development is carried out in area-3 & 5 by removing OB/waste in 2017-18 in the location proposed for the year 2015-16.	The violation under rule 11(1) of MCDR,2017 was pointed out to the party.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No top soil exists in the area proposed under excavation planning. However, separate benches in OB/waste and ore zone are proposed with bench height of 10 m.	No top soil is generated during 2017-18 and separate benches in OB/waste and ore zone are maintained.	Nil.
2c	Stripping ratio or ore to OB ratio	1:0.0 CuM/Tonnes	1:0.0 CuM/Tonnes	Nil
2d	Quantity of topsoil generation in m3	No proposal of top soil generation during 2017-18.	Top soil has not been generated during 2017-18.	Nil.
2e	Quantity of overburden generation in m3	No proposal of waste generation during 2017-18.	NIL as no generation of waste during 2017-18.	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Development has been proposed at two locations: (1) Area 3: 145W-458E/200N-350N, (2) 511W-114W/2531S-2825S.	The development of the mine is not carried out as per approved document for the year 2017-18.	Violation under rule 11(1) of MCDR,2017 has been pointed out to the party.

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### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 pits, Area-3 and Area-5 for the year 2017-18.	Area-3 and Area-5 for the year 2017-18 but the excavation was done in the location proposed for the year 2015-16.	The violation for such deviation has been pointed out to the party under Rule 11(1) of MCDR,2017.

3b	Quantity of ROM mineral production proposed	4.76 mT for the year 2017-18.	0.086 mT for the year 2017-18.	mT stands for million tonnes.
3c	Recovery of sailable/usable mineral from ROM production	3.08 mT	NIL.	mT stands for million tonnes.
3d	Quantity of mineral reject generation	1.68 mT	0.086 mT	mT stands for million tonnes.
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.	1.68 million tonnes for the eyar 2017-18.	0.86 million tonnes.	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.	No proposal of any beneficiation study during 2017-18.	Not applicable as no proposal.	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.	height of bench proposed is 10 m and suitable.
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 01/04/218.	As per AR 2017-18.
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: 311.1 ha at the end of 2017-18, excavation: 169.28 ha, sub grade stack: 68.71 ha, roads&infra: 23.67 ha, green belt: 49.44 ha.	As per AR 2017-18.

3p	Production of ROM mineral during the last five year period as applicable	2013-14:2.50 mT 2014-15:2.50 mT 2015-16:5.99 mT 2016-17:4.98 mT 2017-18:4.76 mT	2013-14:1.71 mT 2014-15:0.27 mT 2015-16: NIL mT 2016-17:0.081 mT 2017-18:0.086 mT	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

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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No proposal of top soil and waste generation during 2017-18. Separate dumping of Mineral reject has been proposed.	Top soil and waste has not been generated during the year. Mineral reject has been kept separately.	Nil
4b	Location of topsoil, OB and mineral reject dumps	No proposal of top soil and waste generation during 2017-18.	Top soil and waste has not been generated during the year.	Nil

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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 proposal of waste generation during the year 2017-18. Hence, no proposal of waste dumping during 2017-18.	Not applicable as no proposal.	Nil
4e	Number of active and alive dumps.	No proposal of active dumping during the year 2017-18.	Not applicable as no proposal.	Nil
4f	Number of dead dumps.	No proposal for the year 2017-18.	Not applicable as no proposal.	Nil
4g	Number of dumps established.	No specific proposal for the year 2017-18.	Not applicable as no proposal.	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 proposal of retaining wall and garland drain during 2017-18.	Not applicable as no proposal.	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 2017-18. Separate dumping of Mineral reject has been proposed.	Top soil and waste has not been generated during the year. 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.	Nil
5d	Total area fully reclaimed and rehabilitated	No Proposal for Fully reclamation and rehabilitation during	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 2017-18 as no area matured for reclamation.	Nil

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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 report to be submitted under Rule 23E(2).	Submitted with in stipulated time period.	Nil
6b	Area available for rehabilitation (ha) .	A total of 15 Ha area has been proposed for Plantation over waste dump/sub-grade dumps during 2017-18.	Plantation has been observed.	Nil
6c	afforestation done (ha).	15 ha for the year 2017-18.	5 ha.	The mine was not under operation upto the year 2016-17 due to lack of forest clearance.
6d	No. of saplings planted during the year	50000 nos. for the year 2017-18	8000 nos.	Nil
6e	Cumulative no .of plants	296002 nos.	296002 nos.	Nil
6f	Any other method of rehabilitation	No specific method of rehabilitation other than Plantation during 2017-18.	As reported commutatively 296252 number of plants have been planted.	Nil
6g	Cost incurred on watch and care during the year	Rs 3 lakh for the year 2017-18.	Rs 3.2 lakh	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	No proposal of backfilling during the plan period as no area is matured for backfilling.	Not applicable as no proposal.	Nil

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal of backfilling during the plan period as no area is matured for backfilling.	Not applicable as no proposal.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No proposal of plantation over backfilled area as no proposal of backfilling.	Not applicable as no proposal.	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal has been given	Not applicable as no proposal.	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No specific proposal.	Not applicable as no proposal.	Nil
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	No proposal of afforestation over waste land.	Not applicable as no proposal.	Nil
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No proposal over waste land.	Not applicable as no proposal.	Nil
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No proposal over waste land.	Not applicable as no proposal.	Nil

6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring of environmental parameters are proposed.	Environmental monitoring was carried out in Core and buffer zone for the reporting year.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	As per approved PMCP a total of 50000 Numbers of sapling has been proposed to plant during 2017-18.	8000 number of plant within lease has been planted during 2017-18.	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 proposed.	Only Mineral reject has been generated during the year. No sorting during the year.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical sorting of Iron Ore by Crushing and screening,	Not applicable as no sorting during the year 2017-18.	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 during the year 2017-18.	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.	No processing and beneficiation during the year 207-18.	Nil

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Sub-grade material generated during excavation and processing of ROM, has been proposed to stack separately for future use.	Sub-grade material generated during excavation has been stacked separately for future use.	Nil
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**Environment:**

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No topsoil exists.	No generation of top soil for the year 2017-18.	Nil
8b	Concurrent use or storage of topsoil	No proposal of top soil generation as no fresh area is proposed for excavation during 2017-18.	No top soil has been generated during the year 2017-18.	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 2017-18 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)	50000 saplings proposed as a part of dump management for the year 2017-18.	8000 saplings planted.	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Cumulative of 296002 nos of plantation carried out.	Cumulative of 296002 nos of plantation carried out.	Nil
8g	Survival rate	No specific Proposal	85% as reported by lessee.	Nil
8h	Water sprinkling on roads to control airborne dust	water sprinkling by water sprinklers on haul roads proposed.	Water sprinkling carried out on haul roads.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	To improve the aesthetic beauty of mines proposal of plantation has been envisaged.	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	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	As per rule 45 of MCDR , monthly and annual returns to be submitted.	Submitted with in stipulated time.	Scrutiny of AR 2017-18.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	graduate minng enigneer:2, diploma engineer: 8, Geologist:1, surveyor: 2	graduate minng enigneer:2, diploma engineer: 8, Geologist:1, surveyor: 2	Scrutiny of AR 2017-18.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mine working: 169.28 Ha. Reclaimed and rehabilitated : 49.44 Ha, waste dump: NIL , Infrastructure with road: 23.67 Ha. , Mineral separation plant:68.71 Ha	The land details furnished in AR seems to be in order.	Scrutiny of AR 2017-18.
9d	Scrutiny of Annual return on afforestation	8000 nos.	found to be in order.	Scrutiny of AR 2017-18.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	0.086 mT of sub grade ore generated.	0.086 mT of sub grade ore generated.	mT stands for million tonnes.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex-mine furnished is "Zero" as no dispatch during the year.	The information furnished about the ex-mine under the Annual return for the year 2017-2018 seems to be in order	Scrutiny of AR 2017-18.
9h	Scrutiny of Annual return on fixed assets	fixed assests: Rs 4593611715	Appears to be in Order.	Scrutiny of AR 2017-18.
9k	Scrutiny of Annual return on mining machineries	Excavator, Dozer, Mator Grader, Loader, Dumper, wheel loader, Tipper, water tanker, blast hole drill, crane, crusher plant, screen plant, compressor etc.	Information furnished appears to be correct.	Scrutiny of AR 2017-18.

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**Details of violations observed during current inspection and compliance position of violation pointed out**

Violation observed			Show couse position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
MCDR17	Rule 11(1)	25/10/2018	MCDR17	Rule 11(1)	25/10/2018

**Date :**

**(SHRI G.C. SETHI)**

Indian Bureau of Mines