

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

Review and updation of Mining Plan REPORT

Bangalore regional office

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

Mine code : 38KAR10012

- (i) Name of the Inspecting : **S47**) **DR. Sudhakara T.L**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Shri. Thripathi, Mines Manager, Shri. Jagadish M.K, Mg
Official with
Designation
- (iv) Date of Inspection : 24/01/2023
- (v) Prev.inspection date : 06/10/2017

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 : 09/09/1968
- (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 : 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 : Mr. Sridhar Balakrishnan,MD & CEO,
121, Maharshi Karve road
Cement House Mumbai -
400020 MUMBAI (SUBURBAN)
MAHARASHTRA
Phone: 7738147500
FAX :

Agent : RAGHAVENDRA RAO JAHAGIRDAR
ACC LTD, WADI CHITTAPUR
DIST KALBURAGI KARNATAKA
GULBARGA KARNATAKA
Phone: 8003090425
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 : SANJEEV TRIPATI.,,
Qualification : DIP IN FCC
Appointment/ : 19/05/2022
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 Yr 2016-17 and no backlogs	27 core holes were drilled to a total of 625m depth in Yr 2016-17
1b	Exploration over lease area for geological axis 1 or 2	G1, G3	G1, G3	G1 axis-390.04 Ha G3 axis-80.99 Ha
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	G1 axis-390.04 Ha G3 axis-80.99 Ha	G1 axis-390.04 Ha G3 axis-80.99 Ha	Wadi 2 Cement Plant area falls in G3 axis
1e	Balance reserve as on 01/04/20		Limestone: 111 - 30805358 tons Shale: 111 - 32310000 tons	
1f	General remarks of inspecting officers on geology, exploration etc			Entire lease area is mineralized. Lessee has carried out G1 level exploration in n390.04 Ha, remaining 80.99 Ha which is in G3 level occupied by plant. In the Mining Plan Scrutiny advised lessee to propose the exploration in the G3 area to bring the mineralized area under G1 level. Accordingly lessee has proposed exploration in the RUMP.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
--------	------	-----------	-------------	---------

2a	Location of development w.r.t.lease area	Development proposed - Western side ML7-ML12 Eastern side ML3A-ML6A	Actual Development done - Western Side N1887420,E709500, N1887540, E709380 Eastern Side N1888100,E711540 N1888080,E711160 N188050,E711590	Development is lagging in both the proposed areas. Violation pointed out during the last inspection dated 31/05/2022. Lessee has replied that due to Covid pandemic sales of cement were lower, hence less production done.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Overburden bench proposed Western side ML7-ML12 Eastern side ML3A-ML6A Limestone bench proposed Western side ML7-ML13 Eastern side M0A-ML8A	Actual Overburden done Western Side N1887420,E709500, N1887540, E709380 Eastern Side N1888100,E711540 N1888080,E711160 LimeStone Western Side N1887500,E709460 N1887700,E709320 N1887410,E708860 Eastern Side N188420,E711760 N1888080,E711600 N1888080,E711240	OB-1 bench, Limestone-03 benches Bottom RL: West: OB:395 M 1st: 397M 2nd:392 M 3rd: 393M Backfill: 390M East: OB:409M 1st:409 M 2nd:399 M 3rd:393M Backfill:387 M
2c	Stripping ratio or ore to OB ratio	1:0.1	1:0.12	Ore-63,44,642 Tons OB-475200m3
2d	Quantity of topsoil generation in m3	4200cu3	3710cu3	(Proposed: 4200 m3 ; Actual:3710 m3) Since dump handling done generation of tops soil is less. Bulk Density :1.6 Tons/ m3
2e	Quantity of overburden generation in m3	415840cu3 (665344) tons	475200cu3 (760320)tons	Slightly more Overburden handled since Production is less; Bulk Density :1.6 Tons/ m3

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Development done within the proposed limit. However, it is observed that proposed development was lagging in both East & West area resulting change in stripping ratio for which violation issued under Rule 11(1) of MCDR, 2017 during last inspection. For the violation, lessee has replied that due to Covid pandemic sales of cement were lower; hence, less production done during 2021-22 so it is lagging.
----	---	--

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: 76,45,652 Tons Shale: NIL	Limestone: 63,44,642 Tons Shale: Nil	Modified Review & Updation of Mining plan vide letter No.: 279/116/89/BNG-336 dt:09/09/2020
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	No proposal for mineral reject generation
3e	Grade of mineral rejects generation and threshold value declared.	No proposal of mineral rejects	No proposal of mineral rejects	100% of mineral mined is used for cement manufacturing; Hence no proposal for mineral rejects

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	Mechanised Method	Adopted as proposed	There is no segregation of material adopted. 3 crushers are operated to reduce size of material viz.-12.5mm, -50mm & -50mm; Crusher1-West side (850 tph) Crusher2-South side (1000 tph) Crusher3-North side (1200 tph)
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	Deep Hole Drilling & Blasting 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	Proposal of Diesel Excavator, Electrical Excavator, Dumpers, Drills, Water tankers, explosive van, Grader, compactor, Loader, Dozer, Crushers	Drills-02 Nos; Shovel-06 Nos; Dumpers-14 Nos; Water tankers-02nos; Loader-02nos; Dozer-03 no; Grader-01no; compactor-01no; Backhoe -01 no; crushers-03nos;	Drills - 115 / 150 mm; Shovels- 6.5 m3- 01nos 5 m3- 01nos 7.2 m3 - 03 nos; 10 m3 -01 no; Backhoe - 3.1 m3- 01no Dumpers- 85Ton-02 nos; 100Ton-08 nos; 40Ton -02nos Loaders - 02 nos; Dozer-03 no; Water tankers- 10KL&28KL-01 each; Explosive van- 10Ton-01no; BMD Truck - 01 no; Crusher- 800Tph,1000 Tph &1200 Tph
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposal for OB Bench Ht: West - 1 to 3m Ease - 6-8 mtrs; Ore bench ht: West - 4 to 10m East - 6-10 mtrs	OB Bench Ht: 2 mtr in west & 6-8 mtr in North; Ore bench ht: West - 4 to 10m East - 6-10 mtrs is being practiced	Bench height in OB & Ore are practiced as proposed
3m	Total area covered under excavation/pits	300.85 Ha At the end of the plan period	298 Ha	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.1	1:0.12	Ore-63,44,642 Tons OB-4,75,200 m3
3o	Total area put in use under different heads at the end of year	As Per Mining Plan.	Actual area Covered under current workings: 298 Ha Reclaimed/ Rehabilitated:15.6 Ha; Used for waste disposal:5 Ha; Occupied by Infrastructure: 96.1 Ha; Untouched area & top soil storage:77.48 Ha	

3p	Production of ROM mineral during the last five year period as applicable	2017-18 Lst:77,18,250 Shale:12,76,87 5 2018-19 Lst:66,74,073 Shale:9,73,336 2019-20: Lst:66,65,983 Shale:9,81,336 2020-21: Lst: 66,50,965 Shale: Nil 2021-22: (in tonnes) Lst: 76,45,652 Shale: Nil (in tonnes)	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 2020-21: Lst: 55,26,321 Shale: Nil 2021-22: (in tonnes) Lst: 63,44,642 Shale: Nil (in tonnes)	Actual production is within the proposed limits
3q	General remarks of inspecting officers on method of mining etc.			The ROM production is carried out within the proposed limits as per the approved Mining Plan

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Proposed backfilling of overburden at below mentioned area: Western side ML09-ML11 Eastern side ML3A-ML6A	Western Side N1888800,E709270 N1888100,E709350 N1888700,E709150 N1887750,E709100 Eastern Side N1888650,E711440 N1888680,E711230 N1888600,E711280 N1888620,E711300	Quantity backfilled: Western- 1,85,200 m3 Eastern-2,90,000 m3 The proposed extent of backfilling not achieved. During inspection lessee stated that due to prolonged monsoon, waste dump proposed to be handled and backfilled not done, hence there is lagging in backfilling.

4b	Location of topsoil, OB and mineral reject dumps	No proposal of OB stacking	Top soil was utilized for afforestation & OB waste was removed and backfilled	
4c	Number of dumps within lease area and outside of lease area	WML-3nos OML-0	WML-3nos OML-0	WML-3nos OML-0
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps located along ML boundary & ultimate pit limit	Dumps located along ML boundary & ultimate pit limit Dump1-ML10 to ML12 Dump2 - ML0 to ML2A Dump3 - ML0 to ML2A	Western N1887300,E709140 N1887440,E708830 Eastern N1887860,E710700 N1887900,E710860 N1887960,E710920 N1887930,E711070
4e	Number of active and alive dumps.	NIL	NIL	No active dumps are found
4f	Number of dead dumps.	3nos	3nos	All dumps are matured & stabilized by plantation
4g	Number of dumps established.	3nos	3nos	Dumps are stabilized by plantation
4h	Whether Retaining wall or garland drain all along dumps are there.	NIL	NIL	
4i	Length of Retaining wall or garland drain all along dumps	No proposal of retaining wall along dump	No retaining wall are constructed along dump	As dump heights are less no retaining wall is found necessary.
4j	Number of settling ponds	NA	NA	
4k	Specific comments of inspecting officer on waste dump management			There is no proposal for waste dump. It is proposed to backfill the waste generated.

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.	Proposal for backfilling is done after mined out of mineral	Backfilling is carried out after full extraction of mineral.	Backfilling done at below mentioned area: Western Side N1888800,E709270 N1888100,E709350 N1888700,E709150 N1887750,E709100
				Eastern Side N1888650,E711440 N1888680,E711230 N1888600,E711280 N1888620,E711300
				Quantity Western- 1,85,200 m3 Eastern-2,90,000 m3
5b	Area under backfilling of mined out area	WEST SIDE ML9 to ML 11 EAST SIDE ML 3A to ML 5A	Western Side N1888800,E709270 N1888100,E709350 N1888700,E709150 N1887750,E709100 Eastern Side N1888650,E711440 N1888720,E711500 N1888650,E711380 N1888280,E711250	The proposed extent of backfilling is not achieved. In the last inspection violation pointed out. Lessee has replied that due to prolonged monsoon, waste dump proposed to be handled and backfilled not done, hence there is lagging in backfilling, we will achieve the proposed extent of backfilling during 2022-23.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Spreading of topsoil over in ML8 to ML12 & ML5A to ML8A area	Top soil generated was used for spreading in ML8 to ML12 & ML5A to ML8A and plantation done	100% use of Top soil is done by spreading on the backfilled area.
5d	Total area fully reclaimed and rehabilitated	No proposal	15.6Ha	Area under water reservoir is 293.91Ha.

5e	General remarks of inspecting officers on backfilling and reclamation etc.	Back filling is under progress in the proposed location. However, there is a lagging in the proposed back filling area. Lessee replied that that that due to prolonged monsoon, waste dump proposed to be handled and backfilled not done, hence there is lagging in backfilling, we will achieve the proposed extent of backfilling during 2022-23. As per approved Mining Plan 61.34 ha area is reclaimed and rehabilitated.
----	--	--

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).		Annual report on PMCP was submitted on 05/07/2022	
6b	Area available for rehabilitation (ha) .	No Proposal	NIL	
6c	afforestation done (ha).	1.5 Ha	1.5 Ha	Location: ML12 to ML13 & ML3A to ML5A
6d	No. of saplings planted during the year	3000 nos.	3000 nos. inside the lease area and 3000 outside the lease area	As per AR
6e	Cumulative no .of plants	WML - 1,21,000 nos.	WML - 1,21,754 nos.	
6f	Any other method of rehabilitation	No proposal	Nil	Plantation done on the matured backfilled area.

6g	Cost incurred on watch and care during the year	Rs.10,50,000	1,93,27,000	As per PMCP report
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Proposed area for compliance on reclamation of voids by backfilling as: Sump 7 L-400M; B-200M D-7m Sump3A L-300M; B-200M; D-5 M	The actual work done to fill the void by backfilling as: North: L-200M; B-150M; D7M West: L-200M; B-150M; D- 5M	Backfilling of voids being done by overburden
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Proposed for backfilling by Overburden for compliance on reclamation & rehabilitation	Backfilling by overburden being done at below mentioned area: West side: Western Side N1888800,E709270 N1888100,E709350 N1888700,E709150 N1887750,E709100 Eastern Side N1888650,E711440 N1888720,E711500 N1888650,E711380 N1888280,E711250	Backfilling of voids being done by overburden
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	NIL	NIL	NIL
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 this year	60.63 Ha of area is presently available as water reservoir.	Compliance by making water reservoir observed as there are 6 nos. sumps & Sump 7 is under development
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No other proposal of reclamation	NIL	

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal of rehabilitation of waste land within lease area	As mentioned, there is no waste land in lease area	Since there is no waste land in lease area. The afforestation is done in earmarked places
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	Season 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.			PMCP activities carried out as per proposal. However, lagging in the backfilling area observed. Lessee stated that this is due to continues rain fall in the area, so proposed waste dump not handled and back filled.

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 Crusher1-West side (850 tph) Crusher2-South side (1000 tph) Crusher3-North side (1200 tph)
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.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	4200cu3 proposed	3710cu3 is generated and used for plantation purpose	Top soil is used for plantation purposes
8b	Concurrent use or storage of topsoil	Spreading of topsoil over in ML8 to ML12 & ML5A to ML8A	Top soil generated was used for spreading in ML8 to ML12 & ML5A to ML8A and plantation done	NIL
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate earmarked place for backfilling is proposed	OB exposed 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	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)	Carrying out phased restoration & reclamation as per approved Review of mining Plan	Carried out phased restoration & reclamation as per approved Review of mining Plan	Restoration, reclamation & rehabilitation of lands affected by mining operations are being done by backfilling & plantation.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	3000 nos	3000 nos (within lease) 3000 nos. (outside lease)	Plantation carried out at earmarked places
8g	Survival rate	85%	Within lease 85% and outside lease 8%	As per Annular returns
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; Fixed sprinklers along crusher ³ area. 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			Asthetic beauty in and around the mine is good. Plantation growth in the western part safety zone is poor due to this soil cover. Suggested lessee to do the gap plantation. Accordingly lessee has proposed the same in the approved RUMP document.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
--------	------	-----------	-------------	---------

9a	Status of submission of Monthly and Annual returns	Annual return submitted on 29/06/2023 Monthly return of December 2022 submitted on 09/01/2023		Monthly and Annual returns submitted within stipulated time
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mr. B N Prasadrao, Mining Engineer Mr. Jagadish M K, Geologist Sanjeev Tripathi, Mines manager	All officers were present during the day of inspection.	NIL
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings : 298Ha Reclaimed/Rehabilitated : 15Ha Used for waste disposal : 4.5Ha Infrastructure (Plant, road, etc): 96.550 Other (safety zone, top soil dump area etc): 77.48Ha	Appears to be correct	NIL
9d	Scrutiny of Annual return on afforestation	1.5Ha	Appears to be correct	NIL
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No proposal	Appears to be correct	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Stock: 0 ROM Production : 6344642 tons Graded ore stock: Nil	Appears to be correct	NIL
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value : Nil Ex-Mine price: Rs. 198.21 Cost of Production: Rs. 198.21	Values provided appears to be correct. Sale value is 'Nil', due to Captive consumption	NIL

9h	Scrutiny of Annual return on fixed assets	Fixed Assets : Rs. 1942823364 Depreciation of fixed assets: Rs.88051432	Appears to be correct	NIL
9k	Scrutiny of Annual return on mining machineries	ROCK DRILL - 02 nos. SHOVEL (HYDRAULIC) - 07 nos. DUMPER - 14 DOZER - 2 CRUSHER - 3	Appears to be correct	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

Date :

(DR. Sudhakara T.L)

Indian Bureau of Mines