

## MCDR INSPECTION REPORT

### 1.0 GENERAL

SN	Particulars	Details
1	Name of the Mine	Aniali Limestone Mine, Survey No-207/P
1(b)	Name of Inspecting Officer & Designation	Sanjay M. Girhe, Sr. Mining Geologist
1(c)	Accompanying Mines Representatives	Sh. C.M. Devidi, Agent (Mines)
1(d)	Type of Inspection	Star Ratings/MCDR
1(e)	Date of Inspection	30.01.2019
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	16.21 Hectare ( Non Forest Area) Forest Area- Nil
3	Mine Code	38GUJ08177
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/437/2011
5	Name of the lessee, Address, phone, email and fax number	Tata Chemicals Limited Ranavav Quarries, Ranavav, Dist- Porbandar Gujarat – 360550, Phone--912801230381 <a href="mailto:cdwivedi@tatachemicals.com">cdwivedi@tatachemicals.com</a>
6	Village	Aniali
7	Taluka/Mandal	Ranavav
8	District	Porbandar
9	Pincode	360550
10	State	Gujarat
11	Post office	Aniali
12	Nearest police station	Ranavav
13	Nearest Railway station	Ranavav
14	Date of Grant of Mining Lease	12.06.1964
15	Date of Execution	31.10.1964 for 20 years
16	Date of opening of Mine	01.03.2017
17	Date of first Renewal, if applicable and its period & expiry	First renewal executed on 13.04.1983 period 20 Years
18	Date of second Renewal, if applicable and its period & expiry	Second renewal applied on 21.10.2003 period 20 years from 29.10.2004 to 28.10.2024 under consideration of State Govt.
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	03.04.2018
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	R. Mukundan Tata Chemicals Limited Bombay House, 24 Homy Modi Street, Mumbai – 400001, Maharashtra, Phone: 022-6657411 Email:rmukundan@tatachemical.com
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	C M Dwivedi Tata Chemicals Limited Ranavav Quarries, Ranavav - 360550 Porbandar, Gujarat, Email: <a href="mailto:cdwivedi@tatachemicals.com">cdwivedi@tatachemicals.com</a> M-09227194002
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Mayank Srivastava BE Mining & FCC metal(R) date of appointment in mines - 15.12.2015 Tata Chemicals Limited Ranavav Quarries,Ranavav – 360550, Porbandar, Gujarat
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Mayank Srivastava Mining Engineer, BE (Mining) & FCC metal (R), Total Experience 18 years, date of appointment in mine - 15.12.2015
24	Whether Geologist and Mining Engineer appointed in mines satisfy	Yes appointed.

	the rule 42 & carrying out their duties as per rule 43 & 44.	
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Vide letter No-682(23)(641)/96-MCCM(N)UDP, 31.12.1997 Vide letter No-682(23)MP-437/2008- MCCM(N)UDP, 01.04.2014
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Vide letter No-682(23)MS-228/2003-MCCM(N)UDP, 29.01.2004 Vide letter No-682(23)MS-473/2008-MCCM(N)UDP, 21.10.2008
27	Mineral(s) granted in lease and proved for mining	Limestone
28	Method of Mining (Opencast, Underground)	Opencast
29	Category (Fully Mechanised, Others or Manual)	Mechanised.
30	Captive/Non Captive	Captive

Scientific Mining: Compliance of proposals of approved mining plan/scheme of mining. –

### Exploration

SN	Item	Proposals (2017-18)	Actual work	Remarks
1a	Backlog of previous year	No backlog of previous year 2016-17	NA	--
1b	Exploration over lease area for Geological axis 1 or 2.	No Proposals for exploration on for G1 or G2 axis	Entire mining lease area of 16.21 Ha explored in G1 axis	--
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Not Proposed	NA	--
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not Proposed	Entire mining lease area of 16.21 Ha explored in G1 axis	--
1e	Balance reserves as on 01.04.2018	<b>Reserves: (In Tonnes)</b> Proved (111)-443900MT <b>Resources: (In Tonnes)</b> Feasibility(211):59800MT Measured(331):513900	<b>Reserves: (In Tonnes)</b> Proved (111)-443900MT <b>Resources: (In Tonnes)</b> Feasibility(211):59800MT Measured(331):513900 0.0436 million Tonne	--
1f	General remarks of inspecting officer on geology, exploration etc.	Entire lase area has been explored as per UNFC Guidelines. During the year 1986-87 total 17 boreholes at 100m x 100x grid pattern were drilled. During 8 vertical boreholes at grid interval 200m x 200m also proposed during the year 2020-21		

### 2.0 Development

SN	Item	Proposals(2017-18)	Actual work	Remarks
2a	Location of development w.r.t. lease area	N Min: 2400658, N Max:2400859 E Min:585303, EMax:585458 & Depth 3.5M	N Min:2400416 N Max:2400696 E Min:585113 E Max:585251 & Depth:2.0m	---
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Excavation was proposed by single bench of 3.5m in mineral. No benches proposed in OB	Working were carried out by formation of single bench of 3.5m	No OB encountered. Very thin layer of top soil & it is concurrently being used for plantation.
2c	Stripping ratio or ore to OB ratio	Not Proposed	Nil	No OB encountered
2d	Quantity of topsoil	Not Proposed	Nil	Very thin layer of top

	generation in m <sup>3</sup>			& concurrently being used for plantation
2e	Quantity of overburden generation in m <sup>3</sup>	Not Proposed	Nil	No OB encountered in the lease area.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Lease area is devoid of overburden & limestone is exposed on the surface itself. A very thin layer of top soil encountered which is concurrently used for plantation purpose.		

### **3.0 Exploitation**

SN	Item	Proposals (2017-18)	Actual work	Remarks
3a	Number of pits proposed for production	Single pit was proposed for production by formation of one bench	Carried out as per the proposals but minor deviation due to lagging in production	--
3b	Quantity of ROM mineral production proposed	No Proposals	Not Applicable	--
3c	Recovery of salable/usable mineral from ROM production	98%	100% utilised as chemical & Cement grade limestone. (Captive Consumption)	--
3d	Quantity of mineral reject generation	Not Proposed	Not Applicable	Entire ROM utilized
3e	Grade of mineral reject generation and threshold value declared	Not Proposed	Not Applicable	--
3f	Quantity of sub-grade mineral generation	Not Proposed	Not Applicable	--
3g	Grade of sub-grade mineral generation	Not Proposed	Not Applicable	--
3h	Manual / Mechanised method adopted for segregating from ROM	Both Mechanised & Manual	Both Mechanised & Manual	--
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Not Proposed	Not Applicable	--
3j	Provision of drilling & blasting in mineral benches	Yes	Yes	--
3k	Provision of mining machineries in mineral benches	Yes Excavator (1.54m <sup>3</sup> ) Tipper (10ton) Wagon Drill-110mm Water Tanker-5KL	Yes Excavator (1.54m <sup>3</sup> ) Tipper (10ton) Wagon Drill-110mm Water Tanker-5KL	--
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of 3.5m proposed in mineral	More or less bench height is maintained in mineral working	--
3m	Total area covered under excavation/pits	Total 14.02 Hect. Proposed in approved plan period 2014-15 to 2018-19	6.97 Hect. Deviations due non operation of mine from 2014-15 to 2016-17	--
3n	Ore to OB ratio for the pit/mine during the year	Not proposed	Nil	--
3o	Total area put in use under different heads at the end of year (As on 31.03.2018)	Pit- 13.01 Hect. Road-0.49Ha Green belt- 0.52	Pit- 6.97 Hect. Infrastructure- 0.002Ha Road- 0.33	Deviation due to less development /ROM

				excavation
3p	Production of ROM mineral during last five-year period, as applicable	Yr- 2013-14 (0 tonne) Yr- 2014-15 (86845tonne) Yr- 2015-16 (86928 tonne) Yr- 2016-17 (87628 tonne) Yr- 2017-18 (87394 tonne)	EC not available EC not available EC not available EC not available 43625 Tonne	--
3q	General remarks of inspecting officer on method of mining etc.	During inspection mine was under working. Mine working was carried out by opencast method (OTFM) with Excavator & tipper combination. Drilling blasting adopted on need basis.		

#### **4.0 Solid Waste Management-Dumping**

SN	Item	Proposals (2017-18)	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	NA, No mines waste, concurrent use of top soil for plantation	NA, No mines waste, concurrent use of top soil for plantation	
4b	Location of topsoil, OB & mineral reject dumps	No Proposals	NA	--
4c	Number of dumps within lease area and outside lease area	None	None	--
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not Applicable	Not Applicable	--
4e	Number of active & alive dumps	None	None	--
4f	Number of dead dumps	None	None	--
4g	Number of dumps stabilized	Not Applicable	Not Applicable	--
4h	Whether Retaining wall or garland drain all along dumps are there	No Proposal	Not Applicable	--
4i	Length of Retaining wall or garland drain all along dump	No Proposal	Not Applicable	--
4j	Number of settling ponds	None	None	--
4k	Specific comments of inspecting officer	Lease area is devoid of any OB, only thin layer of top soil encountered. Entire ROM is being utilized in Soda ash plant & cement plant.		

#### **5.0 Solid Waste Management-Backfilling**

SN	Item	Proposals (2017-18)	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Not Proposed	Area is not fully excavated/mineral exhausted	--
5b	Area under backfilling of mined out area	No Proposals	NA	--
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No Proposals	NA	--
5d	Total area fully reclaimed & rehabilitated	No Proposals	NA	--
5e	General remarks of inspecting officer on backfilling, reclamation etc	As on date, none of the pit has been fully mineral exhausted & hence scope of reclamation doesn't exist at present.		

## 6.0 Progressive Mine Closure Plan

SN	Item	Proposals (2017-18)	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E(2). Details should be given in the format as given in Annexure-20.	Yes Submitted	Yes Submitted on 12 <sup>th</sup> June 2018	--
6b	Management of worked/mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year	0.1 Hect.  0.1 100 Nos.  100 Nos.  Nil  Rs-81000	0.20 Hect.  0.20 200 Nos.  200 Nos.  Nil  Rs-806250	Due to lack of top soil & stony profile of the ground/lease area survival rate is low.
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	Not Proposed	NA	--
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	Not Proposed	Nil	--
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Ambient Air Quality, Surface water Quality, Ground water quality, Noise level, Noise vibration proposed be monitored and values should be in limit.	Environmental monitoring carried out are measured and found within limit	--
6f	General remarks of inspecting officer on PMCP compliance & progressive	PMCP report in prescribed form submitted on 12 <sup>th</sup> June 2018 and PMCP works carried out as per the proposals. Due to very less top soil occurrence, survival rate of saplings are very low.		

## 7.0 Mineral Conservation

SN	Item	Proposals (2017-18)	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	87394 Tonne	39146.470 Tonne	Lagging in production
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Proposed by Manual means	Manual	--
7c	Different grade of mineral sorted out at mines	<u>Chemical grade Lst:</u> >92% CaCO <sub>3</sub> SiO <sub>2</sub> < 4.0% <u>Cement Grade Lst:</u> 44-52% CaO, MgO-3.5(Max)	<u>Chemical grade Lst:</u> >92% CaCO <sub>3</sub> SiO <sub>2</sub> < 4.0% <u>Cement Grade:</u> 44-52% CaO, MgO-3.5(Max)	--

7d	Any beneficiation process at mines	Not Proposed	NA	--
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Mineral is being conserved very systematically as entire ROM is consumed in soda ash plant having chemical grade $Lst > 92\% CaCO_3$ & in cement plant having cement grade limestone $< 92\% CaCO_3$ .		

### 8.0 Environment

SN	Item	Proposals (2017-18)	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal, temporary stacking & concurrent use proposed	Separate removal and utilization for plantation done.	--
8b	Concurrent use or storage of topsoil	Yes	Yes, concurrent use done with temporary storage.	--
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Temporary stacking of Top soil proposed	Yes, Temporary stacking of Top soil done	No overburden.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No Proposals	NA	--
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposals	NA	--
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	Proposals of year wise plantation given in approved MP	Plantation carried out as per the proposals. During the year 200 Nos. plantation done.	--
8g	Survival rate	85%	85%	--
8h	Water sprinkling on roads to control airborne dust	Water spraying on mines haul road, loading, unloading points proposed.	Regular water spraying carried out.	--
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	Aesthetic beauty in and around mine area is not much satisfactory as mining operation started since last 2 years & regular plantation is carried out by the lessee.		

### 9.0 Compliance of Rule 45

S. N.	Item	COMMENTS	Remarks
	Status of submission of Online Monthly and Annual returns	M.R. Submitted up to December-2018 A.R. submitted up to till date- 12.6.2018	--

S. N.	Item	Details GIVEN in A.R.(2017-18)	Observation of I/Officer /Actual reported in Returns	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mayank Srivastava appointed as Mining Engineer,	Mining Eng. Was present during inspection.	--
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit- 6.97 Hect. Infrastructure-0.002Ha Road- 0.33	Deviation observed against proposals given in approved plan	Deviation due to lagging in year wise production

9d	Scrutiny of Annual return on afforestation	200 Nos saplings planted with survival rate of 85%	Advised for more plantation in ML area	During the inspection it was advised to Mine representative to submit the AR & MR correctly for correct cost of production & Ex-mine price as per the guidelines in future.
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Not Given/Not Application	Nil	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Reported as opening Stock-Nil Closing Stock-4478.53 MT as Chemical grade	Nil	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Report Ex-mine price-163.62/MT Sale Value-Not given Cost of production-163.62/MT	Cost of production & Ex-mine price are same. Sale value not furnished (Captive consumption)	
9i	Scrutiny of Annual return on fixed assets	Not Given	Nil	
9k	Scrutiny of Annual return on mining machineries	Excavator (1.54m <sup>3</sup> ) Tipper (10ton) Wagon Drill-110mm Water Tanker-5KL	Nil	

Details of violations observed during current inspection and compliance position of earlier violation pointed out:- The last inspection of mine was carried out on dtd 15.12.2013 and violations of rules 12(3), 23B(3), 27(4), 45(5)(a) & 45(5)(b) pointed and the same were complied. Present inspection was carried out in connection with evaluation of Star Ratings Templates/MCDR during inspection violation of rules 14, 35(2), 54(a) & 55(1)(c)(i) were pointed out and accordingly violation letter was issued.

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