

## 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) & Sh Mayank Shrivastava, Mining Engineer
1(d)	Type of Inspection	Star Ratings/MCDR
1(e)	Date of Inspection	29.01.2019
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	21.04 Hectare
3	Minecode	38GUJ08103
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	07.07.1966
15	Date of Execution	23.12.1966
16	Date of opening of Mine	01.03.2017
17	Date of first Renewal, if applicable and its period & expiry	02.09.1985 period 20 Years
18	Date of second Renewal, if applicable and its period & expiry	17.11.2005 period 20 years
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 the rule 55 & carrying out their duties as per rule 56 & 57.	Sh. C M Dwivedi Appointed as Geologist under the relevant rules.
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Mining Plan was approved vide letter No- 682(23)(337)/2004-MCCM(N)UDP, 01.11.2004
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Review of Mining Plan 682(23)(713)/2009-MCCM(N)UDP, 28.07.2016 Modified Mining Plan approved vide letter No- 682(23)(713)/2009-MCCM(N)UDP, 26.12.2016
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 21.04 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 21.04 Ha explored in G1 axis	--
1e	Balance reserves as on 01.04.2018	<u>Reserves (Mill. Tonnes)</u> Proved (111):0.418 Prob(122): 0.781 <u>Resources (Mill. Tonnes)</u> <u>Pre-Feasibility(221):0.03</u>	<u>Reserves (Mill. Tonnes)</u> Proved (111):0.3896 Prob(122): 0.781 <u>Resources (Mill. Tonnes)</u> <u>Pre-Feasibility(221):0.03</u>	--
1f	General remarks of inspecting officer on geology, exploration etc.	Entire lease area explored previously as per UNFC norms i.e. in G1/G2 levels. Further, no exploration was proposed in approved ROMP (2016-17 to 2019-20) except 2 trial pits in 2016-17 to ascertain mineral continuity.		

### 2.0 Development

SN	Item	Proposals(2017-18)	Actual work	Remarks
2a	Location of development w.r.t. lease area	Excavation proposed from along Northern & East direction in continuation of end limit of 1 <sup>st</sup> year	Excavation carried out as per the proposals with minor variation.	--
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Not Proposed	NA	Thin layer of top soil of about 0.25-0.45m proposed to be scrapped by loader.
2c	Stripping ratio or ore to OB ratio	Not Proposed	NA	--
2d	Quantity of topsoil generation in m3	1100 CuM	Nil	--
2e	Quantity of overburden	Not Proposed	NA	--

	generation in m <sup>3</sup>		
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	120000 Tonne	28400 Tonnes	Lagging in production
3c	Recovery of salable/usable mineral from ROM production	70%	70%	Rest as mineral reject, Interburden,
3d	Quantity of mineral reject generation	4860 MT	Nil	Consumed in cement plant as sweetener
3e	Grade of mineral reject generation and threshold value declared	Below <92% CaO proposed as mineral reject	Nil	
3f	Quantity of sub-grade mineral generation	Not Proposed	Nil	--
3g	Grade of sub-grade mineral generation	Not Proposed	Nil	--
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanical	Mechanical	--
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Not Proposed	NA	--
3j	Provision of drilling & blasting in mineral benches	Proposed, Drilling by 102mm Dia DTH & Blasting by using ANFO	Carried out as proposals, Drilling by 102mm Dia DTH & Blasting by using ANFO	--
3k	Provision of mining machineries in mineral benches	Proposed to deploy Excavator (1.10m <sup>3</sup> ) Hyva Dumper (17 ton) Water Tanker	Deployed Excavator (1.10m <sup>3</sup> ) Hyva Dumper (17 ton) Water Tanker	--
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height proposed of 5m height in mineral	Excavation carried out by formation of about 5m height in mineral	--
3m	Total area covered under excavation/pits	8.01 Hect.	4.48 Hect.	Deviation due to less production
3n	Ore to OB ratio for the pit/mine during the year	Not proposed	NA	--
3o	Total area put in use under	Pit- 6.28 Hect.	Pit- 4.18 Hect.	--

	different heads at the end of year	Infrastructure-0.05 Roads-0.8 Others- 0.90	Waste/reject Others- 0.30	
3p	Production of ROM mineral during last five-year period, as applicable	Yr- 2013-14 (42772.8 tonne) Yr- 2014-15 (42642 tonne) Yr- 2015-16 (40620 tonne) Yr- 2016-17 (54000 tonne) Yr- 2017-18 (120000 tonne)	EC not available EC not available EC not available EC not available 28400 tonne	--
3q	General remarks of inspecting officer on method of mining etc.	Deposit is having shallow depth of limestone with no OB. Chemical grade limestone suitable for open cast mining method, drilling blasting proposed.		

#### **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	Not Proposed	No OB, concurrent use of top soil for plantation	--
4c	Number of dumps within lease area and outside lease area	Not Proposed	NA	--
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not Proposed	None	--
4e	Number of active & alive dumps	None	None	--
4f	Number of dead dumps	None	None	--
4g	Number of dumps stabilised	Not Proposed	NA	--
4h	Whether Retaining wall or garland drain all along dumps are there	Not Proposed	NA	--
4i	Length of Retaining wall or garland drain all along dump	Not Proposed	NA	--
4j	Number of settling ponds	None	None	--
4k	Specific comments of inspecting officer	Deposit is having shallow depth of chemical grade limestone and no OB encountered. Thin layer of top soil scrapped & concurrently used for plantation purpose.		

#### **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	None of the area is fully mineral exhausted	NA
5b	Area under backfilling of mined out area	Not Proposed	Not applicable as area not fully mineral exhausted & no OB encountered	--
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	1100 CuM top soil proposed to be excavated	Concurrent use of top soil for plantation	--
5d	Total area fully reclaimed & rehabilitated	Not Proposed	NA	--

5e	General remarks of inspecting officer on backfilling, reclamation etc	Lease area is devoid of any OB except thin layer of top soil encountered being scrapped and concurrently used for plantation purpose.
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### **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	0.002 Hect.  0.002 200 Nos.  200 Nos.  Nil  Rs-52000	0.30 Hect.  0.30 300 Nos.  300 Nos.  Nil  Rs-100625	--
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	No Proposals	NA	--
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	No Proposals	NA	--
6e	Compliance of Environmental monitoring (core zone & buffer zone)	As per PMCP proposals Environment Monitoring proposed Ambient Air Quality, Surface water Quality, Ground water quality, Noise level, Noise vibration to be monitor in core as well as buffer zone.	As per the proposals Environment Monitoring is carried out by outsourced M/s. Precitech Lab. (P) Ltd & results found well within permissible 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. Mine was non-operation since 2013-14 to 2016-17.		

## **7.0 Mineral Conservation**

SN	Item	Proposals (2017-18)	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	120000 Tonne	28400 Tonne	Lagging in proposed production
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical	--
7c	Different grade of mineral sorted out at mines	Chemical grade Lst: >92% CaCO <sub>3</sub> < 4.0% SiO <sub>2</sub> Cement Grade Lst: 44-52% CaO, MgO-3.5(Max)	Chemical grade Lst: >92% CaCO <sub>3</sub> < 4.0% SiO <sub>2</sub> Cement Grade Lst: 44-52% CaO, MgO- 3.5(Max)	--
7d	Any beneficiation process at mines	No Proposals	Nil	--
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 <sub>3</sub> & in cement plant having cement grade limestone < 92% CaCO <sub>3</sub> .		

## **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 300 Nos. plantation done.	--
8g	Survival rate	85%	65%	--
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 till date -08.3.2019 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 & C.M. Diwedi appointed as Mining Engineer & geologist,	Both Mining Eng. & Geologist were present during inspection.	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.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit- 4.18 Hect. Waste/reject Others- 0.30	Deviation observed against proposals given in approved plan due to Non-Operational of mine	
9d	Scrutiny of Annual return on afforestation	300 Nos saplings planted with survival rate of 65%	Advised for more plantation & survival rate in ML area	
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-799.40 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	

- 10- 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 07.02.2016 and violations of rules 27(4), 29, 42(1)(c)(i) & 45(5)(b) were pointed and the same were compiled vide party reply letter Complied vide reply letter no. RQG/172/16-17 dtd-01.07.2016. Present inspection was carried out in connection with evaluation of Star Ratings Templates/MCDR and during the inspection violations of rules 14, 35(2), 54(a) & 55(1)(c)(i) were pointed out and accordingly violation letter was issued.

Sanjay M. Girhe  
Sr. Mining Geologist  
RO, Gandhinagar

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