

1/27255/2024

MCDR inspection REPORT

Bangalore regional office

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

Mine code : 30KAR07013

- (i) Name of the Inspecting : **S006**) **DR.SURESH PRASAD**
Officer and ID No.
- (ii) Designation : Regional Controller Mines
- (iii) Accompanying mine : Mr. Shrishaila Gouda - Agent, Mr. Vijay Mehta- Mines
Official with
Designation
- (iv) Date of Inspection : 16/11/2023
- (v) Prev.inspection date : 24/09/2021

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. : 0832-6713721 (F), Jayavel.G
E-mail : MK.Reddy@vedanta.co.in
Phone : 0832-6713600 (O),
- (f) Police Station : Baramasagara
- (g) First opening date : 03/10/1955
- (h) Weekly day of rest : SUN
2. Address for : Vedanta Limited(formerly Sesa sterlite/Sesa Goa
correspondance : Sesa Ghor, 20 EDC Complex,
Patto, Panaji, Goa- 403001
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

1/27255/2024

5. Name and Address of the

Lessee : VEDANTA LIMITED
 Sesa Ghor, EDC Complex,
 Patto- Panaji, Tiswadi,
 North Goa, Goa. NORTH GOA
 GOA
 Phone:08194238101, 9483211966
 FAX :08194238170

Owner : M. Krishna Reddy
 Sesa Ghor,20 EDC Complex
 PattoPanjim, Goa. Pin
 403001 CHITRADURGA
 KARNATAKA
 Phone: 08194-238101
 FAX : 0832-2460612

Agent : Shrishaila Gouda
 Megalahalli Office Complex
 Post.
 Bheemasamudra,Dist.Chitradu
 rg Karnataka-577520
 CHITRADURGA KARNATAKA
 Phone: 9923289303
 FAX : 0832-2460612

Mining Engineer

Name : SAJJAD AHAMED,Full Time
 Qualification : B.Tech IN MINING
 Appointment/ : 17/11/2021
 Termination date

Geologist

Name : MAHESHWAR KINNAL,Full Time
 Qualification :
 Appointment/ : 27/10/2022
 Termination date

Manager

Name : VIJAY MEHTA
 Qualification : FCC
 Appointment/ : 30/11/2022
 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
		Modif.of approved Mining Plan	10/05/2016
		MP review under 17(1) MCR 2016	15/12/2016
		MP modif under 17(3) MCR 2016	23/03/2018
		MP modif under 17(3) MCR 2016	19/06/2018

I/27255/2024

Modif.approved Mining Scheme	19/08/2019
MP review under 17(1) MCR 2016	12/03/2020
MP review under 17(1) MCR 2016	13/12/2021
MP modif under 17(3) MCR 2016	01/02/2023

I/27255/2024

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	NIL	
1b	Exploration over lease area for geological axis 1 or 2	No proposal	NIL	Lessee has explored the mineralized area (99.16Ha) under G1 level.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	NIL	In the lease area, lessee has drilled 652bore hoes with a total meterage of 71752 m
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal	Entire mineralized area explored under G1 level.	Lessee has proposed 05 no. of boreholes during 2023-24 to check grades and properties of ore / waste.
1e	Balance reserve as on 01/04/20	115.64Million tonnes As on 01/08/2022 as per approved Mining plan dated 01/02/2023	111.61 million tones. (as on 31/03/2024)	Total Reserve and resources 133.22 million tones as per Annual return.

1/27255/2024

1f	General remarks of inspecting officers on geology, exploration etc	The iron ore deposit type is startiform tabular deposit of regular habit. The central part of the lease area consists of iron ore formation. The hanging and footwall consist of ferruginous shale, Mn clays, phyllites and schist. The iron ore is more friable in nature. Lessee has carried detailed exploration, entire mineralized area of 99.16Ha covered under G1 level of exploration.
----	--	--

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	SB - N1572180-1573393, E630763-629639 NB- N1574254-1573180, E629665-629420	SB - N1572184-1573183, E630763-629822 NB- N1573653-1574081, E629588-629458	Carried out the development within the proposed extent.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	South Block: OB - 9 Mineral - 6 OB/Mineral - 5 North Block: OB - 1 Mineral - 4	South Block: OB - 10 Mineral - 7 OB/Mineral- 4 North Block: OB - 1 Mineral - 4	Section 4 has been considered for South Block and Section 17 for North Block.
2c	Stripping ratio or ore to OB ratio	1: 0.40	1: 0.64	Achieved Ore: 5889769tonnes OB: 3789459tonnes
2d	Quantity of topsoil generation in m3	No proposal	Nil	Lessee is working in the broke up area

1/27255/2024

2e	Quantity of overburden generation in m3	1388850 m3	2229094 m3	Actual quantity of overburden generation in tonnes: 3789459
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			In the north block pit, vertical excavation extended beyond the approved limit. Violation pointed out under Rule 11(1) of MCDR, 2017.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	2	North & South Block
3b	Quantity of ROM mineral production proposed	5891590	5889769	
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Dry crushing & screening plant with 100% product recovery.
3d	Quantity of mineral reject generation	No proposal	NIL	
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	NIL	NIL
3f	Quantity of sub grade mineral generation.	No proposal	NIL	No Proposal as per App. Mining Plan.
3g	Grade of sub grade mineral generation	No proposal	NIL	No Proposal as per App. Mining Plan.
3h	Manual / Mechanised method adopted for segregating from ROM	Fully mechanized method of mining	Fully mechanized method of mining	Fully mechanized mine

1/27255/2024

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposal	Lessee has carried out wet beneficiation studies for low-grade ore and siliceous ore.	Lessee has carried out study at his lab located at Goa.
3j	Provision of drilling and blasting in mineral benches	Proposal was to blast top hard benches of hard ore.	Top hard ore benches are blasted using controlled blasting method.	
3k	Provision of mining machineries in mineral benches	Proposal is given for use of mining machinery in mineral benches.	Excavators and Dumpers are used for excavation of ore and waste in mining pit.	No. of excavators: 1 unit of 3.1 m ³ and 10 units of 4 m ³ . No. of Dumpers: 21 units of 18 cu.m and 15 units of 20.3 cu.m
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	7 m height of bench is proposed for mining.	In the north block pit benches height & width not maintained as proposed in MP.	Violation pointed out under Rule 11(1) of MCDR, 2017
3m	Total area covered under excavation/pits	76.00	75.98	
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.40	1:0.64	Achieved Ore: 5889769 tonnes OB: 3789459 tonnes
3o	Total area put in use under different heads at the end of year	Area in ha O/c working : 76.00 Waste disposal: 64.75 buildings & roads: 7.92 Mineral stack, Safety zone: 11.92	Area in ha O/c working : 75.98 Waste disposal: 66.17 buildings & roads: 7.37 Mineral stack, Safety zone : 11.06	O/c working : 76.00 Waste disposal: 64.75 buildings & roads: 7.92 Mineral stack, Safety zone: 11.92
3p	Production of ROM mineral during the last five year period as applicable	2018-19: 4.51MMT 2019-20: 4.51MMT 2020-21: 5.89MMT 2021-22: 7.20 MMT 2022-23: 5.89 MMT (Intonnes)	2018-19: 4.51MMT 2019-20: 4.55MMT 2020-21: 5.60MMT 2021-22: 5.60MMT 2022-23: 5.8897 MMT (Intonnes)	Production data as per Annual Return submitted.

1/27255/2024

3q General remarks of inspecting officers on method of mining etc.

In the north block pit, lessee has not done systematic mining. At some location collapse/erosion of benches and merging of benches was observed. Benches height not maintained as proposed in the MP. Violation pointed out under Rule 11(1) of MCDR, 2017.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Dumping of waste/OB proposed at Dump ID D3, D4 and D5	Dumping at D5 not carried out and waste dumping is carried out on working benches at two different location viz. on section line 9-9' and between section line 13A and 14A.	Violation pointed out under rule 11(1) of MCDR for dumping of waste on the proposed working benches.
4b	Location of topsoil, OB and mineral reject dumps	Dumping of waste/OB proposed at Dump ID D3, D4 and D5	Dumping at D5 not carried out and waste dumping is carried out on working benches at two different location viz. on section line 9-9' and between section line 13A and 14A.	Violation pointed out under rule 11(1) of MCDR for dumping of waste on the proposed working benches.
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 & 02 active	Dumps Outside Lease- NIL
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Partly within UPL	Partly within UPL	Part of the dumps within UPL.
4e	Number of active and alive dumps.	03 (D3, D4 and D5 dump)	02 (D3 &D4 dump)	Dump D5 is not yet commenced.
4f	Number of dead dumps.	02 (D1 &D2 dump)	02 (D1 &D2 dump)	Both the dumps are stabilized.

I/27255/2024

4g	Number of dumps established.	02 (D1 &D2 dump)	02 (D1 &D2 dump)	Stabilized by means of geotextile and vegetation.
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall & garland drain in finalized stages	Retaining wall & garland drain is provided	Retaining wall and garland drain of hard rock is provided.
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall- 200m Garland drain- 200 m for Dump D5	Proposed Retaining wall and Garland drain not constructed.	Proposed Retaining wall and Garland drain not constructed. Violation pointed out under Rule 11(1) of MCDR, 2017
4j	Number of settling ponds	8 settling ponds are there	8 settling ponds are there	All 8 settling ponds are outside lease area.
4k	Specific comments of inspecting officer on waste dump management			During the inspection it was observed that lessee in not disposing the waste in the earmarked location, Not taken initiation to construct the proposed Retaining wall and Garland drain for the newly proposed dump (D5). Permanent monitoring mechanism for continuous monitoring of the stability of pit and dump slopes not established systematically. Waste material disposed on the working benches of south pit without exhausting the mineral. Violation used under rule 11(1) of MCDR,2017.

1/27255/2024

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No proposals	NIL	Pit is not matured for back filling
5b	Area under backfilling of mined out area	No proposals	NIL	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposals	NIL	
5d	Total area fully reclaimed and rehabilitated	No proposals	NIL	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Pit is not matured for back filling. In the approved Mining plan, there is a proposal for backfilling the part of the south pit from 2024-25 onwards after exhausting the mineral.

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).	Before 1st July 2023	Submitted in time, 24thJune 2023	PMCP Report submitted on 30th June 2023.
6b	Area available for rehabilitation (ha) .	No proposal	Nil	No restoration of mined out area for mining plan
6c	afforestation done (ha).	2.68 Ha	3.5Ha (Inside ML)	Plantation on dump and greenbelt& outside lease area
6d	No. of saplings planted during the year	4825	49700 (Within ML) 5955(Outside ML)	It includes dump, greenbelt & outside lease area

I/27255/2024

6e	Cumulative no .of plants	473184	518059	It includes plantation on dump area and green belt.
6f	Any other method of rehabilitation	Not in proposal	Not applicable	No rehabilitation proposed for mining plan period 2022-23.
6g	Cost incurred on watch and care during the year	INR 482500/-	INR 5662262/-	As reported by lessee team during inspection, the cost incurred towards Procurement of saplings, watering & manure.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal	Not applicable	No restoration of mined out area for mining plan
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	Not applicable	No restoration of mined out area for mining plan
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No proposal	Not applicable	No restoration of mined out area for mining plan
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Not applicable	No restoration of mined out area for mining plan
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Not applicable	No restoration of mined out area for mining plan

1/27255/2024

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Not applicable	No restoration of mined out area for mining plan
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Not applicable	No restoration of mined out area for mining plan
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Not applicable	No restoration of mined out area for mining plan
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposed in Mining Plan.	100% Complied	Complied within timeframe.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Lessee has submitted the PMCP compliance report within stipulated time. Lessee has not carried out proposed retaining wall and Garland drain for the newly proposed dump.

Mineral Conservation:

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

1/27255/2024

7c	Different grade of mineral sorted out at mines.	Lumps & Fines with Fe 50 to 62%	Lumps (Fe) 55% -below 58% 58% -below 60% 60% - 62% Fines (Fe) 51% -below 55% 55% -below 58%	Sorting of fines and lumps is carried out using dry crushing and screening plants and this product is dispatched grade wise. Actual figures from Annual return
7d	Any beneficiation process at mines	No proposals of beneficiation,	Only dry Crushing & Screening carried out	Proposal of Wet beneficiation plant for FY24.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Lessee is doing dry crushing and screening to sort the lumps and fines and utilizing entire ROM as salable mineral.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	NIL	Mining activity is in brokenup area
8b	Concurrent use or storage of topsoil	No proposal	NIL	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for OB in D3, D4 and D5 dumsand separate stocks for fines & lumps proposed.	Dumping at D5 not commenced. Mineral stocking carried out at proposed location.	Violation pointed out under Rule 11(1) for not carrying out dumping at proposed location.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	NIL	No restoration of mined out area proposed in mining plan.

I/27255/2024

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposal	Plantation is done on finalized stages of dumps.	No restoration of mined out areaproposals in mining plan.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No. of Saplings Dumps 26800 Green Belt 5000 Bench Plantation - Total 31800	No. of Saplings Dumps 35000 Green Belt 5000 Bench Plantation - Total 40000	Plantation within leasehold area for FY 2022-23.
8g	Survival rate	90%	90%	
8h	Water sprinkling on roads to control airborne dust	Sprinkling of water all along haul roads.	Sprinkling of water is carried out on haul roads and mist spray at plant area.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in and around mines area is good.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly Return Submitted up to last month October 2023. ***** Annual Return for FY2022-23 submitted on 24th June 2023.		Submitted within stipulated time.

I/27255/2024

- 9b Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager Graduate Mining Eng. : 24 nos. Diploma Mining Eng. : 03 nos. Geologist : 06 nos. Appears to be correct Manager: Mr. Vijay Mehta, Mining Engineer in charge: Mr. Sajjad Ahamed Jelani Geologist in charge: Mr. Maheshwar Kinnal were present during the day of inspection
- 9c Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. O/c working 75.98 Waste disposal 66.17 buildings & roads 7.37 Mineral/ Subgrade stack 11.06 Total 160.59 Appears to be correct
- 9d Scrutiny of Annual return on afforestation 49700 saplings within lease area and 5955 saplings outside lease area. Appears to be correct
- 9e Scrutiny of Annual return on mineral reject generation (Grade and quantity) Mineral reject generation - NIL

1/27255/2024

9f Scrutiny of Closing Stock Appears to be correct
Annual return on as on
ROM stock and/or 31.03.2023:
graded ore ROM -
146804.14
Fines:
a) 51% to
below 55%-
335194.27
b) 55% to
below 58%-
184786.01
c) 58% to
below 60%-
20841.49
d) 60% to
below 62%-
74666.31
e) 62% to
below 65%-
109.70
f) 65% and
above- 0.00
Lumps:
a) 51% to
below 55%-
0.00
b) 55% to
below 58%-
58726.630
c) 58% to
below 60%-
44271.247
d) 60% to
below 62%-
0.000
e) 62% to
below 65%-
30203.790
f) 65% and
above- 0.00

I/27255/2024

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex-Mine Price for Fines: a) 51% to below 55%- 2973.04 b) 55% to below 58%- 2472.25 c) 60% to below 62%- 2606.36 Ex-Mine Price for Lumps: a) 55% to below 58%- 4586.95 b) 58% to below 60%- 5008.79 c) 60% to below 62%- 5178.61	Royalty, DMF and NMET figures considered for calculation of Cost of production were not tallying with the supporting document submitted during the inspection.	Showcause notice issued under Rule 45(7) of MCDR
9h	Scrutiny of Annual return on fixed assets	Rs. 1252287467/- including and, industrial plant, machineries and transport equipment.	Appears to be correct	

1/27255/2024

9k Scrutiny of BACK HOE 3.100 Appears to be correct
Annual return on CUM 1
mining BACK HOE 4.000
machineries CUM 10
WHEEL LOADER
2.900 CUM 6
WHEEL LOADER
3.400 CUM 4
DOZER 449.000
HP 1
DOZER 404.000
HP 3
DOZER 160.000
HP 1
DUMPER 32.000
TONNE 21
DUMPER 35.000
TONNE 15
MOTOR GRADER
245.000 HP 2
AIR COMPRESSOR
1.133 CUM/MN 3
AIR COMPRESSOR
2.264 CUM/MN 1
AIR COMPRESSOR
2.832 CUM/MN 1
AIR COMPRESSOR
16.980 CUM/MN
1
WATER TANKER
9000.000 LITRE
2
CRANE 20.000
TONNE 1
GENERATOR
(DIESEL)
580.000 KWH 1
GENERATOR
(DIESEL)
100.000 KWH 1
GENERATOR
(DIESEL)
200.000 KWH 1

I/27255/2024

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)	07/12/2023		MCDR17 Rule 45(7)	07/12/2023	16/02/2024
MCDR17 Rule 45(7)(a)	07/12/2023	16/02/2024	MCDR17 Rule 11(1)	07/12/2023	

Date :

(DR.SURESH PRASAD)

Indian Bureau of Mines