

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT 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 : **K02**) **Kalmata.M.K.**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Shri Suresh Madhukar Wandhare, General Manager.
Official with
Designation
- (iv) Date of Inspection : 19/03/2020
- (v) Prev.inspection date : 04/09/2019

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 : 50
- (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 : Neeraj Akhouri
 MD & CEO , ACC Ltd ACC Ltd,
 Cement House 121,MK Road
 Mumbai MUMBAI (SUBURBAN)
 MAHARASHTRA
 Phone: 02233024321
 FAX : 02266317407

Agent : K. Vamsidhar Reddy
 Director Plant, Chanda
 Cement Works CHANDRAPUR
 MAHARASHTRA
 Phone: 07172285026
 FAX : 07172285165

Mining Engineer

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

Mining Engineer

Name : Kanchan Kumar,Full Time
 Qualification : B.E.Mining
 Appointment/ : 22/11/2003
 Termination date

Geologist

Name : Gopinath Rengasamy,Full Time
 Qualification : Msc. Geology
 Appointment/ : 15/10/2002
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	03/10/2001
		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	Exploration has been not proposed in the present plan period.	No exploration has been carried out in the present plan period.	Lessee has already explored, entire mineralized area under G-1 level of exploration.
1b	Exploration over lease area for geological axis 1 or 2	Not proposed.	Nil	Total lease area is 558.90 Ha, out of which 167 Ha is mineralized zone. and entire mineralized area is explored under G-1 level, approximately in 100M x 100M, grid interval.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not proposed.	Nil in the present plan period.	No exploration was carried out in the present plan period. However in previous plan periods lessee has explored entire mineralised area under G-1 level, by drilling 322 bore holes and expenditure incurred is approximately Two crores.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Entire mineralized area is explored under G-1, level.

1e	Balance reserve as on 01/04/20	Reserves/resources (As on Nov-2015) as per approved document. Proved Mineral Reserves (111) - 32.89 Million Tonnes, Feasibility M Resources (211) - 14.96 Million Tonnes, Total (Reserves+Resources) -47.85 Million Tonnes	Reserves/resources, as on 01.04.2019. Proved Mineral Reserves (111) - 24.39 Million Tonnes, Feasibility M Resources (211) - 14.96 Million Tonnes, Total (Reserves+Resources) -39.35 Million Tonnes	Depleted 8.5 Million tonnes of ROM produced, between 2015-16(Nov 2015 to March 2016) to 2018-19.
1f	General remarks of inspecting officers on geology, exploration etc		Limestone deposit of Govari area belongs to Penganga series, which is equivalent to Cuddapah system. Total four ore bands are present in the lease area and each band is separated by shale formation. Total mineralised area is 167 Ha and entire mineralised area is explored under G-1 level by drilling 322 boreholes.	

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	In the year 2018-19, development was proposed between sections ML-9 to ML-15 & MLH13 to to ML-15 and Production was proposed between the sections ML-8 to ML-13 , ML-9 to ML-18 & ML-14 to ML-15.	The development and production is carried out as per the proposal.	Lessee has proposed development and production at different locations to maintain the quality as per the requirement of cement plant and for conservation of mineral.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	yes, proposed.	Separate benches were made in ore ona OB.	Topsoil is removed completely by scrapping using Dozers. Bench height is maintained at 8.00 M in ore and OB.
2c	Stripping ratio or ore to OB ratio	1:0.93	1:1.07	
2d	Quantity of topsoil generation in m3	14406 CUM.	13500 CUM	
2e	Quantity of overburden generation in m3	1023686 CUM	1012560 CUM	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		Development has been carried out has per the proposals. Working has been carried out at different locations having different gardes to maintain the quality. Lessee is dispatching ROM by blending low grade ore with hight grade as per the requirement of the plant.	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	One, in the present plan period, lateral and depthwise extension of the existing pit is proposed.	Working has been carried out as per the proposal.	Single pit measuring, 1380m (Length) x 840m(width) is existing within the lease area. Total area covered by existing pit is 115Ha.
3b	Quantity of ROM mineral production proposed	2784460 tonnes in the year 2018-19.	2705567 tonnes.	Production, achieved is 97.16%, in the year 2018-19.
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Negligible quantity of lowgrade /mineral reject generated, is blended with ROM and dispatched to plant.
3d	Quantity of mineral reject generation	Not proposed.	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	Not applicable.	Not applicable.	
3f	Quantity of sub grade mineral generation.	Not proposed.	Nil	
3g	Grade of sub grade mineral generation	Not applicable.	Not applicable.	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised crushing.	Feeding ROM to crusher and crushing to the size of minus 75 mm size.	Lessee is doing only mechanical size reduction.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Nil	Nil	

3j	Provision of drilling and blasting in mineral benches	yes, ROC-L8 drill of 115mm is proposed for drilling and ANFO, kelvex 600-extra, power gel boost is proposed for explosive.	Drilling and blasting is carried out as per the proposal.	Lessee is using, two ROC-L8 drill of 115mm drilling machines, for drilling. Maintaining drill pattern, 5 to 6 m (spacing) x 3m (burden) and depth 8.5mtr. Using rock breakers for breaking oversized boulders.
3k	Provision of mining machineries in mineral benches	Yes, proposed excavators of different capacity ranging, 4.0 CUM to 7.2 CUM, Dumper of 60T capacity, Drilling machines and rock breaker.	One excavator having 6.5CUM and Two excavators of 4.0CUM, Dumpers of 60T capacity, Drilling machine and water tanker are working on the day of inspection.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	8 to 10 mtr bench height is proposed.	Bench height is maintained as per the proposal.	Bench height has been selected as per the mechanization and is suitable for method of working.
3m	Total area covered under excavation/pits	116.45 Ha, pit size is proposed at the end of present plan period up to 31.03.2021.	115.40 Ha, as on 01.04.2019.	Presently working is going on in the broken up area only.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.93	1:1.07	
3o	Total area put in use under different heads at the end of year	Area under Mining-116.45 Ha, Waste dump- 41.07Ha, Infrastructure - 3.76Ha, Other Purpose ((Garland drain, green belt, top soil stock))- 19.07 Ha.	Lease area utilisation as on 01.04.2019 is as follows. Area under Mining- 115.40Ha, Waste dump- 41.07Ha, Infrastructure- 3.76Ha, Other Purpose ((Garland drain, green belt, top soil stock))- 9.95Ha.	

3p	Production of ROM mineral during the last five year period as applicable	2018-19 2784460 tonnes 2017-18 2786195 tonnes 2016-17 2777780 Tonnes 2015-16 2514300 tonnes 2014-15 2514300 tonnes	2018-19 2705567 tonnes 2017-18 2688727 tonnes 2016-17 2054077 tonnes 2015-16 2438071 tonnes 2014-15 2061430 tonnes (As per monthly returns)
3q	General remarks of inspecting officers on method of mining etc.	The mine is being worked by mechanised opencast method and using combination of Heavy Earth Moving Machineries and 60T dumpers for development and production. Proper height and width is maintained in bench formation. Only one pit existing in the lease area covering an area of 115Ha. Working is being carried out at different locations in the same pit to maintain the quality as per the requirement of the plant.	

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Yes, separate dumping was proposed for topsoil and OB.	Topsoil and OB dumping was made as per the proposal.	No mineral reject was proposed in the present plan period.
4b	Location of topsoil, OB and mineral reject dumps	Top soil dump between sections, ML 21 to ML 24 (as per the production and development plan for the year 2018-19) and OB between the section ML 9 to ML 15 and MLH 13 to ML 15.	Top soil was dumping is made between section ML-21 to ML-23 and OB dump between section ML 13 to ML-15.	Dumping of Topsoil and waste is made as per the proposal.

4c	Number of dumps within lease area and outside of lease area	Four waste dump and one topsoil dump was proposed in the present plan period and all are within the lease area.	Four OB dumps and one Topsoil dump is existing within the lease area.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Out side the UPL.	All the dumps are located out side the Ultimate pit limit.	
4e	Number of active and alive dumps.	Four,three waste dumps and one topsoil dump.	Four dumps are active as per the proposal.	
4f	Number of dead dumps.	One waste dump is dead.	one dump which is located between the section ML-23 to Ml-25 is dead and afforested.	
4g	Number of dumps established.	One	One waste dump which is located between the section ML-23 to Ml-25 is stablized by afforestation.	
4h	Whether Retaining wall or garland drain all along dumps are there.	In the present plan period only garland drrains are proposed along the toe of the dump.	Garland drains are made as per the proposal.	In the presebt plan period proposal was not given for construction of retaining wall and no retaining walls are observed along the toe of the dump. Lessee has advised to constructed retaing wall along the toe of the waste dump by using waste rock available in the dump.
4i	Length of Retaining wall or garland drain all along dumps	Garland drain covering 3.34Ha.	Garland drains are made as per the proposal.	Lessee is regularly maintaining garland drains.
4j	Number of settling ponds	Not proposed.	Nil.	

4k	Specific comments of inspecting officer on waste dump management	Waste dumping was made as per the proposal. Total five dumps are existing within the lease area. Four waste dumps and one topsoil dump. Out of four waste dump, one is inactive and afforested. All the dumps are made in the non-mineralized zone and out of Ultimate Pit Limit. Garland drains are made along the toe of the dumps to avoid wash off. Lessee has advised to made retaining wall along the toe of the dumps by using waste boulders available in the dump.
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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 is proposed in the mined out area from which mineral is fully extracted.	As per the proposal mineral was fully extracted from the mined out area, which is backfilled in the year 2018-19.	
5b	Area under backfilling of mined out area	2.2 Ha in the year 2018-19.	2.6 Ha	Backfilling was made in the section ML-14 and ML-15. Total area backfilled in the present plan period is 4.1Ha (2016-17 to 2018-19). During inspection it is observed that backfilling was going on in the section 13.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Both concurrent use and storage was proposed.	As per the requirement, lessee is spreading topsoil on waste dump area for plantation purpose. Remaining quantity is dumped separately for future use.	

5d	Total area fully reclaimed and rehabilitated	2.2 Ha in the year 2018-19.	2.6 Ha is reclaimed in the year 2018-19.	Total area reclaimed in the present plan period i.e. from 2016-17 to 2018-19 is 4.1Ha. The backfilling is under progress and plantation on backfilled area will be taken after completion of the backfilling.
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Total area backfilled from 2016-17 to 2018-19 is 4.1Ha. Mineral is not fully extracted from the mined out pit, so actual backfilling is lagging. Since backfilling is under progress no plantation is made on the backfilled area.	

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).	Before 1st july of every year.	Lessee has submitted the yearly report on PMCP within time.	
6b	Area available for rehabilitation (ha) .	11.9 Ha area is proposed for backfilling in the present plan period i.e from 2016-17 to 2020-21.	Total area backfilled in the present plan period upto 31.03.2019 is 4.1 Ha.	Only backfilling was proposed in the present plan period and plantation in the backfilled area will be carried out in the next plan period after completion of the backfilling in the proposed area.
6c	afforestation done (ha).	1.5Ha in the year 2018-19.	1.2 Ha	Total area covered under plantation in the present plan period is approximately 3.5Ha.

6d	No. of saplings planted during the year	2310 in the year 2018-19	Planted 3000 saplings in the year 2018-19.	Total saplings planted in the present plan period, from 2016-17 to 2018-19 is 24000.
6e	Cumulative no .of plants	6930 saplings in the present plan period from 2016-17 to 2018-19.	Actual saplings planted in the present plan period from 2016-17 to 2018-19 is 24000.	Lessee has made the plantation more than the proposal.
6f	Any other method of rehabilitation	Backfilling and plantation on waste dump is proposed.	Backfilling and plantation on waste dump is carried out as per the proposal.	Total 4.1Ha is backfilled in the present plan period from 2016-17 to 2018-19.
6g	Cost incurred on watch and care during the year	7 lakh in the present plan period.	As per the proposal. Expenditure incurred on maintenance of Garland drain and plantation.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	2.2 Ha was proposed for backfilling in the year 2018-19.	2.6Ha is backfilled in the year 2018-19. (290m (L) x 90m(B))	Total area backfilled in the present plan period from 2016-17 to 2018-19 is 4.1Ha.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	2.2ha area was proposed for backfilling with the 808236 CUM of waste rock, in the year 2018-19.	2.6Ha area is backfilled with 796237 CUM of waste rock, in the year 2018-19.	Total area backfilled in the present plan period , from 2016-17 to 2018-19 is 4.1Ha with 1396237 CUM waste rock.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Not proposed.	Nil	Backfilling is unde progress, so no plantation was proposed in the present plan period on the backfilled area.
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	Proposed plantation in the waste land to develop green belt.	Plantation is made more than the proposal and about 24Ha waste land is covered under plantation.	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No specific proposal was made.	About 24 Ha waste land is rehabilitated by afforestation.	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	By afforestation.	Plantation is made as per the proposal.	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposed, regular monitoring of Air, Water, Noise and Vibration in the core and buffer zone.	Water-4 locations, Air-5 loactions, Ground Vibration-2 locations and Noise-7 locations.Apart from this, ground vibration and noise are being analysed during each blasting.	Lessee is regularly monitoring, Air, Water and Noise and results are within permissible limits.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Since the entire mineral was not extracted from the mined out pit, reclamation is not achieved as per the proposal. Plantation was made more than the proposal in the waste land to develop green belt. Lessee is regularly monitoring Air, Wate and Noise in the core and buffer zone and results are within permissible limits.	

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM mineral is crushed and dispatched to the cement plant after sizing.	As per the proposal.	
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	Cement Grade.	
7d	Any beneficiation process at mines .	Not proposed.	Nil	Lessee is doing only mechanical size reduction. The ROM limestone is crushed to a size of minus 75mm.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		The mine is captive to M/s chanda Cements works, and lessee is simultaneously working at different locations in the same pit to maintain the quality as per the requirement of the plant. The only beneficiation done is mechanical size reduction. The ROM limestone is crushed to a size of minus 75mm. Approximate quantity of fines generated during crushing is 5% and entire crushed material along with fines is transported to the cement plant.	

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Yes, proposed.	Topsoil is removed separately and utilized for plantation.	

8b	Concurrent use or storage of topsoil	Both concurrent use and storage is proposed.	Topsoil removed in the plan period used for plantation and remaining quantity is stored separately for future use.	13500 CUM topsoil was removed in the year 2018-19. Part of it was utilised for plantation purpose and remaining quantity stored separately for future use.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes, separate dumping is proposed for waste rock and ore.	As per the proposal.	No mineral reject is proposed in the present plan period. The mine is captive to M/s Chanda Cements works and lessee is consuming all the ROM production by suitable blending.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Yes, proposed for backfilling of mined out area.	2.6Ha area is backfilled with 796237 CUM of waste rock, in the year 2018-19.	Total area backfilled in the present plan period, from 2016-17 to 2018-19 is 4.1Ha with 1396237 CUM waste rock.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Proposed backfilling of the mined out area.	Backfilling is carried out as per the proposal.	No plantation was proposed on the backfilled area in the present plan period. Plantation will be taken in the next plan period after completion of backfilling.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Yes. The information has been furnished in the mining plan document.	Additionally, 24000 saplings are planted in the present plan period from 2016-17 to 2018-19.	Total plantation made in the lease area upto 2018-19 is approximately 128000.
8g	Survival rate		70 to 80%	Lessee is monitoring the plantation by regular watering.
8h	Water sprinkling on roads to control airborne dust	Yes proposed.	Regularly, spraying water on the mine Haul road, transportation road, dump area, etc.	Using one BEML water tanker of 28KL capacity for water spraying.

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	One big pit is made in the lease area, covering an area of 115.40 Ha, Benches are systematically made. Developed green belt in the waste land by huge number of plantation. Provided garland drains along the toe of dumps. Lessee has suggested to construct retaining walls along the toe of dumps by using waste rocks available in the dump to avoid any wash off.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	A monthly return shall be submitted before the tenth day of every month in respect of the preceding month and an annual return shall be submitted before the 1st day of July each year for the preceding financial year.	Lessee is regularly submitting monthly and annual returns.	Submitted monthly returns upto Feb-2020 and Annual returns for the year 2018-19.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer- Mr. Kanchan Kumar, Geologist- Mr. Gopinath Rengasamy.	The details of mining enginner and Geologist given in the annual returns are found correct.	Submitted notice of appointment for both.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under O/c working-115.40 Ha. reclaimed/rehabilitated-17 Ha, dumps-41 Ha, infrastructure -3.76 Ha, Others-9.95 Ha	Details of land use pattern found correct.	17 ha reclaimed/rehabilitated area includes, backfilled area and dump area which is afforested.
9d	Scrutiny of Annual return on afforestation	3000 saplings.	Information given on plantation is correct.	Survival rate is 80%.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil	complete ROM is crushed and despatched to cement plant.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening and Closing stocks- Zero, Production 2705567.00 T Graded Ore: Opening and Closing stocks- Zero, Production and Dispatches 2705567.00T (Cement Grade	Information furnished in the annual returns is found correct.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value: Nil (Captive Usage) Ex-Mine price and Production Cost- Rs 338.15/- per T	Average, Exmine price given in the monthly returns, submitted between April-2018 to March-2019, is Rs- 270.38/T and Exmine price given in the annual returns submitted for the year 2018-19 is, Rs- 338.15/T.	There is variation in the exmine price given in monthly returns, (submitted for the year 2018-19, from April-2018 to March-2019) and annual returns submitted for the year 2018-19. Violation is pointed out for the same by DCOM during his previous inspection. So no fresh violation is pointed out. Lessee is advised to correct the same.

9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets given in the annual returns is Rs- 3643337730.	Information found correct.
9k	Scrutiny of Annual return on mining machineries	Shovel 4 m3-3, shovel-7m3-1, dumper 60 T-5, Drill 115mm-2, Dozer-2, Backhoe4.5 m31Water Tnker 28Kl-1, Water Tanker 10 KL.	All the machines were available in mines.

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 :

(Kalmata.M.K.)

Indian Bureau of Mines