

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

**MCDR inspection REPORT
Jabalpur regional office**

Mine file No : MP/KATNI/LST-227

Mine code : 38MPR47009

- (i) Name of the Inspecting : **G005**) **SANJAY M. GIRHE**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 22-NOV-19
- (v) Prev.inspection date : 05-DEC-17

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **MARWA (GAIRTALAI/JARARODA)**
- (b) **Registration NO.** :
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address :
State : MADHYA PRADESH
District : KATNI
Village : MARWA, GAIRTALAI, JARA
Taluka : KATNI
Post office : BARHI
Pin Code : 483770
FAX No. : N. A.
E-mail : N. A.
Phone : N. A.
- (f) Police Station :
- (g) First opening date : 10-JAN-92
- (h) Weekly day of rest :
2. Address for : STEEL AUTHORITY OF INDIA LTD.
correspondance : P.O. BARHI, DIST. KATNI (M.P.)
3. (a) Lease Number : MPR0193
(b) Lease area : 944.89
(c) Period of lease : 10
(d) Date of Expiry : 09-JUN-01
4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : Steel authority of India Ltd.
 G. OJHA, DIR(PER & I/C RMD)
 LODHI RD, ISPAT BHAWAN
 NEWDELHI-110003 KATNI
 MADHYA PRADESH
 Phone:07626-273211
 FAX :07626-273201

Owner : STEEL AUTHORITY OF INDIA LTD.
 AT & P.O. BARHI, DIST.KATNI
 M.P KATNI MADHYA PRADESH
 Phone: 07626-273211/25
 FAX : 07626-273201

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	31-DEC-91
Plan/Scheme of Mining		Renewal under rule 22 MCR1960	02-SEP-03
		Modif.of approved Mining Plan	30-OCT-04
		PMCP under 23B(2) for Existing	01-JUL-05
		Mining Scheme rule 12 MCDR1988	13-APR-10
		Mining Scheme rule 12 MCDR1988	28-NOV-14
		MP review under 17(1) MCR 2016	24-MAR-17
		MP modif under 17(3) MCR 2016	05-NOV-18

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No exploration was proposed during modified approved mining plan period 2017-18 to 2021-22	No exploration carried out during the year 2018-19	Detailed exploration were carried out in the past over mining lease area.
1b	Exploration over lease area for geological axis 1 or 2	During the year 2018 no exploration was proposed for geological axis 1 or 2	About 48.0Hect. area have been explored in G1 level. Total 32 BHs of depth ranging 30.51m to 71.12m at 100m grid pattern were drilled for G1 axis.	Exploration was carried out in-hously by M/s SAIL.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	SAIL company exploration wing himself carried out the exploration.	Exploration had carried out long back, hence relevant expenditure details are not available.	No comments
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposals of exploration was given during the year 2018-19	About 48 Hect area have been explored in G1 level & balance 44 Hect area to be explored in G1 or G2 level.	Mining lease area including old working pits have submerged due to Mahanandi River. Hence, further scope of exploration was not feasible.
1e	Balance reserve as on 01/04/20	Limestone Reserves in Million Tonnes as on 01.04.2017 Proved(111) - 0.480 Resources in Million Tonnes Feasibility(21): 20.69 Pre-Feasibility(21):13.63 Inferred(333) : 28.0	Limestone Reserves in Million Tonnes as on 01.04.2019 Proved(111) -0.480 Resources in Million Tonnes Feasibility(221): 20.69 Pre-Feasibility(221):13.63 Inferred(333): 28.0	Mining lease area including old working pits was submerged due to Mahanandi River. ROM production stopped due to this reason.

1f	General remarks of inspecting officers on geology, exploration etc	NA	In the lease area limestone occurred in three different horizons upper (Agal Limestone), Middle (High Manganesia Limestone) & lower (Banded limestone).	Limestone occurring on both the side of river (left & right banks) with the lease holds & belongs to Kajrahat limestone of semri group. The general strike is ENE-WSW with gentle dip towards NNW.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Advancement of Pit-1 from central to northern was proposed for waste generation as well as limestone production upto 336mRL.	Not done	Mining lease area including old working pits have been submerged due to Mahanandi River water flow, hence ROM production couldn't be acheived due to this reason.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No proposal for top soil & overburden. Production bench of 3mts proposed	Not applicable as no production carried during the year 2018-19.	Mining lease area including old working pits have been submerged due to Mahanandi River water flow, hence ROM production couldn't be acheived.
2c	Stripping ratio or ore to OB ratio	Stripping ration was proposed 1:1.63	Not Applicable, as OB removal proposals were not given in approved document.	
2d	Quantity of topsoil generation in m3	Not Proposed	Nil	
2e	Quantity of overburden generation in m3	Not Proposed	Nil	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	NA	Mining lease area including old working pits had been submerged due to Mahanandi River water flow, hence mining operations were stopped due to this reason.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Pit-1 was proposed for production	No production carried out during the year.	Mining lease area including old working pits had been submerged due to Mahanandi River water flow, hence mining operations couldn't be carried out due to this reason.
3b	Quantity of ROM mineral production proposed	Total 59997 Tonne ROM production was proposed.	Not achieved.	Mining lease area including old working pits had been submerged due to Mahanandi River water flow, hence ROM production couldn't be achieved due to this reason.
3c	Recovery of sailable/usable mineral from ROM production	59997 Tonnes (About 87.5% of toatl ROM production)	(Not Done	
3d	Quantity of mineral reject generation	Not Proposed	Not done	
3e	Grade of mineral rejects generation and threshold value declared.	Not Proposed	Nil	
3f	Quantity of sub grade mineral generation.	Not Proposed	Nil	

3g	Grade of sub grade mineral generation	Not Proposed	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual sorting	Not done as no ROM excavation carried out. of intercalated waste from ROM proposed	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not Proposed	Nil	
3j	Provision of drilling and blasting in mineral benches	Proposed for Drilling & blasting with wagon drill - 100mm dia & Jack hammer of 32mm diameter.	Not done as no ROM excavation carried out during the year.	
3k	Provision of mining machineries in mineral benches	Wagon Drill - 100mm dia, Rock Breaker- 32mm, Excavator-2.7 CuM, Dozer- 420HP, Dumpers-10 Tonner capacity, etc	Not done as no ROM excavation carried out during the year.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Suitable height of 3 m was proposed for limestone in MMP.	No mining operation carried out during the year.	Mining lease area including old working pits had been submerged due to Mahanandi River water flow, hence mining operations couldn't be carried out due to this reason.

3m	Total area covered under excavation/pits	Total 18.40 Hect. area was proposed as per MMP approved for the period 2017-18 to 2021-22	About 15.090 Hect as annual return as on 01.04.2019	
3n	Ore to OB ratio for the pit/mine during the year.	No overburden generation proposed during the year	Nil	
3o	Total area put in use under different heads at the end of year	Area proposed as per modified mining plan approved 24.03.2017 Area under mining-18.40Ha Waste dumps-6.66 Ha Infrastructure -0.03Ha Road-3.39 Ha	Area as 01.04.2019 as per annual return Area under mining-15.90Ha Waste dumps-5.90 Ha Infrastructure-0.03Ha Road-3.39 Ha	
3p	Production of ROM mineral during the last five year period as applicable	2014-15 -: 26,250 tonnes 2015-16 -: 52,500 tonnes 2016-17 -: 59,981 tonnes 2017-18 -: 59998 tonnes 2018-19 -: 59997 tonnes	2014-15 -: Nil 2015-16 -: Nil 2016-17 -: Nil 2017-18 -: Nil 2018-19 -: Nil	Mining operations couldn't be carried out as the mining lease area including old working pits had been submerged due to Mahanandi River water flow since long back.
3q	General remarks of inspecting officers on method of mining etc.	NA	NA	Mining operations couldn't be carried out as the mining lease area including old working pits had been submerged due to Mahanandi River water flow since long back.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No dumping proposed for top soil, OB & mineral reject. Whereas, dumping of intercalated waste proposed in western-north part of lease area.	Not done as no mining activities carried out.	
4b	Location of topsoil, OB and mineral reject dumps	No topsoil & OB dumps proposed.	Two waste dumps already existing in lease area towards North-Eastern part between -E3437830 to 3437200 & N709100 to 708890, IB dumping- E3438080 to E3438520 with avg height of 7 to 8mts.	Total, three Interburden dumps are located towards North-eastern part of 2 to 3 mts heights.
4c	Number of dumps within lease area and outside of lease area	Total 02 nos. of OB dumps towards South-East part & 03 Inter-burden waste dumps towards South-East part are available	Total 02 nos. of OB dumps towards South-East part & 03 Inter-burden waste dumps towards South-East part are available	No dumping outside mining lease area noticed.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Exisiting dumps are of temporary nature & some part falling within ultimate pit.	Exisiting dumps are of temporary nature & some part falling within ultimate pit.	
4e	Number of active and alive dumps.	No active dumps	No active dumps as mining lease area including old working pits have been submerged due to Mahanandi River water flow.	Mine is non operational since long back.

4f	Number of dead dumps.	Not proposed in the approved document.	Total 02 nos. of OB dumps towards South-East part & 03 Inter-burden waste dumps towards South-East part may be considered as dead dumps as mine is non operational since long back.	
4g	Number of dumps established.	Not proposed in approved document	Not Applicable	
4h	Whether Retaining wall or garland drain all along dumps are there.	Not proposed in approved document	Not Applicable.	Retaining wall, garland drains along existing couldnot be assessed as the area was water logged.
4i	Length of Retaining wall or garland drain all along dumps	Not Proposed	Not mentioned in approved document.	
4j	Number of settling ponds	Not Proposed	Not mentioned in approved document.	
4k	Specific comments of inspecting officer on waste dump management	NA	NA	Mining lease area including old working pits have been submerged due to Chhoti Mahanandi River water flow & due to this mining operations have been stopped since long back. Hence, proposals of dump management couldn't be implemented.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Full extraction of mineral is not occurred in pits & no such proposals given.	Not Applicable	
5b	Area under backfilling of mined out area	Not Proposed	None of the pits area has been backfilled as of now.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not Proposed	Not Applicable	
5d	Total area fully reclaimed and rehabilitated	Not mentioned in approved document	As per the available surface plan, no such such area is marked.	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	NA	Limestone is still existing the pits and area not matured so far for backfilling and reclamation. Hence, scope of this aspect presently doesnot exists.

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).	As per the rule 23E(2) report to be submitted before 1st July of every year	Not subitted as the mine is non-operational since long back as lease area submerged due to Mahanandi River water flow.	
6b	Area available for rehabilitation (ha) .	Not Proposed	Nil	
6c	afforestation done (ha) .	NA	NA	

6d	No. of saplings planted during the year	Not Proposed	Nil
6e	Cumulative no .of plants	Not mentioned in approved plan	NA
6f	Any other method of rehabilitation	Not proposed in approved plan	NA
6g	Cost incurred on watch and care during the year	Not Proposed	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not Proposed	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not Proposed	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Not Proposed	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Not Proposed	Nil

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not Proposed	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not Proposed	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not Proposed	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring of Ambient Air, Water Quality and Noise has been proposed in the approved document.	Not done as mine is non-operational since long back due submergence of river water.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	NA	PMCP works as proposed couldnot be carried out as mine is non-operational since long back due to submergence Mahanandi River water in lease area.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting & sizing proposed before ROM dispatch in approved plan	Not done as mine was non-operational since long back.	

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual sorting & sizing proposed before ROM dispatch in approved plan.	Not done as mine was non-operational since long back.	
7c	Different grade of mineral sorted out at mines.	Cement grade & Steel grade limestone w.r.t. required size proposed	Not Done	
7d	Any beneficiation process at mines .	No beneficiation is proposed. Limestone grade wise sorting & sizing was proposed.	Not done as mine was non-operational since long back.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	NA	Mining lease area including old working pits have been submerged due to Mahanandi River water flow, hence ROM production couldn't be achieved during the review year.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not Proposed	Nil	
8b	Concurrent use or storage of topsoil	Not Proposed	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for intercalated waste proposed.	Not done as mine was non-operational since long back.	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not Proposed	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed	Nil	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Not Proposed	No plantation carried out.	
8g	Survival rate	Not mentioned in the approved document.	Old plantation observed in lease area.	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling through water tanker has been given in the approved document.	Not done as mine is non-operational since long back.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	NA	NA	The general aesthetic beauty of the lease area could not be assessed as the maximum area was water submerged. Chhoti Mahanandi river is passing along the lease boundary.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly returns submitted up to 31/10/2019 & Annual Return submitted for year 2018-19	Monthly & Annual Return submitted with stipulated time limit.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Shri Hemant Kumar Sahu, Mining Engineer & Shri Satish Kumar Tiwari, Geologist marked as appointed on statutory post as per MCDR, 2017 provisions.	Shri Hemant Kumar Sahu, Mining Engineer & Shri Satish Kumar Tiwari, Geologist were present during the inspection.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area cover under current workings- 15.090Ha Waste dumps- 5.90Ha Infrastructure -0.030Ha	Area cover under current workings-15.090Ha Waste dumps-5.90Ha Infrastructure-0.030Ha	NA
9d	Scrutiny of Annual return on afforestation	Not Given	Due to submergence of mine area by river water, proposals may not be given.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not given	Mineral rejects not generated	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Limestone (BF grade) O/S - 3771.110 M.T. Production - Nil Nil Dispatches - 1401.935 M.T. C/S - 2369.175	Limestone (BF grade) O/S - 3771.110 M.T. Production - Nil Dispatches - 1401.935 M.T. C/S - 2369.175	

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Limestone (BF grade) -: Ex-mine Price - :Rs 871.82/M.T. Sale Value - Nil Production cost -:Rs 795.82/M.T.	Limestone consumption is captive hence sale value is not applicable Ex-mine price is on lowere side w.r.t. ASP published by IBM
9h	Scrutiny of Annual return on fixed assets	Not mentioned	Nil
9k	Scrutiny of Annual return on mining machineries	Tipper - 7.0 CuM	Tippers to dispatch the limestone quantity from mine head.

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 :**(SANJAY M. GIRHE)**

Indian Bureau of Mines