

MCDR inspection REPORT

Jabalpur regional office

Mine file No :

Mine code : 38MPR35266

- (i) Name of the Inspecting : G005) SANJAY M. GIRHE
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Shri Pradeep Rai- Manager, Shri Saurabh Jain, Geologi
Official with
Designation
- (iv) Date of Inspection : 28-SEP-22
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) Mine Name : BHADANPUR N.PATT(296.956H
(b) Registration NO. : IBM/441/2011
(c) Category : A Fully Mechanised
(d) Type of Working : Opencast
(e) Postal address :
State : MADHYA PRADESH
District : SATNA
Village : BHADANPUR N.PATTI
Taluka : MAIHAR
Post office : SARLANAGAR
Pin Code : 485772
FAX No. :
E-mail : ajit.ostwal@adityabirla.com
Phone : 9702474200
(f) Police Station : Maihar
(g) First opening date :
(h) Weekly day of rest : SUN
2. Address for : Post Office Sarlanagar,
correspondance : Maihar, Satna (M.P.) - 485772
3. (a) Lease Number :
(b) Lease area :
(c) Period of lease :
(d) Date of Expiry :
4. Mineral worked : LIMESTONE Main

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5. Name and Address of the

Lessee : M/S ULTRATECH CEMENT LIMITED
NAYAGAON KANKA KHOR
VILLAGES KHOR POST JAWAD
TAHSIL NIMACH MADHYA
PRADESH
Phone:07420230109
FAX :07420235524

Owner : Ultratech Cement Limited
Ultratech Cement Limited
Sarala nagar, Maihar Distt -
Satna SATNA MADHYA PRADESH
Phone:
FAX :

Agent : P Upadhyay
Ultratech Cement Limited
Sarala Nagar, maihar Distt -
Satna SATNA MADHYA PRADESH
Phone:
FAX :

Geologist

Name : Saurabh Jain, Full Time
Qualification :
Appointment/ :
Termination date

Manager

Name : Pradeep Rai
Qualification :
Appointment/ :
Termination date

6. Date of approval of Mining :
Plan/Scheme of Mining

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	It was proposed to drill 15 nos of bore holes during the year 2021-22	Against which 23 nos. of bore holes were drilled to a depth of 688m respectively.	Complete exploration carried out as per the proposals
1b	Exploration over lease area for geological axis 1 or 2	Total 15 nos of boreholes proposed to under take for G1 level exploration	15 nos. of boreholes drilled for G1 level exploration	Exploration completed as proposed in 2012-22
1c	Exploration Agencies and Expenditure in lakh rupees during the year	M/s Synergy, Nagpur, (M.H), About 19.2 Lakh proposed	Expenditure of about 19.20 Lakh to undertake the year 2021-22 exploration.	Expenditure for carrying out exploration in year 2021-22
1d	Balance area to be explored to bring Geological axis in 1 or 2	Exploration were proposed to convert mineralised area in G1- 215.876 ha., G2- 15.14 ha., G3-nil.	With 23 drilled boreholes mineralised area covered to as G1- 215.876 ha., G2- 15.14 ha., G3-nil.	Extensive exploration has been done so far in the lease area. Total 348 nos. of boreholes have been drilled with 8495.32 meterages drilling so far.
1e	Balance reserve as on 01/04/20	Reserves in Million Tonnes Proved (111) -32.913 Resources in Million Tonnes Feasibility(211): 17.913 Measured (331) : 50.83 Indicated (332) : 8.70 Inferred(333) : 23.32 Reserves & Resources position as per Review of Mining Plan approved on 06.03.2020	Reserves in Million Tonnes Proved (111) -32.00 Resources in Million Tonnes Feasibility(211): 12.00 Pre-Feasibility(222): 2.00 Reserves & Resources position as on 01.01.2022 as furnished in Modification in approved Mining Plan dtd 11.04.2022	Resources & Reserves were re-estimated based on the exploration carried out.

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1f	General remarks of inspecting officers on geology, exploration etc	Exploration proposed over the mineralised area	Exploration carried out as proposed.	Stratigraphically the mining lease area belongs to Rohtas formation of Semari series of Vidhyan super group. Limestone intercalated with shale and strike of limestone formation is NE-SW & dipping 10-20 degree towards North.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	It was proposed to work in Pit-A & B between grid E484620 to E484800 & N2673130 to N2673240 from 390mRL to 363mRL	Working carried out at proposed locations but deviations were observed in acheiving targeted development & limestone production quantities during the year.	For the significant deviations as observed, violation under Rule 11(1) of MCDR,2017 pointed out & issued.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Sepearate bench of 3M in OB and 6M in limestone were proposed.	Benches were developed as per the given proposals.	No deviations were observed in benches configuration.
2c	Stripping ratio or ore to OB ratio	Proposed as 1:0.14 CuM/Tonne	Acheived about 1:0.26 CuM/Tonne	Acheived stripping ratio 1:0.26 is on higher side due less production during the year 2021-22
2d	Quantity of topsoil generation in m3	23850 M3	4751 M3	Top soil generation on lower side due to less development & production. Violation under Rule 11(1) of MCDR,2017 issued
2e	Quantity of overburden generation in m3	79500 M3	19004 M3	Less OB generation due to less development & excavation during the year 2021-22. Violation under Rule 11(1) of MCDR,2017 issued

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2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	NA	There are total 3 working pits in the lease area & its dimensions are Pit No-B1 & B2 (2700m x 230-620m x 351mRL), Pit No-A (725m x 255-270m x 373mRL). These are active pits & limestone mineralisation very well seen in all the pits.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Development & excavation proposed in two pits namely Pit-A & Pit-B2	Working carried out in proposed pits	Proposed working marked over development & excavation plan (Plate-5.3)
3b	Quantity of ROM mineral production proposed	12.97350 Lakh tonnes	7.07688 Lakh tonnes	Development & excavation were on lower side and for said deviations violation under 11(1) of MCDR,2017 pointed out & issued.
3c	Recovery of sailable/usable mineral from ROM production	Proposed 90% of total ROM quantity	Achived about 90% as proposed	10% sub-grade generation as proposed
3d	Quantity of mineral reject generation	168285 Cum	105800 Cum	Less generation of mineral rejects during the year 2021-22 due to less development & excavation
3e	Grade of mineral rejects generation and threshold value declared.	34-36 Cao having MgO>6% & SiO>16	34-36 Cao having MgO>6% & SiO>16	Mineral rejects material being stacked separately
3f	Quantity of sub grade mineral generation.	12972 Tonnes	7000 Tonnes	Less sub-grade generation due to less production during the year

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3g	Grade of sub grade mineral generation	34- 38 CaO%	34- 38 CaO%	Being used for blending purpose as when scope generated
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	ROM only crushed in the crusher having installed capacity of 1200 TPH
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not Proposed	Nil	ROM only crushed in the crusher having installed capacity of 1200 TPH
3j	Provision of drilling and blasting in mineral benches	Proposed for drilling & blasting.	Drilling & blasting operation are being carried out in the mine for excavation and production.	Drilling machine IBH-10 of 115mm dia of 210 H.P. deployed for drilled.
3k	Provision of mining machineries in mineral benches	Shovel- 3.9 Cum Back Hoe- 1.7 Cum, Dozer- 380HP Dumper-50T, Tipper 14 Cum, Front End Lodder - 4.6Cum, & 1.3 Cum. Explosive vain -3.7T & 2.4T, Water Tanker- 10000Ltr.,	Shovel- 3.9 Cum Back Hoe- 1.7 Cum, Dozer- 380HP Dumper-50T, Tipper 14 Cum, Front End Lodder - 4.6Cum, & 1.3 Cum. Explosive vain -3.7T & 2.4T, Water Tanker- 10000Ltr.,	HEMM being deployed as per the development & excavation target per year
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	3m bench height in OB & 6m height limestone strata.	Proposed height & width are being maintained in all existing working pits	
3m	Total area covered under excavation/pits	121 .65Ha. (As per approved ROMP dtd 06.03.2020)	115.250 Ha. (As per Annual Return 2021-22)	Limestone production & development were on lower side during the year 2021-22.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.14 CuM/Tonne	1:0.26 CuM/Tonne	Stripping ratio on lower side due to less OB generation during the year.

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3o	Total area put in use under different heads at the end of year	192.56Ha (As per approved ROMP dtd 06.03.2020)	180.935Ha. as present survey data	ROMP was approved for the proposals period from 2020-21 to 2024-25.
3p	Production of ROM mineral during the last five year period as applicable	2017-18-: 1297020 2018-19-: 1296429 2019-20-: 1294885 2020-21-: 1297000 2021-22-: 1297350	2017-18-: 1295814 2018-19-: 1038317 2019-20-: 635923 2020-21-: 398004 2021-22-: 707688	During the year 2021-22 production is on lower side due to COVID-19 pandemic situation & low demand from captive cement plant
3q	General remarks of inspecting officers on method of mining etc.	Proposals were given for systematic mining	Mining operations were not carried out as per the proposals due to low development & production during the year 2021-22	For the said deviations violation u/r 11(1) of MCDR,2017 issued. Mining operations were being carried out by fully opencast mechanised method by combination HEMM with drilling & blasting.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Not Proposed	Top-soil, OB & waste generated during the year proposed for backfilling in Pit-A & Pit-B2 covering total area 2.0Ha	Backfilling at proposed location carried out over 1.20Ha area only, hence for said deviation violation u/r 11(1) of MCDR,2017 pointed out & issued.
4b	Location of topsoil, OB and mineral reject dumps	Not Proposed	Concurrent use for backfilling proposed in Pit-A & Pit-B2	Yes it is being followed.
4c	Number of dumps within lease area and outside of lease area	Within the ML there are 14 active & inactive dumps and no dumps outside ML area observed.	Within the ML there are 14 active & inactive dumps and no dumps outside ML area observed.	The above dumps located within the mining lease area at different locations.

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4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps out side ultimate pit limit	Dumps were located out side ultimate pit limit	Most of the dumps are old one in the lease area
4e	Number of active and alive dumps.	Three active or live dumps in mining lease area	All these dumps in the lease are old dumps .	As stated above
4f	Number of dead dumps.	Dead dumps are 11 nos.	Yes, 11 nos. of inactive dead dumps present in the mining lease area	
4g	Number of dumps established.	Total 07 dumps have been stabalised	Above 07 dumps are stabilized and plantation, shrubs were noticed .	Yes, stabalised by means of plantation.
4h	Whether Retaining wall or garland drain all along dumps are there.	Not Proposed	Length of retaining wall about 1320Mtr. and bunds of 320Mtr.	As reported by the lessee during site inspection.
4i	Length of Retaining wall or garland drain all along dumps	Not Proposed.	Length of retaining wall about 1320Mtr. and bunds of 320Mtr.	Marked on surface & other relevant plans
4j	Number of settling ponds	Not Proposed	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management	Proposals drawn for systematic waste dump management	As per the proposals lessee has carried out the works during 2021-22. For some deviations violation u/r 11(1) of MCDR,2017 was also issued.	Concurrent use of top-soil, overburden for backfilling purpose proposed & accordingly work carried out.

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 was proposed in Pit A-1 & Pit B-2 covering total 2.0Ha area	Backfilling carried in Pit A-1 & Pit B-2 covering total 1.20 Ha area	For deviation violation under Rule 11(1) of MCDR,2017 was pointed out and issued.
5b	Area under backfilling of mined out area	Backfilling was proposed in Pit A-1 & Pit B-2 covering total 2.0Ha area	Backfilling carried in Pit A-1 & Pit B-2 covering total 1.20 Ha area	For deviation violation under Rule 11(1) of MCDR,2017 was pointed out and issued.

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5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use for backfilling purpose proposed	Top soil concurrently used over backfilled area	Top soil generation and its use was given in approved document.
5d	Total area fully reclaimed and rehabilitated	Total 2.0 Ha area proposed for reclamation & rehabilitation during 2021-22	Against to this 1.20Ha area reclaimed & rehabilitated	For deviations violation u/r 11(1) of MCDR,2017 was pointed out & issued.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Systematic proposals for backfilling and reclamation was given	As per the proposals, backfilling & reclamation carried out. For some deviations violations u/r 11(1) of MCDR,2017 was also issued.	Some part of the Pit A-1 & Pit B-2 area has been mineral exhausted & matured for backfilling & reclamation. More scope of backfilling shall be generated in future.

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).	To be submitted before 1st July of every year	Yes, submitted within time limit as per the provisions of Rule 26 of MCDR,2018	PMCP report was produced during inspection & found in order
6b	Area available for rehabilitation (ha) .	No Proposals	Nil	Rehabilitation of areas in respect of worked benches/management of benches not available presently
6c	afforestation done (ha).	Not Proposed	Nil	None
6d	No. of saplings planted during the year	Not Proposed	Nil	None
6e	Cumulative no .of plants	Not Proposed	Nil	None
6f	Any other method of rehabilitation	Not Proposed	Nil	None
6g	Cost incurred on watch and care during the year	Not Proposed	Nil	None

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6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	About 2.0 Ha proposed for backfilling in Pit A-1 & Pit B-2 during 2021-22	Total 1.20 Ha area reclaimed by backfilling in Pit A-1 & Pit B-2 during 2021-22	For said deviations violation u/r 11(1) of MCDR,2017 pointed out & issued to the lessee.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Abotut 2.0 Ha area proposed by backfilling	About 1.20 Ha backfilled by OB/waste material	For said deviations violation u/r 11(1) of MCDR,2017 pointed out & issued to the lessee.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	About 2000 plantation proposed over backfilled area	Backfilling not carried out fully, hence platation was not done	For said deviations violation u/r 11(1) of MCDR,2017 pointed out & issued to the lessee.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	Nil	None
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not Proposed	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	4000 Plantation proposed covering 2.0 Ha area	2000 saplings plated covering 1.0 Ha area	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	2.0 Ha proposed by plantation	About 1.0 Ha rehabilitated by plantation	Area marked on relevant plans
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No Proposals	Nil	Nil

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6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical Air, Water, Noise monitoring Proposed	Carried out as per the proposals	Env. monitoring reports carried out by M/s Creative Enviro Services were produced during inspection.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Necessary PMCP proposals were given in approved document	PMCP works carried out as proposed with some deviations for which violation under Rule 11(1) of MCDR,2017 was pointed out & issued.	Overburden, top-soil and waste generated from mine being concurrently used for backfilling purpose over the matured area in Pit A-1 & Pit B-2.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	12.97350 Lakh tonnes limestone production was proposed, no grade wise sizing & sorting proposed	7.07688 Lakh Lakh tonnes limestone production acheived, no grade wise sizing & sorting carried out.	Whatever is produced from the mine is being sent to the plant for crushing, execept the waste & reject materials.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Not Proposed	Nil. Entire ROM fed to the crusher plant for captive consumption in cement plant	Dedicated crusher of 1200 TPH is existing. Mechanical means of sorting is followed.
7c	Different grade of mineral sorted out at mines.	Not Proposed	Entire ROM fetch to the crusher plant for captive consumption in cement plant	Entire ROM fetch to the crusher plant & 40mm size crushed limestone send to cement plant through conveyor for captive consumption.
7d	Any beneficiation process at mines	No Proposals	Nil	Nil

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7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Proposals made for systematic operations, including the crushing of ROM.	It is followed, up to some extent rejects separation being done at faces itself.	Mineral conservation is very well being practised by consuming entire recoverable limestone in cement plant for captive consumption purpose.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	22500 M3 removal & utilization proposed in 2021-22	4751 M3 top-soil removed & utilized as per the proposals	Low generation due to less development & production during the year. For deviations violation u/r 11(1) of MCDR,2017 pointed out & issued.
8b	Concurrent use or storage of topsoil	Concurrent use for spreading over backfillied area proposed	Concurrently used as proposed	Low generation of top soil during the year due to less development & production.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No Proposals	Nil	Concurrent use of overburden & waste rock quantity proposed for backfilling in Pit A-1 & Pit B-2
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Concurrent use of overburden & waste rock quantity proposed for backfilling in Pit A-1 & Pit B-2	Working carried out as per the proposals with some deviations.	For above said deviations, violation u/r 11(1) of MCDR,2017 was pointed out & issued to the lessee.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Reclamation by overburden & waste rock quantity proposed by backfilling in Pit A-1 & Pit B-2	Backfilling carried out as as proposed with some deviations.	For above said deviations, violation u/r 11(1) of MCDR,2017 was pointed out & issued to the lessee.

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8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	NA	During the year 2021-22 total 2000 plantation in ML area & 4000 nos. in outside ML area carried out.	4000 No. of saplings planted in view of developing the green belt area.
8g	Survival rate	Proposed 95%	Acheived about 90%	Regular caring of saplings is being very well practised.
8h	Water sprinkling on roads to control airborne dust	Water sprinkling is proposed by dedicated water tanker.	Regular water sprinkling is done by water tanker	Water tankers of 10KL capacity is provided for the purpose and less emission of airborne dust was noticed.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Necessary proposals were made	Environmental protection by different means are being practised in very well manner.	Aesthetic beauty in and around mine area is very good as significant amount of plantation work done in mining lease as well as outside ML area.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Online monthly return for the month of Sept-22 & Annual Return for the year 2021-22 submitted.	Online monthly return for the month of Sept-22 & Annual Return for the year 2021-22 were submitted within stipulated timelines.	Online monthly return for the month of Sept-22 & Annual Return for the year 2021-22 were submitted within stipulated timelines.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Given	Shri Pradeep Rai, appointed as Mining Engineer & Shri S.K. Jain appointed as Geologist	Shri Pradeep Rai, Mining Engineer & Shri S.K. Jain, Geologist were present during the mine inspection.

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9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Already exploited & abandoned by opencast (O/C) mining -296.956 Ha Covered under current (O/C) Workings - 115.25 Ha Reclaimed/Rehabilitated- 19.83Ha Used for waste disposal - 15.96 Ha Occupied by plant, buildings, residential, welfare buildings & roads- 24.08Ha Other purpose-1.545 Ha	For discrepancies in lease area utilization at the end of year 2021-22, violation u/r 45(7) of MCDR,2017 was pointed out & issued to the lessee.
9d	Scrutiny of Annual return on afforestation	Given	2000 saplings planted in ML area over backfilled & other area. Also 4000 saplings planted outside lease area as green belt development.	Survival rate of saplings planted is about 90-95% as reported
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Given	105800 tonnes generated during 2021-22	Grades of mineral rejects reported as 34-36 Cao having MgO>6% & SiO>16
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	Cement Grade Limestone: O/S-Nil Production- 707688 MT Cement grade limestone Despatch-707688 MT Cement grade limestone C/S-Nil	ROM is being used as captive consumption in cement plant, hence opening or closing stocks marked as "Nil" .
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Ex-mine price: Cement Grade Limestone - Rs 371.95 /MT	Captive consumption hence cost of production is similar to the ex-mine price as reported
9h	Scrutiny of Annual return on fixed assets	Given	Value of Fixed Assets- Rs 2044324078 (in respect of the Land, Residential, Plant & machineries, etc)	Capital structure/fixed assets was not submitted in respect of mining lease area, hence violation u/r 45(7) of MCDR,2017 was pointed out & issued to the lessee.

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9k	Scrutiny of Annual return on mining machineries	Given	Shovel- 3.9 Cum Back Hoe- 1.7 Cum, Dozer- 380HP Dumper-50T, Tipper 14 Cum, Front End Lodder - 4.6Cum, & 1.3 Cum. Explosive vain -3.7T & 2.4T, Water Tanker- 10000Ltr.,	Nil
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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
MCDR17 Rule 11(1)	11-NOV-22				
MCDR17 Rule 45(7)(a)	11-NOV-22				

Date :**(SANJAY M. GIRHE)**

Indian Bureau of Mines