

# The Sandur Manganese & Iron Ores Limited

(An ISO 9001:2015; ISO 14001:2015 and 45001:2018 certified company)

CIN: L85110KA1954PLC000759; Website: [www.sandurgroup.com](http://www.sandurgroup.com)

## REGISTERED OFFICE

'SATYALAYA', No.266  
Ward No.1, Palace Road  
Sandur - 583 119, Ballari District  
Karnataka, India  
Tel: +91 8395 260301/ 283173-199  
Fax: +91 8395 260473



## CORPORATE OFFICE

'SANDUR HOUSE', No.9  
Bellary Road, Sadashivanagar  
Bengaluru - 560 080  
Karnataka, India  
Tel: +91 80 4152 0176 - 79 / 4547 3000  
Fax: +91 80 4152 0182

No: SMIORE/MN/060126/2679/989

06 January 2026

The Environmental Officer,  
Karnataka State Pollution Control Board,  
Ward No.25, 4th Main Road,  
Kuvempu Nagar,  
Ballari - 583104

Dear Sir,

Sub: Submission of reports pertaining to monitoring of environmental parameters for the month of December 2025 in respect of Mining Lease No. 2679.

- Ref: 1. EC Identification No. EC24B0000KA5391575N dated 01 September 2024.  
2. Consent for Operation No. AW-337273 dated 10 April 2023.  
3. Consent for Operation No. AW-348553 dated 29 April 2025.  
4. Consent for Operation No. AW-351293 dated 12 November 2025.

With reference to the letter cited above, we are enclosing herewith environmental monitoring reports from NABET accredited and MoEF&CC empaneled laboratory M/s Mineral Engineering Services as per stipulated environmental parameters in Environmental Clearance and Consent for Operation-Expansion for the month of December 2025 in respect of Mining Lease No. 2679, Ramghad Manganese & Iron Ore Mine of The Sandur Manganese & Iron Ores Limited.

Kindly request you to acknowledge receipt of the reports and oblige.

Thank you,  
for The Sandur Manganese & Iron Ores Limited.

Parthipan P  
Sr. General Manager & Agent

Encl: Monitoring Reports



MINES OFFICE: Deogiri - 583112, Sandur Taluk, Ballari District

Tel: +91 8395 271025 / 28 / 29 / 40; Fax: +91 8395 271066

PLANT OFFICE: Metal & Ferroalloy Plant, Vyasankere, Mariyammanahalli - 583 222, Hosapete Taluk, Ballari District

Tel: +91 8394 244450 / 244335



National Accreditation Board for  
Testing and Calibration Laboratories

**CERTIFICATE OF ACCREDITATION**

**ENVIRONMENTAL LABORATORY (UNIT OF MINERAL  
ENGINEERING SERVICES LLP)**

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2017**

**"General Requirements for the Competence of Testing &  
Calibration Laboratories"**

for its facilities at

#948,2ND CROSS, ST.THOMAS TOWN POST,KAMMANAHALLI MAIN ROAD, BENGALURU, BENGALURU  
URBAN, KARNATAKA, INDIA

in the field of

**TESTING**

Certificate Number: TC-6172

Issue Date: 24/05/2025

Valid Until: 23/05/2027

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued  
satisfactory compliance to the above standard & the relevant requirements of NABL.  
(To see the scope of accreditation of this laboratory, you may also visit NABL website [www.nabl-india.org](http://www.nabl-india.org))

Name of Legal Entity: MINERAL ENGINEERING SERVICES LLP

Signed for and on behalf of NABL



  
Anuja Anand  
Director

  
N. Venkateswaran  
Chief Executive Officer





**LIFE**  
Lifestyle For  
Environment



केन्द्रीय प्रदूषण नियंत्रण बोर्ड  
CENTRAL POLLUTION CONTROL BOARD  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार  
MINISTRY OF ENVIRONMENT FOREST & CLIMATE CHANGE GOVT OF INDIA

12<sup>th</sup> June 2025

F. No. LB/99/7/2021-INST LAB-HO-CPCB-HO/Pvt./-554

Recognition Letter

To,  
The Head of Laboratory,  
M/s Environmental Laboratory (Unit of Mineral Engineering Services),  
948 2<sup>nd</sup> Cross St Thomas Town Post,  
Kammanahalli, Bengaluru-560084,  
Karnataka.

**Subject: Recognition of M/s Environmental Laboratory (Unit of Mineral Engineering Services), 948 2<sup>nd</sup> Cross St Thomas Town Post, Kammanahalli, Bengaluru-560084, Karnataka as Environmental laboratory under the Environmental (Protection) Act- 1986- reg.**

Sir,

With reference to your application dated 19/03/2025 along with acceptance of the terms & conditions of the guidelines for recognition of environmental laboratories under the Environmental (Protection) Act, 1986, submitted to Central Pollution Control Board (CPCB), the Competent Authority of CPCB has accorded approval for renewal of recognition of Environmental laboratory and Govt. Analysts. Subsequently, M/s **Environmental Laboratory (Unit of Mineral Engineering Services), 948 2<sup>nd</sup> Cross St Thomas Town Post, Kammanahalli, Bengaluru-560084, Karnataka** shall be notified considering the current requirement of mandatory accreditation / certifications of the laboratory with a validity up to 23/05/2028 (for three years), subject to validity of ISO/IEC 17025 and IS/ISO 45001.

2. The following analysts have been approved as Government Analysts:

1. Sh. M. Sachin Raju
2. Smt. Arshiya Kousar
3. Smt. Binu Mani

3. The laboratory should compulsorily follow the accepted terms and conditions and may undertake the following tests:

- a) **Physical Tests:** Conductivity, Colour, pH, Fixed & Volatile Solids, Total Solids, Total Dissolved Solids, Total Suspended Solids, Turbidity, Temperature, Velocity & Discharge Measurement of Industrial Effluent Stream, Flocculation Test (Jar Test), Odour, Salinity, Settleable Solids and Sludge Volume Index (SVI).
- b) **Inorganic (General and Non-metallic):** Acidity, Alkalinity, Ammonical Nitrogen, Chloride, Chlorine Residual, Dissolved Oxygen, Fluoride, Total Hardness, Total Kjeldahl Nitrogen (TKN), Nitrite Nitrogen, Nitrate Nitrogen, Phosphate, Sulphate, Cyanide, Silica and Sulphide.
- c) **Inorganic (Trace Metals):** Boron, Cadmium, Calcium, Total Chromium, Chromium Hexavalent, Copper, Iron, Lead, Magnesium, Mercury, Nickel, Potassium, Sodium, Sodium Absorption Ratio (SAR), Zinc, Arsenic, Aluminium, Antimony, Barium, Cobalt, Selenium, Silver, Tin and Vanadium.
- d) **Organics (General) and Trace Organics:** Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Oil and Grease, Phenolic Compounds, Pesticides (each) (Organo-Chlorine and Organo Nitrogen-Phosphorus), Poly-Chlorinated Biphenyl (PCB's) each, Polynuclear Aromatic Hydrocarbon (PAH), Surfactants and Tannin & Lignin.
- e) **Microbiological Test:** Total Coliform, Faecal Coliform, *E. coli*, Faecal Streptococci and Total Plate Count.
- f) **Toxicological Tests:** Bioassay Method for Evaluation of Toxicity Using Fish (90% survival of fish after 96 hrs in 100% effluent) and Measurement of toxicity using Daphnia or other organism.

contd.

‘परिवेश भवन’ पर्वी अर्जुन नगर, दिल्ली-110032

Parivesh Bhawan, East Arjun Nagar, Delhi-110032

दूरभाष/Tel : 43102030, 22305792, वेबसाइट/Website : www.cpcb.nic.in





- g) **Biological Test:** Macrophytic Identification, Planktonic Identification Count and Chlorophyll.
  - h) **Characterization of Hazardous Waste:** Corrosivity, Ignibility (Flash Point) and Measurement of Heavy Metals/Pesticides in the Waste/Leachate.
  - i) **Soil/Sludge/Sediment and Solid Waste:** Boron, Cation Exchange Capacity (CEC), Electrical Conductivity, Nitrogen (Available), Organic Carbon/Matter (Chemical Method), pH, Phosphorous (Available), Phosphate (Ortho), Phosphate (Total), Potassium, SAR in Soil Extract, Sodium, Soil Moisture, TKN, Calorific Value, Ammonia, Bicarbonate, Calcium, Calcium Carbonate, Chloride, Colour, H. Acid, Heavy Metal, Magnesium, Nitrate, Nitrite, Potash(Available), Sulphate, Sulphur, Total Organic Carbon (TOC), Total Water Soluble Salt and Water Holding Capacity.
  - j) **Ambient Air/ Fugitive Emissions:** Nitrogen Dioxide (NO<sub>2</sub>), Sulphur Dioxide (SO<sub>2</sub>), Total Suspended Particulate Matter, Respirable Suspended Particulate Matter (PM<sub>10</sub>), Ammonia, Carbon monoxide, Chlorine, Lead, Ozone, Benzene Toluene Xylene (BTX), Polycyclic Aromatic Hydrocarbon (PAH) Benzo-a-Pyrene & others and PM<sub>2.5</sub>.
  - k) **Stack Gases/ Source Emission:** Particulate Matter, Sulphur Dioxide, Velocity & Flow, Carbon Dioxide, Carbon Monoxide, Temperature, Oxygen, Oxides of Nitrogen, Acid Mist, Ammonia, Chlorine, Total Hydrocarbon, Hydrogen Sulphide and Carbon Disulphide.
  - l) **Noise Level:** Noise level measurement (20 to 140 dba) and Ambient Noise & Source Specific Noise.
  - m) **Meteorological:** Ambient Temperature, Wind Direction, Wind Speed, Relative Humidity, Solar Radiation and Rain Fall.
4. The laboratory shall compulsorily participate in the Analytical Quality Control (AQC) Exercise conducted by the CPCB to ascertain the capability of the laboratory and analysts. The lab shall submit quarterly progress report on the sample analysis carried out to CPCB.
5. The surprise inspection / periodic surveillance of the recognized environment laboratory will be undertaken to assess its proper functioning systematic operation and reliability of data generated at the laboratory by a Joint Team as per the Notification.
6. The laboratory should have the mandatory requisite accreditation and certificate of the ISO: 17025 and ISO: 45001 as per rules. This recognition is subject to such accreditations and renewals as applicable and in case of serious non-compliance of any of the terms and conditions, the laboratory may be black listed for a minimum period of two years and civil/criminal proceedings, as applicable, may be initiated for performing functions on behalf of the Government in an unauthorized manner.
7. **M/s Environmental Laboratory (Unit of Mineral Engineering Services), Bengaluru, Karnataka** is required to apply for further renewal of recognition through online using CPCB web portal (<https://cpcbepalab.in/epalab>) before expiry of recognition with mandatory accreditation / certification concerned.

Yours faithfully,

*M. S. S. S.*  
12/6/2024

Divisional Head  
Instrumentation Laboratory



फा.सं.एलबी-2021/7/99/इंस्टलैब-एचओ-सीपीसीबी-एचओ /प्राइवेट /-554

मान्यता पत्र

सेवा में,

प्रयोगशाला प्रमुख,  
मैसर्स एनवायरनमेंटल लैबोरेटरी (यूनिट ऑफ मिनरल इंजीनियरिंग सर्विसेस एलएलपी),  
948 दूसरी क्रॉस सेंट थॉमस टाउन पोस्ट,  
कम्पनहल्ली, बेंगलुरु-560084,  
कर्नाटक।

विषय: पर्यावरण (संरक्षण) अधिनियम, 1986 के अंतर्गत पर्यावरणीय प्रयोगशाला के रूप में मैसर्स एनवायरनमेंटल लैबोरेटरी (यूनिट ऑफ मिनरल इंजीनियरिंग सर्विसेस एलएलपी), 948 दूसरी क्रॉस सेंट थॉमस टाउन पोस्ट, कम्पनहल्ली, बेंगलुरु-560084, कर्नाटक की मान्यता के बारे में।

महोदय,

केंद्रीय प्रदूषण नियंत्रण बोर्ड (के.प्र.नि.बोर्ड) को पर्यावरण (संरक्षण) अधिनियम, 1986 के अंतर्गत पर्यावरण प्रयोगशालाओं की मान्यता के लिए दिशानिर्देशों के निबंधन और शर्तों की स्वीकृति के साथ आपके दिनांक 19/03/2025 के प्रस्तुत आवेदन के संदर्भ में, के.प्र.नि.बोर्ड के सक्षम प्राधिकारी ने पर्यावरण प्रयोगशाला और सरकार के विश्लेषक की मान्यता के नवीनीकरण को अनुमोदन प्रदान किया है। तदनुसार, मैसर्स एनवायरनमेंटल लैबोरेटरी (यूनिट ऑफ मिनरल इंजीनियरिंग सर्विसेस एलएलपी), 948 दूसरी क्रॉस सेंट थॉमस टाउन पोस्ट, कम्पनहल्ली, बेंगलुरु-560084, कर्नाटक को भारत की राजपत्र अधिसूचना में प्रयोगशाला की अनिवार्य प्रत्यायन/प्रमाणन की वर्तमान अपेक्षा को ध्यान में रखते हुए दिनांक 23/05/2028 (तीन साल) तक आईएसओ/ आईईसी 17025 और आईएस/आईएसओ 45001 की वैधता के साथ अधिसूचित किया जाएगा।

2. निम्नलिखित विश्लेषकों को सरकारी विश्लेषक के रूप में अनुमोदित किया गया है:

1. श्री. एम. सचिन राजू
2. श्रीमती अर्शिया कौसर
3. श्रीमती. बिनु मणि

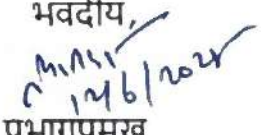
3. प्रयोगशाला अनिवार्य रूप से स्वीकृत निबंधन और शर्तों का पालन करते हुए निम्नलिखित परीक्षणों करेगी:

- क. **भौतिक परीक्षण:** चालकता, रंग, पीएच, स्थिर और वाष्पशील ठोस, कुल ठोस, कुल विलीन ठोस, कुल निलंबित ठोस, आविलता, तापमान, वेग एवं निर्वहन औद्योगिक बहिःस्राव धारा का विसर्जन मापन, फ्लोक्यूलेशन टेस्ट (जार टेस्ट), गंध, लवणता, निपटान योग्य ठोस और आपंक वॉल्यूम इंडेक्स (एसवीआई)।
- ख. **अकार्बनिक (सामान्य और गैर-धात्विक):** अम्लता, क्षारीयता, अमोनिकल नाइट्रोजन, क्लोराइड, क्लोरीन अवशिष्ट, विलीन ऑक्सीजन, फ्लोराइड, कुल कठोरता, कुल कैल्सियम नाइट्रोजन (टीकेएन), नाइट्राइट नाइट्रोजन, नाइट्रेट नाइट्रोजन, फॉस्फेट, सल्फेट, साइनाइड, सिलिका और सल्फाइड।
- ग. **अकार्बनिक (सूक्ष्म मात्रिक धातु):** बोरॉन, कैडमियम, कैल्शियम, टोटल क्रोमियम, क्रोमियम हेक्सावैलेंट, तांबा, लोहा, सीसा, मैग्नीशियम, पारा, निकल, पोटेशियम, सोडियम, सोडियम अवशोषण अनुपात (एसएआर), जिंक, आर्सेनिक, एल्युमीनियम, एंटीमनी, बेरियम, कोबाल्ट, सेलेनियम, सिल्वर, टिन और वैनेडियम।
- घ. **ऑर्गेनिक्स (सामान्य) और ट्रेस ऑर्गेनिक्स:** बायोकेमिकल ऑक्सीजन डिमांड (बीओडी), रासायनिक ऑक्सीजन डिमांड (सीओडी), तेल और ग्रीस, फेनोलिक यौगिक, कीटनाशक (प्रत्येक) (ऑर्गेनो-क्लोरीन और ऑर्गेनो नाइट्रोजन-फॉस्फोरस), पॉली-क्लोरीनेटेड बाइफेनाइल (पीसीबी) (प्रत्येक), पॉलीन्यूक्लियर एरोमैटिक हाइड्रोकार्बन (पीएच), सर्फेक्टेंट और टैनिन & लिग्निन।
- ङ. **सूक्ष्म जीवविज्ञान परीक्षण:** टोटल कोलीफॉर्म, फीकल कोलीफॉर्म, ई.कोली, फीकल स्ट्रेप्टोकोक्की, स्ट्रेप्टोकोक्की और टोटल प्लेट काउंट।
- च. **आविष विज्ञानी परीक्षण:** मछली का उपयोग करके विषाक्तता के मूल्यांकन के लिए जैव परख विधि (100% प्रवाह में 96 घंटे के बाद मछली का 90% जीवित रहना), और डैफ़निया या अन्य जीव का उपयोग करके विषाक्तता का मापन।

जारी.



- छ. **जैविक परीक्षण:** मैक्रोफाइटिक पहचान, प्लवक पहचान गणना और क्लोरोफिल।
- ज. **परिसंकटमय अपशिष्ट का लक्षण वर्णन:** संक्षारकता, ज्वलनशीलता (फ्लैश प्वाइंट) और अपशिष्ट & निक्षालक में भारी धातुओं/पीड़कनाशियों का मापन।
- झ. **मृदा/आपंक/तलछट और ठोस अपशिष्ट:** बोरॉन, कटियन एक्सचेंज क्षमता (सीईसी), विद्युत चालकता, नाइट्रोजन (उपलब्ध), कार्बनिक कार्बन/पदार्थ (रासायनिक विधि), पीएच, फास्फोरस (उपलब्ध), फॉस्फेट (ऑर्थो), फॉस्फेट (कुल), पोटेशियम, मृदा के अर्क में एसएआर, सोडियम, मृदा की नमी, टीकेएन, कैलोरी मान, अमोनिया, बाइकार्बोनेट, कैल्शियम, कैल्शियम कार्बोनेट, क्लोराइड, रंग, एच एसिड, भारी धातु, मैग्नीशियम, नाइट्रेट, नाइट्राइट, पोटेश (उपलब्ध), सल्फेट, सल्फर, कुल कार्बनिक कार्बन (टीओसी), कुल पानी में घुलनशील नमक और जल धारण क्षमता।
- ञ. **परिवेशी वायु/पलायक उत्सर्जन:** नाइट्रोजन डाइऑक्साइड (एनओ<sub>2</sub>), सल्फर डाइऑक्साइड (एसओ<sub>2</sub>), कुल निलंबित विविक्त कण, श्वसन योग्य निलंबित कण पदार्थ (पीएम<sub>10</sub>), अमोनिया, कार्बन मोनोऑक्साइड, क्लोरीन, सीसा, ओजोन, बेंजीन टोल्यूनि ज़ाइलीन (बीटीएक्स), पॉलीसाइक्लिक एरोमैटिक हाइड्रोकार्बन (पीएच) बेंजो-ए-पाइरिन और अन्य और पीएम<sub>2.5</sub>।
- ट. **चिमनी गैसें/स्रोत उत्सर्जन:** पार्टिकुलेट मैटर, सल्फर डाइऑक्साइड, वेग और प्रवाह, कार्बन डाइऑक्साइड, कार्बन मोनोऑक्साइड, तापमान, ऑक्सीजन, नाइट्रोजन के ऑक्साइड, एसिड धुंध, अमोनिया, कुल हाइड्रोकार्बन, हाइड्रोजन सल्फाइड और कार्बन डाइसल्फाइड।
- ठ. **रव (शोर) स्तर:** शोर स्तर माप (20 से 140 डीबीए) और परिवेश रव & स्रोत विशिष्ट रव।
- ड. **मौसम संबंधी:** परिवेश का तापमान, हवा की दिशा, हवा की गति, सापेक्ष आर्द्रता, सौर विकिरण और वर्षा।
4. प्रयोगशाला और विश्लेषकों की क्षमता का पता लगाने के लिए प्रयोगशाला को के.प्र.नि. बोर्ड द्वारा आयोजित विश्लेषणात्मक गुणवत्ता नियंत्रण) एक्ज्यूसी (अभ्यास में अनिवार्य रूप से भाग लेना होगा। प्रयोगशाला किए गए नमूना विश्लेषण पर के.प्र.नि. बोर्ड को तिमाही प्रगति रिपोर्ट प्रस्तुत करेगी।
5. अधिसूचना के अनुसार, एक संयुक्त दल द्वारा मान्यता प्राप्त पर्यावरण प्रयोगशाला का औचक निरीक्षण/आवधिक निगरानी उस के उचित कामकाज, व्यवस्थित प्रचालन और प्रयोगशाला में तैयार किए गए आंकड़ों की विश्वसनीयता का निर्धारण करने के लिए की जाएगी।
6. प्रयोगशाला के पास नियमानुसार ISO/IEC: 17025:2017 (और IS/ ISO: 45001 का अपेक्षित प्रत्यायन और प्रमाण पत्र होना चाहिए। यह मान्यता यथा लागू प्रत्यायन और नवीनीकरण के अधीन है और किसी भी निबंधन और शर्तों के गंभीर गैर-अनुपालन के मामले में, प्रयोगशाला को न्यूनतम दो साल की अवधि के लिए ब्लैकलिस्ट किया जा सकता है और सरकार की ओर से अनधिकृत तरीके से कार्य करने के लिए, यथा लागू सिविल/आपराधिक कार्यवाही शुरू की जा सकती है।
7. **मैसर्स एनवायरनमेंटल लैबोरेटरी (यूनिट ऑफ मिनरल इंजीनियरिंग सर्विसेस एलएलपी), बेंगलुरु, कर्नाटक** को संबंधित अनिवार्य प्रत्यायन/प्रमाणीकरण के साथ मान्यता की समाप्ति से पूर्व केंद्रीय प्रदूषण नियंत्रण बोर्ड के वेबपोर्टल (<https://cpcbepalab.in/epalab>) का उपयोग कर के ऑनलाइन मान्यता के नवीनीकरण के लिए आवेदन करना अपेक्षित है।

भवदीय,  
  
 प्रभागप्रमुख  
 उपकरणीय प्रयोगशाला

# ENVIRONMENTAL MONITORING REPORT

Project	<b>Ramgad Manganese Ore Mine ML No. 2679</b>
Location	Ramgad village, Sandur Taluk, Ballari Dist, Karnataka
Client	M/s. The Sandur Manganese & Iron Ores Limited
Office Address	Sandur, Ballari District, Karnataka
Monitoring Month	December -2025

## **ENVIRONMENTAL LABORATORY** **(Unit of Mineral Engineering Services LLP)**

Recognised by MoEF&CC Under E(P) Act 1986

&

Accredited by NABL

#948, 2<sup>nd</sup> Cross, Kammanahalli Main Road,

St Thomas Town Post,

Bangalore- 560 084, Karnataka

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## TEST REPORT

Table No.1

### AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited  
Name of the Project : Mining Lease No. 2679  
Location : Ramgad village, Sandur Taluk, Ballari Dist, Karnataka  
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)  
Code & Station : A1 - ML Area (Core Zone)  
Duration : 24 Hrs  
Issue date : 02.01.2026  
Sampling & Test Method: IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Particulate Matter		Carbon Monoxide* (CO), mg/m <sup>3</sup>
				PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	
05.12.2025	N010225121	9	11	54	28	0.33
06.12.2025	N002125122	8	12	48	23	0.45
12.12.2025	N027025122	12	18	58	30	0.28
13.12.2025	N00102523	11	15	55	29	0.36
19.12.2025	N02042523	10	13	46	25	0.42
20.12.2025	N000325124	12	18	49	27	0.25
24.12.2025	N018725124	11	14	40	22	0.35
25.12.2025	N023025124	7	10	46	26	0.52
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	4 1 Hr

Note : \* Parameters monitored for period of 1 hr

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## TEST REPORT

Table No.2

### AMBIENT AIR QUALITY

Name of the Client	: The Sandur Manganese & Iron Ores Limited					
Name of the Project	: Mining Lease No. 2679					
Location	: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka					
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)					
Code & Station	: A2 - Core Zone (Myadara Banda Block)					
Duration	: 24 Hrs					
Issue date	: 02.01.2026					
Sampling & Test Method	: IS 5182 & Lab SOP					
Date of Sampling	Report No	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Particulate Matter		Carbon Monoxide* (CO), mg/m <sup>3</sup>
				PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	
05.12.2025	N010425121	8	14	51	27	0.36
06.12.2025	N002325122	10	12	43	23	0.25
12.12.2025	N027225122	7	11	45	24	0.45
13.12.2025	N00122523	9	12	56	29	0.52
19.12.2025	N02062523	10	14	50	26	0.38
20.12.2025	N000525124	12	18	43	22	0.42
24.12.2025	N018925124	7	9	49	26	0.35
25.12.2025	N023225124	8	10	35	19	0.44
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	4 1 Hr

Note : \* Parameters monitored for period of 1 hr

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## TEST REPORT

Table No.3

### AMBIENT AIR QUALITY

Name of the Client	: The Sandur Manganese & Iron Ores Limited					
Name of the Project	: Mining Lease No. 2679					
Location	: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka					
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)					
Code & Station	: A3 - Core Zone (Governor Point)					
Duration	: 24 Hrs					
Issue date	: 02.01.2026					
Sampling & Test Method	: IS 5182 & Lab SOP					
Date of Sampling	Report No	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Particulate Matter		Carbon Monoxide* (CO), mg/m <sup>3</sup>
				PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	
05.12.2025	N010525121	11	15	40	22	0.28
06.12.2025	N002425122	7	9	45	25	0.37
12.12.2025	N027325122	11	13	47	27	0.55
13.12.2025	N00132523	8	10	37	19	0.24
19.12.2025	N02072523	10	14	50	28	0.43
20.12.2025	N000625124	12	18	55	32	0.47
24.12.2025	N019025124	10	13	51	27	0.36
25.12.2025	N023325124	12	14	43	22	0.42
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	4 1 Hr
Note : * Parameters monitored for period of 1 hr						

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## TEST REPORT

Table No.4

### AMBIENT AIR QUALITY

Name of the Client	: The Sandur Manganese & Iron Ores Limited					
Name of the Project	: Mining Lease No. 2679					
Location	: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka					
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)					
Code & Station	: A4 - Core Zone (Neerlabi)					
Duration	: 24 Hrs					
Issue date	: 02.01.2026					
Sampling & Test Method	: IS 5182 & Lab SOP					
Date of Sampling	Report No	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Particulate Matter		Carbon Monoxide* (CO), mg/m <sup>3</sup>
				PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	
05.12.2025	N010625121	7	10	49	25	0.45
06.12.2025	N002525122	11	12	57	33	0.31
12.12.2025	N027425122	6	9	52	28	0.39
13.12.2025	N00142523	11	13	45	25	0.42
19.12.2025	N02082523	7	11	36	19	0.39
20.12.2025	N000725124	8	11	49	28	0.47
24.12.2025	N019125124	9	12	58	30	0.35
25.12.2025	N023425124	8	11	45	24	0.25
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	4 1 Hr

Note : \* Parameters monitored for period of 1 hr

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## TEST REPORT

Table No.5

### AMBIENT AIR QUALITY

Name of the Client	: The Sandur Manganese & Iron Ores Limited					
Name of the Project	: Mining Lease No. 2679					
Location	: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka					
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)					
Code & Station	: A5 - Ramghad village					
Duration	: 24 Hrs					
Issue date	: 02.01.2026					
Sampling & Test Method	: IS 5182 & Lab SOP					
Date of Sampling	Report No	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Particulate Matter		Carbon Monoxide* (CO), mg/m <sup>3</sup>
				PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	
05.12.2025	N010725121	7	10	48	23	0.42
06.12.2025	N002625122	12	15	47	26	0.33
12.12.2025	N027525122	8	15	37	18	0.28
13.12.2025	N00152523	9	14	55	32	0.41
19.12.2025	N02092523	10	11	53	28	0.21
20.12.2025	N000825124	11	13	41	24	0.29
24.12.2025	N019225124	10	12	46	26	0.31
25.12.2025	N023525124	7	11	40	33	0.42
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	4 1 Hr
Note : * Parameters monitored for period of 1 hr						

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## TEST REPORT

Table No.6

### AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited  
Name of the Project : Mining Lease No. 2679  
Location : Ramgad village, Sandur Taluk, Ballari Dist, Karnataka  
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)  
Code & Station : A6 - Dharmapura village  
Duration : 24 Hrs  
Issue date : 02.01.2026  
Sampling & Test Method: IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Particulate Matter		Carbon Monoxide* (CO), mg/m <sup>3</sup>
				PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	
05.12.2025	N010825121	11	13	56	27	0.55
06.12.2025	N002725122	10	15	50	20	0.36
12.12.2025	N027625122	13	18	47	23	0.27
13.12.2025	N00162523	8	10	46	25	0.25
15.12.2025	N00752523	11	13	55	29	0.42
16.12.2025	N01272523	8	15	58	32	0.36
24.12.2025	N019325124	12	17	51	27	0.28
25.12.2025	N023625124	11	13	39	27	0.44
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	4 1 Hr

Note : \* Parameters monitored for period of 1 hr

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## TEST REPORT

Table No.7

### AMBIENT AIR QUALITY

Name of the Client	: The Sandur Manganese & Iron Ores Limited					
Name of the Project	: Mining Lease No. 2679					
Location	: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka					
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)					
Code & Station	: A7 - Garaga village					
Duration	: 24 Hrs					
Issue date	: 02.01.2026					
Sampling & Test Method	: IS 5182 & Lab SOP					
Date of Sampling	Report No	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Particulate Matter		Carbon Monoxide* (CO), mg/m <sup>3</sup>
				PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	
05.12.2025	N010925121	10	13	40	20	0.47
06.12.2025	N002825122	9	11	43	23	0.26
12.12.2025	N027725122	12	15	47	26	0.31
13.12.2025	N00172523	10	11	53	30	0.28
19.12.2025	N02102523	8	10	34	19	0.33
20.12.2025	N000925124	12	13	45	30	0.24
24.12.2025	N019425124	11	15	38	20	0.42
25.12.2025	N023725124	8	12	52	27	0.28
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	4 1 Hr

Note : \* Parameters monitored for period of 1 hr

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## TEST REPORT

Table No.8

### AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited  
Name of the Project : Mining Lease No. 2679  
Location : Ramgad village, Sandur Taluk, Ballari Dist, Karnataka  
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)  
Code & Station : A8 - Yeswanthanagar  
Duration : 24 Hrs  
Issue date : 02.01.2026  
Sampling & Test Method: IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Particulate Matter		Carbon Monoxide* (CO), mg/m <sup>3</sup>
				PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	
05.12.2025	N009725121	10	16	45	25	0.52
06.12.2025	N001725122	9	15	56	29	0.26
12.12.2025	N026925122	7	9	50	27	0.37
13.12.2025	N00092523	12	15	54	26	0.48
15.12.2025	N00702523	7	11	50	26	0.55
16.12.2025	N01222523	11	15	38	20	0.46
22.12.2025	N008025124	13	18	56	27	0.37
23.12.2025	N013825124	9	13	46	20	0.28
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	4 1 Hr

Note : \* Parameters monitored for period of 1 hr

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## TEST REPORT

Table No.9

### AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited  
Name of the Project : Mining Lease No. 2679  
Location : Ramgad village, Sandur Taluk, Ballari Dist, Karnataka  
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)  
Code & Station : A9 - Subbarayanahalli  
Duration : 24 Hrs  
Issue date : 02.01.2026  
Sampling & Test Method: IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Particulate Matter		Carbon Monoxide* (CO), mg/m <sup>3</sup>
				PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	
05.12.2025	N009325121	9	12	54	27	0.35
06.12.2025	N001325122	11	15	44	24	0.36
08.12.2025	N010225122	8	12	58	32	0.24
09.12.2025	N017225122	12	18	55	28	0.47
15.12.2025	N00662523	9	15	50	26	0.35
16.12.2025	N01182523	11	13	47	23	0.28
22.12.2025	N007625124	12	15	44	20	0.43
23.12.2025	N013425124	11	13	53	25	0.37
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	4 1 Hr

Note : \* Parameters monitored for period of 1 hr

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## TEST REPORT

Table No.10

### AMBIENT AIR QUALITY

Name of the Client	: The Sandur Manganese & Iron Ores Limited					
Name of the Project	: Mining Lease No. 2679					
Location	: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka					
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)					
Code & Station	: A10 - Siddapura village					
Duration	: 24 Hrs					
Issue date	: 02.01.2026					
Sampling & Test Method	: IS 5182 & Lab SOP					
Date of Sampling	Report No	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Particulate Matter		Carbon Monoxide* (CO), mg/m <sup>3</sup>
				PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	
05.12.2025	N010325121	9	15	48	24	0.42
06.12.2025	N002225122	10	12	50	26	0.35
12.12.2025	N027125122	7	9	52	28	0.48
13.12.2025	N00112523	9	15	40	22	0.38
19.12.2025	N02052523	8	13	53	26	0.26
20.12.2025	N000425124	10	15	49	25	0.35
24.12.2025	N018825124	10	12	52	27	0.45
25.12.2025	N023125124	12	18	58	32	0.21
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	4 1 Hr
Note : * Parameters monitored for period of 1 hr						

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## TEST REPORT

Table No. 11

### Fugitive Emission

<b>Name of the Client</b>	: The Sandur Manganese & Iron Ores Limited		
<b>Name of the Project</b>	: Mining Lease No. 2679		
<b>Location</b>	: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka		
<b>Sample Collected by</b>	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)		
<b>Duration</b>	: 08 Hrs		
<b>Issue Date</b>	: 02.01.2026		
Code & Station	Date of sample	Report No	Particulate mater ( $\mu\text{g}/\text{m}^3$ )
FA1, Loading point	13.12.2025	N00182523	285
FA2, Dumping point	13.12.2025	N00192523	425
FA3, Haulage Road	12.12.2025	N027825122	463
FA4, Stack Yard	12.12.2025	N027925122	354
FA5, Drilling Point	19.12.2025	N02112523	388
FA6, Waste Dumping Point	19.12.2025	N02122523	393
Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment)			Particulate mater ( $\mu\text{g}/\text{m}^3$ )
Permissible limits for Fugitive Emissions			600 $\mu\text{g}/\text{m}^3$

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## TEST REPORT

Table No. 12

### Analysis Report of Dust Fall Measurement

Name of the Client	The Sandur Manganese & Iron Ores Limited
Name of the Project	Mining Lease No. 2679
Location	Ramgad village, Sandur Taluk, Ballari Dist, Karnataka
Month	01.12.2025 to 31.12.2025
Sample Type	Total Dust Fall Rate
Duration of Monitoring	One Month
Issue Date	02.01.2026

### Result

Code	Location	Result	unit	Reference Method
DF1	Mine Office Area	0.035	g/m <sup>2</sup> month	IS 5182 (Part 01) : 2006
DF2	Near Crusher Area	0.042	g/m <sup>2</sup> month	IS 5182 (Part 01) : 2006
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)				

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## TEST REPORT

Table No. 13

### AMBIENT NOISE LEVEL DATA

Report No : ELMES072512

Report No : ELMES072512

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2679
Location	: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Particulars of Sample	: Noise levels
Issue Date	: 02.01.2026
Sampling	: IS : 9989 & CPCB Guidelines

Corezone								
Code No.	Monitoring stations	Date of monitoring	Day			Night		
			L <sub>min</sub>	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>max</sub>
N1	Core zone ML Area	12.12.2025	41.0	61.7	69.0	41.6	50.7	58.3
N2	Myadara Banda Block	12.12.2025	38.0	53.6	60.0	35.0	49.3	56.0
N3	Governor Point)	12.12.2025	43.0	59.4	65.0	34.0	45.7	54.0
N4	Neerlabbi	12.12.2025	41.8	50.0	56.2	35.0	51.5	61.0

Bufferzone								
Code No.	Monitoring stations	Date of monitoring	Day			Night		
			L <sub>min</sub>	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>max</sub>
N5	Ramgad village	13.12.2025	41.0	52.2	57.0	36.0	43.4	47.0
N6	Dharmapura	13.12.2025	39.0	50.8	56.2	35.0	42.3	46.0
N7	Garaga village	13.12.2025	36.0	47.7	53.8	35.0	41.2	44.2
N8	Yeshwanthanagar	19.12.2025	37.0	51.8	57.0	35.0	43.5	48.3
N9	Subbarayanahalli	19.12.2025	36.0	51.3	56.2	36.0	42.1	45.2
N10	Siddapura	19.12.2025	40.8	53.2	58.0	34.0	42.5	46.2

Permissible Limits of Ambient Noise Levels as per CPCB Guidelines		
	Leq. Limit dB(A)	
	Day	Night
Industrial areas	75	70
Commercial area	65	55
Residential area	55	45

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## TEST REPORT

Table No. 14

### SOURCE NOISE LEVEL DATA

Report No : ELMES082512

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2679
Location	: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Particulars of Sample	: Noise levels
Issue Date	: 02.01.2026
Sampling	: IS : 9989 & CPCB Guidelines

#### Source

Code No.	Monitoring stations	Date of monitoring	Day			Remarks
			L <sub>min</sub>	L <sub>eq</sub>	L <sub>max</sub>	
N1	Loading Point	20.12.2025	42.0	66.8	76.0	During operation
N2	Dumping Point	20.12.2025	41.3	70.9	78.0	During operation
N3	Haulage Road	20.12.2025	43.0	71.8	81.0	During operation

#### Permissible Limits of Ambient Noise Levels as per CPCB Guidelines

	Leq. Limit dB(A)	
	Day	Night
Industrial areas	75	70

#### Heavy Earth Moving Machineries

Code No.	Monitoring stations	Date of monitoring	Day			Remarks
			L <sub>min</sub>	L <sub>eq</sub>	L <sub>max</sub>	
N4	Wheel Loader	20.12.2025	40.0	75.0	80.0	During operation in side of the cabin
			37.0	66.8	73.0	During operation 10mts outside of the cabin
N5	Tata Hitachi 200LC	20.12.2025	43.0	69.9	78.2	During operation in side of the cabin
			40.0	67.9	74.8	During operation 10mts outside of the cabin

#### Permissible limits as per ILO Code of Practice

For Unprotected ear - 8 hrs working shift

Warning limit - 85 dB(A)

Danger limit - 90 dB(A)

Worker not to be exposed for more than 115 dB(A)

With ear protection -

130 dB(A) 'Impulse' or 120 dB(A) 'Fast'

No entry when noise level exceeds 140 dB(A)

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## TEST REPORT

Table No.15

Table No. 1

Name of the Client	: The Sandur Manganese & Iron Ores Limited						
Name of the Project	: Mining Lease No. 2679						
Location	: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka						
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)						
Nature of sample	: Surface water						
Sample Location	: SW1 - Ragavapura kere water, SW2 - Dhananayakana kere water : SW3 - Narihalla Upstream water, SW4 - Narihalla Downstream water						
Issue Date	: 02.01.2026						
Ref : IS : 2296, Water Quality Standards							
Date of sample collection		06.12.2025	06.12.2025	12.12.2025	12.12.2025	Limits	Method of Testing
Date of sample receipt		08.12.2025	08.12.2025	13.12.2025	13.12.2025		
Report No		M000325122	M000425122	M00012523	M00022523		
Sl.No.	Samples Code	SW1	SW2	SW3	SW4		
Parameters		Results					
1	pH	8.31	8.47	8.40	8.50	6.5 to 8.5	IS:3025(Part-11)2022
2	Colour (Hazen Units), Max	5	10	5	15.00	300	IS 3025 (Part 11) 2022
3	Odour	Agreeable	Agreeable	Agreeable	Agreeable	-	IS:3025 (P-5) 2018
4	Total Dissolved Solids (mg/l), Max	194	270	220	230	1500	IS 3025 (Part 16) 2023
5	Total Suspended Solids, mg/l	60.0	80.0	60	74	-	IS 3025 (Part 17) 2023
6	Dissolved Oxygen (as O <sub>2</sub> ), mg/l,	5.60	5.40	5.10	5.30	Min 4	IS:3025(Part-38)1989RA 2019
7	Biochemical Oxygen Demand (as O <sub>2</sub> ), mg/l	<3.0	<3.0	<3.0	<3.0	3	IS 3025 (Part 44) 2023
8	Total Hardness (as CaCO <sub>3</sub> ),mg/l,Max	54.0	110	380.0	340	-	IS:3025 (P-21):2009 RA 2023
9	Sulphates as SO <sub>4</sub> (mg/l), Max	42.0	60.0	90.0	70.0	400	APHA (24th Edition ):4110B
10	Phosphates (as P ), mg/l	<0.05	<0.05	<0.05	<0.05	-	IS 3025 (P-31) Sec 1 2022 1976
11	Chloride (as Cl),mg/l, Max	18.0	55.0	220.0	230.0	600	IS:3025(Part-32) 1988RA2019
12	Fluoride (as F),mg/l, Max	0.56	0.67	0.88	0.85	1.5	IS 3025 (Part 60-Sec1) 2023
13	Sulphide (as H <sub>2</sub> S) , mg/l, Max	<0.01	<0.01	<0.01	<0.01	-	IS:3025 (P-29) 2022
14	Boron (as B), mg/l, Max	<0.1	<0.1	<0.1	<0.1	-	IS:3025 (Part-57) 2021
15	Iron (as Fe),mg/l, Max	<0.005	<0.005	<0.005	<0.005	50	IS 3025 (Part 65) 2022
16	Percent of Sodium (%)	26	29	26.0	30.0	-	IS 2488 part 5
17	Residual Sodium Carbonate (meq/l)	<0.05	<0.05	<0.5	<0.5	-	IS 11624 .2009
18	Total Coliform, MPN/100ml	58	31	110	95	5000	IS 15185 2016 RA 2021

"END OF REPORT"

  
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## TEST REPORT

Table No. 16

Name of the Client		: The Sandur Manganese & Iron Ores Limited				
Name of the Project		: Mining Lease No. 2679				
Location		: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka				
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services LLP)				
Nature of sample		: Ground water (Bore Well)				
Sample Location		: GW1 - Project Site Core Zone Borewell water, GW2 - Ramghad Bore water				
Issue Date		: 02.01.2026				
Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)						
Date of sample collection		12.12.2025	12.12.2025	Desirable Limits	Permissible Limits	Method of Testing
Date of sample receipt		13.12.2025	13.12.2025			
Report No		M00032523	M00042523			
Sl. No.	Sample Code	GW1	GW2			
	Parameters	Results				
1	Colour (Hazen Units)	3	1	5	15	IS:3025 (P-4) 2021
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025 (P-5) 2018
3	pH Value	6.82	7.58	6.5 to 8.5	6.5 - 8.5	IS:3025 (P-11)2022
4	Taste	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025 (P- 8) 2023
5	Turbidity,NTU	1.60	2.60	1	5	IS:3025 (P-10) 2023
6	Total Dissolved Solids,mg/l	130.0	216.0	500	2000	IS:3025 (P-16) 2023
7	Aluminium (as Al)	<0.005	<0.005	0.03	0.2	IS:3025 (P-55) 2022
8	Ammonia (as total Ammonia -N),mg/l	<0.1	<0.1	0.5	0.5	IS:3025 (P-34)1 Sec 1 2023
9	Anionic Detergents (as MBAS),mg/l	<0.1	<0.1	0.2	1.0	IS:3025 (P-68) 2023
10	Barium (as Ba), mg/l	<0.005	<0.005	0.7	0.7	IS:3025(P-65) 2022
11	Boron (as B), mg/l	<0.1	<0.1	0.5	2.4	IS:3025 (Part-57) 2021
12	Calcium (as Ca),mg/l	20.80	36.00	75	200	IS:3025 (P-40) 2021
13	Chloramines as Cl2	<0.1	<0.1	4	4	Clause 6 of IS 3025 (P-26) 2021
14	Chloride as Cl (mg/l)	17.00	50.00	250	1000	IS:3025 (P-32)1988 RA 2019
15	Copper (as Cu),mg/l	<0.0005	<0.0005	0.05	1.5	IS:3025 (P-65) 2022
16	Fluoride (as F),mg/l	0.25	0.42	1	1.5	IS:3025 (P-60) Sec 2022
17	Residual, Free Chlorine,mg/l	<0.1	<0.1	0.2	1	IS:3025 (P-26) 2021
18	Iron (as Fe),mg/l	<0.005	<0.005	1.0	1.0	IS:3025 (Part-65) 2022
19	Magnesium (as Mg)mg/l	8.74	14.60	30	100	IS:3025 (P-46)1 2023
20	Manganese (as Mn),mg/l	<0.001	<0.001	0.1	0.3	IS:3025 (P-65) 2022
21	Mineral Oil,mg/l	<0.5	<0.5	1.0	1.0	IS:3025 (P-39) 2021
22	Nitrates (as NO <sub>3</sub> ),mg/l	8.00	15.60	45	45	IS:3025 (P-34) 1988 RA 2019
23	Phenolics (as C <sub>6</sub> H <sub>5</sub> OH),mg/l	<0.001	<0.001	0.001	0.002	IS:3025 (P-43) Sec 1 2023
24	Selenium (as Se),mg/l	<0.0005	<0.0005	0.01	0.01	IS:3025(P-65) 2022
25	Silver (as Ag), mg/l	<0.005	<0.005	0.1	0.1	IS:3025(P-65) 2022
26	Sulphate (as SO <sub>4</sub> ),mg/l	12.00	36.00	200	400	IS:3025 (P-24) Sec 1 2022
27	Sulphide (as H <sub>2</sub> S) , mg/l	<0.01	<0.01	0.05	0.05	IS:3025 (P-29) 2022
28	Total Alkalinity (as CaCO <sub>3</sub> ) mg/l	88.0	85.0	200	600	IS:3025 (P-23):2023
29	Total Hardness (as CaCO <sub>3</sub> ),mg/l	84.0	150.0	200	600	IS:3025 (P-21):2009 RA 2023
30	Zinc (as Zn),mg/l	<0.005	<0.005	5	15	IS:3025 (P-65) 2022
31	Cadmium (as Cd),mg/l	<0.0005	<0.0005	0.003	0.003	IS:3025 (P-65) 2022
32	Cyanide (as CN),mg/l	<0.01	<0.01	0.05	0.05	IS:3025 (P-27)Sec 1 2021
33	Lead (as Pb),mg/l	<0.0005	<0.0005	0.01	0.01	IS:3025 (P-65) 2022
34	Mercury (as Hg),mg/l	<0.0005	<0.0005	0.001	0.001	IS:3025 (P-65) 2022
35	Molybdenum (as Mo), mg/l	<0.0005	<0.0005	0.07	0.07	IS:3025 (P-65) 2022
36	Nickel (as Ni),mg/l	<0.01	<0.01	0.02	0.02	IS:3025 (P-65) 2022
37	Arsenic (as As),mg/l	<0.0005	<0.0005	0.01	0.01	IS:3025 (P-65) 2022
38	Total Chromium (as Cr),mg/l	<0.001	<0.001	0.05	0.05	IS:3025 (P-65) 2022
39	Escherichia coli/100ml	Not Detected	Not Detected	Shall not be detectable in any 100ml Sample		IS:15185:2016 RA 2021
40	Total Coliform /100ml)	Not Detected	Not Detected			IS:15185:2016 RA 2021
41	Electrical Conductivity (µmhos/cm)	240.0	400.0	—	—	IS 3025 (P-14) 2013 RA 2023

"END OF REPORT"

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## TEST REPORT

Table No. 17

Name of the Client		: The Sandur Manganese & Iron Ores Limited				
Name of the Project		: Mining Lease No. 2679				
Location		: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka				
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services LLP)				
Nature of sample		: Ground water (Bore Well)				
Sample Location		: GW3 - Dharmapura Bore water, GW4 - Garaga Bore water				
Issue Date		: 02.01.2026				
Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)						
Date of sample collection		12.12.2025	12.12.2025	Desirable Limits	Permissible Limits	Method of Testing
Date of sample receipt		13.12.2025	13.12.2025			
Report No		M00052523	M00062523			
Sl. No.	Sample Code	GW3	GW4	Results		
	Parameters					
1	Colour (Hazen Units)	1	1	5	15	IS:3025 (P-4) 2021
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025 (P-5) 2018
3	pH Value	7.60	7.43	6.5 to 8.5	6.5 - 8.5	IS:3025 (P-11) 2022
4	Taste	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025 (P- 8) 2023
5	Turbidity,NTU	1.80	1.20	1	5	IS:3025 (P-10) 2023
6	Total Dissolved Solids,mg/l	1050.0	2100.0	500	2000	IS:3025 (P-16) 2023
7	Aluminium (as Al)	<0.005	<0.005	0.03	0.2	IS:3025 (P-55) 2022
8	Ammonia (as total Ammonia -N),mg/l	<0.1	<0.1	0.5	0.5	IS:3025 (P-34)1 Sec 1 2023
9	Anionic Detergents (as MBAS),mg/l	<0.1	<0.1	0.2	1.0	IS:3025 (P-68) 2023
10	Barium (as Ba), mg/l	<0.005	<0.005	0.7	0.7	IS:3025(P-65) 2022
11	Boron (as B), mg/l	<0.1	<0.1	0.5	2.4	IS:3025 (Part-57) 2021
12	Calcium (as Ca),mg/l	200.40	280.50	75	200	IS:3025 (P-40) 2021
13	Chloramines as Cl2	<0.1	<0.1	4	4	Clause 6 of IS 3025 (P-26) 2021
14	Chloride as Cl (mg/l)	110.00	550.00	250	1000	IS:3025 (P-32)1988 RA 2019
15	Copper (as Cu),mg/l	<0.0005	<0.0005	0.05	1.5	IS:3025 (P-65) 2022
16	Fluoride (as F),mg/l	0.70	1.10	1	1.5	IS:3025 (P-60) Sec 2022
17	Residual, Free Chlorine,mg/l	<0.1	<0.1	0.2	1	IS:3025 (P-26) 2021
18	Iron (as Fe),mg/l	<0.005	<0.005	1.0	1.0	IS:3025 (Part-65) 2022
19	Magnesium (as Mg),mg/l	77.70	121.50	30	100	IS:3025 (P-46)1 2023
20	Manganese (as Mn),mg/l	<0.001	<0.001	0.1	0.3	IS:3025 (P-65) 2022
21	Mineral Oil,mg/l	<0.5	<0.5	1.0	1.0	IS:3025 (P-39) 2021
22	Nitrates (as NO3),mg/l	38.60	44.00	45	45	IS:3025 (P-34) 1988 RA 2019
23	Phenolics (as C6H5OH),mg/l	<0.001	<0.001	0.001	0.002	IS:3025 (P-43) Sec 1 2023
24	Selenium (as Se),mg/l	<0.0005	<0.0005	0.01	0.01	IS:3025(P-65) 2022
25	Silver (as Ag), mg/l	<0.005	<0.005	0.1	0.1	IS:3025(P-65) 2022
26	Sulphate (as SO4),mg/l	120.00	450.00	200	400	IS:3025 (P-24) Sec 1 2022
27	Sulphide (as H2S) , mg/l	<0.01	<0.01	0.05	0.05	IS:3025 (P-29) 2022
28	Total Alkalinity (as CaCO3) mg/l	440.0	520.0	200	600	IS:3025 (P-23):2023
29	Total Hardness (as CaCO3),mg/l	820.0	1200.0	200	600	IS:3025 (P-21):2009 RA 2023
30	Zinc (as Zn),mg/l	<0.005	<0.005	5	15	IS:3025 (P-65) 2022
31	Cadmium (as Cd),mg/l	<0.0005	<0.0005	0.003	0.003	IS:3025 (P-65) 2022
32	Cyanide (as CN),mg/l	<0.01	<0.01	0.05	0.05	IS:3025 (P-27)Sec 1 2021
33	Lead (as Pb),mg/l	<0.0005	<0.0005	0.01	0.01	IS:3025 (P-65) 2022
34	Mercury (as Hg),mg/l	<0.0005	<0.0005	0.001	0.001	IS:3025 (P-65) 2022
35	Molybdénium (as Mo), mg/l	<0.0005	<0.0005	0.07	0.07	IS:3025 (P-65) 2022
36	Nickel (as Ni),mg/l	<0.01	<0.01	0.02	0.02	IS:3025 (P-65) 2022
37	Arsenic (as As),mg/l	<0.0005	<0.0005	0.01	0.01	IS:3025 (P-65) 2022
38	Total Chromium (as Cr),mg/l	<0.001	<0.001	0.05	0.05	IS:3025 (P-65) 2022
39	Escherichia coli/100ml	Not Detected	Not Detected	Shall not be detectable in any 100ml Sample		IS:15185:2016 RA 2021
40	Total Coliform /100ml)	Not Detected	Not Detected			IS:15185:2016 RA 2021
41	Electrical Conductivity (µmhos/cm)	1840.0	3600.0	—	—	IS 3025 (P-14) 2013 RA 2023

"END OF REPORT"

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## TEST REPORT

Table No. 18

Name of the Client		: The Sandur Manganese & Iron Ores Limited				
Name of the Project		: Mining Lease No. 2679				
Location		: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka				
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services LLP)				
Nature of sample		: Ground water (Bore Well)				
Sample Location		: GW5 - Yeshwanthnagar Bore water, GW6 - Subbarayanahalli Bore water				
Issue Date		: 02.01.2026				
Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)						
Date of sample collection		08.12.2025	08.12.2025	Desirable Limits	Permissible Limits	Method of Testing
Date of sample receipt		09.12.2025	09.12.2025			
Report No		M001625122	M001525122			
Sl. No.	Sample Code	GW5	GW6	Results		
	Parameters					
1	Colour (Hazen Units)	5	<1	5	15	IS:3025 (P-4) 2021
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025 (P-5) 2018
3	pH Value	7.70	6.70	6.5 to 8.5	6.5 - 8.5	IS:3025 (P-11)2022
4	Taste	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025 (P- 8) 2023
5	Turbidity,NTU	1.08	<0.1	1	5	IS:3025 (P-10) 2023
6	Total Dissolved Solids,mg/l	1500.0	286.0	500	2000	IS:3025 (P-16) 2023
7	Aluminium (as Al)	<0.005	<0.005	0.03	0.2	IS:3025 (P-55) 2022
8	Ammonia (as total Ammonia -N),mg/l	<0.1	<0.1	0.5	0.5	IS:3025 (P-34)1 Sec 1 2023
9	Anionic Detergents (as MBAS),mg/l	<0.1	<0.1	0.2	1.0	IS:3025 (P-68) 2023
10	Barium (as Ba), mg/l	<0.005	<0.005	0.7	0.7	IS:3025(P-65) 2022
11	Boron (as B), mg/l	<0.1	<0.1	0.5	2.4	IS:3025 (Part-57) 2021
12	Calcium (as Ca),mg/l	224.40	48.10	75	200	IS:3025 (P-40) 2021
13	Chloramines as C12	<0.1	<0.1	4	4	Clause 6 of IS 3025 (P-26) 2021
14	Chloride as Cl (mg/l)	380.00	50.00	250	1000	IS:3025 (P-32)1988 RA 2019
15	Copper (as Cu),mg/l	<0.0005	<0.0005	0.05	1.5	IS:3025 (P-65) 2022
16	Fluoride (as F),mg/l	0.95	0.41	1	1.5	IS:3025 (P-60) Sec 2022
17	Residual, Free Chlorine,mg/l	<0.1	<0.1	0.2	1	IS:3025 (P-26) 2021
18	Iron (as Fe),mg/l	<0.005	<0.005	1.0	1.0	IS:3025 (Part-65) 2022
19	Magnesium (as Mg)mg/l	85.00	19.40	30	100	IS:3025 (P-46)1 2023
20	Manganese (as Mn),mg/l	<0.001	<0.001	0.1	0.3	IS:3025 (P-65) 2022
21	Mineral Oil,mg/l	<0.5	<0.5	1.0	1.0	IS:3025 (P-39) 2021
22	Nitrates (as NO <sub>3</sub> ),mg/l	44.00	18.60	45	45	IS:3025 (P-34) 1988 RA 2019
23	Phenolics (as C <sub>6</sub> H <sub>5</sub> OH),mg/l	<0.001	<0.001	0.001	0.002	IS:3025 (P-43) Sec 1 2023
24	Selenium (as Se),mg/l	<0.0005	<0.0005	0.01	0.01	IS:3025(P-65) 2022
25	Silver (as Ag), mg/l	<0.005	<0.005	0.1	0.1	IS:3025(P-65) 2022
26	Sulphate (as SO <sub>4</sub> ),mg/l	180.00	60.00	200	400	IS:3025 (P-24) Sec 1 2022
27	Sulphide (as H <sub>2</sub> S) , mg/l	<0.01	<0.01	0.05	0.05	IS:3025 (P-29) 2022
28	Total Alkalinity (as CaCO <sub>3</sub> ) mg/l	620.0	130.0	200	600	IS:3025 (P-23):2023
29	Total Hardness (as CaCO <sub>3</sub> ),mg/l	910.0	200.0	200	600	IS:3025 (P-21):2009 RA 2023
30	Zinc (as Zn),mg/l	<0.005	<0.005	5	15	IS:3025 (P-65) 2022
31	Cadmium (as Cd),mg/l	<0.0005	<0.0005	0.003	0.003	IS:3025 (P-65) 2022
32	Cyanide (as CN),mg/l	<0.01	<0.01	0.05	0.05	IS:3025 (P-27)Sec 1 2021
33	Lead (as Pb),mg/l	<0.0005	<0.0005	0.01	0.01	IS:3025 (P-65) 2022
34	Mercury (as Hg),mg/l	<0.0005	<0.0005	0.001	0.001	IS:3025 (P-65) 2022
35	Molybdenum (as Mo), mg/l	<0.0005	<0.0005	0.07	0.07	IS:3025 (P-65) 2022
36	Nickel (as Ni),mg/l	<0.01	<0.01	0.02	0.02	IS:3025 (P-65) 2022
37	Arsenic (as As),mg/l	<0.0005	<0.0005	0.01	0.01	IS:3025 (P-65) 2022
38	Total Chromium (as Cr),mg/l	<0.001	<0.001	0.05	0.05	IS:3025 (P-65) 2022
39	Escherichia coli/100ml	Not Detected	Not Detected	Shall not be detectable in any 100ml Sample		IS:15185:2016 RA 2021
40	Total Coliform /100ml)	Not Detected	Not Detected			IS:15185:2016 RA 2021
41	Electrical Conductivity (µmhos/cm)	2600.0	520.0	—	—	IS 3025 (P-14) 2013 RA 2023

"END OF REPORT"

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## TEST REPORT

Table No. 19

### Stack Monitoring Report

Name of the Client : The Sandur Manganese & Iron Ores Limited				
Name of the Mine : RAMGAD MANGANESE & IRON ORE MINE (ML NO. 2679)				
Location : Ramgad village, Sandur Taluk, Ballari Dist, Karnataka				
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)				
Stack ID & Capacity : DG Set 35 KVA Ramgad-KK1 Mines				
Instrument used for sampling : Emissions collected through stack sampler				
Date of Collection : 13.12.2025				
Date of Sample Receipt : 15.12.2025				
Report No : N00012523				
Issue date : 02.01.2026				
<b>STACK DETAILS</b>				
1	Fuel Used	Diesel		
2	Ambient Temperature (°C)	26		
3	Stack Temperature (°C)	136		
4	Velocity (m/s)	7.03		
5	Stack diameter (M)	0.15		
6	Quantity of flue Gas Discharged into atmosphere (Nm³/hr)	306		
7	Sample Condition When Received	Satisfactory		
8	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1		
9	Serial No. of the Equipment	338 DTH 14		
10	Calibration due date	17.07.2026		
11	Test Method	IS 11255 & flue gas analyser		
<b>Pollutional Parameters (Result)</b>				
Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.079	<0.2
2	CO	g/Kw-hr	0.067	<3.5
3	NOx +HC	g/Kw-hr	0.162	<4.0

INFERENCE

As per KSPCB

Report Status - The measured values for the above parameters for those standards have been specified were observed to be within the said standards

*Arshiya Kousar*  
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## TEST REPORT

Table No. 20

### Stack Monitoring Report

Name of the Client : The Sandur Manganese & Iron Ores Limited				
Name of the Mine : RAMGAD MANGANESE & IRON ORE MINE (ML NO. 2679)				
Location : Ramgad village, Sandur Taluk, Ballari Dist, Karnataka				
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)				
Location : Mining Lease No. 2679				
Stack ID & Capacity : DG Set 20 KVA Ramgad Mines				
instrument used for sampling : Emissions collected through stack sampler				
Date of Collection : 13.12.2025				
Date of Sample Receipt : 15.12.2025				
Report No : N00022523				
Issue date : 02.01.2026				
<b>STACK DETAILS</b>				
1	Fuel Used	Diesel		
2	Ambient Temperature (°C)	25		
3	Stack Temperature (°C)	132		
4	Velocity (m/s)	5.97		
5	Stack diameter (M)	0.15		
6	Quantity of flue Gas Discharged into atmosphere (Nm <sup>3</sup> /hr)	263		
7	Sample Condition When Received	Satisfactory		
8	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1		
9	Serial No. of the Equipment	338 DTH 14		
10	Calibration due date	17.07.2026		
11	Test Method	IS 11255 & flue gas analyser		
<b>Pollutional Parameters (Result)</b>				
Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.118	<0.2
2	CO	g/Kw-hr	0.122	<3.5
3	NOx +HC	g/Kw-hr	0.218	<4.0

INFERENCE	As per KSPCB
	Report Status - The measured values for the above parameters for those standards have been specified were observed to be within the said standards

  
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## TEST REPORT

Table No. 21

### RESULTS OF RESIPARBLE AIR-BORNE DUST SURVEY

Name of the Client : Sandur Manganese & Iron Ores Limited  
Name of the Mine : Ramgad Manganese & Iron Ore Mine (ML NO. 2679)  
Location : Ramgad village, Sandur Taluk, Ballari Dist, Karnataka  
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)  
Issue Date : 02.01.2026

#### PERSONAL SAMPLER

SL. NO	DATE OF SAMPLE COLLECTION	FILTER PAPER CODE	REPORT NO	SAMPLE LOCATION / CATEGORY	NAME OF THE PERSON	DURATION OF SAMPLING			VOLUME OF AIR (Lts)	DUST CONCENTRATION mg/m <sup>3</sup> RPM	*PERMISSIBLE LIMIT mg/m <sup>3</sup>
						FROM	TO	TOTAL HRS			

#### PERSONAL SAMPLER

1	13.12.2025	A-186	FS00125123	Excavator (Tata Hitachi 200 Lc)	Durgappa	8:35	16:35	8:00	708.0	0.56	1
2	13.12.2025	A-187	FS00225123	Wheel Loader Operator	N Nagaraj	8:40	16:45	8:05	722.7	0.83	1

#### STATIC SAMPLER

3	13.12.2025	A-188	FS00325123	Haulage Road	Static	8:45	16:45	8:00	796.8	0.82	1
4	13.12.2025	A-189	FS00425123	Waste Dump	Static	8:50	16:50	8:00	940.8	0.88	1

\*Note: Free Silica Analysis report for Ramgad Manganese & Iron Ore mine show less than 5% Free silica content and hence the permissible limit for dust concentration shall be 1 mg/m<sup>3</sup> (Ref : DGMS (Tech) Circular (MAMID) /08 Dated 29.04.2020)

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## TEST REPORT

Table No. 22

### FREE SILICA ANALYSIS REPORT

Name of the Client		: Sandur Manganese & Iron Ores Limited			
Name of the Mine		: Ramgad Manganese & Iron Ore Mine (ML NO. 2679)			
Location		: Ramgad village, Sandur Taluk, Ballari Dist, Karnataka			
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services LLP)			
Issue Date		: 02.01.2026			
SL.NO	DATE OF SAMPLE COLLECTION	LOCATION / CATEGORY	Name of the person / Static	Free Silica Content (%)	Free Silica Limits (%)
<b><u>PERSONAL SAMPLER</u></b>					
1	13.12.2025	Excavator (Tata Hitachi 200 Lc)	Durgappa	ND	5
2	13.12.2025	Wheel.Loader Operator	N Nagaraj	ND	5
<b><u>STATIC SAMPLER</u></b>					
3	13.12.2025	Haulage Road	Static	ND	5
4	13.12.2025	Waste Dump	Static	ND	5
Note: ND-Not Detected, Detection Level : 0.0005%					

  
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