

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

MCDR INSPECTION REPORT

Nagpur regional office

Mine file No : MAH/CND/LST-11/NGP-III

Mine code : 38MSH08012

- (i) Name of the Inspecting : **M017**) **ASHISH MISHRA**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : **SHRI S. K. TIWARI, AGENT, SHRI AMBORKAR, MINES MANAGE**
Official with
Designation
- (iv) Date of Inspection : 05/10/2018
- (v) Prev.inspection date : 21/09/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **MANIKGARH**
- (b) **Registration NO.** : **IBM/4952/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : MAHARASHTRA
- District : CHANDRAPUR
- Village : KUSUMBI
- Taluka : RAJURA
- Post office : GADCHANDUR
- Pin Code : 442908
- FAX No. : 07173-246867
- E-mail : mines@manikgarhcement.com
- Phone : 07173-245092, 245067, 2450
- (f) Police Station :
- (g) First opening date : 05/03/1986
- (h) Weekly day of rest : SUN
2. Address for : P.O. GADCHANDUR
correspondance : DISTT. CHANDRAPUR
3. (a) Lease Number : MSH0002
- (b) Lease area : 302.58
- (c) Period of lease : 50
- (d) Date of Expiry : 16/08/2031
4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : M/S CENTURY TEXTILES & INDUSTRIES LTD.
 Century Bhawan, Dr. Annie
 Besant Road, Mumbai (MS)
 GREATER BOMBAY MAHARASHTRA
 Phone:022-- 4300351
 FAX :022-4309491

Owner : SHRI B.L.JAIN (NOMINATED OWNER)
 GREATER BOMBAY
 MAHARASHTRA
 Phone:
 FAX :

Agent : R.K.UDGE
 CHANDRAPUR MAHARASHTRA
 Phone:
 FAX : 07173 - 246867

Mining Engineer

Name : R.S.AMBHORKAR, Full Time
 Qualification : BE (MINING)
 Appointment/ : 03/01/1996
 Termination date

Geologist

Name : Shri G.M.Bohra, Full Time
 Qualification : , M.Tech., M.Sc. Geology
 Appointment/ : 15/10/1990
 Termination date

Manager

Name : Shri S K TIWARI
 Qualification : Dip. in Mining, First Class Manager Cert
 Appointment/ : 08/11/2010
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 22 MCR1960	26/05/2000
		Modif.of approved Mining Plan	21/11/2002
		Mining Scheme rule 12 MCDR1988	05/05/2006
		Modif.approved Mining Scheme	02/02/2007
		Renewal under rule 24 MCR1960	07/02/2007
		Modif.approved Mining Scheme	23/09/2008
		Modif.approved Mining Scheme	21/07/2011
		MP modif under MCR 1960	07/06/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	Total 28 Numbers of bore holes drilled during the period i.e., 2011-12 to 2015-16 (previous Scheme of Mining). The drilling was carried out using double tube core barrel with NX size diamond bit. The diameter of core was 56 mm. The total drilling was 2282.60mtrs. Potentially Mineralized area is completely explored under G-1 category of UNFC.
1b	Exploration over lease area for geological axis 1 or 2	G-1	G-1	264 ha out of 302.58 ha lease area is proved to be under G-1 axis of UNFC. Rest of the area is non-mineralized.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil as no exploration was carried out.	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	
1e	Balance reserve as on 01/04/20		As on 01.04.2018: 111- 88775770 T 211- 52050000 T Total: 140825770 T	

1f	General remarks of inspecting officers on geology, exploration etc	Two types of limestone have been deciphered in the area based on chemical analysis viz. high silica limestone and cement grade limestone. The siliceous limestone is exposed in the Northern flings of the area. It is light gray to faintly bluish in colour, hard compact rock with distinctive sub-conchoidal fracture. The cement grade limestone is extremely fine grained, homogenous medium to hard rock showing variety of colours from light gray to dark gray. The limestone strike in general is NW-SE.	Exploration has been done in the complete potentially mineralized area through total 177 boreholes done in the area till date with total meterage of 11657.42 m upto 253 mRL starting from 352 mRL.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	For 2017-18: A Block: 312-322 mRL & 303-312 mRL (Limestone) B & C Blocks: 303-312 MRL, 312-322 mRL, 322-332 mRL (Limestone), 303-293 mRL (Limestone and Waste), 290-283 mRL, 290-299 mRL (Limestone) E Block: 303-312 mRL, 312-322 mRL (Limestone) F Block: 303-312 mRL, 312-322 mRL, 322-332 mRL, 332-342 mRL (Limestone)	Actual development is in line with the proposals but lagging due to lower production as mainly Limestone is occurring and proposed for development of benches/pits.	

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes	Yes	8 benches in ore with average height of 9 m, 6 benches in overburden with average height of 6.5 m. Top soil is occurring only in Block C which is in form of Black cotton soil. Presently 19000 cuM Top soil is available approximately which is proposed for plantation purpose upto 2020-21. No top soil excavation is proposed in 2016-17 to 2020-21 period.
2c	Stripping ratio or ore to OB ratio	Negligible as maximum quantum of Limestone is available in the area from outcrop to bottom.	Negligible (against 5550000 T of ore, 56000 cuM of Overburden is required to be removed).	
2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	2017-18: OB: 56000 cum Waste: 71429 cum	2017-18: OB: 92521 cum Waste: 117143 cum	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Limestone quality varies in benches of block A, B, C, E & F and the same is judiciously blended on day to day basis by operating multiple benches simultaneously. Further, for smooth operations and exploitation from lower benches below 303 MRL in E & F block, it is proposed re-handling of over burden (112000 M3) dumped in E & F block bifurcation out of which approximately 209664 T material has been handled. A & B blocks are also proposed for merger for smooth working.	Development is as per the deposit occurring in the area and is as per the proposals made in the approved document.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit each in A, B , C ,E and F blocks	As per the proposals	
3b	Quantity of ROM mineral production proposed	2017-18: 55,50,000 T	2017-18: 3977766.43 T	Production has been on lower side due to less requirements from the cement plant for which the mine is captive. It facilitated for development of the deposit and re-handling work as per the proposals.
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Complete ROM is graded/blended and dispatched to the cement plant.
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	Not applicable	Nil	

3f	Quantity of sub grade mineral generation.	Nil	Nil	
3g	Grade of sub grade mineral generation	Not applicable	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanical crushing is being done for sizing. No seggregation or sorting is required.	As per the proposals.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposals	Nil	Regular sampling and analysis through X-Ray Analyser available at the Mine is being done for blast holes. Further, mineral rejects generated are utilized by blending with ROM.
3j	Provision of drilling and blasting in mineral benches	Yes.	Yes. Large diameter blast holes are drilled by 150 mm track mounted DTH Drills (3 Nos.). The drills are provided with in-built water injection system ensuring 100% wet drilling. Slurry explosives and ANFO is being used for blasting purpose. Four explosives magazines of 4.5 T capacity each are provided for storage of maximum 18 T explosives and 44000 Nos detonators.	

3k	Provision of mining machineries in mineral benches	Yes	<p>Mining operations are fully mechanized and Drilling & Blasting, Excavation & Loading, Transportation of ROM etc. each operation is being done by HEMM as below:-</p> <p>SHOVEL (HYDRAULIC): 3.2 cum (2 Nos.), 4.0 cum (1 No.)</p> <p>DUMPER: 35 T (10 Nos.)</p> <p>DOZER: 415 HP (2 Nos.)</p> <p>MOTOR GRADER: 119 HP (1 No.)</p> <p>ROCK DRILL (NONELEC.): 150 mm dia (3 Nos.)</p>	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Average height: 9.0 m in Ore and 6.5 m in Waste	Height of Benches maintained is suitable for method of mining and extent of mechanization.	
3m	Total area covered under excavation/pits	2017-18: 148.77 ha area under Mining	2017-18: 144.313 ha area under Mining	
3n	Ore to OB ratio for the pit/mine during the year.	Negligible	Negligible	
3o	Total area put in use under different heads at the end of year		<p>Area under (As on 01.04.2018):</p> <p>Mining: 144.313 ha</p> <p>Mineral Storage: 3.16 ha</p> <p>Roads: 2.63 ha</p> <p>Infrastructure: 4.54 ha</p> <p>OB/ Waste Dumps: 43.44 ha</p> <p>Storage of top Soil: 1.42 ha</p> <p>Others: 1.50 ha</p> <p>Total: 201.003 ha</p> <p>Work done under PMCP during the year: 0.36 ha</p>	<p>Out of the area put to use as given in the actual work:-</p> <p>Excavated Area Reclaimed: 0.87 ha</p> <p>Waste Dump Area reclaimed: 36.04 ha</p> <p>Total Area Reclaimed/rehabilitated: 36.91 ha</p>
3p	Production of ROM mineral during the last five year period as applicable	<p>2012-13:- 30.05 Lakh Ton</p> <p>2013-14:- 55.50 Lakh Ton</p> <p>2014-15:- 55.50 Lakh Ton</p> <p>2015-16:- 55.50 Lakh Ton</p> <p>2016-17:- 55.50 Lakh Ton</p>	<p>2012-13:- 18.24 Lakh Ton</p> <p>2013-14:- 18.61 Lakh Ton</p> <p>2014-15:- 28.97 Lakh Ton</p> <p>2015-16:- 39.56 Lakh Ton</p> <p>2016-17:- 32.36 Lakh Ton</p>	Being a captive mine to the cement plant, production is based upon the plant requirements.

3q General remarks
of inspecting
officers on
method of mining
etc.

Method of mining
is fully
mechanized which
is suitable for
the occurrence of
the mineral,
extent of
mechanization and
capital
expenditure.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Yes	Yes	

- 4b Location of topsoil, OB and mineral reject dumps
 Top Soil Dump: All dumps as per the location. As per the proposals, the OB/ Waste dump located between E & F mentioned at item 8 above is being shifted alongside the Amal nala for embankment and at other active dump locations.
 N2172400 to
 N2172800 &
 E306000 to
 E306200
 Overburden/
 Waste Dumps: 8
 Dumps at-
 N2172900 to
 N2173600 &
 E306200 to
 E306600,
 N2172200 to
 N2173400 &
 E305500 to
 E305800,
 N2173300 to
 N2174000 &
 E305000 to
 305500,
 N2173800 to
 N2174000 &
 E305400 to
 E305900,
 N2173800 to
 N2174000 &
 E306400 to
 E306600,
 N2173600 to
 N2173800 &
 E306800 to
 E307000,
 N2173400 to
 N2173800 &
 E307000 to
 E307600,
 N2173000 to
 N2173300 &
 E306500 to
 E307000 (bet.E
 & F)
 MR Dump:
 N2172400 to
 N2172600 &
 E306200 to
 E306500
- 4c Number of dumps within lease area and outside of lease area
 Top Soil: 1 Dump
 Mineral rejects: 1 Dump
 OB/ Waste: 8 Dumps
 As per the proposals
- 4d Location of dumps w.r.t. ultimate pit limit (Rule 16)
 Dumps are both within and outside pit limits as most of the area is mineralized.
 As per the proposals

4e	Number of active and alive dumps.	Two Dumps for waste/OB One Dump for top Soil and One dump for MR	As per the proposals	
4f	Number of dead dumps.	6 OB/ Waste dumps are dead	As above	
4g	Number of dumps established.	5 OB/ Waste dumps are established, 1 is under re-handling	As per the proposals.	
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes	All along the dumps the retaining wall of basalt has been made while at the toe of C hill dump a masonry wall has been made.
4i	Length of Retaining wall or garland drain all along dumps	Approximately 2000 m	As per the proposals.	
4j	Number of settling ponds	2 nos.	2 Nos.	
4k	Specific comments of inspecting officer on waste dump management			Waste dump management has been done at the level best and most of dumps have been stabilized through plantation. Dumps between Blocks A & B and E & F are being rehandled for smooth working. Apart from these dumps, bunds along the Amal Nala have been made and are being re-inforced.

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.	Mineral is lying below the pit bottom, therefore, no proposals for backfilling.	Nil	
5b	Area under backfilling of mined out area	Nil	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Utilization of preserved top soil and no further excavation of top soil was proposed during the year.	A separate dump of top soil (black Cotton Soil) dump is made and approximate 19042 cum of top soil has been stored which is proposed to be phase-wise utilized for plantation on the dumps.	
5d	Total area fully reclaimed and rehabilitated	Reclamation and rehabilitation of OB/Waste dump was proposed.	1.76 ha of OB/ waste dumps alongwith 0.36 ha of ultimate benches have been reclaimed and rehabilitated through plantation.	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Reclamation and rehabilitation of OB/Waste dumps and ultimate benches is being carried out progressively. Backfilling can not be done due to shortage of waste and also due to non-exhaustion of mineral.

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).	Yes	Yes	
6b	Area available for rehabilitation (ha) .	0.51 ha of ultimate benches	0.36 ha beches plantation has been done.	

6c	afforestation done (ha).	Waste dumps area and Ultimate Benches	Total 36.91 ha area has been afforested.	
6d	No. of saplings planted during the year	1020 saplings were proposed to be planted	1500 saplings have been planted.	
6e	Cumulative no .of plants	Not available as the mine is quite old and plantation have been carried out even without proposals for the same	More than 1 Lakh saplings/trees	Till 2017-18, 140359 plants have been planted inside the lease area, while 27995 plants outside the lease area. In this current year 4500 saplings have been planted .
6f	Any other method of rehabilitation	No such proposals	Nil	
6g	Cost incurred on watch and care during the year	Approximately Rs 10 Lakhs	Rs 25 Lakhs	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No such proposals	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No such proposals	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No such proposals	Nil	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No such proposals	Nil	It is proposed to make water reservoir at conceptual stage.

6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No such proposals	Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No such proposals	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No such proposals	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No such proposals	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Yes	Yes, it is being done as per MoEF guidelines and real-time data are being sent to MoEF.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Under PMCP compliance, progressive reclamation and rehabilitation of waste dumps and ultimate benches are being done. Apart from this, environmental monitoring is being done as per the proposals and as per the MoEF guidelines.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM Mineral is crushed to the required size and then graded mineral is being dispatched.	As per the proposals.	

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Sorting not required as complete ROM is being dispatched after mechanical crushing.	As per the proposals.	
7c	Different grade of mineral sorted out at mines.	Cement Grade Limestone	Cement Grade Limestone	
7d	Any beneficiation process at mines .	Mechanical crushing.	Mechanical crushing.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Complete ROM is being dispatched to the cement plant that contains mineral rejects also (simultaneous blending). Number of faces are being worked simultaneously to get optimum quality requirements. Hence, mineral conservational aspect is satisfactorily dealt with at mine level.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Yes	Yes. Separate removal and stacking of top soil has been done but in the present plan period, no further excavation of top soil was proposed or actually done. Only utilization of existing top soil stacked was proposed for reclamation activities which has been carried out as per the proposals.	

8b	Concurrent use or storage of topsoil	Both.	Concurrent use has been done at earlier stages based upon requirements. In the present proposal period, no excavation of top soil was proposed or carried out and utilization of stored top soil was proposed only which has been done as per the proposals.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes	Yes	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposals	As the mineral has not exhausted from the pits, no restoration of land was either proposed or carried out.	As generated waste shall be negligible, mined out pits are proposed to be converted into water reservoir at conceptual stage.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Yes	Phased restoration of waste dumps and ultimate benches was proposed and is being carried out as per the proposals.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Yes	Yes	
8g	Survival rate	Not available	89%	
8h	Water sprinkling on roads to control airborne dust	Yes	Yes	

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Aesthetic beauty of the area is good. Dense plantation has been done by the lessee and almost all dead dumps have been stabilized. Plantation on ultimate benches is also being carried out now. The area in general is clean and Sustainable Development targets are being met.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		Annual Returns submitted online upto 2017-18 Monthly returns submitted online upto Nov'18	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Shri S.M.SARPATWAR Geologist: Shri A.SAXENA Manager: Shri R.S.AMBHORKAR	Correct and complete information furnished.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under: Mining: 144.313 ha Infrastructure : 8.67 ha Other (Top soil and sub-grade Storage): 4.58 ha Reclaimed and Rehabilitated: 36.91 ha Work done under PMCP during the year: 0.36 ha	Complete and correct information furnished as per the format.	

9d	Scrutiny of Annual return on afforestation	Plantation within lease area: 4500 saplings, Survival Rate: 89% Plantation outside lease area: 180 saplings, Survival Rate: 94%	Complete and correct information furnished.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Correct information furnished as complete ROM is being dispatched.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening and Closing Stocks: Nil, Production: 3977766.430 T Graded Ore: Opening and Closing Stocks: Nil, Production and Dispatch: 3977766.430 T (Cement Grade Limestone)	Complete and Correct information furnished.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale Value: Nil (Captive Consumption) Ex. Mine Price (Rs per T): 192.60 Cost of Production (Rs per T): 192.60	Complete and Correct information furnished.
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets (in Rs) 37659330. Apart from this details of capital structure for Land, building, machineries etc. given alongwith their depreciated values.	Complete information furnished.

9k	Scrutiny of Annual return on mining machineries	Information furnished under Part V section 5.	Complete and correct information furnished as per the extent of mechanization.
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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

Date :

(ASHISH MISHRA)

Indian Bureau of Mines