

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

Mining Plan Modification REPORT

Hyderabad regional office

Mine file No : AP/KSN/LST-15/HYD

Mine code : 38APR10015

- (i) Name of the Inspecting : **K007**) **SHAIVAL KARTIKEYA**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Shri P. Jani Reddy, Agent (Mines) and Shri P. S. Murt
Official with
Designation
- (iv) Date of Inspection : 07-SEP-21
- (v) Prev.inspection date : 18-SEP-18

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **JAYANTHIPURAM MS NO 71**
- (b) **Registration NO.** : **IBM/638/2011**
- (c) **Category** : **A Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **ANDHRA PRADESH**
- District : **KRISHNA**
- Village : **JAYANTHIPURAM**
- Taluka : **JAGGAYYAPET**
- Post office : **KUMARASWAMYRAJA NAGAR**
- Pin Code : **521457**
- FAX No. : **08654-222532**
- E-mail : **mcljpm@madrascements.co.in**
- Phone : **08654-224400 to 09**
- (f) **Police Station** : **CHILLAKALLU**
- (g) **First opening date** : **16-MAY-86**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **JAYANTIPURAM LIMESTONE MINE**
correspondance : **JAYANTIPURAM, CHILLAKALLU (M)**
KRISHNA DIST.
3. (a) **Lease Number** : **APR0125**
- (b) **Lease area** : **18.64**
- (c) **Period of lease** : **20**
- (d) **Date of Expiry** : **19-AUG-11**
4. **Mineral worked** : **LIMESTONE** **Main**

5. Name and Address of the

Lessee : THE RAMCO CEMENTS LTD
 KUMARASWAMY RAJANAGAR
 JAGGAYAPET MANDAL KRISHNA
 ANDHRA PRADESH
 Phone:08654-224400
 FAX :08654-222532

Owner : P.R.VENKATRAMA RAJA
 AURAS CORPORATE CENTRE, Vth
 FLOOR, Dr.RADHAKRISHNA
 ROAD,MYLAPORE, CHENNAI
 CHENNAI CITY TAMIL NADU
 Phone: 044-28478666
 FAX : 044-28478676

Agent : P JANI REDDY
 KUMARASWAMY .RAJA.NAGAR,
 JAYATNTHIPURAM KRISHNA
 DISTRICT KRISHNA ANDHRA
 PRADESH
 Phone: 08654-224400
 FAX : 08654-222532

Mining Engineer

Name : KHAJA ASHRAF ALI,Full Time
 Qualification : B.E(Mining)
 Appointment/ : 01-AUG-17
 Termination date

Geologist

Name : P.SURYANARAYANA MURTHY,Full Time
 Qualification : M.Sc
 Appointment/ : 11-JUN-92
 Termination date

Manager

Name : S.VENKATESWARA REDDY
 Qualification : FCC
 Appointment/ : 01-AUG-17
 Termination date

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	13-MAY-02
Plan/Scheme of Mining		Modif.of approved Mining Plan	18-JUN-03
		Renewal under rule 24 MCR1960	07-APR-06
		Modif.approved Mining Scheme	17-OCT-14
		MP modif under 17(3) MCR 2016	22-SEP-16
		MP review under 17(1) MCR 2016	08-JAN-20

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	F.Y. 2020-21: 05 nos. of DTH boreholes up to the 20 to 30 meters each.	F.Y. 2021-22: 05 nos. of DTH boreholes have been drilled with the cumulative depth of 60.0 meters.	-
1b	Exploration over lease area for geological axis 1 or 2	No proposal has been given in the approved document.	As per the last approved document the entire mining lease area has been explored under G1 level.	-
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not mentioned in the approved document.	M/s The Ramco Cements Limited. Expenditure: Rs. 54295/-	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal has been given in the approved document.	The entire mineralized area 156.54 Ha. has already explored in G1 level.	-
1e	Balance reserve as on 01/04/20	As on 01/04/2021 Under (111): 35.904 Million Tonnes	As on 01/04/2021 Under (111): 36.026 Million Tonnes	-
1f	General remarks of inspecting officers on geology, exploration etc		Limestone deposit within the lease area forms part of Proterozoic Palnad Sub-basin equivalent of Narji Limestone formation of Kurnool Group. These carbonate rocks were formed by sedimentary origin. Only vertical strike joints and solution cavities existing and filled with yellow clay.	The topography is undulating with surface reduce level varying from 13 m above MSL along the central part of the mining lease to a maximum elevation of 73m at the peak of a small hill located in the south-western corner of the lease area.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	F.Y. 2020-21: In between UTM co-ordinates N1865500 to N1864550 and E405450 to E405600 (In between section line ML 11.5 to 18.5)	F.Y. 2020-21: In between UTM co-ordinates N1865500 to N1864550 and E405450 to E405600 (In between section line ML 11.5 to 18.5)	-
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Proposal has been given in the approved document for separate benching of Topsoil/Overburden and Mineral/Ore OB/Waste: 04 nos. Mineral/Ore: 04 nos.	Separate benching of Topsoil/Overburden and Mineral/Ore have been maintained OB/Waste: 04 nos. Mineral/Ore: 04 nos.	-
2c	Stripping ratio or ore to OB ratio	1 : 0.14	1 : 0.15	-
2d	Quantity of topsoil generation in m3	No topsoil will be generated during Review period.	Not applicable.	-
2e	Quantity of overburden generation in m3	276780.00 CuM	264522.2 CuM (Insitu) 2618.10 CuM (Old Dump)	-
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The development and production is being done through fully mechanized means.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	01 no.	01 no.	-
3b	Quantity of ROM mineral production proposed	1905121.00 Metric Tonnes	1780655.00 Metric Tonnes	-
3c	Recovery of sailable/usable mineral from ROM production	82%	79%	-
3d	Quantity of mineral reject generation	No mineral reject will be generated during Review period.	Not applicable.	-
3e	Grade of mineral rejects generation and threshold value declared.	Not mentioned in the approved document.	Not applicable.	-
3f	Quantity of sub grade mineral generation.	F.Y. 2020-21: 103687.00 Metric Tonnes	F.Y. 2020-21: 84763.00 Metric Tonnes	-
3g	Grade of sub grade mineral generation	Above 34% CaO to below 41% CaO	Above 34% CaO to below 41% CaO	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized screening and crushing have been proposed in the approved document for sizing of ROM in to -70 mm	Mechanized screening and crushing is being done for sizing of ROM in to -70 mm	-
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No beneficiation study has been proposed during Review period.	Not applicable.	-

3j Provision of drilling and blasting in mineral benches	OB/Waste: Dia.: 115 mm Burden: 3.5 m to 4.5 m Spacing: 5.0 m to 6.0 m Depth: 8.0 m to 9.0 m Mineral/Ore: Dia.: 115 mm Burden: 3.0 m to 3.5 m Spacing: 4.0 m to 5.0 m Depth: 8.0 m to 9.0 m	OB/Waste: Dia.: 115 mm Burden: 3.5 m to 4.5 m Spacing: 5.0 m to 6.0 m Depth: 8.0 m to 9.0 m Mineral/Ore: Dia.: 115 mm Burden: 3.0 m to 3.5 m Spacing: 4.0 m to 5.0 m Depth: 8.0 m to 9.0 m	-
3k Provision of mining machineries in mineral benches	1. Backhoe Excavator 03 nos. with 2.0 CuM bucket capacity 2. Tippers 09 nos. with 20 Metric Tonnes capacity 3. Cabin Drill 01 no. with 115 mm dia bit and 550 CFM air compressor 4. Bull Dozer 01 no. with 320 HP capacity 5. Water Tanker 01 no. with 10000 liters capacity 6. Jeep 01 no. 7. Service Van 01 no. 8. Explosive Van 01 no. with 9.64 tonnes capacity	1. Backhoe Excavator 02 nos. with 2.0 CuM bucket capacity 2. Dozer 01 no. with 180 HP capacity 3. Tippers 10 nos. with 16 Metric Tonnes capacity 4. Air Compressor 01 no. with 12.74 CuM/Mn 5. Blast Hole Drill 01 no. with 115 mm dia 6. Water Tanker 01 no. with 10000 liters capacity	Details of the machinery used for dewatering has not been included. Deviation has been pointed out.

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Overburden: 04 - 08 meters Ore/Mineral: 06 - 08 meters	Overburden: 04 - 08 meters Ore/Mineral: 06 - 08 meters	-
3m	Total area covered under excavation/pits	95.85 Ha. up to end of F.Y. 2024-25	92.00 Ha. up to end of F.Y. 2020-21	-
3n	Ore to OB ratio for the pit/mine during the year.	1 : 0.14	1 : 0.15	-
3o	Total area put in use under different heads at the end of year	Pit- 95.85 Ha. Waste/reject- 35.80 Ha. Others- 36.82 Ha. Up to end of F.Y. 2023-24	Pit- 92.00 Ha. Waste/reject- 36.61 Ha. Others- 100.63 Ha. Up to end of F.Y. 2020-21	Deviation for excess utilization of the area has been pointed out.
3p	Production of ROM mineral during the last five year period as applicable	Yr. 2016-17: 1349478.00 Metric Tonnes Yr. 2017-18: 1415899.00 Metric Tonnes Yr. 2018-19: 1875300.00 Metric Tonnes Yr. 2019-20: 3766192.50 Metric Tonnes Yr. 2020-21: 1801438.00 Metric Tonnes	Yr. 2016-17: 794000.00 Metric Tonnes Yr. 2017-18: 1409030.00 Metric Tonnes Yr. 2018-19: 1778440.00 Metric Tonnes Yr. 2019-20: 1766408.00 Metric Tonnes Yr. 2020-21: 1695892.00 Metric Tonnes	-
3q	General remarks of inspecting officers on method of mining etc.			Mining is being done through the opencast method with fully mechanized means using conventional method of drilling and blasting.

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)	Separate dumping of OB/Waste, Mineral sub-grade and Mineral/Ore has been proposed in the earmarked locations.	Separate dumping of OB/Waste, Mineral Sub-grade and Mineral/Ore are being done in the earmarked locations.	-
4b	Location of topsoil, OB and mineral reject dumps	<p>Within lease area in between UTM co-ordinates</p> <p>Overburden/Waste (Backfilling in Pit No. 1): N1865265 to N1865455 and E405330 to E405495</p> <p>Mineral Sub-grade (Dump No. 4): N1865455 to N1865525 and E406145 to E406280</p> <p>Mineral/Ore: N1865875 to N1866150 and E404805 to E405170</p>	<p>Within lease area in between UTM co-ordinates</p> <p>Overburden/Waste (Backfilling in Pit No. 1): N1865265 to N1865455 and E405330 to E405495</p> <p>Mineral Sub-grade (Dump No. 4): N1865455 to N1865525 and E406145 to E406280</p> <p>Mineral/Ore: N1865875 to N1866150 and E404805 to E405170</p>	-
4c	Number of dumps within lease area and outside of lease area	<p>OB/Waste: 04 nos.</p> <p>Mineral Sub-grade: 01 no.</p> <p>Mineral/Ore: 01 no.</p>	<p>OB/Waste: 04 nos.</p> <p>Mineral Sub-grade: 01 no.</p> <p>Mineral/Ore: 01 no.</p>	-

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Beyond ultimate pit limit OB/Waste Dump: Dump No. 1, 2 and 3 Within ultimate Pit limit: Mineral Sub-grade: 01 no., Mineral/Ore: 01 no.	Beyond ultimate pit limit OB/Waste Dump: Dump No. 1, 2 and 3 Within ultimate Pit limit: Mineral Sub-grade: 01 no., Mineral/Ore: 01 no.	-
4e	Number of active and alive dumps.	Active and alive: OB/Waste: 01 no. Mineral/Ore: 01 no. Mineral Sub-grade: 01 no.	Active and alive: OB/Waste: 01 no. Mineral/Ore: 01 no. Mineral Sub-grade: 01 no.	-
4f	Number of dead dumps.	OB/Waste: 03 nos.	OB/Waste: 03 nos.	-
4g	Number of dumps established.	Dump no. 1, 2 and 3 Situated in between UTM co-ordinates OB Dump No. 1: N1866000 to N1865750 and E405400 to E405850 OB Dump No. 2: N1864800 to N1865400 and E406400 to E406900 OB Dump No. 3: N1864500 to N1864800 and E406400 to 406600	Dump no. 1, 2 and 3 Situated in between UTM co-ordinates OB Dump No. 1: N1866000 to N1865750 and E405400 to E405850 OB Dump No. 2: N1864800 to N1865400 and E406400 to E406900 OB Dump No. 3: N1864500 to N1864800 and E406400 to 406600	-

4h	Whether Retaining wall or garland drain all along dumps are there.	Proposal has been given in the approved document for construction of (1) 600 meters Retaining Bund along inactive dumps. (2) Garland Drain all along the waste dumps.	(1) Retaining Bunds has not been constructed. (2) Garland Drain has been constructed all along the waste dumps.	Deviation has been pointed out. Revised Proposal has been incorporated in the Modified Mining Plan.
4i	Length of Retaining wall or garland drain all along dumps	Retaining Bunds: 600 meters Garland Drain: Length not given the approved document.	Retaining Bunds: Not constructed Garland Drain: Approx. 3838.0 m x 2.0 m x 1.5 m	-do-
4j	Number of settling ponds	No proposal.	NIL	-
4k	Specific comments of inspecting officer on waste dump management			A certain quantity of limestone and over size boulders of limestone have been dumped along with the waste rock in the mined out pit for reclamation and rehabilitation. Deviation has been pointed out.

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.	Backfilling has been proposed in the partly mined out Pit No. 1 with the 276780 CuM of waste over 1.25 ha. area in between UTM co-ordinates N1865265 to N1865455 and E405330 to E405495	Backfilling is being done in between UTM co-ordinates N1865265 to N1865455 and E405330 to E405495	-
5b	Area under backfilling of mined out area	Pit No. 1: 1.25 Ha. area will be backfilled with 276780 CuM of Waste/Overburden.	Pit No. 1: 0.85 Ha. area has been backfilled with the 267140.30 CuM of Waste/Overburden.	-
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No topsoil will be generated during Review period.	Not applicable.	-
5d	Total area fully reclaimed and rehabilitated	14.68 Ha.	14.28 Ha.	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.			NIL

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).	Submitted before due date.	Information has been cross verified during inspection.	No major deviation has been found.

6b	Area available for rehabilitation (ha) .	No proposal.	NIL	-
6c	afforestation done (ha).	No proposal.	NIL	-
6d	No. of saplings planted during the year	No proposal.	NIL	-
6e	Cumulative no .of plants	No proposal.	NIL	-
6f	Any other method of rehabilitation	No proposal.	NIL	-
6g	Cost incurred on watch and care during the year	No proposal.	NIL	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	(1) 168.25m x 60.90 m x 20 m (2) 101.5 m x 65.77 m x 15 m	(1) 142.60 m x 60.0 m x 8.0 m (2) 175. 22 m x 22.0 m x 18.0 m	-
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	276780.00 CuM	267140.30 CuM	-
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	0.20 Ha.	0.20 Ha.	-
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	NIL	-

6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not any.	Not any.	-
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	500 nos.	1200 nos.	Plantation has been done over Dump no. 2 and 3
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.30 Ha.	0.30 Ha.	-
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	By Plantation	By Plantation	-
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposal has been given in the approved document for regular monitoring of the environmental parameters in the core and buffer zone.	Being done as per proposal.	All the parameters are within the prescribed limit.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			NIL

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 with above 41% CaO will be dispatched to the crusher. Mechanised sorting with shovel has been proposed for segregation of Ore/Mineral from ROM at pit head.	Before dispatch of the Ore/Mineral to the crusher, segregation is being done at pit head.	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mecahnised sorting with the help of excavator has been proposed in the approved document.	Being done as per proposal.	-
7c	Different grade of mineral sorted out at mines.	ROM mineral with above 41% CaO will be sorted out at pit head before dispatch.	Being done as per proposal.	-
7d	Any beneficiation process at mines .	No beneficiation study has been proposed in the approved document.	Not Applicable. Dry crushing and screening for -70 mm ore is being done within lease area.	-
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			NIL

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	No topsoil will be generated during Review period.	Not applicable.	-
8b	Concurrent use or storage of topsoil	No proposal.	NIL	-
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of OB/Waste, Mineral sub-grade and Mineral/Ore has been proposed in the earmarked locations. Within lease area in between UTM co-ordinates	Separate dumping of OB/Waste, Mineral sub-grade and Mineral/Ore are being done in the earmarked locations. Within lease area in between UTM co-ordinates	-
		Overburden/Waste (Backfilling in Pit No. 1): N1865265 to N1865455 and E405330 to E405495	Overburden/Waste (Backfilling in Pit No. 1): N1865265 to N1865455 and E405330 to E405495	
		Mineral Sub-grade (Dump No. 4): N1865455 to N1865525 and E406145 to E406280	Mineral Sub-grade (Dump No. 4): N1865455 to N1865525 and E406145 to E406280	
		Mineral/Ore: N1865875 to N1866150 and E404805 to E405170	Mineral/Ore: N1865875 to N1866150 and E404805 to E405170	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Proposal has been given in the approved document for backfilling with the 276780.0 CuM of waste/overburden over 1.25 Ha. mined out area for restoration of the land.	Backfilling with the 267140.30 CuM of waste/overburden over 0.85 Ha. mined out area has been done for restoration of the land.	-
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	500 nos. of saplings will be planted in 0.30 Ha. over the backfilled area has been proposed under phased restoration.	1200 nos. of saplings have been planted in 0.30 Ha. over the backfilled ground restoration.	-
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	500 nos. of saplings will be planted in 0.30 Ha. over the backfilled area.	1200 nos. of saplings have been planted in 0.30 Ha. over the backfilled area.	-
8g	Survival rate	85%	Approx 85%	-
8h	Water sprinkling on roads to control airborne dust	Proposal has been given in the approved document for water sprinkling on roads to control airborne dust through the water tanker.	Being done as per proposal.	-
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			NIL

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M. R. Submitted up to August 2021 A. R. Submitted up to F.Y. 2020-21	NIL	NIL
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager: Shri P. Vidya Kiran Mining Engineer: Shri P. Vidya Kiran Geologist: Shri P. S. Murthy	Manager: Shri P. Vidya Kiran Mining Engineer: Shri P. Vidya Kiran Geologist: Shri P. S. Murthy	NIL
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit- 92.00 Ha. Waste/reject- 36.61 Ha. Others- 100.63 Ha. Up to end of F.Y. 2020-21	Pit- 92.00 Ha. Waste/reject- 36.61 Ha. Others- 100.63 Ha. Up to end of F.Y. 2020-21	Deviation for excess utilization of the area has been pointed out.
9d	Scrutiny of Annual return on afforestation	Within lease area: 2720 nos. with 85% survival rate Outside lease area: 3610 nos. with 97% survival rate.	Within lease area: 2720 nos. with 85% survival rate Outside lease area: 3610 nos. with 97% survival rate.	NIL
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral Reject: 84763.00 metric tones Grade: Below 34% CaO.	Incorrect nomenclature has been done for Mineral Reject. Grade: above 34% CaO to below 41% CaO.	Deviation has been pointed out.

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing Stock: ROM: 134270.000 Metric Tonne Cement Grade Limestone: NIL	Closing Stock: ROM: 134270.000 Metric Tonne Cement Grade Limestone: NIL	ROM Ore and the Graded Cement Grade Limestone are similar. Incorrect reporting for closing stock of graded ore has been done. Deviation has been pointed out.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale Value: NIL Ex-Mine Price: Rs. 181.62 Per Metric Tonne Cost of Production: 181.62 Per Metric Tonne	Sale Value: NIL Ex-Mine Price: Rs. 181.62 Per Metric Tonne Cost of Production: 181.62 Per Metric Tonne	NIL
9h	Scrutiny of Annual return on fixed assets	Rs. 52882397.00	Rs. 52882397.00	NIL
9k	Scrutiny of Annual return on mining machineries	Given in the annual returns.	Cross verified from the field logbooks.	NIL

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
MCDR17	Rule 11(1)	23-SEP-21			
MCDR17	Rule 45(7)(a)	23-SEP-21			

Date :

(SHAIVAL KARTIKEYA)

Indian Bureau of Mines