

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

**Inspection under SDF for star rating of mines REPORT**

**Bangalore regional office**

**Mine file No :** KNT/GLB/LST/7/BNG

**Mine code :** 38KAR10012

- (i) Name of the Inspecting : **A101** ) **ARUN KUMAR**  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Mr. Vikram Singh-Mines Manager  
Official with  
Designation
- (iv) Date of Inspection : 10/12/2020
- (v) Prev.inspection date : 19/12/2019

**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 : M/s ACC Limited, Wadi Cement Works  
correspondance : 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 : SHALE Associated  
LIMESTONE Main  
CLAY (OTHERS) 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 : K RAVEENDRANATHA REDDY  
 Wadi cement Works, Wadi  
 GULBARGA KARNATAKA  
 Phone:  
 FAX :

## Mining Engineer

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

## Geologist

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

## Manager

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

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
		MP review under 17(1) MCR 2016	08/11/2017
		MP modif under 17(3) MCR 2016	09/09/2020

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Exploration done in 2016-17 and no backlogs	27 core holes were drilled to a total of 625m depth in 2016-17
1b	Exploration over lease area for geological axis 1 or 2	G1 & G3	G1-390.04 Ha, G3-80.99 Ha	Entire 471.03 Ha is mineralized.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	Nil	M/s Synergy Geotech Cost. Rs: 15,06,184/- in the past
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal	Nil	Wadi 2 Cement Plant area falls in 80.99 Ha
1e	Balance reserve as on 01/04/20	Nil	Limestone: 4,03,70,000 tons (CaO-48% & SiO <sub>2</sub> -10%) Shale: 3,22,22,000 tons (CaO- 31% & SiO <sub>2</sub> -26%)	As per the Annual Returns submitted for the FY:2019-120
1f	General remarks of inspecting officers on geology, exploration etc			In all 214 bore holes were drilled to a total meterage of 4954.40 mts at 150m*150mts grid interval. Cement plant falls in 80.99 Ha.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Development proposed - Western side :N50 -E500,N50 -E250,N100 - E250,N100 - E500, North side: N1800 E2600,N1800 E2400,N2000 E2400,N2000 E2600	Actual Development done - Western side: N60 - E380,N50 -E190,N105 - E185,N100 - E457 North side: N1815 E2595, N1800 E2388, N2020 E2379, N2030 E2600	ML3A to ML4A, ML10 to ML12.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in overburden and mineral proposed	Separate benches maintained in overburden and mineral	OB - 1 bench, Limestone - 04 benches including shale
2c	Stripping ratio or ore to OB ratio	1:0.09	1:0.1	Nil
2d	Quantity of topsoil generation in m3	4045 tons	3200 tons	Less handling of OB done
2e	Quantity of overburden generation in m3	7,15,034 tons	6,44,333 tons	Violation issued
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development was carried out within the proposed grids as per the proposal

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#### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit proposed for production	Actual production is carried out in one pit only	Approximate dimensions of pit ( L: W : D) 3250m:825m:27m
3b	Quantity of ROM mineral production proposed	Limestone: 66,65,983 Tons Shale: 9,73,336 Tons	Limestone: 59,32,933 Tons Shale: Nil	Modified RMP submitted & approved vide letter No.: 279/116/89/BNG-336 dt:09/09/2020 for exclusion of shale.
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	All mineral extracted is used for cement manufacturing
3d	Quantity of mineral reject generation	No Proposal	Nil	Nil
3e	Grade of mineral rejects generation and threshold value declared.	Limestone threshold value:CaO-34% (Min),MgO-5% (Max)	Nil	High grade limestone is blended with siliceous limestone
3f	Quantity of sub grade mineral generation.	No Proposal	Nil	Nil

3g	Grade of sub grade mineral generation	No Proposal	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	All the blasted material is proposed to be sent to crushers for further sizing	All the blasted material sent to crushers for further sizing	There is no segregation of material. 3 crushers are operated to reduce size of material viz.-12.5mm, -50mm & -50mm
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal for beneficiation proposed	No beneficiation study carried out as mineral is directly used for cement manufacturing	ROM is used for manufacturing of cement & does not require any beneficiation
3j	Provision of drilling and blasting in mineral benches	Deep Hole Drilling & Blasting proposed	Deep Hole Drilling & Blasting was carried out	Drilling carried out by DTH Drills of 115mm & 150mm. Blasting is carried out by using ANFO, NONEL detonators & Electronic detonators
3k	Provision of mining machineries in mineral benches	Shovel dumper combination proposed	Shovel dumper combination used for mining	Machineries used on the day of inspection: Drills-01 Nos; Shovel-02 Nos; Dumpers-07 Nos; Water tankers-02nos; Loader & Dozer-01 no
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed Bench Ht : OB - 1-3 mts, Limestone 6-8 mtrs;	OB Bench Ht: 1-3 mtr & Limestone bench ht:6-8Mts.Width of the benches were 10-12 mts	Formation of benches are based on the grade of limestone
3m	Total area covered under excavation/pits	296.89 Ha At the end of the plan period	279 Ha at the end of reporting year	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.09	1:0.1	Nil

3o	Total area put in use under different heads at the end of year	Covered under current workings: 296.89 Ha, Reclaimed/Rehabilitated: 28.169 Ha; top soil storage- 4.23 Ha, Used for waste disposal: 11.34 Ha; Occupied by Infrastructure : 96.1 Ha; Roads-0.45 Ha, Untouched area & green belt-62.02 Ha at the end of plan period	Actual area Covered under current workings: 279 Ha, Reclaimed/Rehabilitated: 15.6 Ha; Used for waste disposal: 5 Ha; Occupied by Infrastructure: 96.55 Ha; Untouched area & top soil storage: 90.48 Ha, Area covered under PMCP-2.00	Nil
3p	Production of ROM mineral during the last five year period as applicable	2015-16: Lst: 77,19,250, Shale: 12,76,875 2016-17: Lst: 77,19,750, Shale: 12,78,000 2017-18: Lst: 77,18,250, Shale: 12,76,875 2018-19: Lst: 66,74,073, Shale: 9,73,336 2019-20: Lst: 66,65,983, Shale: 9,81,336	2015-16: Lst: 58,32,078, Shale: 6,74,303 2016-17: Lst: 51,00,099, Shale: 6,69,667 2017-18: Lst: 56,80,730, Shale: 8,09,555 2018-19: Lst: 61,28,618, Shale: Nil 2019-20: Lst: 59,32,933, Shale: Nil	All unit in tons. Actual production is within the proposed limits
3q	General remarks of inspecting officers on method of mining etc.			Opencast method of mining with shovel dumper combination & deep hole drilling & blasting was practiced. Actual production is within the proposed limits

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Solid Waste Management - Dumping:

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Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	OB removed was proposed for backfilling	OB removed & backfilling was done as per proposal	Backfilling was done in section line ML 9 to ML 11 & ML 5A to ML 6A. Top soil generated was utilized for afforestation
4b	Location of topsoil, OB and mineral reject dumps	No proposal of OB stacking	Top soil was utilized for afforestation & Ob waste was removed & backfilled	Nil
4c	Number of dumps within lease area and outside of lease area	WML-4nos OML-Nil	WML-4nos OML-Nil	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps proposed outside UPL	Dumps located along ML boundary & outside the UPL	Approximately 50m away from the ultimate pit limit
4e	Number of active and alive dumps.	No proposal	Nil	No active dumps were observed. Backfilling in progress
4f	Number of dead dumps.	4nos	4nos	All dumps are matured & stabilized by plantation
4g	Number of dumps established.	4nos	4nos	Dumps are stabilized by plantation
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal	Garland drain/trench all along the periphery of the dump	Nil
4i	Length of Retaining wall or garland drain all along dumps	No proposal	Nil	Nil
4j	Number of settling ponds	No proposal	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management			Waste dump management was satisfactory. OB removed was backfilled in the worked out mining pit as per proposal

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Solid Waste Management - Backfilling:

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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 proposed after exhausting limestone	Backfilling is carried out after full extraction of mineral	Nil
5b	Area under backfilling of mined out area	18.80Ha	15.60 Ha	Backfilling in progress
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Spreading of top soil on backfilled area & plantation proposed	Spreading of top soil on backfilled area & plantation carried out for better survival rate of the plants	Top soil generated was spreaded on the backfilled area
5d	Total area fully reclaimed and rehabilitated	28.169 Ha	15.60 Ha	28.169 Ha is converted into water reservoir & 15.6 Ha covered under backfilling
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Major portion of the mined out pit is converted into water reservoir & backfilling carried out in the north & west side as proposed

#### 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 01st July every year	PMCP report received in time	Submitted on 25.06.2020
6b	Area available for rehabilitation (ha) .	No proposal	Nil	Nil
6c	afforestation done (ha).	2 Ha	2 Ha	Nil
6d	No. of saplings planted during the year	4000 saplings proposed	5500 saplings planted in all	Nil
6e	Cumulative no .of plants	41747 Saplings .	92250 Saplings	Including plant & Mines area



6f	Any other method of rehabilitation	No proposal	Nil	Nil
6g	Cost incurred on watch and care during the year	Rs.1,00,320.00	Rs.9,37,000.00	Expenses incurred including environment monitoring
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	North Side: L-250M; B-80M; D-8M West: L-70M; B-50M; D-6M	North: L-200M; B-70M; D-8M West: L-70M; B-50M; D-6M	Backfilling of voids being done by overburden
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Backfilling proposed	Backfilling by overburden carried out in the dug out pit	Backfilling of voids being done by overburden
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Not specified	2.00 Ha	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	60.63 Ha of area is presently available as water reservoir.	Sump 7 is under development
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Plantation carried out on backfilling in ML 5A to ML7A	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Nil	Nil

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Seasons wise environmental monitoring of air,water,soil & noise proposed	Seasons wise environmental monitoring of air,water,soil & noise was carried out as per the proposal	All values of environment monitoring are within permissible limits.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			The lessee has carried out the PMCP activities as per the proposal. Backfilling was done & plantation carried on the backfilled area

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#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Direct ROM dispatch to their captive plant	Blasted material is sent to the crusher for further sizing & dispatched to their captive cement plant of 6.5 MTPA clinker production capacity	3 crusher units having 700TPH,1000 TPH & 1200 TPH respectively
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No proposal	Bench wise blending as per the requirement of cement plant	All material excavated is used for cement manufacturing
7c	Different grade of mineral sorted out at mines.	No proposal	No sorting is done in mines	Nil
7d	Any beneficiation process at mines	No proposal	No beneficiation is done in mines except crushing	Only crushing is done, after which mineral is conveyed to plant through covered belt conveyors
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Beneficiation of the limestone is not required as entire ROM produced are being utilized with proper blending in their cement plant

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## Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	4045 tons proposed	3200 tons is generated and used for plantation purpose	Top soil is used for plantation purpose
8b	Concurrent use or storage of topsoil	Spreading of top soil over the backfilled area	Top soil generated was used for spreading on the backfilled areas & plantation done	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate earmarked place for backfilling is proposed	OB excavated is Backfilled as per proposal	Overburden is backfilled & no other waste rock / rejects / fines occur in mines
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Separate earmarked place for backfilling is proposed	OB excavated is Backfilled as per proposal	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	It is proposed to rehabilitate a part of the dug out pit by backfilling	15.60 Ha covered under backfilling	28.169 Ha is considered as fully reclaimed & rehabilitated by water reservoir
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	4000 saplings proposed	WML- 5500 nos OML - 4000 nos	Plantation by karanj carried out at earmarked places
8g	Survival rate	85%	80%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads proposed to suppress the dust	Continuous water sprinkling on haul roads by water tankers to suppress the dust generated; Along with this at crushers Bag filters are in place for preventing dust to airborne	02 water tankers each of 28KL & 10KL are operated to cover haul roads

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Aesthetic beauty in & around the mine area was good as the lessee had carried out afforestation & environmental protection measures as per the proposal.
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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 Nov 2020 A.R. Submitted up to 2019-2020	AR submitted on 27.06.2020	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Manager: Shri. Vikram Singh Mining Engineer: Shri. B N Prasadrao Geologist: Shri . Jagadish M K	Same mines official were present at time of inspection	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current workings: 279 Ha, Reclaimed/Rehabilitated: 15.6 Ha; Used for waste disposal: 5 Ha; Occupied by Infrastructure : 96.55 Ha; Untouched area & top soil storage: 90.48 Ha, Area covered under PMCP-2.00	Appears to be correct	
9d	Scrutiny of Annual return on afforestation	WML - 5500 nos & OML - 4000 nos @ 80% survival rate	Appears to be correct	

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening Stock: Nil Production: Limestone- 59,32,933 tons Closing stock: Nil	Appears to be correct
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale price- Nil Ex. Mine Price- Nil Production cost -(Rs./T)- 180.14	Sale price is not applicable since the mines is a captive
9h	Scrutiny of Annual return on fixed assets	Rs. 1,84,12,30,077 /- (including land, plant, machinery & transport equipment)	Appears to be correct
9k	Scrutiny of Annual return on mining machineries	Drills - -3 Nos, Shovels- 6 Nos, Dumpers-14 Nos, Loaders - 02 nos; Dozer-01 no; Water tankers- 10KL&28KL-01 each; Explosive van- 10Ton-01no; BMD Truck - 01 no;	Appears to be correct

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**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)	03/02/2021			
MCDR17	Rule 13(1)	03/02/2021			

**Date :**

**(ARUN KUMAR)**

Indian Bureau of Mines