

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

MCDR INSPECTION REPORT

Bangalore regional office

Mine file No : KNT/CTD/FE/4/BNG

Mine code : 30KAR07013

- (i) Name of the Inspecting : **256**) **PUKHRAJ NENIVAL**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Mr. M. Krishna Reddy agent, Mr. Jiwandas L Hedau man
Official with
Designation
- (iv) Date of Inspection : 26/02/2016
- (v) Prev.inspection date : 13/06/2014

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **A. NARRAIN**
- (b) **Registration NO.** : **IBM/327/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : KARNATAKA
- District : CHITRADURGA
- Village : MEDEKERIPURA
- Taluka : CHITRADURGA
- Post office : BHEEMASAMUDRA
- Pin Code : 577501
- FAX No. : 0832-2460612
- E-mail : ddjalan@vedanta.co.in
- Phone : 08194-238101
- (f) Police Station : Baramasagara
- (g) First opening date : 03/10/1955
- (h) Weekly day of rest : SUN
2. Address for : MEGALAHALLI OFFICE COMPLEX
correspondance : BHEEMASANDRA POST
CHITRADURGA - 577520
3. (a) Lease Number : KAR1020
- (b) Lease area : 163.5
- (c) Period of lease : 20
- (d) Date of Expiry : 13/05/2013
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : SESA STERLITE LTD
 SESA GHOR, 20 EDC COMPLEX,
 PATTO-PANJI GOA 403 001
 NORTH GOA GOA
 Phone:
 FAX :

Owner : D.D.JALAN
 M/S SESA STERLITE LIMITED,
 SESA GHOR, 20EDC COMPLEX
 PATTO - PANAJI GOA NORTH
 GOA GOA
 Phone:
 FAX :

Agent : M. Krishna Reddy
 Megalahalli Office Complex
 Bheemasamudra ,
 Chitradurga, Karnataka
 CHITRADURGA KARNATAKA
 Phone: 08194-238101
 FAX : 0832-2460612

Mining Engineer

Name : DEVARAJ, Full Time
 Qualification : B.E.MINING
 Appointment/ : 20/01/2007
 Termination date

Geologist

Name : Somshekhar Dhodkunde, Full Time
 Qualification : M.Sc, Applied Geology
 Appointment/ : 11/01/2016
 Termination date

Manager

Name : JIWAN L HEDAU
 Qualification : BE (MINING)
 Appointment/ : 01/01/2013
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 22 MCR1960	03/04/1992
		Renewal under rule 22 MCR1960	04/03/1998
		Modif.of approved Mining Plan	02/07/2001
		Mining Scheme rule 12 MCDR1988	06/03/2003
		Modif.approved Mining Scheme	18/08/2005
		Mining Scheme rule 12 MCDR1988	26/04/2007
		Mining Scheme rule 12 MCDR1988	19/08/2008
		Modif.approved Mining Scheme	25/02/2010
		Mining Scheme rule 12 MCDR1988	29/02/2012
		Mining Scheme rule 12 MCDR1988	03/09/2012
		Renewal under rule 24 MCR1960	19/11/2012

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	80 Boreholes Meterage: 12520	13330 Mtr exploratory drilling has been completed in 2015-16.	For confirmation orebody for its depthwise extension.
1b	Exploration over lease area for geological axis 1 or 2	G1: 5.00 Ha G2: Nil	G1: 5.78 Ha G2: Nil	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Expenditure: Nil, as no boreholes were proposed for 2015 2013-14: Rs. 4.50 Crores 2014-15: Rs. 1.58 Crores.	Southwest Pinnacle Exploration Pvt. Ltd. & Karthikeya Exploration & Mining Services Pvt Ltd. Expenditure: Rs. 8.75 Crores. (2015-16)	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Depth extension beyond 100m below UPL to be ascertained
1e	Balance reserve as on 01/04/20	46.341 MMT	44.281 MMT as on 01/02/2016	Exploration of 13330 m completed in 2015-16 updated reserves to be incorporated.
1f	General remarks of inspecting officers on geology, exploration etc			The proposed exploration of 2012-13 to 2014-15 has been carried out satisfactorily in 2015-16 after the violation pointed out by Sri.B.Rammohan RCOM during his check-up inspection undertaken in June 2015. The violation is pointed out for not preserving the core samples as required by the Rule 59 of MCDR.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Sections RL No. of benches Co ordinates NB 16A-20 961-926 5 NB 16A-20 961-926 5 N1573700-1574200 E629500-629665 SB 1A-5A 905-835 10 N1572070-1572500 E630368-630700 6-14 898-793 15 N1572440-1573200 E629860-630358	Sections RL No. of benches Co ordinates NB 16A-20 961-926 5 N1573700-1574200 E629500-629665 SB 1A-5A 905-835 10 N1572070-1572500 E630368-630700 7-13 912-877 5 N1572600-1573000 E630000-630500	Development work is lagging behind.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes, Ore: 10 benches OB: 16 benches	Ore: 10 benches OB: 11 benches	No topsoil generation as the Surface Area is already broken
2c	Stripping ratio or ore to OB ratio	1: 1.72	1: 1.06 (till Jan 2016)	Less development work.
2d	Quantity of topsoil generation in m3	NIL	NIL	
2e	Quantity of overburden generation in m3	1786364 m ³	991354m ³ (till Jan 2016)	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The violations have been pointed out for less development work, distortion of stripping ratio and for not submitting the updated plans and sections.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	2	
3b	Quantity of ROM mineral production proposed	2,290,000 Tons	2,061,699 Tons (till Jan 2016)	

3c	Recovery of sailable/usable mineral from ROM production	100%	100%
3d	Quantity of mineral reject generation	NIL	NIL
3e	Grade of mineral rejects generation and threshold value declared.	NA	NA
3f	Quantity of sub grade mineral generation.	NIL	NIL
3g	Grade of sub grade mineral generation	NA	NA
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized. Shovel-Dumper Combination	Mechanized. Shovel-Dumper Combination
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	NIL	NIL
3j	Provision of drilling and blasting in mineral benches	NA	NA
3k	Provision of mining machineries in mineral benches	Yes	Yes
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed height= 07 m Width=>10m	Actual height= 07 Width=>10m
3m	Total area covered under excavation/pits	61.05 Ha	61.05 Ha
3n	Ore to OB ratio for the pit/mine during the year.	1: 1.72	1: 1.06

3o	Total area put in use under different heads at the end of year	Area (Ha) Opencast working 61.05 Reclaimed/Rehabilitated 19 Waste disposal 40.25 Plants, buildings, roads etc. 25.79 Mineral/Sub grade stocks 14.5 Total 160.59	Area (Ha) Opencast working 61.05 Reclaimed/Rehabilitated 19 Waste disposal 40.25 Plants, buildings, roads etc. 25.79 Mineral/Sub grade stocks 14.5 Total 160.59	
3p	Production of ROM mineral during the last five year period as applicable	2011-12: 6.00 MMT 2012-13: 1.72 MMT 2013-14: 2.29 MMT 2014-15: 2.29 MMT 2015-16: 2.29 MMT	2011-12: 3.26 MMT 2012-13: 0.00 MMT (Supreme Court Ban) 2013-14: 2.06 MMT 2014-15: 1.03 MMT (Mining stopped for renewal) 2015-16: 2.06 MMT (upto Jan 2016)	
3q	General remarks of inspecting officers on method of mining etc.			Production work is being done satisfactorily and expected to achieve the proposed production of 2.29 mill. tonnes.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Yes, 3.93 MMT of OB to be dumped in D4 dump	Yes, 2.18 MMT of OB dumped in D3 dump (till Jan'16)	No top soil & mineral rejects present
4b	Location of topsoil, OB and mineral reject dumps	D4 dump in NE corner of South Block.	D3 dump in SE corner of South Block.	Deviation in the dumping place.

4c	Number of dumps within lease area and outside of lease area	Inside Lease :02 Inactive & 02 active Outside Lease- NIL	Inside Lease :02 Inactive & 01 active Outside Lease- NIL	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside Ultimate pit Limit	Outside Ultimate pit Limit	
4e	Number of active and alive dumps.	02 (D3 & D4 dumps)	01 (D3 dumps)	
4f	Number of dead dumps.	02 (D1 & D2 dumps)	02 (D1 & D2 dumps)	
4g	Number of dumps established.	02 (D1 & D2 dumps)	02 (D1 & D2 dumps)	
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall & garland drain is provided	Retaining wall & garland drain is provided	
4i	Length of Retaining wall or garland drain all along dumps	R.W G.D D1 1311 1311 D2 320 320 D3 1251 1251 D4 672 672	R.W G.D D1 819 769 D2 256 95 D3 1055 734 D4 478 288	
4j	Number of settling ponds	09	09 Outside lease area	
4k	Specific comments of inspecting officer on waste dump management			OB dump is carried out at other than proposed place i.e. D4 in place of D3, hence violation is been pointed out.

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.	NIL	NIL	
5b	Area under backfilling of mined out area	NIL	NIL	

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	NA	NA	
5d	Total area fully reclaimed and rehabilitated	NA	NA	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			NA

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 on- 26/02/2016	
6b	Area available for rehabilitation (ha) .	NIL	NIL	
6c	afforestation done (ha).	NA	NA	
6d	No. of saplings planted during the year	i)Afforestation: D1 & D2 ii) 3.31 Ha iii) Geotextiles, plantation, Gap plantation	i)Afforestation: D1& D2 ii) 4.4 Ha iii)Geotextiles, plantation, Gap plantation	
6e	Cumulative no .of plants	Monitoring on Quarterly basis	Being carried out by MOEF accredited lab on Quarterly basis	Working satisfactorily.
6f	Any other method of rehabilitation	NA	NA	
6g	Cost incurred on watch and care during the year	NA	NA	

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NA	NA
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	NA
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	NA	NA
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NA	NA
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NA
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	NA	NA
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NA	Na
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NA	NA

6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposed on quarterly basis.	Being done on quarterly basis.	The lessee has added 3 more monitoring stations for surface water, as suggested by Sri.B.Rammohan ,RCOM during his check-up inspection.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Proposed measures are being implemented satisfactorily.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	YES	YES	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	Dry crushing & Screening plant

7c	Different grade of mineral sorted out at mines.	Lumps Below 55% 55% to below 58% 58% to below 60% 60% to below 62% 62% to below 65% 65% and above Fines Below 55% 55% to below 58% 58% to below 60% 60% to below 62% 62% to below 65% 65% and above	Lumps Below 55% 55% to below 58% 58% to below 60% 60% to below 62% 62% to below 65% 65% and above Fines Below 55% 55% to below 58% 58% to below 60% 60% to below 62% 62% to below 65% 65% and above	
7d	Any beneficiation process at mines	Only dry Crushing & Screening	Only dry Crushing & Screening	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral conservation aspect is taken care very well.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	NA	NA	
8b	Concurrent use or storage of topsoil	NA	NA	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	D4 dumps for OB	D3 dumps for OB	Violation is pointed out for deviation.

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	NA	NA	Mining pit is not yet matured for backfilling.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Rehabilitation by way of plantation	Rehabilitation by way of plantation	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Area No. of Saplings Dumps 3.31 8275 Green Belt 1.23 3075 Bench Plantation 2.65 6625 Total 7.19 17975	Area No. of Saplings Dumps 5.08 18477 Green Belt 0.67 2573 Bench Plantation - - Total 5.75 21050	
8g	Survival rate	80%	75%	
8h	Water sprinkling on roads to control airborne dust	YES	354KLD water sprinkler is deployed for dust suppression	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Environment aspects are taken care in proper manner. The boundary pillars are intact at the place with requisite details.

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 January 2016, Annual Return: 2014-15	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Devaraj N Geologist: Prakash Hegde Manager: Jiwan L Hedau	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	O/c working 61.05 reclaimed 19.00 Waste disposal 40.25 buildings & roads 25.79 Mineral/ Subgrade stack 14.5 Total 160.59	
9d	Scrutiny of Annual return on afforestation	2014-15: 54152 Cumulative:384 508 S.Rate:75%	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NIL	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing stock ROM-8,82,075 MT Fines- 6,32,686MT Lumps-2,91,369 MT	Incorrect reserve figures are furnished, hence violation have been pointed out.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost per metric ton: Rs 492 Sale value: Fines- Rs.1657 Lumps: Rs.3259.	
9h	Scrutiny of Annual return on fixed assets	Fixed asset: Rs. 117.85 Crore.	

9k Scrutiny of Excavator - 3,
Annual return on Backhoe - 9,
mining Wheel loaders
machineries - 9, Dozer -
 4, Valvo
 Tippers - 35,
 Crushing &
 Screening
 Plant - 1
 mobile & 1
 Fixed, Motor
 grader - 2,
 Water tanker -
 4.

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed			Show cause position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
Rule 13(1)	04/03/2016				
Rule 28(1)	04/03/2016				
Rule 45(1)	04/03/2016				
Rule 59	04/03/2016				

Date :

(PUKHRAJ NENIVAL)

Indian Bureau of Mines