INDIAN BUREAU OF MINES
MINERALS DEVELOPMEMT AND REGULATION DIVISION

MCDR inspection REPORT

Hyderabad regional office

Mine file No : AP/KNL/LST-190/HYD **Mine code : 38APR11130**

(i) Name of the Inspecting Officer and ID No. : **M015) MANISH K. MAINDIRATTA**

(ii) Designation : Deputy Controller Mines

(iii) Accompaning mine Official with Designation : SHRI S. BOSE AND OTHERS

(iv) Date of Inspection : 15/02/2019

(v) Prev.inspection date : 07/07/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **JSW LIMESTONE MINE**

(b) Registration NO. :

(c) Category : A Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : ANDHRA PRADESH
District : KURNOOL
Village : BILAKALAGUDUR
Taluka : GADIVEMULA
Post office : GADIVEMULA
Pin Code : 518508
FAX No. :
E-mail :
Phone : 08514202304,202305

(f) Police Station : Gadivemula

(g) First opening date : 01/04/2008

(h) Weekly day of rest : SUN

2. Address for correspondance : Bilakalgudur village,
Gadivemula Mandal
Kurnool district.

3. (a) Lease Number : APR2820
(b) Lease area : 617.57
(c) Period of lease : 20
(d) Date of Expiry : 24/04/2028

4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : JSW CEMENTS
403, SAI RAM ENCLAVE
SRINIVAS NAGAR NANDYAL
KURNOOL ANDHRA PRADESH
Phone:
FAX :

Owner : RAJIV DUBE
ADITYA BIRLA CENTRE, SK
AHIRE MARG, WORLI MUMBAI
(SUBURBAN) MAHARASHTRA
Phone:
FAX :

Agent : G.Veerababu
Village:Bilakalagudur
P.O.:Gadivemula Kurnool
KURNOOL ANDHRA PRADESH
Phone: 08514202304
FAX :

6. Date of approval of Mining Plan/Scheme of Mining :

Fresh under rule 22 MCR1960	16/10/2007
Modif.of approved Mining Plan	02/12/2008
Modif.of approved Mining Plan	21/08/2012
Mining Scheme rule 12 MCDR1988	07/10/2013
MP review under 17(1) MCR 2016	27/11/2017

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal was there for the year 2017-18	Nil undertaken	
1b	Exploration over lease area for geological axis 1 or 2	No proposal was there for exploration in the year 2017-18.	No bore hole was drilled as per proposal.	Against 52 holes lessee has reportedly drilled 137 holes in the period 2014-15 & 2015-16. Area Under G1= 243.90ha. G2= 60 ha. G3 = 46.67 ha. Plant established on remaining 267 hectare lease area and not having cement grade limestone
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	Not applicable as there is no exploration work undertaken in 2017-18.	
1d	Balance area to be explored to bring Geological axis in 1 or 2		Area Under G1= 243.90ha. G2= 60 ha. G3 = 46.67 ha. Plant established on remaining 267 hectare lease area and not having cement grade limestone	The proposal has been taken in the subsequent document approved on 22/11/2017 to convert the left over area under G1 level of exploration.
1e	Balance reserve as on 01/04/20		As per the document approved on 27/11/2017, Total mineral resource as on 1.09.2017= 170.437 million Tonnes (mT) Less depletion (prod'n) during the period 1/9/2017 to 31/3/2018=572469 T(0.572mT) Balance Reserve as on 1.04.2018=169.865mT	Prod'n Sept-17=79282T Oct7=86347T Nov 17=92790T Dec= 82511T Jan 18= 70141T Feb 18=128405T Mar= 90775T

1f	General remarks of inspecting officers on geology, exploration etc	The plant is located in the lease area which is not having cement grade limestone as per the submission of the lessee. But in light of new threshold value resource should be assessed accordingly in the next document in the entire lease area.	

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Production proposed at pi-1 and Pit-2	Production has been undertaken at the pit-1 and pit-2 Top and bottom RL of pit-1 is from 251.3mRL & 228.7 mRLrespectively and is having 3benches Pit no 2 is is having top and bottom RL of 44.4m & 228.6 m respectively is having 2 benches.	Area is having remnants of old slab quarry workings.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	proposal was there to work Overburden and mineral separately.	Both pit workings are lying between UTML N1734600-`735800 & E226100-227300 Separate benches are there in the top soil and mineral.. The top mineralized bench is generally flaggy limestone with high silica. As such it is worked separately as overburden.	Area under active mining is largely devoid of top soil
2c	Stripping ratio or ore to OB ratio	1:0.1	1:0.33	982770T Lst: 332251T Mineral reject
2d	Quantity of topsoil generation in m3	As per the document approved on 7/10/2013 Top soil= 16671 T	Only about 1003 T (about 630 cu m) of top soil is generated in 2017-18.	In 2018-19 no soil generated

2e	Quantity of overburden generation in m3	As per the document approved on 7/10/2013 OB (2017-18)= 434940T	Overburden/ Mineral reject Generation in 2017-18= 332251T
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		In light of inconsistent behaviour of the deposit the lessee has got the benefeciation study done from IBM Ore dressing lab. The study report shows that the froth floatation at a grind of 95.4% passing 75 micro metre with recommended flocculant gives a yield of 55.6%. So the development of the mine should be thoroughly planned with minimum degradation and feasibility of a water based process for benefeciation need to be assessed in light of the terrain in which the plant is located.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	2	However the lease is having old workings in the lease area. The mine is being worked by opencast method of mining mantaining a pit slope of 45 degree as per proposal. Top and bottom RL of pit-1 is from 251.3mRL & 228.7 mRLrespectively and is having 3benches . Pit no 2 is is having top and bottom RL of 244.4m & 228.6 m respectively is having 2 benches.

3b	Quantity of ROM mineral production proposed	2017-18-4410775 T	2017-18=982770T
3c	Recovery of sailable/usable mineral from ROM production	4410775 T of Limestone and 434940 T of mineral reject generation was anticipated	982770T cement + sub grade Lst produced and 332251T Limestone Mineral reject generated as overburden
3d	Quantity of mineral reject generation	434940 T of mineral reject generation was anticipated	332251T Limestone Mineral reject generated as overburden and 37111T of subgrade generated.
3e	Grade of mineral rejects generation and threshold value declared.		The mineral beyond threshhold value is rejected as waste and the remaining mineral reject is kept at subgrade dumps.
3f	Quantity of sub grade mineral generation.	2017-18=4190236T	2017-18= 37111 T
3g	Grade of sub grade mineral generation	SiO2 16-18%	SiO2 16-18%
3h	Manual / Mechanised method adopted for segregating from ROM	minerla reject generation as over burden proposed.	The segragation of the blasted material is done at the blast site itself . limestone quality is checked both before and after the blast.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.		The lessee has reported inconsistent behavior of the deposit with regard to silica percentage. It has also got the beneficiation study undertaken which is being examined.
3j	Provision of drilling and blasting in mineral benches	The large dia blasting was proposed . ANFO with slurry cartridge as base charge was proposed.	The large dia blasting is being done with 115mm drill holes. ANFO-slurry explosive being used for blasting. The proper delay detonators have been used to keep the vibration within the safe limits.

3k	Provision of mining machineries in mineral benches	Excavator-dumper combination was proposed with large dia drill machines for blast hole drilling.	Excavator of 2.3 cubic metre capacity with dumper of 18 T capacity are being used. Large dia drill machines for blast hole drilling is being undertaken..
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	bench height of 8m proposed	The working is done with excavotor having boom height suffecient for 8m high benches.
3m	Total area covered under excavation/pits	As per document approved Total area approved under excavation till 2021-22 103.20 hectare	Area under excavation is approximately 72 hectare including old slab quarry workings.
3n	Ore to OB ratio for the pit/mine during the year.	2017-18 1:0.1	2017-18- 1:0.33
3o	Total area put in use under different heads at the end of year	Total area put to use upto 2017-18 as per approved plan was 221.95 hect	As per the submissions in the approved document Area put to use under different heads is appx 202.9 hectare
3p	Production of ROM mineral during the last five year period as applicable	2013-14-4773805T, 2014-15-4708289T 2015-16-4839955T 2016-17-4466422T 2017-18=4410775T	2013-14- 2055596T, 2014-15-1731063T 2015-16-1285454T 2016-17-1340883T 2017-18=982770T

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Proposed to dump topsoil OB (flaggy Limestone) and mineral reject separately.	Mineral reject is being dumped separately as per their quality as subgrade or waste.	Top soil whereever recoverable is used for green belt development.

4b	Location of topsoil, OB and mineral reject dumps	Place earmarked for the dump.	Two mineral reject dumps of more than 18% silica is there on the western side of the lease along side the road. Two subgrade dumps have been noticed one in the south side of pit-1 near plant gate and other adjacent to pit-1 in North east direction. Location SD1 (Plant gate) N1735100, E 227200 SD2 - B1735600, E 227200 SD3 - N 1735600, E 226100 SD4 - N 1735200, E 226100	
4c	Number of dumps within lease area and outside of lease area	4	4	All dumps are within lease area . Highest dump is about 14m high with 2 steps.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)		All the dumps are on the mineralized zone and within the lease area.	
4e	Number of active and alive dumps.	4	4	
4f	Number of dead dumps.	0	0	
4g	Number of dumps established.		No dump has been stabilized, as they are all active dumps.	
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal	Garland drain provided at the dump.	
4j	Number of settling ponds	NIl	NIl	

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 proposal	So far area is not consoidered mature for the purpose of backfilling. The mineralisation is seen all along the pit. However it has been made to understand that eastern part of the pit might not be extended further due to quality problem.
5b	Area under backfilling of mined out area	No proposal	NIL
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use proposed for plantation.	Meagre quantity of top soil wherever produced/ recovered is used for plantation.
5d	Total area fully reclaimed and rehabilitated	No proposal	NIl

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).		Not submitted.	Violation issued
6b	Area available for rehabilitation (ha) .	No proposal for rehabilatation of benches was there	Area is not considered mature for rehabilitation.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal	Area is not considered mature for reclamation and rehabilitation. by backfilling.	
6p	Compliance of environmental monitoring (core zone and buffer zone)		Complied . reports are within the permissible limit.	

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area		Cement grade material is directly shifted to crusher whereas the subgrade material is shifted to the corresponding dump. Depending upon the quality.	
7c	Different grade of mineral sorted out at mines.		The segregation of Cement Grade or sub grade is done at the blast site itself . The material is then blended to meet the plant requirement.	
7d	Any beneficiation process at mines .	No proposal	Benefeciation not being done;.	

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate top soil removal and utilization proposed.	Meager quantity of Topsoil generated is used for plantation & greenery development	
8b	Concurrent use or storage of topsoil		Concurrently used for plantation purposes as per proposal	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps proposed for mineral reject, waste rock.	Separate dumps for over burden/ mineral rejects provided.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	The subgrade mineral is used after blending.	

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	not done.	Area is not considered mature for rehabilitation as the ultimate pit dump has not been reached.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)		14409 saplings have been grown in the vicinity of plant, mine office and the safety barrier zone in 2017-18.	
8g	Survival rate		70% approximately.	Avenue plantation around the area demarcated for excavtion need to be immproved.
8h	Water sprinkling on roads to control airborne dust		Provided as per proposal to prevent dust generation due to vehicular movement.	

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		M.R. Submitted up to Jan 2019 A.R. Submitted up to 2017-18	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	The information about Mining Engineer, Geologist and Manager has been furnished in the returns	The notice of appointment of Mining Engineer is not received at our office. So violation pointed for the same.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	The break up of the land use pattern has been provided in the returns.	About 203 hectare area reported to be degraded during the period 2017-18 .	

9d	Scrutiny of Annual return on afforestation	The information provided in the returns on the afforestation within and outside the lease area.	found to be as per work done.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	--	332251 T of limestone generated as reject and 37111 as mineral as subgrade.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	The information provided in the returns	No deviation observed.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost		Cost of production reported as Rs 219.64 Rs PMT
9h	Scrutiny of Annual return on fixed assets	---	---
9k	Scrutiny of Annual return on mining machineries	The detailed partoiculars of the mining machineries have been provided in the returns.	The machinery provided as reported in the returns.

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
Rule 26(2)	20/03/2019				
Rule 54	20/03/2019				
Rule 46	20/03/2019				

Date :

(**MANISH K. MAINDIRATTA**)

Indian Bureau of Mines