

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/DOL/SNG/MCDR-5/BBS-12/5/01

Mine code : 38ORI13014

- (i) Name of the Inspecting : **K013**) **KEWAL KRISHAN**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Sri Dinesh Singh Panwar, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 24/06/2021
- (v) Prev.inspection date : 15/10/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **LANJIBERNA LIMESTONE & DO**
- (b) **Registration NO.** : **IBM/393/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : LANJIBERNA
- Taluka : Kutra
- Post office : LANJIBERNA
- Pin Code : 770023
- FAX No. : 06624-220933
- E-mail : ocl_rajgangpur@dalmiacement
- Phone : 06624-221212
- (f) Police Station : RAJGANGPUR
- (g) First opening date : 12/05/1951
- (h) Weekly day of rest : SUN
2. Address for : VILL/PO-LANJIBERNA
correspondance : DIST-SUNDERGARH
ODISHA
3. (a) Lease Number : ORI0016
- (b) Lease area : 1002.01
- (c) Period of lease : 20
- (d) Date of Expiry : 20/08/1998
4. Mineral worked : DOLOMITE Associated
LIMESTONE Main

5. Name and Address of the

Lessee : ORISSA CEMENT LIMITED
 AT/PO RAJGANGPUR
 SUNDARGARH ORISSA
 Phone:20133,20733
 FAX :20933, 20133

Owner : SHRI AMANDEEP
 M/S OCL INDIA LIMITED
 RAJGANGPUR ODISHA
 SUNDARGARH ORISSA
 Phone: 06624220933
 FAX :

Agent : SAROJ KUMAR ROUT
 LANJIBERNA RAJGANGPUR
 ODISHA SUNDARGARH ORISSA
 Phone: 06624676403
 FAX :

Mining Engineer

Name : B. JAGADEESH KUMAR,Full Time
 Qualification : AMIE in Mining Engg
 Appointment/ : 28/11/2015
 Termination date

Geologist

Name : DR. UDAYNATH SAHOO,Full Time
 Qualification : M.Sc, M. Phil, Ph. D (Geology)
 Appointment/ : 20/10/2010
 Termination date

Manager

Name : SUBRAT MISHRA
 Qualification : Diploma in Mining Engg. & FCC
 Appointment/ : 02/05/2019
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	27/01/2005
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	27/11/2005
	:	Modif.approved Mining Scheme	01/02/2007
	:	Renewal under rule 24 MCR1960	07/05/2009
	:	FMCP under 23C(1)	08/02/2012
	:	Modif.of approved Mining Plan	11/01/2013
	:	Mining Scheme rule 12 MCDR1988	25/03/2015
	:	MP modif under 17(3) MCR 2016	25/01/2018
	:	Modif.approved Mining Scheme	28/08/2019
	:	MP review under 17(1) MCR 2016	14/11/2019

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	239 Boreholes with 19,795 Meterage	nil	issued violation under rule 11(1) of MCDR 2017
1b	Exploration over lease area for geological axis 1 or 2	about 498.722ha of area proposed under exploration for G1 level	as on 1/4/2021 , area explored under G1 is 283.623 ha and under G2 is 90.712 ha	As on 1/4/2021 , area explored under G1 is 283.623 ha and under G2 is 90.712 ha and remaining 498.722ha area is unexplored
1c	Exploration Agencies and Expenditure in lakh rupees during the year	M/S OCL India Limited, Lanjiberna Limestone & Dolomite Mines At/PO:Lanjiberna, Dist: Sundargarh (Odisha)	not accriedout during the year 2020-21	Earlier M/S SPS GeoMining Solution Private Limited, A-401, Star Plaza, 43/3 Feeder Road, Belghoria, Kolkata-700 056 under supervision of the Lessee during the years 2016-17 to 2018-19.
1d	Balance area to be explored to bring Geological axis in 1 or 2	498.722 ha unexplored area	not carried out during the year 2020-2021	violation issued under rule 11(1) of MCDR 2017
1e	Balance reserve as on 01/04/20	Reserves as on 1.4.2021 under 111 94.086 million Tonnes and under 122 12.651 million Tonnes	Reserves as on 1.4.2021 under 111 94.086 million Tonnes and under 122 12.651 million Tonnes	Reserves as on 1.4.2021 under 111 94.086 million Tonnes and under 122 12.651 million Tonnes

1f	General remarks of inspecting officers on geology, exploration etc	The mining area reveals a higher degree of complexity of structure which has not only Influenced the behavior of limestone bands along strike and dip direction. As on 1/4/2021 , area explored under G1 is 283.623 ha and under G2 is 90.712 ha and remaining 498.722ha area is unexplored
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Q 1-3 & 4_5 2463097 N- 2463832 N, 242542E- 244181E Q 2-6 2463160N- 2463668N, 2444762E- 245671E	Q 1-3 & 4_5 2463097 N- 2463832 N, 242542E-244181E Q 2-6 2463160N-2463668N, 2444762E-245671E	. In order to have scientific mining and proper blending of ore, Qry 1-3 & 4-5 are now proposed to be merged during the review period of 2020-21 to 2024-25
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	seperate benches in top soil,oberburden and minerals	seperate benches in top soil,oberburden and minerals	seperate benches in top soil,oberburden and minerals
2c	Stripping ratio or ore to OB ratio	1:0. 86	1: 0.60	strippping ratio is less because of less ROM production
2d	Quantity of topsoil generation in m3	no such proposal	no such proposal	

2e	Quantity of overburden generation in m3	Waste 29,19,000 M ³	Waste 14,60,938 M ³	Less waste generate than proposal issued violation under rule 11(10 of MCDR 2017.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The development and production activites are carried out as per the proposal . Merging of quarry no 1- 3 is under progress & quarry no 4-5 have been merged .

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	03 nos of pits proposed for production Q1-3, Q4-5 & Q2-6	03 nos of pits proposed for production Q1-3, Q4-5 & Q2-6	
3b	Quantity of ROM mineral production proposed	Limestone-85,00,000 MT Dolomite-79,150	Limestone-60,99,957 MT Dolomite-22,991	issued violation under rule 11(1) of MCDR 2017
3c	Recovery of sailable/usable mineral from ROM production	100%	The ROM after blending with low grade is being utilized for plant	The ROM after blending with low grade is being utilized for plant
3d	Quantity of mineral reject generation	5,10,000 MT	4,10,295 MT	
3e	Grade of mineral rejects generation and threshold value declared.	34% -CaO< and MgO< 7%	38% 34% -CaO< and MgO< 7%	34% -CaO< and MgO< 7%
3f	Quantity of sub grade mineral generation.	5,10,000 MT	4,10,295 MT	
3g	Grade of sub grade mineral generation	34% -CaO< and MgO< 7%	38% 34% -CaO< and MgO< 7%	34% -CaO< and MgO< 7%

3h	Manual / Mechanised method adopted for segregating from ROM	mechanised method	as per proposal	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	no such proposal	only crushing and reduction of size	
3j	Provision of drilling and blasting in mineral benches	Drilling by Sandvik Hyd drill of 115 mm dia Burden-3.2 m Bench Height- 8 m Spacing -3.7 m	Drilling by Sandvik Hyd drill of 115 mm dia Burden-3.2 m Bench Height- 8 m Spacing -3.7 m	
3k	Provision of mining machineries in mineral benches	Hydrolic Shovels , Dumpers, dozers, rock drills, Motor Grader, Excavat or loder JCB, 3DX etc	Hydrolic Shovels , Dumpers, dozers, rock drills, Motor Grader, Excavator loder JCB, 3DX etc	Hydrolic Shovels , Dumpers, dozers, rock drills, Motor Grader, Excavator loder JCB, 3DX etc
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of benches proposed is 8.0m	Height of benches is 8.0m and is suitable.	Height of benches is 8.0m and is suitable.
3m	Total area covered under excavation/pits	area under mining at the end of plan peroid is 166.187ha	area under mining at the end of 2020-2021 is 147.040 ha	area under mining at the end of 2020-2021 is 147.040 ha
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.86	1:0.60	

3o	Total area put in use under different heads at the end of year	total area put to use under different head at the end of plan peroid is 226.65ha.	area put to use at the end of year , OC working disposal 60.160ha, area occupied by plant , residentails building&road 22.480ha	area put to use at the end of year ,under O/C working 147.040 ha, under waste disposal 60.160ha, area occupied by plant , residentails building & road 22.480ha.
3p	Production of ROM mineral during the last five year period as applicable	2016-17 Limestone = 43,58,710 MT 2017-18 Limestone = 43,89,690 MT 2018-19 :Limestone = 44,92,750 MT 2019-20 limestone = 65,01,250 MT 2020-21 :Limestone = 85,00,000 MT	2016-17 Limestone = 38,28,182 MT 2017-18 Limestone = 41,50,721 MT 2018-19 :Limestone = 39,47,099 MT 2019-20 limestone = 44,05,692 MT 2020-21 :Limestone = 60,99,957 MT	
3q	General remarks of inspecting officers on method of mining etc.			The method of mining is A category and is fully mechanised. The ROM production is carried out by opencast mining methods in the three no pits as per the proposal.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	seperate dumpling for OB, mineral reject/subgrad e is envisaged	seperate dumpling for OB, mineral reject/subgrade is envisaged	seperate dumpling for OB, mineral reject/subgrade is envisaged

4b	Location of topsoil, OB and mineral reject dumps	2463427N-2463850N / 242807E-243148E	as per the proposal	
4c	Number of dumps within lease area and outside of lease area	01 no	as per the proposal	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	outside the UPL	outside the UPL	outside the UPL
4e	Number of active and alive dumps.	01 no	01 no	
4f	Number of dead dumps.	no such proposal	11 nos	11 nos
4g	Number of dumps established.	no such proposal during the year	no such proposal during the year	
4h	Whether Retaining wall or garland drain all along dumps are there.	a total of 340m lenght of retaining wall proposed	constructed as per the proposal.	
4i	Length of Retaining wall or garland drain all along dumps	A total of 340m lenght of retaining wall proposed along the dumps	340m lenght of retaining walhas been construced along the dumps	
4j	Number of settling ponds	01 no of settling pond	01 no of settling pond .	

4k	Specific comments of inspecting officer on waste dump management	There are 01 no of active dump and 11 nos of in active dumps. Dumping of waste materials is continued over the over active dump and other earmarked areas during the ensuing review period. During the review period of 2020-21 to 2024-25, retaining wall all around the bottom periphery of waste dumps followed by garland drains of shall be constructed.
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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.	no such proposal	no such proposal	
5b	Area under backfilling of mined out area	no such proposal	no such proposal	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	no such proposal	no such proposal	
5d	Total area fully reclaimed and rehabilitated	no such proposal	no such proposal	

5e	General remarks of inspecting officers on backfilling and reclamation etc.	No back filling has been proposed . mineralization continues in the depth and pits are not matured for backfilling.	No back filling has been proposed . mineralization continues in the depth and pits are not matured for backfilling.
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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).	submitted before Ist july	submitted	
6b	Area available for rehabilitation (ha) .	no such proposal	no such proposal	
6c	afforestation done (ha).	Near Old Quarry & Gap plantation	Near Old Quarry & Gap plantation	Near Old Quarry & Gap plantation
6d	No. of saplings planted during the year	during the year 2020-21 , 2500 nos	during the year 2020-21 , 2764 nos	
6e	Cumulative no .of plants		3,33,301 nos	3,33,301 nos
6f	Any other method of rehabilitation	no such proposal	no such proposal	no such proposal
6g	Cost incurred on watch and care during the year	not specified	Rs 10,45,876/-	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	no such proposal	no such proposal	mineralization continues in depths and pits are not matured for reclamation and rehabilitation

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	no such proposal	no such proposal
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	no such proposal	no such proposal
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	no such proposal	no such proposal
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	no such proposal	no such proposal
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	no such proposal	no such proposal
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	no such proposal	no such proposal
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	no such proposal	no such proposal

6p	Compliance of environmental monitoring (core zone and buffer zone)	periodical monitoring of environmental parameters are proposed.	carried out as per the proposal	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Mineralization continues in depth and pits are not matured for reclamation and rehabilitation.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Cement grade limestone dispatched to capative plant	Cement grade limestone dispatched to capative plant	Cement grade limestone dispatched to capative plant
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	mechanised	mechanised	
7c	Different grade of mineral sorted out at mines.		CaO > 38% & MgO < 7% CaO 34-38% & MgO < 7%	cement grade Limestone is directly despatched to capative plant
7d	Any beneficiation process at mines .	No proposal for any beneficiations of ROM and mineral rejects except proper blending and processing the ROM and mineral rejects in the crushers for crushing and reduction of ROM to output size 75mm	No proposal for any beneficiations of ROM and mineral rejects except proper blending and processing the ROM and mineral rejects in the crushers for crushing and reduction of ROM to output size 75mm	No proposal for any beneficiations of ROM and mineral rejects except proper blending and processing the ROM and mineral rejects in the crushers for crushing and reduction of ROM to output size 75mm

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	The lessee has no proposal for any beneficiations of ROM and mineral rejects except proper blending and processing the ROM and mineral rejects in the crushers for crushing and reduction of ROM to output size 75mm. There are two existing crusher plants of 400 TPH & 1200 near the mine. The lessee has a plan to install another crushing unit of 1800 TPH to meet the requirement of limestone after enhancement of production level during the ensuing period.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	no such proposal	no such proposal	
8b	Concurrent use or storage of topsoil	no such proposal	no such proposal	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	provision for seperate dumping of overburden, waste rock, subgrade/mineral reject is envisaged	provision for seperate dumping of overburden, waste rock, subgrade/mineral reject is envisaged	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	no such proposal	no such proposal	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	no such proposal	no such proposal	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	2500 nos of sapling proposed during the year 2020-21	2764 nos of sapling plantated during the year 2020-21	
8g	Survival rate		70%	70%
8h	Water sprinkling on roads to control airborne dust	One 10 KL and the other of 18 KL water sprinklers to suppress the dust in mine haul road to control airborne dust.	One 10 KL and the other of 18 KL water sprinklers to suppress the dust in mine haul road to control airborne dust.	One 10 KL and the other of 18 KL water sprinklers to suppress the dust in mine haul road to control airborne dust.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			aesthetic beauty in and around the mine is good because of planation carriedout and by regular sprinkling of water on mine road to control the dust.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
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- 9a Status of submission of Monthly and Annual returns as per MCDR 2017, the monthly return are to be submitted before 10th day of every month in respect of the proceeding month and AR shall be submitted before the 1st day of July each year for the proceeding financial year. submitted
- 9b Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager The annual return for the year 2020-21 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2021 The scrutiny of annual return for the year 2020-21 during the inspection doesnot arise.
- 9c Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. The annual return for the year 2020-21 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2021 The scrutiny of annual return for the year 2020-21 during the inspection doesnot arise.

- 9d Scrutiny of Annual return on afforestation The annual return for the year 2020-21 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2021 The scrutiny of annual return for the year 2020-21 during the inspection doesnot arise.
- 9e Scrutiny of Annual return on mineral reject generation (Grade and quantity) The annual return for the year 2020-21 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2021 The scrutiny of annual return for the year 2020-21 during the inspection doesnot arise.
- 9f Scrutiny of Annual return on ROM stock and/or graded ore The annual return for the year 2020-21 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2021 The scrutiny of annual return for the year 2020-21 during the inspection doesnot arise.
- 9g Scrutiny of Annual return on sale value, Ex. Mine price and production cost The annual return for the year 2020-21 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2021 The scrutiny of annual return for the year 2020-21 during the inspection doesnot arise.

9h	Scrutiny of Annual return on fixed assets	The annual return for the year 2020-21 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2021	The scrutiny of annual return for the year 2020-21 during the inspection doesnot arise.
9k	Scrutiny of Annual return on mining machineries	The annual return for the year 2020-21 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2021	The scrutiny of annual return for the year 2020-21 during the inspection doesnot arise.

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)	20/07/2021			

Date :**(KEWAL KRISHAN)**

Indian Bureau of Mines