INDIAN BUREAU OF MINES
MINERALS DEVELOPMEMT AND REGULATION DIVISION

MCDR INSPECTION REPORT

Nagpur regional office

Mine file No : MAH/CND/LST- 4/NGP **Mine code : 38MSH08001**

(i) Name of the Inspecting Officer and ID No. : **MQ17) ASHISH MISHRA**

(ii) Designation : Assistant Controller Mine

(iii) Accompaning mine Official with Designation : Shri Gajendra Singh, Sr. GM (Mines) & Shri Jagan Redd

(iv) Date of Inspection : 29/09/2017

(v) Prev.inspection date : 11/01/2010

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **NAOKARI**

(b) Registration NO. : **IBM/441/2011**

(c) Category : A Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : MAHARASHTRA
District : CHANDRAPUR
Village : NAOKARI
Taluka : KORPANA
Post office : AWARPUR CEMENT WORK
Pin Code : 442917
FAX No. : 07173- 266341
E-mail : amathawale@adityabirla.com
Phone : 07173- 266330

(f) Police Station : GADCHANDUR

(g) First opening date : 21/04/1982

(h) Weekly day of rest : SUN

2. Address for correspondance : P.O.- AWARPUR CEMENT PROJECT,
DISTT. - CHANDRAPUR (MS) 442 917

3. (a) Lease Number : MSH0007
(b) Lease area : 1030.58
(c) Period of lease : 30
(d) Date of Expiry : 11/02/2030

4. Mineral worked : SHALE Associated
LIMESTONE Main

5. Name and Address of the

Lessee	:	M/S ULTRATECH CEMENT LTD. CHANDRAPUR MAHARASHTRA Phone: FAX :
Owner	:	SHRI V.T.MOORTHY UNIDENTIFIED TAMIL NADU Phone: FAX :
Agent	:	SHRI A.M.ATHAWALE CHANDRAPUR MAHARASHTRA Phone: FAX :

Mining Engineer

Name	:	SHRI D.D. MAHULE,Full Time
Qualification	:	BE MINING
Appointment/ Termination date	:	26/09/2006

Geologist

Name	:	Shri C.N.Joshi,Full Time
Qualification	:	M.Sc.Tech.(Applied Geology)
Appointment/ Termination date	:	

Manager

Name	:	SHRI R.V.SAMBREY
Qualification	:	DIP. MINING
Appointment/ Termination date	:	04/07/2006

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

Modif.of approved Mining Plan	18/12/2000
Modif.of approved Mining Plan	16/12/2003
Mining Scheme rule 12 MCDR1988	28/07/2005
Mining Scheme rule 12 MCDR1988	21/01/2011
Mining Scheme rule 12 MCDR1988	12/06/2015

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	As per the SOM approved for the period 2015-16 to 2019-20, total 20 boreholes were proposed to be drilled in the years 2016-17 and 2017-18.	In the year 2016-17, no exploration work has been carried out. Proposed exploration may be carried out in 2017-18 or balance proposal period. Out of the total lease area of 1030.58 ha, around 295 ha is mineralized area and rest 735.58 ha is non-mineralized. Mineralized area has already been proved upto G1 level by drilling 734 core boreholes in 100 m X 100 m grid. The area has been divided into two blocks- Block A- Proved depth 122mRL Block B- Proved depth 137mRL	Block A is having 421 boreholes out of which 49 boreholes have encountered ore below proved depth upto 101mRL (considered proved depth for the block is 122mRL) and Block B is having 313 boreholes out of which 90 boreholes have encountered ore below proved depth upto 100mRL (considered proved depth for the block is 137mRL). No backlog is there as depth persistancy may be proved after attaining proved depth which has not been reached yet due to lower production.
1b	Exploration over lease area for geological axis 1 or 2	G1 Total G1 resources as per the approved SOM are 491.70 MT	As per the proposals, G1 level exploration has been carried out for the mineralized zone within the lease area upto maximum 100mRL.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	For the years 2016-17 to 2017-18, proposed exploration of 20 boreholes to be carried out by the lessee. Expenditure is not proposed.	No exploration has been done in 2016-17, hence the information under the item is 'Nil'.	

1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Mineralized area out of the total lease area has already been explored. Hence balance area to be explored stands 'Nil'. Total 20 boreholes are proposed in the lease area out of which 18 are in non-mineralized zone to check whether any mineralization is occuring and 2 boreholes are in the existing pit to check footwall contact of the proved orebody.
1e	Balance reserve as on 01/04/20	Balance reserves as on 01/04/2015 as per the approved SOM are as below: 111- 203.22 MT 121-136.07 MT 211-152.41 MT Total 491.70 MT	As on 01/04/2017, Reserves are as below (considering depletion of reserves due to production): 111 & 121- 332.95 MT 211-152.41 MT Total- 485.36 MT (Production during the period 2015-16 to 2016-17 is 6.34 MT)	

1f	General remarks of inspecting officers on geology, exploration etc	The Lithological sequence of rocks, in the deposit area in order of occurrence from top to bottom is as below: 1.Overburden Soil (OBS) 2.Sandstone 3.Green Shale 4.Argillaceous Limestone 5.Limestone with sub-grade bands 6.Black shale 7.Purple Shale	Exploration carried out in the lease area is up to the mark as per the geology and occurence of the ore within the lease area. Main issue pertaining to the lease area is Sulphur content in the Limestone which is +0.75% in some cases because generation of SOx is an environmental hazard and with new MoEF guidelines for the generation of SOx in force, lessee is using block modelling and other softwares for mine planning to optimize the utilization of resources.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Block A: From 201-184mRL (3 benches) in North direction, From 184-170 mRL (2 benches) in South West Block B: From 209-182mRL (4 benches) in North & East direction	Actual development is as per the proposals but width to be developed is lagging due to lower production in comparison to the proposals.	

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes	Yes	Total 8 benches in OB/Waste and 8 benches in ore are being developed separately. Top soil from 209mRL and above as well as 200 to 209mRL (Block B) is being utilized simultaneously for plantation prurposes.
2c	Stripping ratio or ore to OB ratio	1:0.255	1:0.371	Ore production for 2016-17: 3132373.10 T OB removed: 1162276 T
2d	Quantity of topsoil generation in m3	38667 T	Approximately 40000 T	
2e	Quantity of overburden generation in m3	638166 T	1162276 T	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		The Limestone as a whole occurs in the form of an asymmetrical anti-clinal fold the axial plane of which strikes in a NW-SE direction up to ML 30 beyond which it trends in a NE-SW direction. The Limestone plunges towards NW with an amount of about 18°. Analysis of strike and dip readings suggest that the strike of the deposit is around N67°30'W and S67°30'E between ML-0 and ML-30 further east of which the strike changes to N7° 30' E and S7° 30' W. Several benches are being worked simultaneously	Limestone occuring in the area is having geological disturbances in form of faults / clay and shale partings / dolomitic contaminations and is also having high 'S' content at places. Due to this, lessee is using ore modelling softwares like SURPAC so that excavations can be optimized for desired development and production. Accordingly bench height is considered as 7m in Block-A and 9m in Block-B. Development was found adequate in the area with respect to the geology and type of deposit.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two number of pits were proposed for production.	Two pits-one each in Block A and B are there for development as well as production.	
3b	Quantity of ROM mineral production proposed	2016-17: 7300000 T	2016-17: 3132373.100 T	
3c	Recovery of sailable/usable mineral from ROM production	ROM for 2016-17: 7300000 T Top Soil: 38667 T (considered under ROM and total rejects/waste as it is very small quantity) Rejects/Waste for 2016-17: 1613327 T Mineral Recovery: 5648006 T	2016-17: ROM-3132373.100 T 2016-17: Dispatched Ore-3132373.100 T	Production being on lower side, high Sulphur/Silica containing or Dolomitic Limestone were Nil for the year. Complete ROM has been dispatched to the Cement Plant of M/s Ultratech Cements under which the mine is captive.
3d	Quantity of mineral reject generation	2016-17: Nil	2016-17: Nil	
3e	Grade of mineral rejects generation and threshold value declared.	Not Applicable	Not Applicable	No mineral rejects are generated, instead, screen rejects, high silica and Sulphur containing material, dolomitic limestone having high MgO that are below threshold and considered as rejects/waste. Dolomitic limestone, High Silica/Sulphur containing material, screen rejects and waste are being dumped separately.
3f	Quantity of sub grade mineral generation.	Nil	Nil	

3g	Grade of sub grade mineral generation	Not Applicable	Not Applicable	Due to optimization and grade control, Sub-grade, if any, generated during excavation is being dispatched and no separate sub-grade stack is available.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized mechod throgh crushing and screening	As per the proposals.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	There is no Mineral Beneficiation technique adopted except dry crushing and screening.	Earlier, Fractional analysis study of ROM was conducted for different quality of material from Block A and Block B. The ROM was screened through various sizes of sieves, viz. 200 mm, 75 mm, 50 mm, 25 mm, 10 mm and 6 mm. The weight of material after each screening was done and also a representative sample was collected and analyzed for chemical constituents. The study determined that at - 6mm fraction of material contribute high silica and high sulphur to the Limestone.	With the rejection of - 6mm fraction fines, the quality of residual Limestone is increased substantially and 68 million tons of sub grades Limestone will be utilized which would have been un-utilized otherwise.

3j	Provision of drilling and blasting in mineral benches	Yes, As per the proposals, Drilling will be carried out to a depth of 8m in Block-A and 10 meters in Block-B in two rows with 6m spacing and 4m burden. Blasting is done by slurry explosive of 125mm dia cartridge-6.25 kg each and 40cm in length in conjunction with ANFO (94% fertilizer grade ammonia and 6% diesel by weight).	As per the proposals.	4 DTH drills-model IBH 10 (2 Nos.), model IDM 30 & IDM 40 (1 Nos. each) are available. Explosive storage facility is available at mine site (magazine) with valid storage licence.
3k	Provision of mining machineries in mineral benches	Category 'A' mechanized working is there in the mine and list of machinery deployed is given in 'Actual Work' column.	DTH Drill (2) IBH 10 DTH Drill (1) IDM 30 DTH Drill (1) IDM 40 Hydraulic Excavators (6)-L & T 300CK-4m3 Hydraulic Excavators (1)-EX 12000-6.5m3 Rock breaker (1)-PC200-20T Wheel loader (1)-HM 2071-7.1m3 Dumpers (10)-TATA EH600-35T Dumper (2)-BH 35-35T Dumper (2)-CAT 773E-60T Dozer with Ripper (2)-CAT D8R-4m x 2m Water Sprinkler (2)-HM 1035-20KL Water Sprinkler (2)-WS28-28KL Explosive Van (1)-TATA-10T/(1)-ASHOK LEYLAND-10T Diesel Tanker (1)-Ashok Ley-6KL Lube Van (1)-TATA 709-6T (As proposed)	Proposals and actuals are same.

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes.	Yes.	Mining operations in the lease area are highly mechanized. As per the geology of the area & machineries deployed, bench height proposals are suitable for working.
3m	Total area covered under excavation/pits	As on 01/04/2015, area under pits is 180.81 ha with proposals for additional area requirement of 56.28 ha aggregating to 237.09 ha upto 2019-20.	As per the Annual returns, actual area under the pits for the year ending on 31/03/2017 is 198.65 ha.	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.26	1:0.37	Higher amount of overburden was removed than the proposals during the year.
3o	Total area put in use under different heads at the end of year	As on 01/04/2015: Area under pits: 180.81 ha Area under Top soil storage: 18.23 ha Area under Dumping: 23.60 ha Area under Mineral storage: 4.91 ha Area under buildings: 6.16 ha Area under Road: 6.62 ha Area under Green Belt: 46.10 ha Unused area: 744.15 ha Total: 1030.58 ha	As on 31/03/2017: Area under pits: 198.65 ha Area under Top soil storage: 18.23 ha Area under Waste Dumping: 32.08 ha Area under Buildings: 6.16 ha Area under Road: 6.62 ha Area under Green Belt: 48.10 ha Unused area: 720.74 ha Total: 1030.58 ha	

3p	Production of ROM mineral during the last five year period as applicable	2016-17: 7300000 T 2015-16: 7299998 T 2014-15: 4700000 T 2013-14: 4700000 T 2012-13: 4700000 T	2016-17: 3132373.100 T 2015-16: 3208344.000 T 2014-15: 3031612.000 T 2013-14: 3091720.000 T 2012-13: 3413086.000 T
3q	General remarks of inspecting officers on method of mining etc.		

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	Top Soil, OB/Waste and rejects having mineral content below threshold value (High silica, high Sulphur and Dolomitic Limestone) are being dumped separately.

4b	Location of topsoil, OB and mineral reject dumps	Top Soil: North side of both Blocks A & B, Western side of Block A, Bunds on either side of Canal and Northern and Western side of Block A Dolomitic Limestone Dumps: North of Block A, North of Block B and SW of Block A, apart from this, one protective bund near Magazine is proposed for 2016-17 with 1050 m length High S High Silica: Proposed in NW of Block B near Magazine Screen Rejects/Fines: Proposed in N of Block B Shale Dumps: North of Block B and within pit in Block A	Top Soil: 4 Dumps and 7 Top Soil Bunds (2 Dumps in the North side of both Blocks A & B- Palgaon Dump-I & II and 2 dumps in the Western side of Block A- Gugus Dump-I & II, Bunds on either side of Canal and Northern and Western side of Block A) Dolomitic Limestone Dumps: 3 Dumps- North of Block A, North of Block B and SW of Block A and one protective bund near Magazine with 1000 m length approximately Other dumps as per the proposals.	In pit dumping of shale is being done in Block A to meet the requirement of Kiln feed for clinker making. This facilitates on-site blending of shale with Limestone and so excavated (blended) material is loaded in the Dumpers and transported to the Crusher.
4c	Number of dumps within lease area and outside of lease area	All dumps within lease area.	Top Soil: 4 dumps and 7 bunds are within lease area Dolomitic Limestone, Shale, High Silica High S, Shale etc. all dumps are within the lease area.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	All dumps are proposed outside the pit limits	Presently dumps are outside the pit limits based on the exploration carried out in the area.	Dumps are proposed mainly in the Shale, Dolomitic Limestone etc. (non-mineralized) zone proved in the exploration results.

4e	Number of active and alive dumps.	Top Soil: 1 Dolomitic Limestone: 2 Shale: 1 and active inpit dumping High S High Silica: 1 Screen Rejects: 1	Top Soil: 1 Active Dump in the North of Block B (Palgaon Dump-II) Dolomitic Limestone: 2 Active dumps- 1 SW of Block A and 1 in N of Block B Shale: 1 in North of Block B and active inpit dumping in Southern part of Block A High S High Silica: 1 Active dump in NW of Block B Screen Rejects: 1 Active dump in N side of Block B	
4f	Number of dead dumps.	Top Soil: 3 Inactive/Dead Dumps, 7 dead/inactive Top Soil Bunds Dolomitic Limestone: 1	Top Soil: 3 Inactive/Dead Dumps-2 in the West of Block A (Gugus-I & II) and 1 in North of Block A (Palgaon Dump-I), apart from this, 7 dead/inactive Top Soil Bunds (On either side of Canal and NW of Block A) Dolomitic Limestone: 1 Dead/Inactive dump- North of Block A Shale: Nil High S High Silica: Nil Screen Rejects: Nil	All inactive / Dead dumps are fully stabilized through plantation.
4g	Number of dumps established.	Top Soil: 3 Inactive/Dead Dumps, 7 dead/inactive Top Soil Bunds Dolomitic Limestone: 1	Top Soil: 3 Inactive/Dead Dumps-2 in the West of Block A (Gugus-I & II) and 1 in North of Block A (Palgaon Dump-I), apart from this, 7 dead/inactive Top Soil Bunds (On either side of Canal and NW of Block A) Dolomitic Limestone: 1 Dead/Inactive dump- North of Block A Shale: Nil High S High Silica: Nil Screen Rejects: Nil	The dumps and bunds are stabilized by plantation. One Top Soil dump in the west of Block A (Gugus-I) has one terrace and rest of the stabilized Top Soil dumps and one Dolomitic Limestone dump have two terraces.

4h	Whether Retaining wall or garland drain all along dumps are there.	Yes.	Yes.	Fresh dumping of High Silica High S, Screen rejects etc. done in the N part of Block b near magazine, therefore, a protective bund has been constructed by Dolomitic Limestone with approximately 10000 m length. Apart from this, garland drains, retaining walls as well as protective bunds are constructed by the the lessee to avoid any wash-off or degradation of land.
4i	Length of Retaining wall or garland drain all along dumps	For the year 2016-17: Garland Drain: proposed for 200 m in N part of Block A Retaining Wall: proposed for 200 m in N part of Block A	For the year 2016-17: Garland Drain: Construction of 400 m in N part of Block A & block B Retaining Wall: Construction of 210 m in N part of Block A	Over all around 4000 m of garland drain and retaining wall (including bunds) are there at the mine site. Apart from this, garland drains are constructed around pit to collect the mine water and avoid any wash off.
4j	Number of settling ponds	Two Settling Tanks	As per the proposals, Two settling tanks are there in the North of Block A having dimensions 20mx10mx3m each.	The water encountered during mining activity is pumped out & utilized for various purposes in the mine. The excess water collected in the water sump at the bottom of the pit is discharged into settling tank on the north side of the "A" Block and the overflow is discharged after proper treatment to the Bop Nallah.

4k	Specific comments of inspecting officer on waste dump management	Waste dump management is found proper at the mine site as all inactive dumps are stabilized and all dumps have proper protective features like garland drians and retaining walls. Mineral bearing waste like screen rejects, dolomitic limestone and high silica high Sulphur containing waste are being dumped separately for any future usage.

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.	No such proposals.	No backfilling proposed ore done.	
5b	Area under backfilling of mined out area	Nil	Nil	Presently, none of mining blocks are exhausted of mineral. Up to the end of the conceptual period no reclamation and rehabilitation as such is envisaged. It was proposed to convert the mining pit as a reservoir to hold the water. No portion of the pit was proposed for backfilling. It was proposed to use the water in the reservoir for cultivation purposes and source of water for the adjoining area.

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No such proposals	Not applicable	Top soil is being used for plantation over dumps or waste land.
5d	Total area fully reclaimed and rehabilitated	67.16 ha as on 01/04/2015 and further plantation proposals for rehabilitation over 5.0 ha area for the five years period from 2015-16 to 2019-20.	67.16 ha of area has been reclaimed and rehabilitated which covers Dump area and Waste Land (Green Belt) area prior to the scheme period i.e. as on 31/03/2015 which is reported in the proposals under SOM. Further, plantation has been carried out for additional 2.0 ha area in the year 2015-16 (Green Belt in the 7.5 m non mining zone) and 1.0 ha in the year 2016-17 (dump plantation over Dolomitic Limestone Dump in N of Block A).	Top Soil Dump Reclamation and Rehabilitation Area: 16.30 ha Dolomitic Limestone Dump Reclamation and Rehabilitation Area: 5.76 ha Green Belt Area: 48.10 ha Total: 70.16 ha
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Backfilling is not proposed upto the conceptual period. It is proposed to convert the pit into water reservoid at the end of mine-life. Average Rainfall for the area is around 1200 mm and considering lease shape and size (1030.58 ha), catchment area shall be good for conversion into a water reservoir. Reclamation of already stabilized dumps and green belt development has been done for around 70 ha 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).	Yes	Yes
6b	Area available for rehabilitation (ha) .	There is no proposal for reclamation and rehabilitation of the mining pit, as the mineral is available further depth in the existing pits. Further, plantation over matured dumps and green belt plantation is proposed under rehabilitation which is 5.0 ha for 2015-16 to 2019-20.	2.0 ha Green belt plantation and 1.0 ha Dump plantation has been done in the years 2015-16 and 2016-17 respectively. No mined out area is available for rehabilitation.
6c	afforestation done (ha).	For 2016-17: 1.0 ha	For 2016-17: Plantation done with 5000 saplings over 1.0 ha area on the Dolomitic limestone dump in the North of Block A. Apart from this 600 saplings also planted outside the lease area.
6d	No. of saplings planted during the year	5000 Nos.	5000 Nos. saplings within lease are as well as 600 saplings outside the lease area
6e	Cumulative no .of plants	Not Available	Total 177429 saplings have been planted till 2016-17 out of which 153189 saplings/trees are alive with survival rate of around 86%.
6f	Any other method of rehabilitation	No	No

6g	Cost incurred on watch and care during the year	Rs 40 Lakh	Total Rs 9063652.86/- were spent (approx Rs 90 lakh) with break-up as given below: Dust, Noise, Vibration study and monitoring-Rs 751000/- Dust supression measures in mines-Rs 6259653/- Env Protection measures at Crusher-Rs 64000/- Plantation & care-Rs 1000000/- Garland Drains, Retaing wall etc.-Rs 989000/-	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Nil	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Nil	Nil	
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	Nil (Plantation proposed over dumps)	Nil (for the year 2016-17)	Plantation over 2.0 ha non-mining zone has been done in the year 2015-16 for Green belt development.

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil (For the Year 2016-17)	Total 48.10 ha of waste land has been converted into Green belt by the year 2015-16.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	Nil	Green belt Plantation has been done.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Yes	Environment monitoring is being done for core zone and buffer zone as per MoEF guidelines in this regard and its report is being submitted to this office.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Garland drains, retaining walls, check dams, bunds, settling tanks etc. all protective measures are planned and executed under the PMCP activities. Available matured dumps are reclaimed and rehabilitated through terracing and plantation. Environment monitoring is being done as MoEF guidelines in the core and buffer zone. Annual report under PMCP and report for environment monitoring are being submitted. Overall PMCP compliance was found good for the area.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks

7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting and dispatch after crushing and screening.	As per the proposals, ROM is scrushed and screened. Then it is dispatched to the Cement Plant.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical Crushing and screening.	As per the proposals.	
7c	Different grade of mineral sorted out at mines.	Only one: Cement Grade Limestone	As per the proposals.	
7d	Any beneficiation process at mines .	Crushing and screening.	Crushing and screening.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			The area is having clay and shale partings and grade of Limestone occuring in the area is varying. therefore various grades are mined to control the quality of final product and also to ensure mineral conservation. Further, High silica High S containing and Dolomitic Limestone are being stacked separately for any future use. Screen rejects/fines that mainly contribute for high 'S' content are being stacked separately. Shale is being dumped inpit in Block A for grade optimization.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks

8a	Separate removal and utilization of topsoil (Rule 32)	Yes	Black cotton soil is occuring at top with approximate thickness of 0.5 m. This top soil has been and is being stacked separately for any future usage. Also, top soil is being utilized for carrying out afforestation activities over the dumps and waste land available in the lease area.	
8b	Concurrent use or storage of topsoil	Both-concurrent use and storage.	Top soil generated is being stored at earmarked location as mentioned in this report previosly. If required, top soil is being used concurrently for plantation.	
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	No	Mineral has not exhausted from the pit and hence, restoration of land by backfilling has not been proposed. At the conceptual stage, it is proposed to convert the pit into water reservoir and restoration of land is not proposed even upto conceptual stage.

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phased reclamation and rehabilitation in form of Dump stabilization and plantation over 5.0 ha dump area was proposed in the Approved SOM for the period 2015-16 to 2019-20.	Reclamation and rehabilitation is being done by terracing and Dump plantation of matured dumps as well as by Green belt development in the non-mining zone and Waste land within the lease area. In the year 2016-17, 1.0 ha of plantation by 5000 nos. of saplings was done with 86% survival rate over the Dolomitic Limestone dump in the N of Block A. Total 70.16 ha area has been reclaimes and rehabilitated as on date having-48.10 ha Green belt and 22.06 ha dump plantation area.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Yes	Yes	EIA study has been done and submitted.
8g	Survival rate	100%	86%	Fencing is being practiced to ensure higher survival rate.
8h	Water sprinkling on roads to control airborne dust	Yes	Yes	As per the extent of mechanization, two water sprinklers are deployed in the mine for water sprinkling to control the airborne dust.

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Plantation has been done judiceously so that aesthetic beauty of the area shall remain maintained. Green belt has been developed on either side of canal in the non-mining (blocked) zone and also in the peryphery of the lease area. Pit is being used as a sump and for rain water harvesting which is beneficial. Overall, except normal degradation of the area due to mining, aesthetic beauty is good.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		Monthly Returns submitted online upto Oct'17 (as on date) Annual Return submitted online upto 2016-17	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Shri. Anil D Kawale Geologist: Shri. Jagan Mohan Reddy Manager: Shri. Soudip Ghosh	Correct information furnished.	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings: 198.65 ha Reclaimed/Rehabilitated: 0 Used for waste disposal: 32.08 ha Occupied by Infrastructre & roads: 12.78 ha Other Purpose (top soil): 18.23 ha Work done under progressive mine closure plan during the year: 1.0 ha	Correct information furnished except 'Reclamation and Rehabilitation' under which area has not been furnished.	Except PMCP (plantation) work over 1.0 ha area, no other reclamation and rehabilitation work carried out for the year and lessee was of the view that under this option data has to be entered only if any work carried out during the year. Suitable spot guidance has been given and as the online return submitted by lessee is under scrutiny stage with MMS division, it was suggested to get the data corrected. It is under correction stage, hence no violation issued.
9d	Scrutiny of Annual return on afforestation	Number of trees plated for the year 2016-17: Within lease area: 5000 nos. Outside lease area: 600 nos. Survival rate: 86%	Correct information furnished.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil	There is no mineral reject. Hence correct information furnished.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening and Closing stocks-Nil ROM Production-3132373.100 T Graded Ore: Opening and Closing stocks-Nil Production & Dispatch-3132373.100 T	Correct information furnished.	Complete ROM produced is sent to the crusher hence ROM opening and closing stocks are 'Nil'. Complete graded ore production is dispatched to the Cement Plant for which the mine is captive.

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale Value: Nil as it is a captive mine. Ex. Mine Price: Rs 238.50 per T Production Cost: Rs 238.50 per T	Sale Value: Nil Ex. Mine Price: Rs 238.50 per T Production Cost: Rs 238.50 per T	Ex-mine price, in terms of Rule 45 (8)(b)(V) of MCDR'2017, for captive mines shall be cost of production. As per the instruction issued by CCOM vide letter No. O-11011/1/2006-CCOM-Vol. I dated 03/11/2017, ASP/ ex-mine price and cost of production for other captive mines also checked and found the information furnished by the lessee correct (other lessees reported more or less same Ex-mine price).
9h	Scrutiny of Annual return on fixed assets	Given.	Correct information furnished.	
9k	Scrutiny of Annual return on mining machineries	Details pertaining to Mining Machinery is furnished under Part-V (5).	Correct information furnished.	

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