INDIAN BUREAU OF MINES
MINERALS DEVELOPMEMT AND REGULATION DIVISION

MCDR INSPECTION REPORT

Bangalore regional office

Mine file No : KNT/GLB/LST/7/BNG **Mine code : 38KAR10012**

(i) Name of the Inspecting Officer and ID No. : **130) PRASHANT S HEGDE**

(ii) Designation : Senior Mining Geologist

(iii) Accompaning mine Official with Designation : Shri K.B. Verma. GM Mines

(iv) Date of Inspection : 08/08/2017

(v) Prev.inspection date : 15/10/2015

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **WADI - I**

(b) Registration NO. : **IBM/256/2011**

(c) Category : A Fully Mechanised

(d) Type of Working : Opencast

(e) Postal address

State	:	KARNATAKA
District	:	GULBARGA
Village	:	WADI
Taluka	:	CHITTAPUR
Post office	:	WADI
Pin Code	:	
FAX No.	:	022-25811618
E-mail	:	kunj.verma@acclimited.com
Phone	:	022-67973967 (O),948068626

(f) Police Station : Chittapur

(g) First opening date : 09/08/1966

(h) Weekly day of rest : SUN

2. Address for correspondance : M/s ACC Limited, Wadi Cement Works
Wadi-585 225,Taluk-Chittapur
Dist-Gulbarga ,State -Karnataka

3. (a) Lease Number : KAR0074
(b) Lease area : 471.03
(c) Period of lease : 20
(d) Date of Expiry : 18/02/2023

4. Mineral worked :

LIMESTONE	Main
CLAY (OTHERS)	Associated
SHALE	Associated

5. Name and Address of the

Lessee : ACC Limited
WADI CEMENT WORKS, WADI
[P.O], GULBARGA, GULBARGA
KARNATAKA
Phone:08476-62411
FAX :08476-62190

Owner : Neeraj Akhoury
121, Maharshi Karve road,
"Cement House" Mumbai
MUMBAI (SUBURBAN)
MAHARASHTRA
Phone:
FAX : 02225811618

Agent : DR.S.B.SINGH
DIRECTOR (PLANT), WADI
CEMENT WORKS WADI, GULBARGA
GULBARGA KARNATAKA
Phone:
FAX :

Mining Engineer

Name : B N Prasadrao,Full Time
Qualification : B.E. Mining Engineering
Appointment/ Termination date : 20/06/2016

Geologist

Name : JAGDISH MADIVAL,Full Time
Qualification : M.Sc (GEOLOGY)
Appointment/ Termination date : 05/07/2013

Manager

Name : KUNJ BEHARI VERMA
Qualification : B.E (MINING)
Appointment/ Termination date : 16/09/2012

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

Existing rule 11 MCDR1988	28/06/1990
Modif.of approved Mining Plan	10/06/1993
Mining Scheme rule 12 MCDR1988	12/10/1994
Mining Scheme rule 12 MCDR1988	08/03/2000
Renewal under rule 22 MCR1960	16/06/2003
Mining Scheme rule 12 MCDR1988	20/10/2008
Mining Scheme rule 12 MCDR1988	24/09/2013

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	25 nos of BHs	27 nos of Core BHs with 625 total meterage	NIL
1b	Exploration over lease area for geological axis 1 or 2	NIL	G-1: 390.04 Ha G-3: 80.99 Ha	Entire ML covered under G-1 stage exploration except Plant area
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NA	M/S Synergy Geotech, Nagpur Expenditure incurred : Rs.23 Lakhs	NIL
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	G-1: 390.04 Ha G-3: 80.99 Ha	Entire ML covered under G-1 stage exploration except Plant area
1e	Balance reserve as on 01/04/20	----------	Limestone (Cement grade) 57.19 million tonnes (Grade: CaO-38 to 48 %; MgO-0.1 to 0.8 %; SiO2-9 to 20%; Al2O3- About 2 to 4 % and Fe2O3- 0.6 to 1.3 %)	Based on approved RMP dated 8/11/2017.
1f	General remarks of inspecting officers on geology, exploration etc	----------	----------	The exploration of Wadi Mine was carried out with 214 nos of boreholes (Core, CCS and DTH) with 4,955 total meterage in about 150 m X 150 m grid interval. Entire ML covered under G-1 stage exploration except Plant area. G-3 area cannot be converted into G-1 due to presence of cement plant structure within ML.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks

2a	Location of development w.r.t.lease area	Block-4 (SW part) Block-1 (N-part)	Block-1 (N-part)	V/L issued on 5/9/17
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in ore and top soil/OB	One bench in top soil /OB and 4 benches in ore	NIL
2c	Stripping ratio or ore to OB ratio	1:0.08	1: 0.08	Based on Limestone Data
2d	Quantity of topsoil generation in m3	7,500	4375	NIL
2e	Quantity of overburden generation in m3	337000	252,750 (404400 tonnes)	BD-1.6 taken as per Approved SOM
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	---------- ----	----------	There is little overburden in this mine i.e clay materials and top soil. The formations of benches were made based on the grade of mineral to facilities the proper blending. V/L issued on 5/9/17 for deviation in development.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Single pit	Single pit (Existing pit 3000 m X 1000 m X 35 m)	NIL
3b	Quantity of ROM mineral production proposed	7.72 million tonnes of limestone	Limestone- 5.1 million tonnes	NIL
3c	Recovery of sailable/usable mineral from ROM production	100 %	100 %	NIL
3d	Quantity of mineral reject generation	NIL	NIL	NIL

3e	Grade of mineral rejects generation and threshold value declared.	Limestone threshold value: CaO- 35% (Min); MgO- 4 %(Max); SiO2- 18% (Max) and Alkalies - 0.5 % (Max)	Entire ROM is being utilized in their Captive Plant.	High grade Limestone blended with shale /siliceous Limestone
3f	Quantity of sub grade mineral generation.	There is no generation of sub-grade ore.	NIL	Shale mined out is used as corrective material in the cement manufacturing process.
3g	Grade of sub grade mineral generation	Not applicable	NIL	NIL
3h	Manual / Mechanised method adopted for segregating from ROM	No such proposals	The limestone from the pit faces is transported by 85 to 100 tonnes dumpers to crusher units located within ML. The crushed material transported through conveyor belt to cement plant located within ML.	NIL
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposals	No such study carried out	NIL
3j	Provision of drilling and blasting in mineral benches	Deep-hole drilling and blasting in ore zone (with 3 drills)	Deep-hole drilling and blasting in ore zone (with 3 drills)	NIL
3k	Provision of mining machineries in mineral benches	Shovel & dumper combination	The machineries were deployed as proposed in approved SOM	NIL
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	1 to 3 mtr-Top soil /clay bench and 4 nos of ore benches with height 6-9 m (Average 8m)	1 to 3 mtr-Top soil /clay bench and 4 nos of ore benches with height of 6-9 m (Average 8m) and width of 15 to 30 m	Formation of benches are based on grade of ore.
3m	Total area covered under excavation/pits	275 Ha	246.29 Ha	NIL

3n	Ore to OB ratio for the pit/mine during the year.	1:0.08	1: 0.08	For Limestone Mineral
3o	Total area put in use under different heads at the end of year	Pit- 275Ha Dumps: 35 ha Green Belt-26 Ha Infrastructures & Plant, road : 85.8	Pit- 246.29 Ha Dumps: 24 Green Belt-26 Ha Infrastructures & Plant : 96	NIL
3p	Production of ROM mineral during the last five year period as applicable	Limestone: 2012-13- 7.72 2013-14-7.72 2014-15-7.72 2015-16-7.72 2016-17--7.72	Limestone: 2012-13- 5.21 2013-14- 5.05 2014-15-5.47 2015-16-5.83 2016-17-5.10	Unit: million tonnes
3q	General remarks of inspecting officers on method of mining etc.	---------- -------	----------	The lower side deviation of exploitation was due to less demand of cement in the market. Besides, the lessee had produced 669,667 tonnes of Shale (Minor Mineral) against the proposal of 1.28 million tonnes target during year 2016-17.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	There is a proposal of separate stacking topsoil and OB.	Actual work done as per the proposals.	NIL
4b	Location of topsoil, OB and mineral reject dumps	The top soil utilized for afforestation. The OB waste will be back-filled.	Top soil utilized for afforestation and OB wastes were back-filled.	NIL
4c	Number of dumps within lease area and outside of lease area	5 nos of dumps (within ML) and NIL Out-side ML.	5 nos of dumps(within ML) and NIL Out-side ML.	NIL

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Near to ML boundary and near to their captive plant/crusher as entire ML is mineralized	Near to Near to ML boundary and near to their captive plant / crusher as per the proposals.	NIL
4e	Number of active and alive dumps.	NIL	NIL	NIL
4f	Number of dead dumps.	5	5	NIL
4g	Number of dumps established.	5 dumps stabilized by plantation	5 dumps stabilized by plantation	NIL
4h	Whether Retaining wall or garland drain all along dumps are there.	No such proposals	Garland drain/trench all along the periphery of the dump.	NIL
4i	Length of Retaining wall or garland drain all along dumps	No such proposals	NIL	NIL
4j	Number of settling ponds	No such proposals	NIL	NIL
4k	Specific comments of inspecting officer on waste dump management	---------- ---	----------	As on date about 26 Ha area has been developed as Green Belt. About 28.169 Ha area of mined pit was fully reclaimed and rehabilitated in this mine (As per approved RMP dated 8/11/2017).

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.	337,000 m3 quantity of wastes will be backfilled	252,750 m3 quantity of wastes was backfilled	NIL
5b	Area under backfilling of mined out area	Backfilling proposals in Block-4 and block-1 (4 Ha)	Backfilling carried out in block-1 only (1.5 Ha)	V/L issued on 5/9/17

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Spreading of top soil on the waste dumps and thereafter plantation on the waste dumps for better survival rate of the plants.	Actual work done as per the proposals.	NIL
5d	Total area fully reclaimed and rehabilitated	Proposed to convert the mined out area into water reservoir and back-filling in part of pit	Actual work done as per the proposals.	NIL
5e	General remarks of inspecting officers on backfilling and reclamation etc.	----------	----------	The generation of OB waste is negligible as thickness OB was very less. As on date about 26 Ha area has been developed as Green Belt. About 28.169 Ha area of mined pit was fully reclaimed and rehabilitated in this mine (As per approved RMP dated 8/11/2017).

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.	Annual report submitted on 22/7/17.	NIL
6b	Area available for rehabilitation (ha) .	30 Ha	30 Ha	NIL
6c	afforestation done (ha).	28 Ha	28 Ha	NIL
6d	No. of saplings planted during the year	3500 nos	3500 nos	NIL

6e	Cumulative no .of plants	75000 nos	80000 nos	NIL
6f	Any other method of rehabilitation	Water reservoir - 2HA	Water reservoir - 2HA	NIL
6g	Cost incurred on watch and care during the year	5 lakhs	6 lakhs	About 28.169 Ha area of mined pit was fully reclaimed and rehabilitated in this mine.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	4Ha	4Ha	NIL
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	4 Ha	1.5 Ha	NIL
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	3.5 Ha	NIL	NIL
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	2 Ha	2 Ha	NIL
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NIL	NIL	Part of existing pit (60.63 ha) is being utilized as water reservoir. Further, about 28.169 Ha area of mined pit was fully reclaimed and rehabilitated in this mine.

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	NIL	3500 nos saplings within ML in 3 Ha and 3500 nos of saplings outside ML. were planted	NIL
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NIL	NIL	NIL
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NIL	NIL	NIL
6p	Compliance of environmental monitoring (core zone and buffer zone)	Season-wise environmental monitoring of ambient air quality, water quality, dust fall rate, soil sample analysis and noise level.	Season-wise environmental monitoring of ambient air quality, water quality, dust fall rate, soil sample analysis and noise level are being carried out and all parameters are within limit.	NIL
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	----------	----------	The lessee had carried out PMCP proposals as per the proposals.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Direct ROM Mineral dispatch to their captive cement plant.	Direct ROM Mineral dispatch to their captive cement plant of having 6.5 mtpa clinker production capacity.	Shale occurring below the limestone horizon is being utilized in the plant feed in regular manner as an additive.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No such proposals	Bench wise blending as per their requirement.	NIL

7c	Different grade of mineral sorted out at mines.	No such proposals	Bench wise blending as per their requirement.	NIL
7d	Any beneficiation process at mines .	No mineral Beneficiation proposals.	No mineral beneficiation carried out except crushing.	Three Crusher unit having capacity 650 TPH, 1000 TPH & 1200 TPH respectively.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	----------	----------	Beneficiation of Limestone and shale are not required as entire ROM produced is being utilized with proper blending in their cement plant.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	The top soil generated (7500 m3) will be utilized for afforestation	4375 m3 of top soil generated during year 2016-17 and utilized for afforestation work	NIL
8b	Concurrent use or storage of topsoil	Spreading of top soil on the waste dumps and thereafter plantation on the waste dumps for better survival rate	4375 m3 of top soil generated during year 2016-17 and utilized for afforestation work	NIL
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	There is separate dump for waste O/B and top soil	Separate dumping of top-soil and waste O/B are being carried out.	NIL
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposals	NIL	NIL

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	It is planned to Rehabilitation of part of mined out pit by making water reservoir and part pit back-filling.	1)60.6 Ha area has been used as water reservoir, so far 2) 28 Ha area backfilled so far.	NIL
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Entire ML area is non-forest. There is proposal of Afforestation of 3,500 nos of saplings in 3 Ha area within ML	3500 nos saplings within ML in 3 Ha and 3500nos of saplings outside ML. were planted during year 2016-17.	NIL
8g	Survival rate	90%	85 %	Year 2016-17
8h	Water sprinkling on roads to control airborne dust	Proposed	The regular dust suppression by water tankers/sprinkling of water is made in the mine, colony and plant areas.	NIL
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	----------	----------	The aesthetic beauty in and around mine is good as lessee had carried out huge afforestation and other environmental protective measures as per approved SOM.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted upto July -17 A.R. submitted upto 2016-17	Regular	NIL
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Shri Mr. B.N. Prasadrao, Mining Engineer and Shri Jagadish M.K., Geologist	Shri Mr. B.N. Prasadrao, Mining Engineer and Shri Jagadish M.K., Geologist	NIL

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit Area = 246.29 Ha Reclaimed/rehabilitated area = 28.169 Ha Waste disposal area : 24 Ha Infrastructure, road and plant area: 96 Ha	Actual also same	NIL
9d	Scrutiny of Annual return on afforestation	3,500 nos (WML) 3,500 nos nos (OML)	Actual also same	NIL
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NIL	NIL	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	NIL	NIL	NIL
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex-mine price per tonne = Rs 174 (~) & Cost of production per tonne = Rs 174	Appeared to be correct as captive mine	NIL
9h	Scrutiny of Annual return on fixed assets	Rs 184,26,76,911	Appeared to be correct as plant within ML	NIL

9k	Scrutiny of Annual return on mining machineries	3 nos of Rock drill ; 4 nos of Shovel of (6.5 m3); 1 nos of Shovel of (10 m3); 11 nos of dumpers of 85 tonnes capacity; 2 nos of dumpers of 100 tonnes capacity ;1 nos Dozer (320 HP); 1 nos Motor Grader; 2 nos Front end Loader (5.5 m3); 3 nos of crushers (650 TPH, 1000 TPH & 1200 TPH) and one Water tanker.	Same as mentioned in AR	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)		06/09/2017	25/10/2017			

Date :

(**PRASHANT S HEGDE**)

Indian Bureau of Mines