

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

MCDR INSPECTION REPORT

Nagpur regional office

Mine file No : MAH/YTL/LST- 43 /NGP

Mine code : 38MSH26013

- (i) Name of the Inspecting : **M017**) **ASHISH MISHRA**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Sandeep Singh, Shri Chandresh Bohra
Official with
Designation
- (iv) Date of Inspection : 11/10/2017
- (v) Prev.inspection date : 21/08/2009

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **GOVARI**
- (b) **Registration NO.** : **IBM/256/2011**
- (c) **Category** : A Mechanised
- (d) **Type of Working** : Opencast
- (e) **Postal address**
- State : MAHARASHTRA
- District : YEOTMAL
- Village : GOVARI
- Taluka : WANI
- Post office : SINDOLA MINES 445 307
- Pin Code : 445307
- FAX No. : 07239 - 236272
- E-mail : sindola_cd@accement.com
- Phone : 07239 - 236272
- (f) **Police Station** :
- (g) **First opening date** : 28/01/1988
- (h) **Weekly day of rest** : WED
2. **Address for** : P.O. CEMENT NAGAR
correspondance DISTT. - CHANDRAPUR
442 502
3. (a) **Lease Number** : MSH0017
- (b) **Lease area** : 558.9
- (c) **Period of lease** :
- (d) **Date of Expiry** : 31/03/2030
4. **Mineral worked** : LIMESTONE Main

5. Name and Address of the

Lessee : M/S CHANDA CEMENT WORKS (ACC)
 CEMENT NAGAR, DISTT.
 CHANDRAPUR (MS) - 442 502
 CHANDRAPUR MAHARASHTRA
 Phone:07172 - 75026
 FAX :07172 - 75165

Owner : Shri M.L.Narula, Director.
 M/s Associated Cement Co
 GREATER BOMBAY MAHARASHTRA
 Phone:
 FAX :

Agent : SHRI CHANDER SHEKHAR
 YEOTMAL MAHARASHTRA
 Phone:
 FAX :

Mining Engineer

Name : SHRI M.K. MEHTA, Full Time
 Qualification : B.E. MINING
 Appointment/ : 16/08/2002
 Termination date

Mining Engineer

Name : SHRI SANDEEP JAIN, Full Time
 Qualification : B.E. MINING
 Appointment/ : 22/11/2003
 Termination date

Geologist

Name : SHRI J. SUSEENDHIRAN, Full Time
 Qualification : MSc Geology
 Appointment/ : 15/10/2002
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	03/10/2001
Plan/Scheme of Mining		Modif.approved Mining Scheme	02/12/2003
		Modif.approved Mining Scheme	21/10/2005
		Modif.of approved Mining Plan	21/10/2005
		FMCP under 23C(1)	29/10/2005
		Mining Scheme rule 12 MCDR1988	15/12/2005
		Modif.approved Mining Scheme	06/03/2009
		Mining Scheme rule 12 MCDR1988	11/11/2011
		MP modif under MCR 1960	19/08/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	Mineralized part of the lease area has already been completely explored by 322 boreholes over a grid of 100 m X 100 m. Therefore, no further proposals was made for exploration after 2008.
1b	Exploration over lease area for geological axis 1 or 2	G1 level reserves already established in the lease area.	G1 level reserves already established in the lease area.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not applicable as no proposals.	Not applicable.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	
1e	Balance reserve as on 01/04/20	Balance reserves as on 01/04/2017 are as given in the actual work:	111-30835923 T 211-14960000 T* Total: 45795923 T i.e. around 45.79 MT of total resources *the resources are blocked due to non-availability of surface rights which shall be converted into mine-able reserves upon lessee having rights over the land.	Area under G-1: 167 ha G-2: Not Applicable G-3: Not Applicable G-4: Not Applicable Non-mineralized: 391.9 ha Total: 558.90 ha

1f	General remarks of inspecting officers on geology, exploration etc	Govari limestone band is in U shape. Strike of the bands change from NW-SE in the northern part to N-S in the middle to E-W in the southern part of the lease. 4 limestone bands are present in the area. From top to bottom these bands are named as Band I to Band IV. From top these limestone bands are separated by Dolomitic limestone, Calcareous shale and Magnesian limestone respectively. Band IV is underlain by Magnesian shale.	Since the grant of the lease exploration work was done in Govari on several stages. Total of 322 boreholes with a cumulative meterage of 10644.2 m were drilled. Therefore, based on complex geology, lessee has already explored the area for outlining the mineralized zone.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	The ML has been divided into 26 sectional lines drawn from East to West direction at 100 m interval (from North to South into SL-1 to SL-26). Development proposals location as per these sectional lines are: For 2016-17: SL-9 to SL-13 For 2017-18: SL-13 to SL-18	As per the proposals.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes	As per the proposals	
2c	Stripping ratio or ore to OB ratio	2016-17: 1:1.1 2017-18: 1:0.97	2016-17: 1:1.1 2017-18: 1:1.87	

2d	Quantity of topsoil generation in m3	2016-17: 44408 cuM 2017-18: 16096 cuM	As per the proposals	
2e	Quantity of overburden generation in m3	2016-17: 1188142 cuM 2017-18: 1066118 cuM	2016-17: 2250797 T (approx. 1125398.5 cuM) 2017-18: 2334840 T (approx. 1167420 cuM)	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development is as per the geology as the orebody is almost vertical (approximately 1:1 ore to OB ratio) and is as per the proposals made in the approved Mining Plan document.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One large pit	One pit developed	
3b	Quantity of ROM mineral production proposed	2016-17: 1111112 cuM (approx. 2.78 MT) 2017-18: 1114478 cuM (approx. 2.78 MT)	2016-17: 2.05 MT 2017-18: 2.688 MT	
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Approximately 5% of fines are being generated which are blended with ROM and dispatched.
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	Not Applicable	Not Applicable	Mineral rejects are size rejects and are fines generated while crushing of ROM. Tehse are blended and utilized.
3f	Quantity of sub grade mineral generation.	Nil	Nil	

3g	Grade of sub grade mineral generation	Not Applicable	Not Applicable	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized crushing	As per the proposals	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable	Not Applicable	
3j	Provision of drilling and blasting in mineral benches	Yes	Yes	There are 2 drill machines ROC-L8 with 115 mm diameter having 380 HP used for drilling and hole depth is around 8.5 m for 8 m bench height. Spacing X Burden is 5 m X 3 m. Explosive used for blasting is ANFO, Kelvex-600, Kelvex-extra and Powder gel boost (Class-2). Powder factor in Limestone is around 5.98. Secondary drilling is not being done and instead Rock breaker is being used.
3k	Provision of mining machineries in mineral benches	Yes	Mine is Category A Mechanized mine and accordingly machineries are being used for Drilling and Blasting, Loading, Transportation and Crushing.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height proposed: 8 m	Bench height is as per the proposals. Also bench height has been selected as per the mechanization and is suitable for method of working.	
3m	Total area covered under excavation/pits	74 ha	As per the proposals	

3n	Ore to OB ratio for the pit/mine during the year.	1:0.97	1:1.1	
3o	Total area put in use under different heads at the end of year		Area under: Mining: 74 ha Top soil storage: 1.73 ha Waste Dumping: 36.07 ha Infrastructure: 1.24 ha Roads: 2.52 ha Garland Drain and retaining Wall: 3.34 ha Green belt: 8.0 ha Total: 126.9 ha	
3p	Production of ROM mineral during the last five year period as applicable	2017-18: 2.78 MT 2016-17: 2.78 MT 2015-16: 2.51 MT 2014-15: 2.51 MT 2013-14: 2.51 MT	2017-18: 2.688 MT 2016-17: 2.05 MT 2015-16: 2.43 MT 2014-15: 2.24 MT 2013-14: 1.89 MT	
3q	General remarks of inspecting officers on method of mining etc.			Mine is captive to the Chanda Cement Plant held by M/s ACC Ltd. which has capacity of 2.31 MT of Clinker and corresponding Limestone requirement is 3.41 MT which is being fed by Govari and Sindola Mines held by M/s ACC Ltd. hence to meet the plant requirement and to meet the capital expenditure, method of mining selected which is Category A mechanised is suitable for the mine.

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)	Yes	As per the proposals.	
4b	Location of topsoil, OB and mineral reject dumps	Top Soil stack: SL-21 to SL-23 alongwith concurrent utilization. OB and Waste Dumps: 4 dumps at SL-8 to SL-17, SL-23 to SL-24 & SL-21 to SL-26, SL-21 to SL-25 Mineral rejects dumps: Nil	As per the proposals	
4c	Number of dumps within lease area and outside of lease area	All dumps within lease area. 1 top soil and 4 Waste Dumps.	As per the proposals.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	All dumps are located outside pit limits	All dumps are outside pit limits.	
4e	Number of active and alive dumps.	1 top Soil and 4 Waste Dumps total 5, all are active and alive dumps except 1 Waste dump at SL-21 to SL-25.	1 top Soil and 4 Waste Dumps total 5, all are active and alive dumps except 1 Waste dump at SL-21 to SL-25.	
4f	Number of dead dumps.	One Waste Dump	One	The dump is located at SL-21 to SL-25
4g	Number of dumps established.	One Waste Dump	One	It has been stabilized by afforestation.
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes	
4i	Length of Retaining wall or garland drain all along dumps	All along the waste dumps covering an area of 3.34 ha	All along the waste dumps covering an area of 3.34 ha	Approximate length is 3500 m.
4j	Number of settling ponds	Nil	Nil	

4k	Specific comments of inspecting officer on waste dump management	Waste dump management aspect has been covered as per the proposals. The dumps are outside the pit limits and toe of the dumps are constructed with garland drains and retaining walls to avoid land degradation due to wash off. One dump has been stabilized through plantation.
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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.	Backfilling after full extraction of the are is proposed.	As per the proposals, upon full extraction, the area is being backfilled with the available waste.	
5b	Area under backfilling of mined out area	2016-17: 2.03 ha between SL-16 to SL-17 2017-18: 2.1 ha between SL-15 to SL-17	2016-17: Nil 2017-18: 1.5 ha between SL-16 to SL-17	There is a shortfall as mineral is left due to lower production. hence backfilling has not been done till full extraction.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use as well as storage for future usage	As per the proposals	Top soil utilized for 1.5 ha backfilled area. Remaining generated top soil stacked for future usage.
5d	Total area fully reclaimed and rehabilitated	26.13 ha	27.63 ha as per the details below: Backfilled area reclaimed and rehabilitated: 1.5 ha Top soil stack: 1.13 ha Waste dump area: 17 ha Green belt: 8.0 ha	

5e	General remarks of inspecting officers on backfilling and reclamation etc.	Backfilling can be done only after full extraction of minerals and production has been lower than the proposals, therefore, the actual backfilling is lagging behind. Overall efforts are satisfactory in restoring the area.
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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).	Yes	Yes	
6b	Area available for rehabilitation (ha) .	1.5 ha	As per the proposals.	
6c	afforestation done (ha).	2.5 ha	2.5 ha	
6d	No. of saplings planted during the year	30000	30000	
6e	Cumulative no .of plants	95000	95000	
6f	Any other method of rehabilitation	Geotextile usage for stabilization of Waste dump	Geotextile was used for stabilization of 3.0 ha area under waste dump.	
6g	Cost incurred on watch and care during the year	1.77 Crore	96 Lakhs	Figures are including expenditure over SDF implementations.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	2016-17: 2.03 ha between SL-16 to SL-17 2017-18: 2.1 ha between SL-15 to SL-17	2016-17: Nil 2017-18: 1.5 ha between SL-16 to SL-17	

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	2016-17: 2.03 ha between SL-16 to SL-17 2017-18: 2.1 ha between SL-15 to SL-17	2016-17: Nil 2017-18: 1.5 ha between SL-16 to SL-17	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Nil	1.5 ha	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Nil	Nil	
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	0.5 ha	0.5 ha	
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	0.5 ha	0.5 ha	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	Nil	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Yes	Yes	Real-time monitoring is being done and data is being sent to MoEFCC.

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	PMCP operations are well managed though the operations are a bit lagging from the proposals. Compliance on environment monitoring in core and buffer zone as well as compliance on submission of annual report is being done.
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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 dispatch	As per the proposals	ROM is being crushed, graded and then being dispatched to the cement plant.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines.	Cement Grade Limestone	Cement Grade Limestone	
7d	Any beneficiation process at mines .	Mechanical size reduction i.e. crushing unit	ROM is being crushed to a size of -75 mm.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral conservation aspect is fully covered as complete ROM excavated is being fed to the Cement Plant. 5% of fines are generated while crushing but it is blended with the ROM and utilized.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Yes	Yes	
8b	Concurrent use or storage of topsoil	Concurrent usage and remaining soil generated is being stacked for future usage.	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	Yes, backfilling of mined out and exhausted area is proposed.	As per the proposals.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Pits after exhaustion are proposed for backfilling and plantation and waste dumps are proposed for stabilization.	1.5 ha area of mined out pit has been backfilled and plantation carried out over the area. Further, 17 ha of dump area has been stabilized through plantation out of which 3 ha was through Geotextiles.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Yes	Yes	
8g	Survival rate		80%	
8h	Water sprinkling on roads to control airborne dust	Yes	Yes	One TATA truck with tanker is deployed in the mine for water sprinkling.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Apart from normal degradation due to mining activities, overall aesthetic beauty of the area is good.

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		Up to date.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Shri Kanchan Kumar Geologist: Shri Naveen Kumar Pala Manager: Shri Sandeep Kumar Singh	Correct information furnished	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.		Correct information has been furnished	
9d	Scrutiny of Annual return on afforestation	2016-17: 5000 trees planted within lease area with survival of 80% Outside lease area: 1000 trees planted with 60% survival	Correct information furnished	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil information furnished	Correct	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	2016-17 ROM: Opening and Closing stocks- Zero, Production- 2054077 T Graded Ore: Opening and Closing stocks- Zero, Production and Dispatches- 2054077 T (Cement Grade)	Correct information furnished	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex-mine price: 292.08 Rs/T Sale Value: Nil Cost of Production: 292.08 Rs/T	Correct information furnished	

9h	Scrutiny of Annual return on fixed assets	Yes	Correct information furnished
9k	Scrutiny of Annual return on mining machineries	Information given on mining machinery	Correct information furnished

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 :
(ASHISH MISHRA)

Indian Bureau of Mines