O/C

The Sandur Manganese & Iron Ores Limited

(An ISO 9001:2015; ISO 14001:2015 and 45001:2018 certified company)
CIN: L85110KA1954PLC000759; Website: 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/071125/2678/783

07 November 2025

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 environmental parameters for the month of October 2025 in respect of Mining Lease No. 2678.

Ref:
1. Environmental Clearance F.No. IA-J-11015/45/2021-IA-II(M) dated 25 April 2023.
2. Consent for Operation No. AW-345054 dated 18 September 2024.
3. Consent for Operation No. AW-348549 dated 29 April 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 October 2025 in respect of Mining Lease No. 2678 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

The Sandur Manganese & Iron Ores Ltd.

Encl: Monitoring Reports

11/11/2025

National Accreditation Board for Testing and Calibration Laboratories

NABL

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 thislaboratory, you may also visit NABL website 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

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

12th June 2025

Recognition Letter

To,

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

Subject: Recognition of M/s Environmental Laboratory (Unit of Mineral Engineering Services), 948 2nd 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 19/03/2025along 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 2nd 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 Solidsand 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, Tinand 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 andTotal 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.

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 Saltand Water Holding Capacity.

j) **Ambient Air/ Fugitive Emissions:** Nitrogen Dioxide (NO_2), Sulphur Dioxide (SO_2), Total Suspended Particulate Matter, Respirable Suspended Particulate Matter (PM_{10}), Ammonia, Carbon monoxide, Chlorine, Lead, Ozone, Benzene Toluene Xylene (BTX), Polycyclic Aromatic Hydrocarbon (PAH) Benzo-a-Pyrine& others and $PM_{2.5}$.

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,

12/6/2024

Divisional Head
Instrumentation Laboratory

12 जून 2025

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

मान्यता पत्र

सेवा में,

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

विषय: पर्यावरण (संरक्षण) अधिनियम, 1986 के अंतर्गत पर्यावरणीय प्रयोगशाला के रूप में मैसर्स एनवायरनमेंटल लैबोरेटरी (यूनिट ऑफ मिनरल इंजीन्यरिंग सर्विसेस एलएलपी), 948 दूसरी क्रॉस सेंट थॉमस टाउन पोस्ट, कम्मनहल्ली, 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। तत्पश्चात, **मैसर्स एनवायरनमेंटल लैबोरेटरी (यूनिट ऑफ मिनरल इंजीन्यरिंग सर्विसेस एलएलपी), 948 दूसरी क्रॉस सेंट थॉमस टाउन पोस्ट, कम्मनहल्ली, 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 बहि:स्राव 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 केजेल्डहल नाइट्रोजन (टीकेएन), नाइट्राइट नाइट्रोजन, नाइट्रेट नाइट्रोजन, फॉस्फेट, सल्फेट, साइनाइड, सिलिका और सल्फाइड।
   - ग. **अकार्बनिक (सूक्ष्म मात्रिक धातु)**: बोरोन, कैडमियम, कैल्शियम, टोटल क्रोमियम, क्रोमियम हेक्सावलेंट, 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-क्लोरिनेटेड बाइफिनाइल (पीसीबी) (प्रत्येक), पॉलीन्यूक्लियर एरोमैटिक हाइड्रोकार्बन (पीएएच), 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, पोटाश (उपलब्ध), सल्फेट, सल्फर, कुल कार्बनिक कार्बन (टीओसी), कुल पानी में घुलनशील नमक और जल धारण क्षमता।

ञ. **परिवेशी वायु/पलायक उत्सर्जन**: नाइट्रोजन डाइऑक्साइड (एनओ$_2$), सल्फर डाइऑक्साइड (एसओ$_2$), कुल निलंबित विविक्त कण, श्वसन योग्य निलंबित कण पदार्थ (पीएम$_{10}$), अमोनिया, कार्बन मोनोऑक्साइड, क्लोरीन, सीसा, ओजोन, बेंजीन टोल्यूनि ज़ाइलीन (बीटीएक्स), पॉलीसाइक्लिक एरोमैटिक हाइड्रोकार्बन (पीएएच) बेंजो-ए-पाइरिन और अन्य और पीएम$_{2.5}$।

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 डाइसल्फ़ाइड।

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) एक्यूसी (अभ्यास में अनिवार्य रूप से भाग ले ना 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: 45001का 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 इंजीन्यरिंग 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 अपेक्षितहै।

भवदीय,

12/6/2024

प्रभागप्रमुख
उपकरणीय प्रयोगशाला

ENVIRONMENTAL MONITORING REPORT

Project	Mining Lease No. 2678
Location	Deogiri Manganese & Iron Ore Mine, Kammathuru Iron Ore Mine, Subrayanahalli Manganese & Iron Ore Mine, Sandur Taluk, Ballari Dist, Karnataka
Client	M/s. The Sandur Manganese & Iron Ores Limited
Office Address	Sandur, Ballari District, Karnataka
Monitoring Month	October -2025

ENVIRONMENTAL LABORATORY

(Unit of Mineral Engineering Services LLP)

(Accredited by NABL & MoEF&CC Under E(P) Act 1986)

#948, 2nd Cross, Kammanahalli Main Road,

St Thomas Town Post,

Bangalore- 560 084, Karnataka

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(UNIT OF MINERAL ENGINEERING SERVICES LLP)

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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. 2678
Location : Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station : A1 - Mine Pit (SK) / (CBG)
Duration : 24 Hrs
Issue date : 03.11.2025
Sampling & Test Method : IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter		Carbon Monoxide* (CO), mg/m^3
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)	
03.10.2025	N001725102	9	13	33	16	0.35
04.10.2025	N006725102	11	12	45	23	0.85
06.10.2025	N012125102	6	10	40	21	0.56
07.10.2025	N015525102	8	11	37	18	0.68
17.10.2025	M026825103	12	15	43	23	0.48
18.10.2025	N000925104	11	18	35	20	0.58
20.10.2025	N006625104	6	10	32	16	0.75
21.10.2025	N009325104	11	12	43	24	0.95
27.10.2025	N007025105	9	10	30	16	0.86
28.10.2025	N014125105	5	9	40	26	1.05
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

ARSHIYA KOUSAR
Dy TM - Chemical -
Govt Analyst/Authorised Signatory

Office & Lab Address : # 948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.
Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in

Note : This report is subject to the terms and conditions mentioned overleaf.

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(UNIT OF MINERAL ENGINEERING SERVICES LLP)

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Recognised by MoEFCC(CPCB) under E(P) Act 1986 Recognition valid upto 23.05.2028

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. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station	: A2 - Kammathuru (within ML Area)
Duration	: 24 Hrs
Issue date	: 03.11.2025
Sampling & Test Method	: IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter		Carbon Monoxide* (CO), mg/m^3
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)	
03.10.2025	N001825102	8	9	30	17	0.65
04.10.2025	N006825102	7	11	39	20	0.78
06.10.2025	N012225102	6	10	46	25	0.95
07.10.2025	N015625102	9	13	31	18	0.55
17.10.2025	M026925103	10	12	38	21	0.74
18.10.2025	N001025104	6	9	45	26	1.20
20.10.2025	N006725104	7	10	32	16	0.58
21.10.2025	N009425104	9	10	35	19	0.87
27.10.2025	N007125105	11	12	47	26	0.65
28.10.2025	N014225105	8	10	36	19	0.45
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

ARSHIYA KOUSAR
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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. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station	: A3 - Deogiri (within ML Area)
Duration	: 24 Hrs
Issue date	: 03.11.2025
Sampling & Test Method	: IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter		Carbon Monoxide* (CO), mg/m^3
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)	
03.10.2025	N001925102	12	14	25	16	0.35
04.10.2025	N006925102	9	11	38	18	0.88
06.10.2025	N012325102	10	12	28	15	0.64
07.10.2025	N015725102	7	9	46	23	0.51
17.10.2025	M027025103	5	10	27	19	0.48
18.10.2025	N001125104	9	11	33	16	0.35
20.10.2025	N006825104	7	9	41	22	0.45
21.10.2025	N009525104	11	12	46	24	0.59
27.10.2025	N007225105	6	9	36	18	0.66
28.10.2025	N014325105	8	10	43	24	0.75
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. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station	: A4 - SBH Plot (Mine Boundary)
Duration	: 24 Hrs
Issue date	: 03.11.2025
Sampling & Test Method	: IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter		Carbon Monoxide* (CO), mg/m^3
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)	
03.10.2025	N002025102	10	13	37	19	0.80
04.10.2025	N007025102	10	11	32	16	0.45
06.10.2025	N012425102	8	10	40	22	0.28
07.10.2025	N015825102	10	12	45	26	0.68
17.10.2025	M027125103	6	9	33	18	0.45
18.10.2025	N001225104	7	10	42	25	0.66
20.10.2025	N006925104	8	9	48	23	0.73
21.10.2025	N009625104	11	14	34	20	0.81
27.10.2025	N007325105	10	13	27	15	0.55
28.10.2025	N014425105	7	11	36	18	0.64
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

ARSHIYA KOUSAR
Dy TM - Chemical
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Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in

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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. 2678
Location : Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station : A5 - Subbarayanahalli (within ML Area)
Duration : 24 Hrs
Issue date : 03.11.2025
Sampling & Test Method : IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter		Carbon Monoxide* (CO), mg/m^3
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)	
03.10.2025	N002125102	5	9	44	28	0.63
04.10.2025	N007125102	8	11	33	17	0.48
06.10.2025	N012525102	9	10	40	22	0.57
07.10.2025	N015925102	10	14	37	18	0.87
17.10.2025	M027225103	6	9	46	25	0.74
18.10.2025	N001325104	7	10	33	17	0.65
20.10.2025	N007025104	8	11	41	24	0.55
21.10.2025	N009725104	9	12	49	26	0.45
27.10.2025	N007425105	7	9	40	22	0.38
28.10.2025	N014525105	9	11	37	18	0.48
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

ARSHIYA KOUSAR
Dy TM - Chemical
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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. 2678
Location : Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station : A6 - Appayyanahalli (Narayanpura)
Duration : 24 Hrs
Issue date : 03.11.2025
Sampling & Test Method : IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter		Carbon Monoxide* (CO), mg/m^3
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)	
03.10.2025	N002225102	6	9	36	19	0.25
04.10.2025	N007225102	9	12	24	16	0.65
06.10.2025	N012625102	10	13	45	24	0.38
07.10.2025	N016025102	5	9	37	19	0.42
17.10.2025	M027325103	12	14	44	25	0.57
18.10.2025	N001425104	10	13	53	27	0.45
20.10.2025	N007125104	7	9	35	18	0.61
21.10.2025	N009825104	5	9	25	15	0.73
27.10.2025	N007525105	7	9	46	26	0.54
28.10.2025	N014625105	11	14	39	18	0.99
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

ARSHIYA KOUSAR
Dy TM - Chemical
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Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in

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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. 2678
Location : Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station : A7 - Vitalanagar (Navalatti)
Duration : 24 Hrs
Issue date : 03.11.2025
Sampling & Test Method : IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter		Carbon Monoxide* (CO), mg/m^3
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)	
03.10.2025	N002325102	9	11	40	24	0.46
04.10.2025	N007325102	6	10	51	27	0.57
06.10.2025	N012725102	10	13	44	19	0.84
07.10.2025	N016125102	9	10	40	25	0.35
17.10.2025	M027425103	8	11	47	26	0.45
18.10.2025	N001525104	11	12	38	18	0.42
20.10.2025	N007225104	9	11	52	27	0.56
21.10.2025	N009925104	7	9	43	22	0.68
27.10.2025	N007625105	8	13	45	25	0.75
28.10.2025	N014725105	7	9	49	28	0.45
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

ARSHIYA KOUSAR
Dy TM - Chemical
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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. 2678
Location : Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station : A8 - Swamihalli
Duration : 24 Hrs
Issue date : 03.11.2025
Sampling & Test Method : IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter		Carbon Monoxide* (CO), mg/m^3
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)	
03.10.2025	N002425102	10	12	26	17	0.66
04.10.2025	N007425102	7	9	39	19	0.36
06.10.2025	N012825102	9	10	40	21	0.46
07.10.2025	N016225102	7	11	52	27	0.52
17.10.2025	M027525103	8	10	48	25	0.35
18.10.2025	N001625104	6	9	35	17	0.48
20.10.2025	N007325104	9	13	52	26	0.55
21.10.2025	N010025104	11	12	43	23	0.61
27.10.2025	N007725105	7	10	40	22	0.38
28.10.2025	N014825105	10	12	31	17	0.49
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

ARSHIYA KOUSAR
Dy TM - Chemical
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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. 2678
Location : Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station : A9 - Yeswanthanagar
Duration : 24 Hrs
Issue date : 03.11.2025
Sampling & Test Method : IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter		Carbon Monoxide* (CO), mg/m^3
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)	
03.10.2025	N002525102	11	10	40	26	0.51
04.10.2025	N007525102	12	14	53	28	0.75
06.10.2025	N012925102	10	11	43	20	0.86
07.10.2025	N016325102	7	9	55	29	0.64
17.10.2025	M027625103	10	12	32	20	0.58
18.10.2025	N001725104	9	11	41	24	0.34
20.10.2025	N007425104	12	13	53	25	0.48
21.10.2025	N010125104	7	12	43	23	0.52
27.10.2025	N007825105	11	14	50	27	0.38
28.10.2025	N014925105	9	11	36	18	0.75
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. 2678
Location : Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station : A10 - Tonasigeri
Duration : 24 Hrs
Issue date : 03.11.2025
Sampling & Test Method : IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO_2), µg/m^3	Nitrogen Dioxide (NO_2), µg/m^3	Particulate Matter		Carbon Monoxide* (CO), mg/m^3
				PM_{10}, (µg/m^3)	$PM_{2.5}$, (µg/m^3)	
03.10.2025	N002625102	11	10	40	21	0.58
04.10.2025	N007625102	9	12	25	17	0.64
06.10.2025	N013025102	7	13	47	24	0.52
07.10.2025	N016425102	13	15	35	18	0.35
17.10.2025	M027725103	11	12	50	28	0.25
18.10.2025	N001825104	10	12	45	25	0.48
20.10.2025	N007525104	9	11	37	18	0.38
21.10.2025	N010225104	8	10	35	16	0.29
27.10.2025	N007925105	9	13	30	19	0.45
28.10.2025	N015025105	7	9	40	21	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. 11

Fugitive Emission

Name of the Client	**: The Sandur Manganese & Iron Ores Limited**
Name of the Project	**: Deogiri Manganese & Iron Ore Mine (ML NO. 2678)**
Location	**: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.**
Sample Collected by	**: Environmental Laboratory (Unit of Mineral Engineering Services LLP)**
Duration	**: 08 Hrs**
Issue Date	**: 03.11.2025**

Code & Station	Date of sample	Report No	Particulate mater (µg/m^3)
FA1-Mine Face / Benches	17.10.2025	M027825103	232
FA2 - Haulage Road / Service Road	17.10.2025	M027925103	321
FA3 - Crushing & Screening Plant	17.10.2025	M028025103	365
FA4 - Mineral Stack Yard / Loading	18.10.2025	N001925104	215
FA5 - Active Waste Dump	18.10.2025	N002025104	387

Ref : As per CFO in Annexure - II issued KSPCB

	Particulate mater (µg/m^3)
Permissible limits for Fugitive Emissions	**600 µg/m^3**

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TEST REPORT

Table No. 12

Fugitive Emission

Name of the Client	: **The Sandur Manganese & Iron Ores Limited**
Name of the Project	: **Kammathuru Iron Ore (KTIO) (ML No. 2678)**
Location	: **Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.**
Sample Collected by	: **Environmental Laboratory (Unit of Mineral Engineering Services LLP)**
Duration	: **08 Hrs**
Issue Date	: **03.11.2025**

Code & Station	Date of sample	Report No	Particulate mater ($\mu g/m^3$)
FA1-Mine Face / Benches	03.10.2025	N002725102	296
FA2 - Haulage Road / Service Road	03.10.2025	N002825102	356
FA3 - Crushing & Screening Plant	03.10.20025	N001625102	385
FA4 - Mineral Stack Yard / Loading	04.10.2025	N007725102	245
FA5 - Active Waste Dump	04.10.2025	N007825102	378

Ref : As per CFO in Annexure - II issued KSPCB

	Particulate mater ($\mu g/m^3$)
Permissible limits for Fugitive Emissions	**600 $\mu g/m^3$**

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TEST REPORT

Table No. 13

Fugitive Emission

Name of the Client	**: The Sandur Manganese & Iron Ores Limited**
Name of the Project	**: Subrayanahalli Manganese & Iron Ore Mine (ML NO. 2678)**
Location	**: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.**
Sample Collected by	**: Environmental Laboratory (Unit of Mineral Engineering Services LLP)**
Duration	**: 08 Hrs**
Issue Date	**: 03.11.2025**

Code & Station	Date of sample	Report No	Particulate mater (µg/m^3)
FA1-Mine Face / Benches	06.10.2025	N013125102	185
FA2 - Haulage Road / Service Road	06.10.2025	N013225102	366
FA3 - Crushing & Screening Plant	06.10.2025	N013325102	287
FA4 - Mineral Stack Yard / Loading	07.10.2025	N016525102	255
FA5 - Active Waste Dump	07.10.2025	N016625102	364

Ref : As per CFO in Annexure - II issued KSPCB

	Particulate mater (µg/m^3)
Permissible limits for Fugitive Emissions	**600 µg/m^3**

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TEST REPORT

Table No. 14

Analysis Report of Dust Fall Measurement

Name of the Client	The Sandur Manganese & Iron Ores Limited
Name of the Project	Mining Lease No. 2678
Location	Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Month	01.10.2025 to 31.10.2025
Sample Type	Dust Fall
Duration of Monitoring	One Month
Issue Date	03.11.2025

Result

Code	Location	Result	unit	Reference Method
DF1	Deogiri mines office	0.115	g/m^2 month	*IS 5182 (Part 01) : 2006*
DF2	Kammathuru (Near School)	0.096	g/m^2 month	*IS 5182 (Part 01) : 2006*
DF3	Appayyanahalli	0.125	g/m^2 month	*IS 5182 (Part 01) : 2006*
DF4	Subbarayanahalli (Near Hospital)	0.119	g/m^2 month	*IS 5182 (Part 01) : 2006*
DF5	Yeswanthanagar (Near Railway Track)	0.125	g/m^2 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. 15

AMBIENT NOISE LEVEL DATA

Report No : ELMES022510

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Particulars of Sample	: Noise levels
Issue Date	: 03.11.2025
Sampling	: IS : 9989 & CPCB Guidelines

Corezone

Code No.	Monitoring stations	Date of monitoring	Day			Night		
			L_{min}	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}
N1	Mine Pit (SK/CBG)	03.10.2025	38.9	56.0	61.0	34.0	46.7	54.5
N2	Kammathuru ML Area	03.10.2025	40.0	55.8	65.0	36.0	49.3	58.0
N3	Deogiri ML Area	03.10.2025	42.0	58.4	68.0	34.0	50.8	60.0
N4	SBS Plot (Mine Boundary)	05.10.2025	38.0	51.6	58.7	35.0	48.7	56.0
N5	SB Halli ML Area	05.10.2025	37.0	55.6	62.0	34.0	48.1	57.0
N6	Mine area	05.10.2025	40.0	60.8	66.8	34.5	52.4	60.0

Bufferzone

Code No.	Monitoring stations	Date of monitoring	Day			Night		
			L_{min}	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}
N7	Appayanahalli (Narayanapura)	06.10.2025	38.2	48.9	56.8	34.0	41.2	47.2
N8	Vitthalanagar (Navalatti)	06.10.2025	39.2	50.8	58.3	35.0	43.9	48.0
N9	Swamihalli	06.10.2025	35.0	50.2	56.2	35.0	40.1	44.0
N10	Yeshwanthnagar	07.10.2025	39.0	51.3	57.2	34.0	42.6	49.0
N11	Tonasingeri	07.10.2025	36.0	51.4	55.8	36.0	42.4	46.5
N12	Kumaraswamy Temple	07.10.2025	37.5	49.4	57.0	34.0	40.6	46.0

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. 16

Name of the Client	**: The Sandur Manganese & Iron Ores Limited**
Name of the Project	**: Mining Lease No. 2678**
Location	**: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.**
Sample Collected by	**: Environmental Laboratory (Unit of Mineral Engineering Services LLP)**
Nature of Sample	**: STP Water**
Sample Location	**: STP1, Inlet Water sample from 100 KLD STP, Deogiri**
Date of sample collection	**: 04.10.2025**
Date of sample receipt	**: 05.10.2025**
Report No	**: M000125102**
Issue Date	**: 03.11.2025**

Ref: G S R 1265 (e) and CPCB Standards

Sl.No.	Sample Code / Parameters	STP1 / Unit	Results	Method of Testing
1	pH	-	6.51	IS 3025 (P-11) 2022
2	Biochemical Oxygen Demand BOD_3 27^0 C	mg/l	62	IS 3025 (Part 44) 2023
3	Chemical Oxygen Demand (COD)	mg/l	292	IS 3025 (Part 58) 2023
4	Total Suspended Solids, at 105^0C	mg/l	300	IS 3025 (P-17) 2022
5	Ammonium (H4-N)	mg/l	1.8	IS:3025 (Part-34 Sec 1) 2023
6	Total Nitrogen (N-Total)	mg/l	12	IS 3025 (Part-34 sec 1) 2023
7	Fecal coliform	MPN/100ml	200	APHA 24th Edition chapter 9221 E

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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. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Nature of Sample	: STP Water
Sample Location	: STP2, Outlet Water sample from 100 KLD STP, Deogiri
Date of sample collection	: 04.10.2025
Date of sample receipt	: 05.10.2025
Report No	: M000225102
Issue Date	: 03.11.2025

Ref: G S R 1265 (e) and CPCB Standards

Sl.No.	Parameters	units	Results	Sewage Effluent Discharge Standards	Method of Testing
1	pH	-	6.65	6.5 - 9.0	IS 3025 (P-11) 2022
2	Biochemical Oxygen Demand BOD_3 27^0 C	mg/l	8.5	<10	IS 3025 (Part 44) 2023
3	Chemical Oxygen Demand (COD)	mg/l	32	<50	IS 3025 (Part 58) 2023
4	Total Suspended Solids, at 105^0C	mg/l	18	<20	IS 3025 (P-17) 2022
5	Ammonium (H4-N)	mg/l	0.6	<5	IS:3025 (Part-34 Sec 1) 2023
6	Total Nitrogen (N-Total)	mg/l	3.6	<10	IS 3025 (Part-34 sec 1) 2023
7	Fecal coliform	MPN/100ml	16	<100	APHA 24th Edition chapter 9221 E

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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. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Nature of sample	: Surface water
Sample Location	: SW1 - Durgammakolla spring water, SW2 - JLK spring water SW3 - Katrasinghkolla spring water
Date of sample collection	: 04.10.2025
Date of sample receipt	: 05.10.2025
Issue Date	: 03.11.2025

Ref : IS : 2296, Water Quality Standards

	Report No	M000525102	M000625102	M000725102	Limits	Method of Testing
Sl.No.	Sample Code	SW1	SW2	SW3		
	Parameters	Results				
1	pH	6.70	6.80	7.25	6.5 to 8.5	IS:3025(Part-11)2022
2	Colour (Hazen Units)	1	5	5	300	IS 3025 (Part 11) 2022
3	Odour	Agreeable	Agreeable	Agreeable	-	IS:3025 (P-5) 2018
4	Total Dissolved Solids (mg/l)	152	184	140	1500	IS 3025 (Part 16) 2023
5	Total Suspended Solids, mg/l	4	13	18	-	IS 3025 (Part 17) 2023
6	Dissolved Oxygen (as O_2), mg/l	5.7	5.6	5.8	Min 4	IS:3025(Part-38)1989RA 2019
7	Biochemical Oxygen Demand (as O_2), mg/l	<3.0	<3.0	<3.0	3	IS 3025 (Part 44) 2023
8	Total Hardness (as $CaCO_3$),mg/l	120	70	62	-	IS:3025 (P-21):2009 RA 2023
9	Sulphates as SO_4 (mg/l)	18.0	26.0	22.0	400	APHA (24th Edition):4110B
10	Phosphates (as P), mg/l	<0.05	<0.05	<0.05	-	IS 3025 (P-31) Sec 1 2022
11	Chloride (as Cl),mg/l	19.0	50.0	48.0	600	IS:3025(Part-32) 1988RA2019
12	Fluoride (as F),mg/l	0.35	0.42	0.48	0.38	IS 3025 (Part 60-Sec1) 2023
13	Sulphide (as H_2S) , mg/l	<0.01	<0.01	<0.01	-	IS:3025 (P-29) 2022
14	Boron (as B), mg/l	<0.1	<0.1	<0.1	-	IS:3025 (Part-57) 2021
15	Iron (as Fe),mg/l	<0.005	<0.005	<0.005	50	IS 3025 (Part 65) 2022
16	Percent of Sodium (%)	22.23	22.12	21.5	-	IS 11624 .2009
17	Residual Sodium Carbonate (meq/l)	<0.5	<0.5	<0.5	-	IS 11624 .2009
18	Total Coliform, MPN/100ml	48	50	52	5000	IS 15185 2016 RA 2021

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TEST REPORT

Table No.19

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Nature of sample	: Surface water
Sample Location	: SW4 - Hari Shankar Spring Water, SW5 - Narihalla Dam water
Date of sample collection	: 04.10.2025
Date of sample receipt	: 05.10.2025
Issue Date	: 03.11.2025

Ref : IS : 2296, Water Quality Standards

	Report No	M000825102	M000925102	Limits	Method of Testing
Sl.No.	Sample Code	SW4	SW5		
	Parameters	Results			
1	pH	6.26	8.30	6.5 to 8.5	IS:3025(Part-11)2022
2	Colour (Hazen Units)	1.0	10.0	300	IS 3025 (Part 11) 2022
3	Odour	Agreeable	Agreeable	-	IS:3025 (P-5) 2018
4	Total Dissolved Solids (mg/l)	66.0	500.0	1500	IS 3025 (Part 16) 2023
5	Total Suspended Solids, mg/l	28	80	-	IS 3025 (Part 17) 2023
6	Dissolved Oxygen (as O_2), mg/l	5.80	5.40	Min 4	IS:3025(Part-38)1989RA 2019
7	Biochemical Oxygen Demand (as O_2), mg/l	<3.0	<3.0	3	IS 3025 (Part 44) 2023
8	Total Hardness (as $CaCO_3$),mg/l	26.0	270	-	IS:3025 (P-21):2009 RA 2023
9	Sulphates as SO_4 (mg/l)	4.0	70.0	400	APHA (24th Edition):4110B
10	Phosphates (as P), mg/l	<0.05	<0.05	-	IS 3025 (P-31) Sec 1 2022 1976
11	Chloride (as Cl),mg/l	23.0	115	600	IS:3025(Part-32) 1988RA2019
12	Fluoride (as F),mg/l	0.46	0.80	1.5	IS 3025 (Part 60-Sec1) 2023
13	Sulphide (as H_2S) , mg/l	<0.01	<0.01	-	IS:3025 (P-29) 2022
14	Boron (as B), mg/l	<0.1	<0.1	-	IS:3025 (Part-57) 2021
15	Iron (as Fe),mg/l	<0.005	<0.005	50	IS 3025 (Part 65) 2022
16	Percent of Sodium (%)	23.6	22.8	-	IS 2488 part 5
17	Residual Sodium Carbonate (meq/l)	<0.5	<0.5	-	IS 11624 .2009
18	Total Coliform, MPN/100ml	58	60	5000	IS 15185 2016 RA 2021

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TEST REPORT

Table No. 20

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Nature of sample	: Ground water
Sample Location	: GW1 - Deogiri Mine Office Bore water, GW2 - Borewell near Kumarswamy temple, GW3 - Appayyanahalli (Narayanpura) Bore water
Date of sample collection	: 06.10.2025
Date of sample receipt	: 07.10.2025
Issue Date	: 03.11.2025

Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)

Sl. No.	Report No / Sample Code / Parameters	M001025102 GW1	M001125102 GW2	M001225102 GW3	Desirable Limts	Permissible Limts	Method of Testing
		Results					
1	Colour (Hazen Units)	1	1	1	5	15	IS:3025 (P-4) 2021
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025 (P-5) 2018
3	pH Value	6.02	6.92	7.35	6.5 to 8.5	6.5 - 8.5	IS:3025 (P-11)2022
4	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025 (P- 8) 2023
5	Turbidity,NTU	1.02	1.80	<0.1	1	5	IS:3025 (P-10) 2023
6	Total Dissolved Solids,mg/l	88.0	216.0	616.0	500	2000	IS:3025 (P-16) 2023
7	Aluminium (as Al)	<0.005	<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	<0.1	0.5	0.5	IS:3025 (P-34)1 Sec 1 2023
9	Anionic Detergents (as MBAS),mg/l	<0.1	<0.1	<0.1	0.2	1.0	IS:3025 (P-68) 2023
10	Barium (as Ba), mg/l	<0.005	<0.005	<0.005	0.7	0.7	IS:3025(P-65) 2022
11	Boron (as B), mg/l	<0.1	<0.1	<0.1	0.5	2.4	IS:3025 (Part-57) 2021
12	Calcium (as Ca),mg/l	4.80	24.00	80.10	75	200	IS:3025 (P-40) 2021
13	Chloramines as C12	<0.1	<0.1	<0.1	4	4	Clause 6 of IS 3025 (P-26) 2021
14	Chloride as Cl (mg/l)	20.00	40.00	50.00	250	1000	IS:3025 (P-32)1988 RA 2019
15	Copper (as Cu),mg/l	<0.0005	<0.0005	<0.0005	0.05	1.5	IS:3025 (P-65) 2022
16	Fluoride (as F),mg/l	0.26	0.50	0.62	1	1.5	IS:3025 (P-60) Sec 2022
17	Residual, Free Chlorine,mg/l	<0.1	<0.1	<0.1	0.2	1	IS:3025 (P-26) 2021
18	Iron (as Fe),mg/l	<0.005	<0.005	<0.005	1.0	1.0	IS:3025 (Part-65) 2022
19	Magnesium (as Mg)mg/l	4.40	18.20	58.30	30	100	IS:3025 (P-46)1 2023
20	Manganese (as Mn),mg/l	<0.001	<0.001	<0.001	0.1	0.3	IS:3025 (P-65) 2022
21	Mineral Oil,mg/l	<0.5	<0.5	<0.5	1.0	1.0	IS:3025 (P-39) 2021
22	Nitrates (as NO_3),mg/l	6.00	9.50	26.00	45	45	IS:3025 (P-34) 1988 RA 2019
23	Phenolics (as C_6H_5OH),mg/l	<0.001	<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	<0.0005	0.01	0.01	IS:3025(P-65) 2022
25	Silver (as Ag), mg/l	<0.005	<0.005	<0.005	0.1	0.1	IS:3025(P-65) 2022
26	Sulphate (as SO_4),mg/l	10.00	26.00	86.00	200	400	IS:3025 (P-24) Sec 1 2022
27	Sulphide (as H_2S) , mg/l	<0.01	<0.01	<0.01	0.05	0.05	IS:3025 (P-29) 2022
28	Total Alkalinity (as $CaCO_3$) mg/l	34.0	125.0	450.0	200	600	IS:3025 (P-23):2023
29	Total Hardness (as $CaCO_3$),mg/l	30.0	135.0	440.0	200	600	IS:3025 (P-21):2009 RA 2023
30	Zinc (as Zn),mg/l	<0.005	<0.005	<0.005	5	15	IS:3025 (P-65) 2022
31	Cadmium (as Cd),mg/l	<0.0005	<0.0005	<0.0005	0.003	0.003	IS:3025 (P-65) 2022
32	Cyanide (as CN),mg/l	<0.01	<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	<0.0005	0.01	0.01	IS:3025 (P-65) 2022
34	Mercury (as Hg),mg/l	<0.0005	<0.0005	<0.0005	0.001	0.001	IS:3025 (P-65) 2022
35	Molybdenum (as Mo), mg/l	<0.0005	<0.0005	<0.0005	0.07	0.07	IS:3025 (P-65) 2022
36	Nickel (as Ni),mg/l	<0.01	<0.01	<0.01	0.02	0.02	IS:3025 (P-65) 2022
37.	Arsenic (as As),mg/l	<0.0005	<0.0005	<0.0005	0.01	0.01	IS:3025 (P-65) 2022
38	Total Chromium (as Cr),mg/l	<0.001	<0.001	<0.001	0.05	0.05	IS:3025 (P-65) 2022
39	Escherichia coli/100ml	Not Detected	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	Not Detected			IS:15185:2016 RA 2021
41	Electrical Conductvity (µmhos/cm)	160.0	400.0	1100.0	–	–	IS 3025 (P-14) 2013 RA 2023

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TEST REPORT

Table No. 21

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Nature of sample	: Ground water
Sample Location	: GW4 - SB Halli Bore water (near hospital), GW5 - Yeshwanthnagar Bore water (near railway track)
Date of sample collection	: 06.10.2025
Date of sample receipt	: 07.10.2025
Issue Date	: 03.11.2025

Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)

Sl. No.	Report No / Sample Code / Parameters	M001325102 GW4 Results	M001425102 GW5 Results	Desirable Limts	Permissible Limts	Method of Testing
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	6.40	7.35	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	1.03	1.10	1	5	IS:3025 (P-10) 2023
6	Total Dissolved Solids,mg/l	280.0	1450.0	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	26.00	176.30	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)	65.00	400.00	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	0.35	0.81	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	19.40	87.40	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_3),mg/l	10.50	30.20	45	45	IS:3025 (P-34) 1988 RA 2019
23	Phenolics (as C_6H_5OH),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_4),mg/l	50.00	140.00	200	400	IS:3025 (P-24) Sec 1 2022
27	Sulphide (as H_2S) , mg/l	<0.01	<0.01	0.05	0.05	IS:3025 (P-29) 2022
28	Total Alkalinity (as $CaCO_3$) mg/l	115.0	600.0	200	600	IS:3025 (P-23):2023
29	Total Hardness (as $CaCO_3$),mg/l	170.0	800.0	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 Conductvity (µmhos/cm)	510.0	2500.0	–	–	IS:3025 (P-14) 2013 RA 2023

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TEST REPORT

Table No. 22

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Nature of sample	: Drinking water
Sample Location	: DW1 - Drinking Water Deogiri Near Office
	: DW2 - Drinking Water Subbarayanahalli Near Office
Issue Date	: 03.11.2025

Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)

	Date of sample collection	04.10.2025	04.10.2025	Desirable Limts	Permissible Limts	Method of Testing
	Date of sample receipt	05.10.2025	05.10.2025			
	Report No	M000325102	M000425102			
Sl. No.	Sample Code / Parameters	DW1	DW2			
		Results				
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	6.56	6.90	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	<0.1	<0.1	1	5	IS:3025 (P-10) 2023
6	Total Dissolved Solids,mg/l	98.0	260.0	500	2000	IS:3025 (P-16) 2023
7	Calcium (as Ca),mg/l	9.61	30.00	75	200	IS:3025 (P-40) 2021
8	Chloride as Cl (mg/l)	22.00	55.20	250	1000	IS:3025 (P-32)1988 RA 2019
9	Fluoride (as F),mg/l	<0.1	<0.1	1	1.5	IS:3025 (P-60) Sec1 2022
10	Iron (as Fe),mg/l	<0.005	<0.005	1.0	1.0	IS:3025 (Part-2) 2022
11	Magnesium (as Mg)mg/l	5.34	21.90	30	100	IS:3025 (P-46) 2023
12	Nitrates (as NO_3),mg/l	1.60	5.20	45	45	IS:3025 (P-34) Sec 1 2023
13	Sulphate (as SO_4),mg/l	12.00	30.00	200	400	IS:3025 (P-24) Sec 1 2022
14	Total Alkalinity (as $CaCO_3$) mg/l	48.0	145.00	200	600	IS:3025 (P-23):2023
15	Total Hardness (as $CaCO_3$),mg/l	46.0	165.0	200	600	IS:3025 (P-21):2009 RA 2019
16	Electrical Conductvity (µmhos/cm)	180.0	480.0	–	–	IS 3025 (P-14) : 2013RA 2023
17	Escherichia coli/100ml	Not Detected	Not Detected	Shall not be detectable in any 100ml Sample		IS:15185:2016 RA 2021
18	Total Coliform /100ml)	Not Detected	Not Detected			IS:15185:2016 RA 2021

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TEST REPORT

Table No. 23

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Nature of Samples	: Soil Samples
Date of sample collection	: 07.10.2025
Date of sample receipt	: 08.10.2025
Issue Date	: 03.11.2025

	Report No		M002725102	M002825102	M002925102	M003025102	M003125102
SL. No.	Sample Code		S1	S2	S3	S4	S5
	Parameters	Unit	Results				
Physical Properties							
1	Colour	–	Red Soil	Red Soil	Red Soil	Red Soil	Red Soil
2	Textural class	–	Clay Loam	Sandy Loam	Clay Loam	Clay Loam	Clay Loam
3	Size Distribution						
	Sand	%	31.21	32.66	31.52	31.85	32.61
	Clay	%	22.96	24.86	27.21	29.12	25.32
	Silt	%	45.83	42.48	41.27	39.03	42.07
4	Moisture Content	%	7.15	7.26	7.22	7.33	7.52
5	Bulk Density	gm/cc	1.63	1.66	1.62	1.62	1.66
6	Water holding capacity	%	26.45	30.12	21.96	27.96	22.42
7	pH	–	6.33	6.24	7.61	7.32	6.75
8	EC	m.mohs/cm	0.182	0.252	0.250	0.275	0.196
Chemical Properties							
9	Organic Carbon	%	0.63	0.22	0.25	0.21	1.88
10	Nitrogen as N	Kg/Ha	125	191	120	153	178
11	Phosphorous as P	Kg/Ha	6.41	8.14	7.13	7.22	7.62
12	Potassium as K_2O	Kg/Ha	192	128	112	131	158
13	Sodium as Na	mg/kg	24	30	28	33	22
14	Chloride as Cl	mg/kg	127	118	133	135	127
15	Sulphate as SO_4	mg/kg	30	26	22	26	25

Sample Location

S1 - Top soil (Kammathuru)
S2 - Top soil (Deogiri)
S3 - Top soil (SB Halli)
S4 - Active Dump (Deogiri)
S5 - Active Dump (SB Halli)

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TEST REPORT

Table No. 24

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Nature of Samples	: Soil Samples
Date of sample collection	: 07.10.2025
Date of sample receipt	: 08.10.2025
Issue Date	: 03.11.2025

	Report No		M003225102	M003325102	M003425102	M003525102	M003625102
SL. No.	Sample Code		S6	S7	S8	S9	S10
	PARAMETERS	Unit	Results				
Physical Properties							
1	Colour	–	Red Soil	Red Soil	Red Soil	Red Soil	Red soil
2	Textural class	–	Clay Loam	Clay Loam	Slity Clay	Slity Clay	Clay Loam
3	Size Distribution						
	Sand	%	32.85	32.33	34.22	33.22	36.12
	Clay	%	26.12	28.42	28.23	28.33	29.63
	Silt	%	41.03	39.25	37.55	38.45	34.25
4	Moisture Content	%	7.63	6.88	6.42	6.42	7.33
5	Bulk Density	gm/cc	1.55	2.91	7.42	1.63	7.52
6	Water holding capacity	%	32.55	26.55	29.22	31.42	36.54
7	pH	–	7.32	7.52	7.44	6.87	7.33
8	EC	m.mohs/cm	0.482	0.566	0.622	0.272	0.526
Chemical Properties							
9	Organic Carbon	%	0.75	0.52	0.67	0.82	0.48
10	Nitrogen as N	Kg/Ha	122	130	122	163	133
11	Phosphorous as P	Kg/Ha	28	31	36	58	48
12	Potassium as K_2O	Kg/Ha	141	140	130	152	140
13	Sodium as Na	mg/kg	42	33	40	36	28
14	Chloride as Cl	mg/kg	28	31	32	30	29
15	Sulphate as SO_4	mg/kg	27	33	36	32	31

Sample Location

S6 - Appayyanahalli agriculture lan
S7 - Vitthalanagar agriculture land
S8 - Swamihalli agriculture land
S9 -Tonasigere agriculture land
S10 - Yeshwanthnagar agriculture land

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TEST REPORT

Table No. 25

Stack Monitoring Report

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Subrayanahalli Manganese & Iron Ore Mine (ML NO. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Sample Location	: KVH Iron Ore Mines
Stack ID & Capcity	: DG 1010 KVA (808 KW)
instrument used for sampling	: Emissions collected through stack sampler
Date of Collection	: 04.10.2025
Date of Sample Receipt	: 06.10.2025
Report No	: N000125102
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	170
4	Velocity (m/s)	13.97
5	Stack diameter (M)	0.30
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	3174
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

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	NOx (as NO_2) (as 15% O_2), dry basis	ppmv	24.33	360
2	NMHC (as C) (at 15 % O_2)	mg/Nm3	28.33	100
3	PM (as C) (at 15 % O_2)	mg/Nm3	36.00	75
4	CO (at 15 % O2)	(mg/Nm3	46.00	150

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TEST REPORT

Table No. 26

Stack Monitoring Report

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Deogiri Manganese & Iron Ore Mine (ML NO. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Sample Location	: Katasinkolla
Stack ID & Capcity	: DG Set 62.5 KVA
instrument used for sampling	: Emissions collected through stack sampler
Date of Collection	: 04.10.2025
Date of Sample Receipt	: 06.10.2025
Report No	: N000225102
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	146
4	Velocity (m/s)	8.19
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	358
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

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.171	<0.2
2	CO	g/Kw-hr	0.206	<3.5
3	NOx +HC	g/Kw-hr	0.115	<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. 27

Stack Monitoring Report

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Subrayanahalli Manganese & Iron Ore Mine (ML NO. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Sample Location	: KVH Iron Ore Mine
Stack ID & Capcity	: DG Set 6.0 KVA Doosan Light Source
instrument used for sampling	: Emissions collected through stack sampler
Date of Collection	: 06.10.2025
Date of Sample Receipt	: 07.10.2025
Report No	: N000325102
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	29
3	Stack Temperature (^{0}C)	142
4	Velocity (m/s)	6.25
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	276
7	Sample Condition When Received	Satisfactory
8	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1
9	Serial No. of the Equipment	86 BTF 12
10	Calibration due date	17.07.2026
11	Test Method	IS 11255 & flue gas analyser

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.119	<0.2
2	CO	g/Kw-hr	0.414	<3.5
3	NOx +HC	g/Kw-hr	1.332	<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. 28

Stack Monitoring Report

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Deogiri Manganese & Iron Ore Mine (ML NO. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Sample Location	: KTION Work Shop
Stack ID & Capcity	: DG Set 6.0 KVA Doosan Light Source
instrument used for sampling	: Emissions collected through stack sampler
Date of Collection	: 06.10.2025
Date of Sample Receipt	: 07.10.2025
Report No	: N000425102
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	31
3	Stack Temperature (^{0}C)	144
4	Velocity (m/s)	7.67
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	337
7	Sample Condition When Received	Satisfactory
8	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1
9	Serial No. of the Equipment	86 BTF 12
10	Calibration due date	17.07.2026
11	Test Method	IS 11255 & flue gas analyser

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.101	<0.2
2	CO	g/Kw-hr	0.673	<3.5
3	NOx +HC	g/Kw-hr	1.448	<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. 29

Stack Monitoring Report

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Kammathuru Iron Ore (KTIO) (ML No. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Sample Location	: KTIO Sub Station
Stack ID & Capcity	: DG Set 125 KVA
instrument used for sampling	: Emissions collected through stack sampler
Date of Collection	: 07.10.2025
Date of Sample Receipt	: 08.10.2025
Report No	: N001325102
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	148
4	Velocity (m/s)	12.7
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	553
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

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.106	<0.2
2	CO	g/Kw-hr	0.111	<3.5
3	NOx +HC	g/Kw-hr	0.345	<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. 30

Stack Monitoring Report

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Kammathuru Iron Ore (KTIO) (ML No. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Sample Location	: KTIO Sub Station
Stack ID & Capcity	: DG Set 82.5 KVA
instrument used for sampling	: Emissions collected through stack sampler
Date of Collection	: 07.10.2025
Date of Sample Receipt	: 08.10.2025
Report No	: N001425102
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	29
3	Stack Temperature (^{0}C)	136
4	Velocity (m/s)	8.04
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	360
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

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.052	<0.2
2	CO	g/Kw-hr	0.166	<3.5
3	Nox +HC	g/Kw-hr	0.384	<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. 31

Stack Monitoring Report

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Kammathuru Iron Ore (KTIO) (ML No. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Sample Location	: KTIO - D-09 Dump
Stack ID & Capcity	: DG Set 7.5 KVA
instrument used for sampling	: Emissions collected through stack sampler
Date of Collection	: 07.10.2025
Date of Sample Receipt	: 08.10.2025
Report No	: N001525102
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	29
3	Stack Temperature (^{0}C)	144
4	Velocity (m/s)	7.69
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	338
7	Sample Condition When Received	Satisfactory
8	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1
9	Serial No. of the Equipment	86 BTF 12
10	Calibration due date	17.07.2026
11	Test Method	IS 11255 & flue gas analyser

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.090	<0.2
2	CO	g/Kw-hr	0.405	<3.5
3	NOx +HC	g/Kw-hr	1.686	<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. 32

Stack Monitoring Report

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Kammathuru Iron Ore (KTIO) (ML No. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Sample Location	: KTIO - Work Shop
Stack ID & Capcity	: DG 6 KVA Doosan Light Source
instrument used for sampling	: Emissions collected through stack sampler
Date of Collection	: 17.10.2025
Date of Sample Receipt	: 18.10.2025
Report No	: N000125104
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	25
3	Stack Temperature (^{0}C)	130
4	Velocity (m/s)	6.82
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	310
7	Sample Condition When Received	Satisfactory
8	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1
9	Serial No. of the Equipment	86 BTF 12
10	Calibration due date	17.07.2026
11	Test Method	IS 11255 & flue gas analyser

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.093	<0.2
2	CO	g/Kw-hr	0.620	<3.5
3	NOx +HC	g/Kw-hr	2.507	<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. 33

Stack Monitoring Report

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Kammathuru Iron Ore (KTIO) (ML No. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Sample Location	: KTIO - Work Shop
Stack ID & Capcity	: DG 6 KVA Doosan Light Source
instrument used for sampling	: Emissions collected through stack sampler
Date of Collection	: 17.10.2025
Date of Sample Receipt	: 18.10.2025
Report No	: N000225104
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	24
3	Stack Temperature (^{0}C)	142
4	Velocity (m/s)	7.43
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	330
7	Sample Condition When Received	Satisfactory
8	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1
9	Serial No. of the Equipment	86 BTF 12
10	Calibration due date	17.07.2026
11	Test Method	IS 11255 & flue gas analyser

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.121	<0.2
2	CO	g/Kw-hr	0.495	<3.5
3	NOx +HC	g/Kw-hr	2.091	<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. 34

Stack Monitoring Report

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Mine	: Kammathuru Iron Ore Mine (KTIO) (ML No. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Screening Plant Make & code	: Sandvik Screening & Crushing Plant (MCP- 2)
Mobile Crusher Capacity	: 500 TPH
Date of Collection	: 17.10.2025
Date of Sample Receipt	: 18.10.2025
Report No	: N000325104
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Stack diameter (M)	0.13
3	Stack Temperature (^{0}C)	38
4	Velocity (m/s)	11.04
5	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	470.00
6	Sample Condition When Received	Satisfactory
7	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1
8	Serial No. of the Equipment	338 DTH 14
9	Calibration due date	17.07.2026
10	Test Method	IS 11255

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Permissible limits
1	Particulate Matter	mg/Nm^3	37	100

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TEST REPORT

Table No. 35

Stack Monitoring Report

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Mine	: Kammathuru Iron Ore Mine (KTIO) (ML No. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Screening Plant Make & code	: Keestrak Crushing & Screening Plant (MCP- 3)
Mobile Crusher Capacity	: 350 TPH
Date of Collection	: 17.10.2025
Date of Sample Receipt	: 18.10.2025
Report No	: N000425104
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Stack diameter (M)	0.20
3	Stack Temperature (^{0}C)	40
4	Velocity (m/s)	10.01
5	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	1003.0
6	Sample Condition When Received	Satisfactory
7	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1
8	Serial No. of the Equipment	338 DTH 14
9	Calibration due date	17.07.2026
10	Test Method	IS 11255

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Permissible limits
1	Particulate Matter	mg/Nm^3	42	100

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TEST REPORT

Table No. 36

Stack Monitoring Report

Name of the Client	:The Sandur Manganese & Iron Ores Limited
Name of the Mine	: Subrayanahalli Manganese & Iron Ore Mine (ML NO. 2678)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Sample Location	: KVH
Screening Plant Make & code	: Sandvik Screening & Crushing Plant (MCP - 1)
Mobile Crusher Capacity	: 500 TPH
Date of Collection	: 18.10.2025
Date of Sample Receipt	: 20.10.2025
Report No	: N000525104
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Stack diameter (M)	0.13
3	Stack Temperature (^{0}C)	43
4	Velocity (m/s)	11.70
5	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	491.00
6	Sample Condition When Received	Satisfactory
7	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1
8	Serial No. of the Equipment	338 DTH 14
9	Calibration due date	17.07.2026
10	Test Method	IS 11255

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Permissible limits
1	Particulate Matter	mg/Nm^3	55	100

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TEST REPORT

Table No. 37

Stack Monitoring Report

Name of the Client	:The Sandur Manganese & Iron Ores Limited
Name of the Mine	: ML NO. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Screening Plant Make & code	: Terex Screening Plant (MSP - 2)
Mobile Crusher Capacity	: 350 TPH
Date of Collection	: 18.10.2025
Date of Sample Receipt	: 20.10.2025
Report No	: N000625104
Issue date	: 03.11.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Stack diameter (M)	0.20
3	Stack Temperature (^{0}C)	39
4	Velocity (m/s)	11.78
5	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	1184.0
6	Sample Condition When Received	Satisfactory
7	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1
8	Serial No. of the Equipment	86BTF12
9	Calibration due date	17.07.2026
10	Test Method	IS 11255

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Permissible limits
1	Particulate Matter	mg/Nm^3	58	100

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TEST REPORT

Table No.38

Stack Monitoring Report

Name of the Client	:The Sandur Manganese & Iron Ores Limited
Name of the Mine	: ML NO. 2678
Location	: Deogiri, Subbarayanahalli, Ramghad & Kammathuru Villages, Sandur Tq, Ballari Dt.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection	: 18.10.2025
Date of Sample Receipt	: 20.10.2025
Issue date	: 03.11.2025

STACK DETAILS

Screening Plant Make & code		Keestrak Screening Plant (MSP-1)	Keestrak Screening Plant (MSP-3)
Report No		N000725104	N000825104
1	Fuel Used	Diesel	Diesel
2	Capacity	600 TPH	350 TPH
3	Stack diameter (M)	0.20	0.20
4	Stack Temperature (^{0}C)	35	43
5	Velocity (m/s)	11.53	11.66
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	1173.0	1157.0
7	Sample Condition When Received	Satisfactory	
8	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1	
9	Serial No. of the Equipment	86BTF12	
10	Calibration due date	17.07.2026	
11	Test Method	IS 11255	

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	
1	Particulate Matter	mg/Nm^3	61	65
	Permissible limits	mg/Nm^3	100	

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Note : This report is subject to the terms and conditions mentioned overleaf.