INDIAN BUREAU OF MINES
MINERALS DEVELOPMEMT AND REGULATION DIVISION

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/MN/39/BNG **Mine code : 40KAR03014**

(i) Name of the Inspecting Officer and ID No. : **OM5) Dr.OMKESHA MURTHY.M.G**

(ii) Designation : Regional Mining Geologist

(iii) Accompaning mine Official with Designation : Shri.Bharath Kumar R.S.Mines Manager,Shri.Jalli Subra

(iv) Date of Inspection : 13/09/2022

(v) Prev.inspection date : 06/09/2021

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SMIORE ML NO. 2679**

(b) Registration NO. : **IBM/35/2011**

(c) Category : A Fully Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : KARNATAKA
District : BELLARY
Village : RAMGAD
Taluka : SANDUR
Post office : SANDUR
Pin Code :
FAX No. : 08395- 271066, 080-2361316
E-mail : eps@sandurgroup.com
Phone : (08395)- 271025/29/40/28, (

(f) Police Station : SANDUR

(g) First opening date : 01/01/1954

(h) Weekly day of rest : SUN

2. Address for correspondance : M/s THE SANDUR MANGANESE & IRON ORES LTD,
NO.9, BELLARY ROAD, SADASHIVANAGAR,
BANGALORE - 560080

3. (a) Lease Number : KAR0224
(b) Lease area : 4335.68
(c) Period of lease : 20
(d) Date of Expiry : 31/12/1993

4. Mineral worked : IRON ORE Associated
MANGANESE ORE Main

5. Name and Address of the

Lessee : SANDUR MANGANESE & IRON ORES LTD
DEOGIRI (PO)-583 112 SANDUR
BELLARY KARNATAKA
Phone:08395-271025/28/29/40
FAX :08395-271066

Owner : Md.Abdul Saleem (Director Mines),Nominated owner
DEOGIRI SANDUR Tq BELLARY
BELLARY KARNATAKA
Phone: 08395-271025/28
FAX : 08395-271066

Agent : SHRIDHAR P HEGDE
DEOGIRI SANDUR BELLARY
BELLARY KARNATAKA
Phone: 08395-271025/28/29/40, 9448497925
FAX : 08395-271066

Mining Engineer
Name : KARTHIK R K,Full Time
Qualification : B E MINING
Appointment/ Termination date : 15/10/2014

Geologist
Name : Jalli.Subramanyam,Full Time
Qualification : M.Sc. Geology
Appointment/ Termination date : 01/12/2010

Manager
Name : BHARATH KUMAR.R.S
Qualification : D.MIN.ENGG WITH F.C.C
Appointment/ Termination date : 04/09/2019

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

Existing rule 11 MCDR1988	28/04/1992
Mining Scheme rule 12 MCDR1988	19/05/1999
Mining Scheme rule 12 MCDR1988	28/09/2006
Mining Scheme rule 12 MCDR1988	15/01/2013
Renewal under rule 22 MCR1960	05/12/2013
Modif.of approved Mining Plan	25/05/2016
Modif.of approved Mining Plan	08/12/2017
MP review under 17(1) MCR 2016	08/12/2017
MP review under 17(1) MCR 2016	05/10/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No Proposal	No Backlog	-
1b	Exploration over lease area for geological axis 1 or 2	-	-	Entire Mineralized area has been explored & 57.29 ha has been proved under G1 category
1c	Exploration Agencies and Expenditure in lakh rupees during the year	-	-	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	No Proposal	Not applicable	
1e	Balance reserve as on 01/04/20	Mn. Ore: 551780 Tonnes Iron Ore: 2165629 Tonnes.	Mn. Ore: 551780 Tonnes Iron Ore: 2165629 Tonnes.	Reserves are after depletion of production during the FY 2021-22. Average grade of Mn ore is 23% and Fe 50%
1f	General remarks of inspecting officers on geology, exploration etc			Entire Mineralised area explored up to G1 Level.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks

2a	Location of development w.r.t.lease area	Proposed Location of Development for Manganese Ore: Neerlabbi (NRLB)- N 1667417 to 1667656 E 659833 to 660172, Dabaxikolla (DBX)- N 1672976 to 1673135 E 656210 to 656361, Governor Point (GP)- N 1673322 to 1673732 E 655768 to 656030, Myadar Banda- N 1658317 to 1658540 E 669120 to 669696.	Actual Location of Development for Manganese Ore: Neerlabbi (NRLB)- N 1667417 to 1667656 E 659833 to 660172, Dabaxikolla (DBX)- N 1672976 to 1673135 E 656210 to 656361, Governor Point (GP)- N 1673322 to 1673732 E 655768 to 656030,	Myadara banda as no Production and Development has taken place in that pit. Violation U/R 11(1) issued for the deviation
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches proposed in topsoil, overburden and mineral is proposed	Separate benches maintained in topsoil, overburden and mineral is maintained	Top soil: 1 Bench, Over burden: 3 benches, Mineral: 6 benches
2c	Stripping ratio or ore to OB ratio	1: 8.46	1: 11.29	Higher stripping ratio is due to irregular nature of Manganese ore body
2d	Quantity of topsoil generation in m3	560 m3	350 m3	Generated top soil is used for afforestation during the year
2e	Quantity of overburden generation in m3	296017 m3	166116.4 m3	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		Development carried out satisfactorily except the exploratory development, for that violation has been issued

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	04 pits and 02 exploratory Mining pits	Worked in 03 pits and one exploratory mining pit	Violation U/R 11(1) issued for the deviation
3b	Quantity of ROM mineral production proposed	ROM- 76800 T	Mn Ore-31500T Mn Rejects-35476 T Total-66976	
3c	Recovery of sailable/usable mineral from ROM production	100%	98%	Manual sorting of salable Mn ore from ROM after dry screening
3d	Quantity of mineral reject generation	Mn Ore: 44800 T Iron Ore: 83968 T	Mn Ore: 35476 T Iron Ore: 4813 T	
3e	Grade of mineral rejects generation and threshold value declared.	10% Mn to 25% Mn 35% Fe and Above to below 55% Fe	10% Mn and Above up to 23% Mn Fe ore above threshold value separately stacked	
3f	Quantity of sub grade mineral generation.	No proposal	Nil	
3g	Grade of sub grade mineral generation	No proposal	Not applicable	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Mining proposed by Manual method for segregating/Sorting of Mn from ROM	Mechanized Mining adopted and Manual method for segregating/Sorting of Mn from ROM	

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	--	Dry crushing, screening and sorting for Mn ore is carried out.
3j	Provision of drilling and blasting in mineral benches	Provision of drilling & blasting made 110 mm dia, Spacing :4 Mtrs & Burden:3 Mtrs and height:8.25 Mtr	As per proposal	
3k	Provision of mining machineries in mineral benches	Proposed mining machineries Excavator-2 No's, Wheel loaders 2 No's, Trucks-12 No's, Deep hole Drill-1 No's, Jack hammer-4 No's	Mining machineries used Excavator-3 No's, Wheel loaders 2 No's, Trucks-16 No's, Deep hole Drill-1 No's, Jack hammer-3 No's	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed Bench height & Bench width - 7.5 m	Maintained the bench parameters as per the approved MP	
3m	Total area covered under excavation/pits	46.96 ha	46.69 ha	
3n	Ore to OB ratio for the pit/mine during the year.	8.46	11.29	

3o	Total area put in use under different heads at the end of year	Area put to use in plan period - Area under mining: 46.96 ha, Waste dump site-38.43 ha, Mineral storage-0.640 Infrastructure -0.845 ha. Roads-4.68 ha. Green belt 12.10 ha Biodiversity 0.50 ha R&R 5.08 ha Others 29.965 ha	Area put to use in plan period - Area under mining: 46.69 ha, Waste dump site-37.88 ha, Mineral storage-0.640 Infrastructure-0.845 ha. Roads-4.68 ha. Green belt 12.10 ha Biodiversity 0.50 ha R&R 5.08 ha Others 30.785 ha	
3p	Production of ROM mineral during the last five year period as applicable	Mn Ore- (in tonnes) 2016-17 7400 2017-18 7400 2018-19 32000 2019-20 32000 2021-22 32000	Mn Ore- (in tonnes) 2016-17 7017 2017-18 7224 2018-19 31761 2019-20 31638 2021-22 31500	Actual production of Manganese ore is within the proposed limits.
3q	General remarks of inspecting officers on method of mining etc.			Mechanized Mining adopted and Manual method for segregating/sorting of Mn Ore from ROM

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumps are proposed for top soil, OB and mineral reject	Separate dumps are maintained for top soil, OB and mineral reject	

4b	Location of topsoil, OB and mineral reject dumps	Proposed OB Neerlabbi (NRLB)- N 1666957 to 1667417 E 659875 to 660335 Dabaxikolla (DBX) N 1672760 to 1673062 E 656324 to 656600 Governor Point (GP)- N 1673600 to 1673823 E 655838 to 656054 Myadar Banda- N1658318 to 1658540 E 669710 to 669811 Proposed Mineral reject stacking Locations: Neerlabbi (NRLB)- N 1667093 to 1667296 E 660267 to 660385 N 1667434 to 1667680 E 659654 to 659828 N 1667756 to1668000 E 669903 to 660089, Dabaxikolla (DBX) N 1672949 to 1673110 E 656289 to 656416, Govern	Actual OB Locations: Neerlabbi (NRLB)- N 1666957 to 1667417 E 659875 to 660335 Dabaxikolla (DBX) N 1672760 to 1673062 E 656324 to 656600 Governor Point (GP)- N 1673600 to 1673823 E 655838 to 656054 Proposed Mineral reject stacking Locations:\ Neerlabbi (NRLB)- N 1667093 to 1667296 E 660267 to 660385 N 1667434 to 1667680 E 659654 to 659828 N 1667756 to 1668000 E 669903 to 660089, Dabaxikolla (DBX) N 1672949 to 1673110 E 656289 to 656416, Governor Point (GP)- N 1673528 to 1673625 E 656000
4c	Number of dumps within lease area and outside of lease area	Within lease area- 28 OB dumps Outside mining lease area-Nil	Within lease area- 28 OB dumps Outside mining lease area-Nil

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No Proposal	Nil	
4e	Number of active and alive dumps.	4 dumps	3 dumps	Violation U/R 11(1) issued for the deviation
4f	Number of dead dumps.	25 No's	25 No's	
4g	Number of dumps established.	19 No's of dumps are stabilized and 6 No's of dumps are partially stabilized.	19 No's of dumps are stabilized and 6 No's of dumps are partially stabilized.	Stabilized by coir mat and plantation.
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall and garland Drain have been made as per R&R Plan	Retaining wall and garland Drain have been made as per R&R Plan	
4i	Length of Retaining wall or garland drain all along dumps	Retaining Wall - 40 X 1 X 1 Mtrs Garland Drain - 90 X 1 X 1 Mtrs	Retaining Wall - 40 X 1 X 1 Mtrs Garland Drain - nil	
4j	Number of settling ponds	No Proposal	NIL	Desilting of existing ponds carried out during the year.
4k	Specific comments of inspecting officer on waste dump management			Stabilized of in active dumps by coir mat and plantation.

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.	Back filling is prosed during the year where the mineral has been exhausted completely and same has been approved in Mining Plan.	Back Filling is carried out only in such area which has been approved in Mining Plan where the mineral has already been exhausted.	

5b	Area under backfilling of mined out area	5.04 ha	2.93 ha	13.36 ha covered under backfilling.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	670 Tonnes	426 Tonnes	Top soil will be utilized for plantation in the plan period
5d	Total area fully reclaimed and rehabilitated	No proposal	Nil	--
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Back Filling is carried out as per the approved in Mining Plan where the mineral has already been exhausted.

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).	To be submitted by 1st July of every year	Annual report on PMCP submitted on 29.06.2022	
6b	Area available for rehabilitation (ha) .	No proposal	NIL	
6c	afforestation done (ha).	Backfilling proposed in DBX, NRLB & GP pits after complete excavation of ore i) Voids available for backfilling 5.04 ha ii) Void filled by waste/tailings 5.04 ha iii) Afforestation on the backfilled area in ha 1.00 ha	Backfilling carried out in DBX, NRLB & GP pits as per plan i) Voids available for backfilling 2.93 ha ii) Void filled by waste/tailings 2.93 ha iii) Afforestation on the backfilled area in ha 1.484 ha	

6d	No. of saplings planted during the year	i) Afforestation Gap Plantation ii) Area rehabilitated 5.04 ha iii) Method of rehabilitation Plantation	i) Afforestation Gap plantation with 4000 saplings carried out during the year ii) Area rehabilitated 2.93 ha of back filling 1.484 ha of previously worked out area rehabilitated iii) Method of rehabilitation Plantation	Sofar 30.68 ha of waste dumps also has been afforested.
6e	Cumulative no .of plants	Environmental monitoring proposed in Core and Buffer Zone	Environmental monitoring has been carried out for all the 4 seasons for Ambient air quality (core zone- 4 locations & buffer zone- 6 locations), water quality (surface water - 5 locations & Ground water- 5 locations), Noise quality (core zone - 6 location & buffer zone - 6 locations)	All the environmental parameters were observed to be within the permissible limit
6f	Any other method of rehabilitation			PMCP proposals have been implemented satisfactorily
6g	Cost incurred on watch and care during the year			
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D			
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings			
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area			

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	
6p	Compliance of environmental monitoring (core zone and buffer zone)	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Mn Ore: 44800	Mn Ore: 35476 T	

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual sorting for Mn Ore proposed	Dry screening and manual separation of Mn ore from ROM	
7c	Different grade of mineral sorted out at mines.	Below 25% Mn, 25% -35%, 35% - 46%	Below 25% Mn, 25% -35%, 35% - 46%	As per dispatch reported in AR
7d	Any beneficiation process at mines .	No proposal	No such beneficiation process carried out in the mines	Dry screening and manual separation of Mn ore from ROM
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Manual method adopted for mineral sorting of ROM. Different grade of mineral sorted (Mn) at the mine and 25% to 46% grade material has been dispatched.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Yes	Yes	Topsoil generated during the year has been used for Afforestation.
8b	Concurrent use or storage of topsoil	670 tonnes	426 tonnes used for Afforestation	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for overburden and Mineral rejects proposed	As proposed	Waste and Mineral rejects are stacked separately
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	OB and waste(IB) proposed for backfilling	As proposed	

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Backfilling proposed	As per proposal	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	--	During the year 7359 saplings planted within mine lease area	264446 saplings has been planted within and outside the lease area with 80% Survival rate
8g	Survival rate	80%	80%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed on haul roads to control airborne dust	As per proposal	2 No's of water tankers each of 7000 Ltrs and 1 No of 12000 Ltrs capacity is deployed
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty of the mining area and surrounding area has been well maintained

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted upto August-2022 A.R. submitted upto FY 2021-22	M.R. Submitted upto August-2022 A.R. submitted upto FY 2021-22	Annual return submitted on 27.06.2022
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager Mining- Shri. Bharath Kumar R.S., Mining Engineer- Shri. Karthik A. K., Geologist- Shri. Jalli Subramanyam	Verified and found correct	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under mining: 46.69 ha, Reclaimed/Rehabilitated-5.08 ha Mineral storage-0.640 ha Waste disposal-37.88 ha Occupied by plant, buildings, residential, welfare buildings and roads- 5.525 ha.	Area under mining: 46.69 ha, Reclaimed/Rehabilitated-5.08 ha Waste disposal-37.88 ha Occupied by plant, buildings, residential, welfare buildings and roads- 5.525 ha.	Annual return submitted online & for the year 2021-22
9d	Scrutiny of Annual return on afforestation	Within mining lease area-7359 @ 80% survival	Verified and found correct	Annual return submitted online & for the year 2021-22
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mn-35476 Tonnes (10-20% Mn), Fe- 4813 Tonnes (35-55% Fe)	Below 25% Mn, 25% -35%, 35% - 46% Dispatched as per AR	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM; Opening stock-6286.850 Tonnes, Production-31500 Tonnes, Closing stock-6286.450 Tonnes	ROM; Opening stock-6286.850 Tonnes, Production- 31500 Tonnes, Closing stock-6286.450 Tonnes	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production Rs 5916 per Ton, sale value-9363.33 and Ex. Mine price- Avg. 9363.33 Rs/T	Verified and seems to be correct	
9h	Scrutiny of Annual return on fixed assets	Rs 20,78,248 /-	Rs 20,78,248/-	

9k	Scrutiny of Annual return on mining machineries	Mining machineries used Excavator-3 No's, Wheel loaders 2 No's, Trucks-16 No's, Deep hole Drill-1 No's, Jack hammer-3 No's	Mining machineries used Excavator-3 No's, Wheel loaders 2 No's, Trucks-16 No's, Deep hole Drill-1 No's, Jack hammer-3 No's

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)	30/09/2022				

Date :

(**Dr.OMKESHA MURTHY.M.G**)

Indian Bureau of Mines