

MCDR INSPECTION REPORT

Mine file No : MCDR-MiFLOLST/2/2023-GUH-IBM_RO_GUH

Mine Code : 38MEG03016

Date of Inspection: : 16.11.2023,17.11.2023

Name of Inspecting Officer: Subrata Kumar Muduli-Senior Mining Geologist

1.0 GENERAL

SN	Particulars	Details
1	Name of the Mine	LUMSHNONG LIMESTONE MINE
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	70.00 Ha. (Total Lease Area) 4.82 Ha. (Forest) 65.18 Ha. (Non-Forest)
3	Mine Code	38MEG03016
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/5471/2011
5	Name of the lessee, Address, phone, email and fax number	STAR CEMENT LIMITED Village/P.O./P.S. – Lumshnong East Jaintia Hills District, Meghalaya - 793 210
6	Village	Lumshnong
7	Taluka/Mandal	Khliehriat
8	District	East Jaintia Hills
9	Pincode	793 210
10	State	Meghalaya
11	Post office	Lumshnong
12	Nearest police station	Lumshnong
13	Nearest Railway station	Bardarpur
14	Date of Grant of Mining Lease	04.01.2017
15	Date of Execution	10.01.2017
16	Date of opening of Mine	21.09.2017
17	Date of first Renewal, if applicable and its period & expiry	Not applicable
18	Date of second Renewal, if applicable and its period & expiry	Not applicable
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	Not applicable
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	SH. PANKAJ KEJRIWAL Star Cement Limited, Village/P.O./P.S. – Lumshnong East Jaintia Hills Dist., Meghalaya, pankajkejriwal@hotmail.com Date of appointment: 13.08.2021
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	SH. D. V. RAMANAYYA Star Cement Limited, Village/P.O./P.S. – Lumshnong East Jaintia Hills Dist., Meghalaya, Mobile No. 94901-88024 dvramanayya@starcement.co.in Date of appointment: 11.01.2018
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	SH. SATYAJIT PALIA Star Cement Limited, Village/P.O./P.S. – Lumshnong East Jaintia Hills Dist., Meghalaya, Mobile No. 88370-75324 satyajitpalia@starcement.co.in Date of appointment: 01.06.2021
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	SH. SATYAJIT PALIA Qualification: Diploma in Mining Engineering Experience: 18 years Star Cement Limited, Village/P.O./P.S. – Lumshnong East Jaintia Hills Dist., Meghalaya, Mobile No. 88370-75324

1/26511/2024

SN	Particulars	Details
		satyajitpalia@starcement.co.in Date of appointment: 19.11.2021
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Yes
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Mining Plan: Letter No.314(3)/2010-MCCM(CZ)/MP-37, dated 10.06.2011 Modification of Approved Mining Plan: Period: 2017-18 to 2020-21 Letter No. IBM/GHY/MEG/EJNH/LST/MP-83, dated 19.06.2017
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: Period: 2021-22 to 2025-26 Letter No. IBM/GHY/MEG/EJNH/LST/MP-83, dated 27.08.2021
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)	Fully Mechanised
30	Captive/Non Captive	Captive

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

Exploration

SN	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	
1b	Exploration over lease area for Geological axis 1 or 2.	Nil	Nil	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Nil	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	
1e	Balance reserves as on 01.04.2023	90.89 million tons	93.66 million tonnes	
1f	General remarks of inspecting officer on geology, exploration etc.	Exploration over 69.56 Ha area has been completed in G1 level by means of drilling 47 nos of core bore holes for a total drilling meterage of 3958.25m.		

2.0 DEVELOPMENT

SN	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Easting 436054 to 436564 Northing 2783484 to 2783922	Easting 435939 to 436790 Northing 2783440 to 2784095	Extent of Existing Pit as on 01.04.2023
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Benches to be developed only in OB and Mineral.	Benches developed OB and Mineral.	
2c	Stripping ratio or ore to OB ratio	1: 0.11	1: 0.09	
2d	Quantity of topsoil generation in m ³	Nil	Nil	
2e	Quantity of overburden generation in m ³	108045	80,555.56	Proposed OB generation could not achieved due to present EC restriction (15 lakhs TPA)

I/26511/2024

2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	There are only two nos of mining pits namely Pit-1 (645m X 610m X 54m) with One OB bench and 8 nos Ore bench and Pit-2 (200m X 110m X 18m) with 3 nos Ore benches.
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3.0 EXPLOITATION

SN	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	1	1	The mining has been carried out in a single pit
3b	Quantity of ROM mineral production proposed	24,98,500 MT	14,98,194.80 MT	Proposed production could not achieved due to present EC restriction (15 lakhs TPA)
3c	Recovery of saleable/usable mineral from ROM production	100%	100%	
3d	Quantity of mineral reject generation	No proposal	Nil	--
3e	Grade of mineral reject generation and threshold value declared	No proposal	Nil	--
3f	Quantity of sub-grade mineral generation	No proposal	Nil	--
3g	Grade of sub-grade mineral generation	No proposal	Nil	--
3h	Manual / Mechanised method adopted for segregating from ROM	No such proposal approved for 2022-23.	Segregation is not being practiced.	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No proposal	Nil	--
3j	Provision of drilling & blasting in mineral benches	2nos drilling machine each of 115mm dia, Spacing-5m,Burden-3m,Bench height-9m,Hole depth-10m,charging:stemming ratio-2:1,Staggered pattern drilling and blasting.	Deep hole drilling by deploying two nos DTH drilling machine of 115 mm dia,Spacing-4 to 5m,Burden-2.5m to 3m,Bench height-9m,Hole depth-10m,charging:stemming ratio-2:1,Staggered pattern drilling and blasting, NONEL is used for bottom initiation.	
3k	Provision of mining machineries in mineral benches	Mechanised mining with the combination of deep hole drilling and blasting, also by deploying Hydraulic Excavator of 2.6m ³ with dumpers of 25 MT.	Hydraulic Excavator of 2.6m ³ with dumper of 25 MT	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Suitable.	Boom height of excavator is suitable for the bench height.	
3m	Total area covered under excavation/ pits	27.09 Ha.	25.391 Ha.	

I/26511/2024

SN	Item	Proposals	Actual work	Remarks
3n	Ore to OB ratio for the pit/mine during the year	1: 0.14	1: 0.07	
3o	Total area put in use under different heads at the end of year	38.28 Ha.	33.476 Ha.	
3p	Production of ROM mineral during last five-year period, as applicable	2018-19: 25,00,580 MT 2019-20: 25,04,760 MT 2020-21: 24,95,816 MT 2021-22: 24,99,800 MT 2022-23: 24,98,500 MT	2018-19: 8,98,721.13 MT 2019-20: 8,99,772.42 MT 2020-21: 8,99,103.10 MT 2021-22: 8,99,933.80 MT 2022-23: 14,98,194.80 MT	Proposed production could not achieved due to present EC restriction (15 lakhs TPA)
3q	General remarks of inspecting officer on method of mining etc.	The mine is being operated by open cast mechanised method by adopting deep hole drilling and blasting in combination with deployment of excavators and tippers.		

4.0 SOLID WASTE MANAGEMENT-DUMPING

SN	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Proposal for separate dumping of OB.	Separate dumping of OB carried out.	As per proposal
4b	Location of topsoil, OB & mineral reject dumps	N2784532- N2784160 E435866-E436402	N2784532- N2784160 E435866-E436402	
4c	Number of dumps within lease area and outside lease area	Two	Five	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside the UPL	Outside the UPL	
4e	Number of active & alive dumps	2	5	
4f	Number of dead dumps	Nil	Nil	
4g	Number of dumps stabilised	Nil	Not applicable	
4h	Whether Retaining wall or garland drain all along dumps	Yes	Yes	
4i	Length of Retaining wall or garland drain all along dump	Retaining wall: 270m	Retaining wall: 270m	
4j	Number of settling ponds	Nil	Not applicable	
4k	Specific comments of inspecting officer	Terracing of waste dump has been done. Retaining wall and garland drain constructed to prevent wash off.		

I/26511/2024

5.0 SOLID WASTE MANAGEMENT-BACKFILLING

SN	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No such proposal approved.	Mineral is yet to exhaust. No part of the lease is matured to start backfilling.	
5b	Area under backfilling of mined out area	No such proposal approved.	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No such proposal approved.	OB Soil is being dumped and only top soil is being used for green belt development.	
5d	Total area fully reclaimed & rehabilitated	No such proposal approved.	Nil	
5e	General remarks of inspecting officer on backfilling, reclamation etc	The mine was opened on 21.09.2017. Mineral is yet to exhaust. No part of the mining lease is matured to start backfilling, reclamation.		

6.0 PROGRESSIVE MINE CLOSURE PLAN

SN	Item	Proposals	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.	As per rule 26(2) Annual PMCP report to be submitted before 1st day of July of every year	Submitted on 29.06.2023.	
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	No such proposal approved. i) NA ii) NA iii) NA iv) NA v) Nil vi) NA	i) NA ii) NA iii) NA iv) NA v) Nil vi) NA	Mineral yet to exhaust and the mining activity is in dynamic stage. Hence, no proposal of reclamation and rehabilitation of mined out benches by back filling and other means envisaged.
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 such proposal approved. i) NA ii) Nil iii) NA iv) NA v) Nil	i) NA ii) Nil iii) NA iv) NA v) Nil	-do-
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	No such proposal approved.	There is no waste land. Entire lease area is mineralised. However against the proposal of 700 nos of sapling plantation	

1/26511/2024

SN	Item	Proposals	Actual work	Remarks
			in 0.35 Ha within the 7.5m safety barrier, the lessee has completed plantation of 2850nos in 0.35Ha.	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Air, Noise and Water quality monitoring to be done within the mining lease area	Monitoring has been carried out & all the parameters are within the prescribed limits.	
6f	General remarks of inspecting officer on PMCP compliance & progressive	Lessee is doing regular environmental monitoring, green belt development in the 7.5m safety barrier.		

7.0 MINERAL CONSERVATION

SN	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	No proposal of grade-wise sorting approved and the entire produced ROM will be directly despatched.	1498194.800 tonnes Produced ROM is directly despatched to the plant from the mine.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	No such proposal approved.	No sorting done.	Entire ROM is of Cement Grade
7c	Different grade of mineral sorted out at mines	No such proposal approved.	Nil	
7d	Any beneficiation process at mines	No such proposal approved as entire Limestone is feedable in the Cement Plant.	Nil	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	The Lessee has reported 100% recovery. Lessee has reported no generation of sub grade or mineral reject.		

8.0 ENVIRONMENT

SN	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	To be removed separately.	Nil during 2022-23.	
8b	Concurrent use or storage of topsoil	Topsoil to be used for plantation and additional quantity to be stored.	Nil during 2022-23.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for overburden.	There are in total Five OB dumps.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposal approved.	Nil as no part of the lease area is matured to start backfilling.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No such proposal approved.	Nil	A total 800 m Retaining

I/26511/2024

				wall and 950 m Garland drain have been constructed along part of waste dump.
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	Within lease-700 Nos.	Within lease-2850 Nos.	A total 20350 numbers of saplings have been planted starting from the date of grant.
8g	Survival rate	No proposals	About 80% as reported by lessee.	
8h	Water sprinkling on roads to control airborne dust	Water Sprinkling on Haul roads	Water sprinkling by water tanker over haul roads is being carried out regularly.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	Lessee is doing plantation in and around the mines to improve the aesthetic beauty of Mines and surrounding areas.		

9.0 COMPLIANCE OF RULE 45

SN	Item	COMMENTS		Remarks
	Status of submission of Monthly and Annual returns	Monthly Return submitted upto – Oct'23 Annual Return yet to be submitted for FY 2022-23		
SN	Item	Details GIVEN in A.R.	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Shri Satyajit Palia- Mines Manager, Shri Satyajit Palia- Mining Engineer, Hijam Rakesh Singh- Geologist	Shri Satyajit Palia - Mines Manager, Shri Satyajit Palia - Mining Engineer, Hijam Rakesh Singh- Geologist	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining Pit-25.391 Ha OB Dump-8.010 Ha	Mining Pit-25.391 Ha OB Dump-8.010 Ha	
9d	Scrutiny of Annual return on afforestation	Saplings Plantation Within lease: 2850 Nos.	Saplings Plantation Within lease: 2850 Nos.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil	Nil	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening Stock: Nil Production: 1498194.80 MT Dispatch: 1498194.80 MT Closing Stock: Nil	Opening Stock: Nil Production: 1498194.80 MT Dispatch: 1498194.80 MT Closing Stock: Nil There is no separate stock for graded ore.	

I/26511/2024

9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex. Mine Price: Rs 243.90/Tonne	Ex. Mine Price: Rs 243.90/Tonne	
9i	Scrutiny of Annual return on fixed assets	Rs 494322002.00	Details belongs to five mines of the Lessee.	
9k	Scrutiny of Annual return on mining machineries	1) Back Hoe-2.6m ³ : 4 2) Dumper-25 tonners-17 3) Dozer-165 HP-1 4) Drill Machine-115mm-2 with Air Compressor-2 5) Water Tanker-10KL-1 6) Explosive Van-7.5Tonnes-1	Found OK.	

10 - Details of violations observed during current inspection and compliance position of earlier violation pointed out:- Violation issued-Rule 34A(1) and 34A(3) of MCDR-2017 on 20.12.2023. Earlier violation-Rule 11(1) of MCDR-2017- Under Compliance. Thereafter the State Govt has reduced the extent of the ML area from 70 Ha to 66.98 Ha.

Subrata Kumar Muduli
Senior Mining Geologist
Name of Inspecting Officer/Designation