

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

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

Mine file No : ORI/IRON/KJR/MCDR-60/BBS

Mine code : 30ORI08013

- (i) Name of the Inspecting : RAM ) RAMKISHAN R  
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Kamal Bhasker, Mine Manager  
Official with  
Designation
- (iv) Date of Inspection : 27/08/2019
- (v) Prev.inspection date : 19/09/2018

**PART-I : GENERAL INFORMATION**

- 1. (a) Mine Name : BOLANI
- (b) Registration NO. : IBM/1120/2011
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :  
State : ORISSA  
District : KEONJHAR  
Village : BOLANI  
Taluka : BARBIL  
Post office : BOLANI  
Pin Code : 758037  
FAX No. : 06767-30246  
E-mail : rmdbom2016@gmail.com  
Phone : 06767-60207
- (f) Police Station : Bolani
- (g) First opening date : 12/04/1960
- (h) Weekly day of rest : SUN
- 2. Address for correspondence : BOLANI ORES MINES, AT/PO: BOLANI  
KEONJHAR DISTRICT  
ORISSA
- 3. (a) Lease Number : ORI0102
- (b) Lease area : 1321.45
- (c) Period of lease : 20
- (d) Date of Expiry : 09/04/2030
- 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 : Kalyan Maity, (Director cum Nominated Owner)  
 SAIL, RAW MATERIAL DIVISION  
 Industry House ( 4th to 6th  
 Floor ) 10, Camac Street,  
 Kolkata KOLKATA WEST BENGAL  
 Phone: 033-22825255  
 FAX :

Agent : A.K.MISHRA  
 KEONJHAR ORISSA  
 Phone:  
 FAX :

Mining Engineer  
 Name : Ravi Ranjan, Full Time  
 Qualification : B.Tech in Mining Engineering  
 Appointment/ : 01/05/2016  
 Termination date

Geologist  
 Name : Joydev Chattopadhyay, Full Time  
 Qualification : M.Sc.Tech in Applied Geology  
 Appointment/ : 01/06/2016  
 Termination date

Manager  
 Name : Tarun Kanti Roy  
 Qualification : B.TECH (MINING)  
 Appointment/ : 10/07/2014  
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	18/01/2001
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	25/10/2002
	:	Mining Scheme rule 12 MCDR1988	24/05/2007
	:	Renewal under rule 24 MCR1960	13/01/2010
	:	Mining Scheme rule 12 MCDR1988	03/08/2015
	:	MP review under 17(1) MCR 2016	27/03/2018
	:	MS modif under MCR 1960	06/08/2018

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	As per the approved document dated 06.08.2018, 50 nos of boreholes were planned as a part of exploration during the plan period i..e. year 2018-19 to 2019-20.	no exploration has been carried out during the year 2018-19.	Nil
1b	Exploration over lease area for geological axis 1 or 2	As per the approved document dated 06.08.2018, 50 nos of boreholes were planned as a part of exploration during the plan period i..e. year 2018-19 to 2019-20 for G1/G2 level.	No exploration has been carried out during the year 2018-19.	Violation observed and communicated to lessee letter dated 06.09.2019
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such specific proposal.	Not applicable.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	To bring balance area under G1/G2 level 50 nos of boreholes were proposed during the plan period i.e. 2018-19 to 2019-20.	No exploration has been carried out.	Nil

1e	Balance reserve as on 01/04/20	As per the approved document dated 06.08.2018 the iron ore reserves are 247 mil.t and resources are 64.18 mil.t.	due to depletion/addition over the period of time the updated iron or reserves as on dated 01.04.2019 are 241.3 mil.t and resources are 64.18 mil.t	Nil
1f	General remarks of inspecting officers on geology, exploration etc		50 nos of boreholes were planned during the plan period, but no exploration has been carried out during the year 2018-19.	Nil

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**Development :**

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	4 quarries (F-Area, G-Area, D-Area and Panposh area are proposed for development during the year 2018-19.	development is carried out in the proposed quarries as proposed in the approved mining plan.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	no top soil generation is envisaged in the mining plan and seperate benches in mineral and OB are proposed.	seperate benches in OB and mineral are maintained.	Nil
2c	Stripping ratio or ore to OB ratio	0.36 t/cu.m.	0.22 t/cu.m.	Nil
2d	Quantity of topsoil generation in m3	Not applicable	Nil	Nil
2e	Quantity of overburden generation in m3	1692679 cu.m. for the year 2018-19.	1240663 cu.m.	due to less development.

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2f General remarks of inspecting officers on development of pit w.r.t. type of deposit etc development is carried out by opencast mining method as proposed in the mining plan.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	4 pits proposed for production during the year 2018-19.	production is carried out from 4 pits.	Nil
3b	Quantity of ROM mineral production proposed	11.61 mil.t during the year 2018-19	5.65 mil.t	less production due to capacity enhancement infrastructure development is under process.
3c	Recovery of sailable/usable mineral from ROM production	saleable ore 10.37 mil.t and mineral rejects 1.24 mil.t	saleable ore 5.65 mil.t and mineral rejects Nil	the generated mineral rejects were blended with high grade ore.
3d	Quantity of mineral reject generation	1.24 mil.t	Nil	the generated mineral rejects were blended with high grade ore.
3e	Grade of mineral rejects generation and threshold value declared.	+45%-57% Fe	+45%-57% Fe	Nil
3f	Quantity of sub grade mineral generation.	Not applicable	NA	addressed in mineral rejects
3g	Grade of sub grade mineral generation	Not applicable	Nil	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.	proposed. wet beneficiation	not carried out due to want of statutory clearances.	Nil
3j	Provision of drilling and blasting in mineral benches	deep hole drilling and blasting is proposed in mineral benches.	deep hole drilling and blasting is carried out.	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	10 m bench height is proposed.	maintained.	Nil
3m	Total area covered under excavation/pits	290.8 ha till the end of plan period i.e. 2019-20.	290.8 ha	Nil
3n	Ore to OB ratio for the pit/mine during the year.	0.36 t/cu.m.	0.22 t/cu.m.	Nil
3o	Total area put in use under different heads at the end of year	Total area put in use under different haeds at the end of plan period i.e. 2019-20 is 491.21 ha	419.49 ha	Nil

3p	Production of ROM mineral during the last five year period as applicable	2014-15: 12.00 Mil.t 2015-16: 12.00 Mil.t 2016-17: 9.62 Mil.t 2017-18: 10.05 Mil.t 2018-19: 11.61 Mil.t	2014-15: 4342889 t 2015-16: 5354705 t 2016-17: 5681842 t 2017-18: 5232276 t 2018-19: 5654001 t	Nil
3q	General remarks of inspecting officers on method of mining etc.		mining is done by opencast mining method as proposed in the mining plan in a fully mechanised manner.	Nil

#### Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	no top soil generation is envisaged, seperate dumping for OB is proposed and mineral rejects are proposed to be temporarily stacked and blended with high grade ore	seperate dumping of OB is carried out. mineral rejects are blended with high grade ore.	Nil
4b	Location of topsoil, OB and mineral reject dumps	waste dumping is proposed in four blocok areas.	waste dumping is caried out as per the proposal in mining plan	Nil
4c	Number of dumps within lease area and outside of lease area	6 dumps with in lease area.	5 dumps with in lease area.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	5 outside UPL and 1 with in UPL.	4 outside UPL and 1 with in UPL	Nil
4e	Number of active and alive dumps.	6 nos	5 nos	Nil

4f	Number of dead dumps.	No such proposal.	Not applicable	Nil
4g	Number of dumps established.	Not applicable	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	proposed.	maintained.	Nil
4i	Length of Retaining wall or garland drain all along dumps	400 m during the year 2018-19	200 m	violation observed and communicated to lessee letter dated 06.09.2019
4j	Number of settling ponds	2 nos	2 nos	Nil
4k	Specific comments of inspecting officer on waste dump management		waste dumping management is carried out as per the approved mining plan	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.	area not matured for reclamation and rehabilitation	NA	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)	Not applicable	NA	Nil
5d	Total area fully reclaimed and rehabilitated	Not applicable	Nil	Nil



5e	General remarks of inspecting officers on backfilling and reclamation etc.	Area not matured for reclamation and rehabilitation	Nil
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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).	PMCP report to submitted. submitted before 1 st July		Nil
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	Nil
6c	afforestation done (ha).	3 ha	3 ha	Nil
6d	No. of saplings planted during the year	7500 nos	7800 nos	Nil
6e	Cumulative no .of plants	72230 nos	245000 nos	
6f	Any other method of rehabilitation	Not applicable	Nil	Nil
6g	Cost incurred on watch and care during the year	No such specific proposal.	Rs 25.94 lakhs	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Not applicable	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not applicable	Nil	Nil

6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Not applicable	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	
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	3 ha	3 ha	Nil
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	3 ha	3 ha	Nil
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	plantation	plantation	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	environmental monitoring of core zone and buffer zone are proposed.	monitoring of environmental parameters are carried out.	Nil

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	PMCP measures are carried out as per mining plan.	Nil
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#### Mineral Conservation:

Sl.No.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	grade-wise sorting is proposed.	grade-wise sorting is carried out.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	mechanical	mechanical	Nil
7c	Different grade of mineral sorted out at mines.	+45%-57% Fe and +57% Fe above	+45%-57% Fe and +57% Fe above	Nil
7d	Any beneficiation process at mines	proposed.	not carried out due to want of statutory clearance.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		grade-wise sorting of mineral are carried out.	Nil

#### Environment:

Sl.No.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	no top soil generation is envisaged during the year 2018-19.	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)	seperate dumping for OB is proposed and mineral rejects are proposed to be temporarily stacked and blended with high grade ore	seperate dumping of OB is carried out. mineral rejects are blended with high grade ore.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not applicable	Nil	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not applicable	Nil	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	7500 nos	7800 no	Nil
8g	Survival rate		90%	Nil
8h	Water sprinkling on roads to control airborne dust	water sprinkling on haul raods for dust supression is proposed.	carried out.	Nil

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	aesthetic beauty in and around the mines area is maintained.	Nil
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## Compliance of Rule 45:

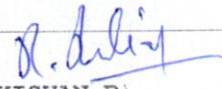
Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly and annual returns are to be submitted as per rule 45 of MCDR, 2017	submitted.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer - 17 (ii) Diploma Mining Engineer - 17 (iii) Geologist - 3	found to be in order.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	area under pits 397.5 ha, dumps 19.4 ha	total land use are utilisation furinshed information is not in line with approved mining plan	violation observed and communicated to lessee datd 06.09.2019
9d	Scrutiny of Annual return on afforestation	7800 nos	7800 nos	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 stock is 32823 t	found to be in order.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	production cost Rs 497.1	cost per tonne on royalty and taxes and other expenses to be added.	advised to rectify the calcuation of production cost furnished.

9h	Scrutiny of Annual return on fixed assets	Rs. 8631033	Rs. 8631033	Nil
9k	Scrutiny of Annual return on mining machineries	SHOVEL (HYDRAULIC) 4.500 CUM - 1 SHOVEL (HYDRAULIC) 7.500 CUM - 2 SHOVEL (HYDRAULIC) 9.500 CUM - 2 BACK HOE 2.600 CUM -2 ROCKER SHOVEL LOADER 1.200 CUM -1 DUMPER 50.000 TONNE - 2 DUMPER 100.000 TONNE - 8 WATER TANKER 28000.000 LITRE - 3 DOZER 410.000 HP - 7	found to be in order.	Nil

**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 11(1)	06/09/2019				
Rule 45(7)	06/09/2019				

Date : 25/10/19.

  
(RAMKISHAN R)

Indian Bureau of Mines