

**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 :
Official with
Designation
- (iv) Date of Inspection : 19/12/2019
- (v) Prev.inspection date : 13/12/2018

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 : 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

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	27 core holes were drilled to a total depth of 625m in FY 2016-17
1b	Exploration over lease area for geological axis 1 or 2	G1, & G3	G1-390.04 Ha G3-80.99 Ha	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	Nil	M/s Synergy Geotech Cost: Rs 15,06,184
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal	G3 -80.99 Ha	Plant area falls in G3 axis
1e	Balance reserve as on 01/04/20	Nil	Limestone: 4,63,06,382 tons Shale: 3,22,22,000 tons	As per the Annual Returns submitted for the FY-2018-19
1f	General remarks of inspecting officers on geology, exploration etc			27 core holes were drilled to a total depth of 625m in FY 2016-17. Cement plant falls in 80.99 Ha of the ML area

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Location of Development proposed: N900 to 1060 ,E780 to 1680 & N1800 to 2000, E 2400 to 2600	Development is carried out in : N915 to 1060 - E775 to 1670 & N1810 to 2025 ,E 2365 to 2580	Development was carried out in between ML 2A-4A (North Side), ML3A (North side dump handling) & ML10-ML12 (West Side).
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in overburden and mineral proposed.	Separate benches in overburden and mineral maintained	OB-1 bench, Limestone-4 Bench
2c	Stripping ratio or ore to OB ratio	1:0.09	1:0.17	Additional Overburden removed & lower excavation of limestone

2d	Quantity of topsoil generation in m3	9195.2 tons	7200 tons	Nil
2e	Quantity of overburden generation in m3	714636.8 tons	1073248 tons	Bulk Density:Limestone- 2.5 Tons/ m3 & OB- 1.6 Tons/ m3
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development of the mine was carried out as per the proposal. Benches are formed based on the grade of the mineral to facilitate proper blending.

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: 66,74,073 Tons Shale: 9,73,336 Tons	Limestone: 61,28,618 Tons, Shale- Nil	Violation issued for non production 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 shale/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 is sent to crushers for further sizing	There is no segregation of material adopted. Three 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 proposals	No beneficiation study carried out	Nil
3j	Provision of drilling and blasting in mineral benches	Deep Hole Drilling & Blasting in limestone benches	Deep Hole Drilling & Blasting carried out as proposed	Drilling carried out by DTH Drills of 115mm & 150mm. Blasting is carried out by using ANFO & NONEL detonators.
3k	Provision of mining machineries in mineral benches	Provision of mining Machineries made like Excavator, Electrical Excavator, Dumpers, Drills, Water tankers, explosive van, Grader, compactor, Loader & Dozer	The machineries were deployed as proposed in the approved RMP	os.Explosive van-10Ton-01no; BMD Truck - 01 no.; Crusher-800Tph,1000 Tph&1200 Tph Drills-04 Nos; Shovel-06 Nos; Dumpers-14 Nos; Water tankers-02
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposal for OB Bench Ht: 3mts; Ore bench ht: 8mts;	OB Bench Ht: 3mts; Ore bench ht: 8mts is being practised	Formation of benches are based on grade of ore
3m	Total area covered under excavation/pits	296.89 Ha at the end of the plan period	270.84 Ha at the FY 2018-19	As reported in AR
3n	Ore to OB ratio for the pit/mine during the year.	1:0.09	1:0.17	Additional Overburden removed

3o	Total area put in use under different heads at the end of year	Pit: 296.89 Ha, Storage for top soil- 4.23 Ha, Waste dumping-11.34 Ha, Infrastructure : 96.1 Ha; Roads-0.45 Ha, & others- 62.02 Ha at the end of plan period	Actual area Covered under current workings: 270.84 Ha, Reclaimed/Rehabilitated: 27 Ha; Used for waste disposal:14.89Ha; Occupied by Infrastructure: 96.1 Ha; Untouched area & top soil storage:78 Ha, work done under PMCP:2.00Ha	Nil
3p	Production of ROM mineral during the last five year period as applicable	2014-15- Lst:77,18,000, Shale:12,76,650 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 Tons, Shale: 9,73,336 Tons	2014-15 Lst:54,74,760 ,Shale:7,75,422 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- Limestone: 61,28,618 Tons, Shale- Nil	All unit in Tons.Violation issued for non consumption of Shale
3q	General remarks of inspecting officers on method of mining etc.			In FY 2018-19, No shale has been consumed .Violation letter has been issued for necessary clarification.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate stacking of top soil & OB for backfilling is proposed	Separate stacking of top soil & OB for backfilling is done as per proposal	Nil

4b	Location of topsoil, OB and mineral reject dumps	The top soil was proposed to be utilized for afforestation & OB removed for backfilling.	Top soil utilized for afforestation & OB waste is removed & backfilled	Backfilling locations: N600 E550,N550 E550,N720 E2740,N1060 E2720,N800 E2900, N1000 E2860 in SL ML9 to ML11 & from ML 5A to ML7A
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 the ultimate pit limit	Dumps carried outside the ultimate pit limit	Approximately 50m away from the ultimate pit limit
4e	Number of active and alive dumps.	Nil	Nil	No active dumps are found. Backfilling in process
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 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 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 the proposal

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Backfilling proposed after exhausting limestone	Backfilling is carried out after full extraction of mineral	Nil
5b	Area under backfilling of mined out area	18.80 Ha	14.171Ha	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 for better survival rate of the plants	Actual work done is as per the proposal	Nil
5d	Total area fully reclaimed and rehabilitated	42.249 Ha	42.34 Ha	28.169 Ha is converted into water reservoir & 14.171 Ha is 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.	Annual report received in time.	Submitted report on 27.06.2019
6b	Area available for rehabilitation (ha) .	No proposal	Nil	Nil
6c	afforestation done (ha).	2 Ha	2 Ha	Plantation done on backfilled areas
6d	No. of saplings planted during the year	250 nos.	4000 nos.	Neem, Karanj etc
6e	Cumulative no .of plants	41497 saplings.	86750 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.66,880/-	Rs.9,37,000/-	Expenses incurred including environment monitoring
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Northern side:11.2 Ha, Western side:2.88 Ha	14.171 Ha	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Proposed for backfilling by Overburden	Backfilling being done in ML 5A to ML7A	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	250 nos	250 nos	Plantation done in backfilled area by Karanj
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal for converting dug out pits into water reservoir in the reporting year	6 nos of rain water harvesting pond covering 60.63 Ha of area is presently used as water reservoir	Sump 7 is under development
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No other proposal of reclamation	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)	Season wise environmental monitoring of ambient air quality, water quality, water quality soil sample analysis & noise level proposed.	Season wise environmental monitoring of ambient air quality, water quality soil sample analysis & noise level are being 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 is done & plantation carried out on waste dumps & backfilled area.

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.	Blasted material is sent to the crusher for further sizing & dispatched to their captive cement plant of having 6.5 MTPA clinker production capacity	3 Crusher units having 700TPH,1000TPH & 1200TPH 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 the material excavated is used for cement manufacturing; hence no sorting required.
7c	Different grade of mineral sorted out at mines.	No such proposal	No sorting is done in mines	Nil
7d	Any beneficiation process at mines	No mineral beneficiation proposals	No mineral beneficiation carried out 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 limestone & shale 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)	The top soil generated (9196 tons) will be utilized for afforestation	8000 tons of top soil is generated during the year 2018-19 and utilized for afforestation work	Top soil is used for plantation purpose
8b	Concurrent use or storage of topsoil	Spreading of top soil on the waste dumps & backfilled areas, thereafter plantation to be done for better survival rate	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 in between section lines ML 5A to ML7A	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 in between section ML 5A to ML7A	OB is backfilled & plantation is done & no other waste rock / rejects / fines occur in mines
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	It is planned to rehabilitate a part of the dug out pit by backfilling	14.171 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)	WML- 4000nos OML - 4000 nos	WML- 4000nos 4000 nos	OML -	Plantation including Neem, karanj etc
8g	Survival rate	90%	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				The aesthetic beauty in and around the mine is good as lessee had carried out huge afforestation and other environmental protective measures as per approved RMP.

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 2019 A.R. Submitted up to 2018-2019	AR submitted on 30.06.2019	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Manager: Shri. Kunj Behari Verma Mining Engineer: Shri. B N Prasadrao Geologist: Shri. Jagadish Madival	Same mine officials were present during the course of inspection	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current workings: 270.84 Ha, Reclaimed/ Rehabilitated: 27 Ha; Used for waste disposal: 14.89 Ha; Occupied by Infrastructure : 96.1 Ha; Untouched area & top soil storage: 78 Ha, Work done under PMCP during the year- 2.00 Ha	Appears to be correct
9d	Scrutiny of Annual return on afforestation	WML - 4000 nos @ 80% survival rate 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	ROM: Opening Stock: Nil Production (lim estone): 61,28,618 Tons, Closing stock: Nil	Appears to be correct
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex. Mine Price & production cost -Rs./T- 180.94	Sale price is not applicable since the mines is captive
9h	Scrutiny of Annual return on fixed assets	Rs. 180,34,60,551/- (including land, plant, machinery & transport equipment)	Appears to be correct

9k Scrutiny of Drills - 115 / Appears to be correct
Annual return on 150 mm - 04
mining nos. Shovels-
machineries 6.5 m3 -
 05nos; 10 m3
 -01no;
 Dumpers-85Ton-
 10nos; 100Ton-
 4nos; Water
 tankers-
 10KL&28KL;
 Explosive van-
 10Ton-01no;
 BMD Truck- 10
 Ton; Crusher-
 800Tph,1000
 Tph&1200 Tph

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)	21/01/2020			

Date :

(ARUN KUMAR)

Indian Bureau of Mines