

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

MCDR INSPECTION REPORT

Nagpur regional office

Mine file No : MAH/GAD/FE-2/NGP

Mine code : 30MSH27002

- (i) Name of the Inspecting : B014) CHANDRESH BOHRA
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri Khadu- Mine manager, Shri Rahul Bhadra- Geologis
Official with
Designation
- (iv) Date of Inspection : 10-Nov-22
- (v) Prev.inspection date : 20-Oct-21

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : SURJAGARH (348.09HA)
- (b) **Registration NO.** : IBM/5067/2011
- (c) **Category** : A Mechanised
- (d) **Type of Working** : Opencast
- (e) **Postal address**
- State : MAHARASHTRA
- District : GADCHIROLI
- Village : SURJAGARH(WOORIA HIL
- Taluka : ETAPALLI
- Post office : ETAPALLI
- Pin Code : 442704
- FAX No. :
- E-mail :
- Phone :
- (f) **Police Station** :
- (g) **First opening date** : 15-Jun-07
- (h) **Weekly day of rest** :
2. **Address for** :
correspondance
3. (a) **Lease Number** : MSH0370
- (b) **Lease area** : 348.09
- (c) **Period of lease** : 50
- (d) **Date of Expiry** : 05-Feb-57
4. **Mineral worked** : IRON ORE Main

5. Name and Address of the

Lessee : M/S LLOYDS METAL & ENGINEERS LTD
A-WING, BLOCK NO.805/806,
8TH FLOOR, LOKMAT BHAVAN,
RAMDASPETH, NAGPUR (MS)
NAGPUR MAHARASHTRA
Phone:
FAX :

6. Date of approval of Mining : Fresh under rule 22 MCR1960 03-Mar-04
Plan/Scheme of Mining Mining Scheme rule 12 MCDR1988 21-Mar-17

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	In the approved document dated 21.03.2-017 17 boreholes proposed	no exploratory drilling done during the last plan period. due to naxal problem	New RMP has been approved wherein 34 pits and 98 no of boreholes proposed. during the inspection exploratory drill machine was running.
1b	Exploration over lease area for geological axis 1 or 2		G1- 24.81 ha, G2- 16.21 ha, G3-93.75 gha	
1c	Exploration Agencies and Expenditure in lakh rupees during the year		DGM maharashtra during 1962-1971	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Proposal was given to bring potentially mineralized are to G1 level approx 195.47 ha	No drilling carried out	Presently exploration ids going on as per RMP approved dated 28.03.2022
1e	Balance reserve as on 01/04/20		as on 31.01.20022 Reserve- 58.204 mio ton, resources-29.723 mio ton, total- 87.927 mio ton	

1f	General remarks of inspecting officers on geology, exploration etc	The creasant shaped surjagarh hill range occurs at about 608 metre height from the MSL. The iron ore formation consists of ferrogenuous phylites and Banded hematite Quartzite. General strike of formation is WNW-ESE & dip 60-70 degree. The area was explored by DGM, Maharashtra by drilling 57 boreholes about 45 ha is explored upto G1 level and 107 ha under G2 level.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t. lease area	It was proposed from section E-E', F-F', G-G', H-H', I-I' and J-J' and float ore mining in the eastern side of lease area.	Development was done in main pit only. Float ore mining was not done.	Modification has been done in RMP approved in year 2022 so no violation raised.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes proposed	Seperate benches made in top soil, OB and mineral	
2c	Stripping ratio or ore to OB ratio	1:0.141	1:0.40	Backlog OB was handled
2d	Quantity of topsoil generation in m3	80000 m3	30500 m3	work done in already excavated area. no violaton raised as already new RMP from 2022-23 has been approved and work was going accordingly

2e	Quantity of overburden generation in m3	244849 m3	1127961 tons	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development was carried out more than proposal due to backlog of earlier years which was not done due to naxal problem.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit and float ore	One pit	
3b	Quantity of ROM mineral production proposed	2765450 T	2759870 T	
3c	Recovery of sailable/usable mineral from ROM production	No such proposal	100%	
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	No such proposal	Nil	
3f	Quantity of sub grade mineral generation.	No such proposal	Nil	
3g	Grade of sub grade mineral generation	No such proposal	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanical	Mechanical	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposal	Nil	

3j	Provision of drilling and blasting in mineral benches	Deep hole drilling and blasting	Deep hole drilling and blasting
3k	Provision of mining machineries in mineral benches	Shovel dumper combination and Drilling and Dozing	As per proposal
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	10 metre high	10 metre height is maintained
3m	Total area covered under excavation/pits	78 ha upto end of march 2022	15.79 ha les due to less production and float ore not working
3n	Ore to OB ratio for the pit/mine during the year.	1:0.141	1:0.40
3o	Total area put in use under different heads at the end of year		Mining- 15.79 ha, mineral storage- 7.56 ha, Roads 13.84 ha, dump-nil
3p	Production of ROM mineral during the last five year period as applicable	2017-18- 6,00,000 tons 2018-19- 6,00,000 tons 2019-20- 10,71,600 tons 2020-21- 17,540,100 tons 2021-22- 27,65,450 tons	2017-18- 1,75,397.225 tons 2018-19- 1,68,603.370 tons 2019-20- 550 tons 2020-21- Nil 2021-22- 27,59,870 tons
3q	General remarks of inspecting officers on method of mining etc.		There was proposal to work in float zone nd insitu working however mining was caarried out insitu area. Mine is located in LWE affexted area so two years work was hampered very badly. Now production level has normalized.

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Seperate dumping of top soil and OB proposed	seperate dumping of top soil and OB done	
4b	Location of topsoil, OB and mineral reject dumps	waste dump was proposed in the northern side of the lease area i.e. between the section line C-4 to C-7	all the OB material was used for road making inside lease	
4c	Number of dumps within lease area and outside of lease area	01	01 but the all waste was utlized in road making	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	outside UPL	outside UPL	
4e	Number of active and alive dumps.	01	01	
4f	Number of dead dumps.	Nil	Nil	
4g	Number of dumps established.	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	Construction of retaining wall was proposed along dump	Nil as all the waste generated was used in road making, ramp and bunds making of crushing plant	
4i	Length of Retaining wall or garland drain all along dumps	apprximately 100 metre	Nil	
4j	Number of settling ponds	No such proposal	Nil	
4k	Specific comments of inspecting officer on waste dump management			The mine is situated in LWE affected area and working was disturbed due to naxal activities. OB generated was used in road makng, ramp and bunds making.

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.	13 ha	Nil	As all the OB generated was used in road and ramp making and float ore area is not fully explored so backfilling not done. Exploration proposal of float zone area is also given in RMP approved in March 2022.
5b	Area under backfilling of mined out area	13 ha	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Plantation	Plantation	
5d	Total area fully reclaimed and rehabilitated	13 ha in year 2021-22	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			As proper mining was not carried out the lease area during last mining plan period due to LWE affected area and OB generated was used in road making and ramp making and due to not exploration of total area . Backfilling was restrained.

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).	PMCP report must be submitted before 1st of July of every year for preceding year.	Report submitted in time.	

6b	Area available for rehabilitation (ha) .	13 ha	Nil	
6c	afforestation done (ha).	13 ha on backfilling	0.2 ha with 240 nos saplings	
6d	No. of saplings planted during the year	11000 nos	240 nos inside minng lease 300 nos outside mining lease	Mining was badly affected till saeptember 2022 due to naxal affectedd area so plantation not done. No violation raised as new RMP has been approved with new proposal
6e	Cumulative no .of plants	33000	240	
6f	Any other method of rehabilitation	No such proposal	Nil	
6g	Cost incurred on watch and care during the year	Not proposed	approx 10000	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	There was proposal of backfilling of 13 ha	No backfilling was done as mining affected due to naxal activity so entire float zone was not removed and also it is proposed to explore the float zone also with exploratory drilling.	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Waste generated during float zone mining was proposed to backfill in float zone area	No backfilling done as waste generated is used as preparing road, ramp etc.	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	11,000 saplings proposed to be planted	No afforestation done due to backfilling not done	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No such proposal	Nil	

6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No such proposal	Nil	
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	Not proposed	240 saplings planted	
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No such proposal	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No such proposal	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposed regular monitoring of Air, water, noise and vibration	Regular monitoring of environment parameters done and parameters are within limit	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			The mine is working in LWE affected area so working hampered for years so plantation and other activities not carried out properly. Now December onwards work is going on smoothly and working is also modified with new approved RMP so no violation raised.

Mineral Conservation:

Sl.No.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting within lease area	Grade wise sorting done	

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	Crushing and screening
7c	Different grade of mineral sorted out at mines.	No such proposal given in plan	Below 55 % Fe, 58-60% Fe and 62% to 65 % Fe produced	
7d	Any beneficiation process at mines .	Not proposed	Nil	Crushing and screening for size reduction is being done.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Lessee is consuming entire ROM by grad wise sorting and blending low grade with high grade ore as per requirement

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	85000 m3	30500 m3	
8b	Concurrent use or storage of topsoil	Plantation purpose	Plantation purpose	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Seperate dumping of top soil, OB and mineral stack proposed	Seperate dumping of ON and top soil is done. however entire OB was used for road , ramp making etc	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposal	Nil	In the RMP approved on dated 28.03.2022 , it is proposed to use waste rock for road making outside lease also if he requirement of such thing comes.

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Backfilling of float zone working	Not done
8g	Survival rate	Not proposed	90%
8h	Water sprinkling on roads to control airborne dust	Water tanker	Water tanker is deployed for dust suppression.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		General environment of mines during inspection was found okay with water spraying was being done with water tanker and wet drilling machine is also used

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly return must be submitted by 10th of every month and Annual Rturn must be submitted by 1st July of every year for preceding year.	Monthly return submitted upto Sept 2022 and Annual Return for the year 2021-22 submitted timely.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager Mining & Mining Engineer- Jivan Hedau, Geologist- Viraj Sontakke	Information furnished is correct	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	under mining- 15.79 ha, Infrastructure - 25.480 ha, Other purpose- 7.56 ha	Information seems correct	

9d	Scrutiny of Annual return on afforestation	240 saplings inside lease and 300 saplings out side lease	Information furnished is correct
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Information furnished is correct
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing stock of ROM on 31.03.2022 reported 1840600 tons	Stck is ontinously depleting
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production- 1882.45 Rs/T, Ex Mine Prce & ale Value Below 55% 2424 Rs/T, 58-60%- 3538 Rs/T, 60-62%- 5100 Rs/T & 62-65 %- 671	Found okay
9h	Scrutiny of Annual return on fixed assets	Rs 617877252	It seems correct
9k	Scrutiny of Annual return on mining machineries	Shovel- 30 Nos, Tippers- 81 Nos, Water tanker- 13, Dozer- 04 Nos.	All the machinery was available in mines

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 :

(CHANDRESH BOHRA)

Indian Bureau of Mines