



# **BMM Ispat Ltd.,**

## **ENVIRONMENTAL MONITORING REPORT**



**Danapur Village, Hosapete Taluk,  
Vijayanagara District, PIN-583222,  
Karnataka.**

**FEBRUARY-2025**

**Prepared by**



**GLOBAL** ENVIRONMENT & MINING SERVICES LLP

**NABL & MOEFCC Recognized Laboratory**

(Consulting Engineers, Mine Designers, Geologists & Surveyors)

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### **PREFACE**

The industries should monitor environmental parameters as per the frequency and locations given in the CFE/CFO. And the same should be submitted on every month to the respective pollution control board.


As part of the conditions and inherent concern on health of the employees and surroundings **M/s. BMM Ispat Ltd.**, as appointed **M/s. Global Environment & Mining Services LLP**, Hosapete, to carry out the environmental pollution monitoring on AAQ Monitoring, Fugitive monitoring, Noise Monitoring, Water Analysis & Stack monitoring pollution and submit the same to the Pollution Control Board.

Accordingly, M/s. Global Environment & Mining Services LLP, Hosapete, carried out the pollution monitoring as per the standard sampling methods prescribed by CPCB, for AAQ Monitoring, Fugitive monitoring within the plant, Stack Monitoring & Personal Dust Sampling as per the CFO. These monitoring has been carried out in a frequency as mentioned in the CFO and the same report is being submitted to the Board.

We sincerely thank to officials of **M/s. BMM Ispat Ltd.**, for their valuable co-ordination & support during the sampling and reporting.

for GLOBAL Environment & Mining Services

Place: Hosapete  
Date:03.03.2025

  
K. Ramakrishna Reddy  
(Technical Manager)





## **1.0 EXECUTIVE SUMMARY**

### **1.1 INTRODUCTION**

The journey of the BMM Group is a reflection of the path tread by every entrepreneur who believes in the human potential and one's own ability to bring about a life affirming change that transcends time. BMM Group was born out of this committed belief of Late Shri. Udai chand Singhi.

Entrenched in the Indian ethos, with an astute understanding of market needs, values and sensibilities **Mr. Dinesh Kumar Singhi** inherited the legacy from his father and has built the BMM Group on sound fundamentals since 1998. He steered the company towards growth by being the first mining company to establish a power generation plant for captive use, and creating a steel plant from the captive ore mine. Over the last 12 years, BMM has been able to add value to every relationship under his able and dynamic leadership.

Today, BMM is a 4900 Crores Company due to its focus on market orientation and optimal usage of technology to achieve process efficiency and value addition. BMM has always believed in the principle of sharing and hence continues to transfer this benefit derived from sustained growth to its employees, partners and associates. The unique value proposition that defines the very fabric of the BMM culture is the firm's belief in unleashing this 'potential in tones' in terms of its human capital, continuous growth and consistent benefits to its stakeholders.

The human potential at BMM is reflected in the depth of domain expertise across diverse sectors and dynamism of youth at various levels in the Organization. Business operations lead by professionals with decades of market understanding and a dynamic team enables BMM to deliver superior product quality. This human potential keeps BMM attuned to scaling new heights and meeting customer expectations. While consistently adding value to its partners, BMM is sensitive to its responsibility towards the environment by implementing best practices in its Business Operations and contribution to society through various social Endeavors.

BMM has a commitment of being a good Corporate Citizen and is committed to achieving business goals through ethical means. BMM hence has been able to have deeper relevance to society by creating value that is inclusive and truly benefits all.



## 1.2 PROMOTERS OF THE PROJECT

BMM Group, one of the leading Steel, Power & Mining companies in India that has achieved the present level under the leadership and guidance of **Sri. Dinesh Kumar Singhi**, the Founder & Chairman of the group, is promoting the project. His vision is to globalize the company business and do value addition by operating responsibly and in a sustainable manner in exploring, exploiting, excavating and processing minerals followed by setting up steel plant facilities.

**BMM** is a step towards forward integration has set up new merchant Bar Mill. The works is located at:

**BMM ISPAT LIMITED**  
(Registered Office & Works)  
#114, Danapur  
**Hosapete - 583 222**  
Vijayanagara Dist., Karnataka  
Phone +91 08394-264000, +91 9686550808/09  
Fax - 08394 264010

## 1.3 Site Location

BMM ISPAT LIMITED is located at Danapur about 15 Kms away from Hosapete in Karnataka. The plant site can be connected by national highway, viz. NH-13. The plant is 1 km away from the NH-13 near Danapur village. The nearest railway station is Hospet; Bangalore is at a distance of 300 kms. Seaport is Belikere and Karwar, the nearest Airport is in the private sector belonging to JSW, a Jindal Group company at Thoranagallu (Vidyanagara).



M/s. BMM ISPAT Ltd., Has accorded Environmental Clearance for 2.0 MTPA Integrated Steel Plant, with the following facilities.

S.N.	Items	Capacity
1	Iron ore beneficiation plant	4.70 MTPA
2	Palletizing Plant	2.40 MTPA
3	DRI Plant	0.70 MTPA
4	Coke Oven	0.80 MTPA
5	Sinter Plant	2.50 MTPA
6	Blast furnace	1.70 MTPA
7	EAF & BOF Steel making shop	2.30 MTPA
8	Continuous casting machines Slab Caster Billet Caster	1.10 MTPA 1.10 MTPA
9	Rolling mills: Hot strip mill Structural/wire rods	1.00 MTPA 1.00 MTPA
10	Oxygen Plant	2x500 TPD
11	Calcining	1,080 TPD
12	Cement Plant	1.40 MTPA
13	Power Plant	230 MW
14	Sponge Iron Division -1	2 x 100 TPD
15	Induction furnace (billets)	9000 tonnes/month
16	Rolling Mill (TMT rods)	9000 tonnes/month
17	Captive Power Plant	25 MW

Out of the above units, presently **4 x 500 TPD Sponge Iron Plants** and **1X70 MW Thermal Power Plants** have been commissioned on August 2011. Beneficiation plant-2, Pellet Plant-2 are commissioned on March 2012. 2X70 MW Thermal based power plants have commissioned on Jan 2013, EAF, Steel Making Shop, CCM, Rolling Mill, Oxygen plants are commissioned on August 2015. Remaining units are under various stages of implementation.

Hence environmental pollution monitoring is being carried out for 4 x 500 TPD sponge iron plants, 1X70 MW Thermal Power Plant, 1.3MTPA Beneficiation, 1.2MTPA Pellet Plant, 2X70MW Power plant, SMS, and RML.

**1.4** The report includes environmental monitoring data collected at above site for the month of **FEBRUARY-2025**. The Parameters monitored are:

- ❖ Ambient Air Quality
- ❖ Fugitive Dust Level
- ❖ Stack Emission
- ❖ Ambient Noise Level
- ❖ Water Quality

## **2.0 SCOPE AND METHODOLOGY**

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### **2.1 PREAMBLE**

The scope of the study and the present report covers the detailed characterization of the existing environmental status in and around the plant area for major environmental components viz. Ambient & work zone air quality, Fugitive Emission, Noise level and water quality & Stack Emission.

### **2.2 AMBIENT AIR QUALITY**

To assess the ambient air quality status, monitoring stations were identified 6 Location plant site. Work zone air monitoring stations were identified in the major work spots. Based on the production activities the parameters chosen for ambient air quality. Were Particulate Matter PM<sub>10</sub>, Particulate Matter (size less than 2.5 $\mu$ m) PM<sub>2.5</sub>.

#### **2.2.1 PARTICULATE MATTER (PM<sub>10</sub>) (size less than 10 $\mu$ m).**

##### **Purpose**

The purpose of this protocol is to provide guidelines for monitoring and analysis of Particulate Matter PM<sub>10</sub> in ambient air

**Reference Method:** IS 5182 Part 23 Method of Measurement of Air Pollution: Respirable Suspended Particulate Matter (PM<sub>10</sub>) cyclonic flow technique.

##### **Principle of the method**

Air is drawn through a size-selective inlet and through a 20.3 X 25.4 cm (8 X 10 in) filter at a flow rate, which is typically 1132 L/min. Particles with aerodynamic diameter less than the cut-point of the inlet are collected, by the filter. The mass of these particles is determined by the difference in filter weights prior to and after sampling. The concentration of PM<sub>10</sub> in the designated size range is calculated by dividing the weight gain of the filter by the volume of air sampled.

##### **Sampling**

Field Sampling - Tilt back the inlet and secure it according to manufacturer's instructions. Loosen the faceplate wing nuts and remove the faceplate. Remove the filter from its jacket and centre it on the support screen with the rough side of the filter facing upwards. Replace the faceplate and tighten the wing nuts to secure the rubber gasket against the filter edge. Gently lower the inlet. For automatically flow-



controlled units, record the designated flow rate on the data sheet. Record the reading of the elapsed time meter. The specified length of sampling is commonly 8 hours or 24 hours. During this period, several reading (hourly) of flow rate should be taken. After the required time of sampling, record the flow meter reading, take out the filter media from the sampler, and put in a container or envelope.

### **Analysis**

**Filter inspection:** Inspect the filter for pin holes using a light table. Loose particles should be removed with a soft brush. Apply the filter identification number or a code to the filter if it is not a numbered. Condition the filter in conditioning room maintained within 20-30° C and 40-50% relative humidity or in an airtight desiccator for 24 hours. Take initial weight of the filter paper (Wi) before sampling. Condition the filter after sampling in conditioning room maintained within 20-30° C and 40-50% relative humidity or in an airtight desiccator for 24 hours. Take final weight of the filter paper (Wf).

## **2.2.2 Particulate Matter (PM<sub>2.5</sub>)(size less than 2.5µm)**

### **Purpose**

The purpose of this protocol is to provide guidelines for monitoring and analysis of Particulate Matter PM<sub>2.5</sub> in ambient air.

**Reference Method:** USEPA 2001 Method of Measurement of Air Pollution:

Particulate Matter (PM<sub>2.5</sub>) cyclonic flow technique.

### **Principle**

An electrically powered air sampler draws ambient air at a constant volumetric flow rate (16.7 lpm) maintained by a mass flow / volumetric flow controller coupled to a microprocessor into specially designed inertial particle-size separator (i.e. cyclones or impactors) where the suspended particulate matter in the PM<sub>2.5</sub> size ranges is separated for collection on a 47 mm polytetrafluoroethylene (PTFE) filter over a specified sampling period. Each filter is weighed before and after sample collection to determine the net gain due to the particulate matter. The mass concentration in the ambient air is computed as the total mass of collected particles in the PM<sub>2.5</sub> size ranges divided by the actual volume of air sampled, and is expressed in µg/m<sup>3</sup>. The microprocessor reads averages and stores five-minute averages of ambient temperature, ambient pressure, filter temperature and volumetric flow rate. In

addition, the microprocessor calculates the average temperatures and pressure, total volumetric flow for the entire sample run time and the coefficient of variation of the flow rate.

### **2.2.3 Sulphur Dioxide (SO<sub>2</sub>)**

**Purpose:** The purpose of this protocol is to provide guidelines for monitoring and analysis of sulphur dioxide in ambient air.

**Reference Method:** Modified West & Gaeke Method (IS 5182 Part 2 Method of Measurement of Air Pollution: Sulphur dioxide).

Sulphur dioxide from air is absorbed in a solution of potassium tetra chloromercurate (TCM). A dichlorosulphitomercurate complex, which resists oxidation by the oxygen in the air, is formed. Once formed, this complex is stable to strong oxidants such as ozone and oxides of nitrogen and therefore, the absorber solution may be stored for some time prior to analysis. The complex is made to react with para-rosaniline and formaldehyde to form the intensely coloured pararosaniline methyl sulphonic acid. The absorbance of the solution is measured by means of a suitable spectrophotometer.

#### **Sampling**

Place 30 ml of absorbing solution in an impinger and sample for four hours at the flow rate of 1 L/min. After sampling measure the volume of sample and transfer to a sample storage bottle.

#### **Analysis**

Replace any water lost by evaporation during sampling by adding distilled water up to the calibration mark on the absorber. Mix thoroughly, pipette out 10 ml of the collected sample into a 25 ml volumetric flask. Add 1 ml 0.6% sulphamic acid and allow reacting for 10 minutes to destroy the nitrite resulting from oxides of nitrogen. Add 2 ml of 0.2% formaldehyde solution and 2 ml pararosaniline solution and make up to 25 ml with distilled water. Prepare a blank in the same manner using 10 ml of unexposed absorbing reagent. After a 30 min colour development interval and before 60 minutes, measure and record the absorbance of samples and reagent blank at 560 nm. Use distilled water; not the reagent blank, as the optical reference.



**2.2.4      Nitrogen Di Oxide (NO<sub>2</sub>):****Purpose**

The purpose of this protocol is to provide guidelines for monitoring of nitrogen dioxide in ambient.

**Principle of the method**

Modified Jacobs &Hochheiser Method (IS 5182 Part 6 Methods for Measurement of Air Pollution: Oxides of nitrogen)

Ambient nitrogen dioxide (NO<sub>2</sub>) is collected by bubbling air through a solution of sodium hydroxide and sodium arsenite. The concentration of nitrite ion (NO<sub>2</sub>) produced during sampling is determined calorimetrically by reacting the nitrite ion with phosphoric acid, sulfanilamide, and N-(1-naphthyl)- ethylenediamine dihydrochloride (NEDA) and measuring the absorbance of the highly coloured azo-dye at 540 nm.

**2.2.5      Ozone (Chemical method)****Purpose**

The purpose of this protocol is to provide guidelines for monitoring of ozone in ambient air.

**Principle of the method**

Micro-amounts of ozone and the oxidants liberate iodine when absorbed in a 1% solution of potassium iodine buffered at pH 6.8 + 0.2. The iodine is determined spectrophotometrically by measuring the absorption of tri-iodide ion at 352 nm.

**Sampling**

Place 10 ml of absorbing solution in a standard impinger and sample for one hour at the flow rate of 1 L/min. Do not expose the absorbing reagent to direct sunlight. After sampling measure the volume of sample and transfer to a sample storage bottle.

**Analysis**

If, appreciable evaporation of the absorbing solution occurs during sampling, add water to bring the liquid volume to 10 ml. Within 30 to 60 minutes after sample collection, read the absorbance in a cuvette at 352 nm against a reference cuvette containing distilled water. Measure the absorbance of the unexposed reagent and subtract the value from the absorbance of the sample.

**2.2.6 Ammonia(NH<sub>3</sub>)****Purpose**

The purpose of this protocol is to provide guidelines for monitoring of ammonia in ambient air.

**Principle of the method**

Indophenol method Ammonia in the atmosphere is collected by bubbling a measured volume of air through a dilute solution of sulphuric acid to form ammonium sulphate. The ammonium sulphate formed in the sample is analysed calorimetrically by reaction with phenol and alkaline sodium hypochlorite to produce indophenol. The reaction is accelerated by the addition of Sodium Nitroprusside as catalyst.

**Sampling**

Place 10 ml of absorbing solution in an impinger and sample for one hour at the flow rate of 1 to 2 L/min. After sampling measure the volume of sample and transfer to a sample storage bottle

**Analysis**

Transfer contents of the sample bottle to a 25 ml glass stopper graduated cylinder. Maintain all the solutions and sample at 25° C. Add 2 ml buffer. Add 5 ml of working phenol solution, mix, and fill to about 22 ml. Add 2.5 ml of working hypochlorite solution and rapidly mix. Dilute to 25 ml, mix and store in the dark for 30 minutes to develop colour. Measure the absorbance of the solution at 630 nm on a spectrophotometer using 1 cm cells. Prepare a reagent blank and field blank and measure the absorbance as done in the analysis of samples.

**2.2.7 Benzo(a)Pyrene****Purpose**

The purpose of this protocol is to provide guidelines for monitoring of Benzo (a) Pyrene (BaP) in ambient air.

**Principle of the Method**

It is based on BIS method IS 5182 (Part 12):2004 and USEPA method (TO-13). This method is designed to collect particulate phase PAHs in ambient air and fugitive emissions and to determine individual PAH compounds using capillary gas chromatograph equipped with flame ionization detector. It is a high volume



(1.2m<sup>3</sup>/min) sampling method capable of detecting sub.ng/m<sup>3</sup> concentration of PAH in 24 hours sample (i.e., collected in 3 shifts of 8 hour each with 480 m<sup>3</sup> sampling volume of air).

### **Sampling**

24 hr. sampling using PM10 high volume sampler with 8 hourly samples using EPM 2000 glass fibre or equivalent filter.

### **Sample Processing**

**Extraction:** Filter papers (half of all the filters papers collected in a day) are cut into strips using scissors and transfer to 250 ml beaker. Add ~50 ml. of Toluene (GC/HPLC grade). These samples are extracted with toluene using ultra sonic bath for about 30 minutes. Repeat the procedure twice (50ml x 2 times) for complete extraction. Alternatively, sample can be extracted using soxhlet extraction apparatus for about 8 hr. with Toluene and repeat it twice.

### **Filtration**

Filter the extracted samples with Whatman filter paper no.41 containing 2 gm of Anhydrous Sodium Sulphate (to remove moisture).

### **Sample injection**

Take 2µl of sample from the amber vial using standard gas tight syringe and inject in the Capillary GC-FID instrument for analysis. Record the resulting concentration of each PAH compound including B(a)P. A 10ng/µl concentration B(a)P or other PAH standards are to be injected in GC/FID instrument with every batch of samples. As a control Internal Standard of 10 ng/µl conc. is added to each sample prior to the analysis in case of internal calibration is used.

#### **2.2.8 Benzene**

Samples collected through active sampling (sorbent tubes) are extracted or desorbed by conventional solvent (generally 1-5 ml of carbon disulphide) using ultrasonication for 15 min to remove analyte from the sorbent material. Desorbed samples are analyzed using gas chromatograph (GC) fitted with capillary column and flame ionization detector (FID). A single tube may provide enough samples to permit several analyses.

**Principle of the Method**

IS 5182 (Part 11): 2006, the charcoal tubes are available in different sizes and contain varying amount of activated charcoal. The ambient air is sucked through the tube using a low flow sampler used for collection of BTX sample in a way that results in an enrichment of the relevant substances in the activated charcoal. Desorption of the adsorbed benzene is done using carbon disulphide (CS<sub>2</sub>). The substances desorbed in the CS<sub>2</sub> are analyzed by capillary gas chromatography. A flame ionization detector (FID) is used for analysis while quantification is performed using the internal/external standard.

**Gas Chromatograph**

Any suitable gas chromatograph with flame ionization detector (FID) with fused silica capillary columns having a length of 25 m or more, an internal diameter of 320  $\mu$ m or below and with a stationary phase film thickness less than 1.5  $\mu$ m as follows or equivalent may be recommended.

**Sampling**

Selection of Sorbent Tube - Samples are collected in glass sampling tube filled with an activated charcoal (coconut shell), Chromo sorb 106 or other suitable adsorbent.

**Analytical Procedure**

Samples collected through active sampling (sorbent tubes) are extracted or desorbed by conventional solvent (generally 1-5 ml of carbon disulphide) using ultrasonication for 15 min to remove analyte from the sorbent material. Desorbed samples are analysed using gas chromatograph (GC) fitted with capillary column and flame ionization detector (FID). A single tube may provide enough samples to permit several analyses.

**2.2.9 Carbon Monoxide (CO)****Principle:**

Samples containing carbon monoxide in the range of 0 to 100 mg/l are analysed on a non-dispersive infrared absorption gas analyser, namely, an electro-optical spectrophotometer with no spectral dispersion component. It may consist of a single or double source of infrared energy and one or more infrared detectors separated by an optical cell or cells through one or more of which the sample flows, whereby the specific spectral absorption of the component of interest is determined.

**Non dispersive Infrared (NDIR) Gas Analyser**

The apparatus shall be constructed so as to be suitable for operating within the temperature range of 15°C to 40°C and in a relative humidity range of 0 to 90 percent. The apparatus shall embody facilities for the analysis of continuously applied sample or a discrete sample of volume of 2.0 litres. In the later case the purification train shall be of such a design and dead volume that 2.0 litres is adequate for its proper flushing out. The apparatus shall include facilities for the visual inspection of results and also for their recording. The scale shall be divided into steps of 1.0 percent full scale division (fsd).

Though the basic instrument recommended is for (0 to 100) mg/l range, for samples of higher mg/l range the instrument may be used with proper dilution and conditioning of the samples.

**2.2.10 Lead (Pb), Nickel (Ni) & Arsenic (As)****Purpose**

The purpose of this protocol is to provide guidelines for monitoring of Lead (Pb), Nickel (Ni) & Arsenic (As) in ambient air.

**Principle of the method**

The Atomic Absorption Spectroscopy (AAS) technique makes use of absorption spectrometry to assess the concentration of an analyte in the sample. The method is based on active sampling using PM10 Respirable Dust Sampler and then sample analysis is done by atomic absorption spectrophotometer.

**Sampling procedure**

Tilt back the inlet and secure it according to manufacturer's instructions. Loosen the face-plate wing-nuts and remove the face plate. Remove the filter from its jacket and centre it on the support screen with the rough side of the filter facing upwards. Replace the face-plate and tighten the wing-nuts to secure the rubber gasket against the filter edge. Gently lower the inlet. For automatically flow-controlled units, record the designated flow rate on the data sheet. Record the reading of the elapsed time meter. The specified length of sampling is commonly 8 hours or 24 hours. During this period, several reading (hourly) of flow rate should be taken. After the required time of sampling, record the flow meter reading and take out the filter media from the sampler and put in a container or envelope.

### **3.0 Fugitive Emission Monitoring**

Fugitive air quality was monitored 40 samples were collected from the analyzed for SPM analyzed by gravimetric method. Work Zone Air quality was monitored at all Plant area and material handling area.

### **4.0 Stack Monitoring**

Stack Monitoring was Collected from Vayubodhan Stack sampler VSS1 stack monitoring was used for drawing the flue gas. Sulphur dioxide and oxides of Nitrogen in the flue gas was sampled by bubbling flue gas solution respectively and the analyses of the pollutants were done as per the Indian Standard procedures prescribed by CPCB/BIS. Stack Emission level was monitored as per the statutory requirement on twice in a month.

#### **4.1 Stack Emissions Monitoring Methodology**

##### **Sampling Procedure**

##### **Pre-Sampling Activities**

Weigh the properly conditioned thimble/filter and place it into the clean, air tight Container. Designate appropriate label or ID No. to each thimble/filter container. Particulate matter emission of "Stack Monitoring – Material and Methodology for is kinetic Sampling.

Field activity starts with the collection of detailed information from the industry about the products, raw materials, fuels, and stack dimensions.

#### **4.2 Traverse Point Calculation**

Calculate the traverse point and accordingly mark the distance from tip of the Nozzle, on Pitot tube and probe. Do not forget to add the collar length of port to the calculated traverses. For detailed calculation of "Stack Monitoring– Material and Methodology for isokinetic sampling.

#### **4.3 Determination of Dust Concentration**

Determine the mass of dust collected in the thimble by difference i.e., weighing the thimble before and after the run. Dry the thimble in an oven for about 2 hours at 120°C prior to sampling. After sampling, cool, dry and again weigh the thimble along with dust maintaining the same condition as prior to sampling.



**DATA ANALYSIS****4.4 BUFFERZONE AMBIENT AIR QUALITY STATUS****Danapur Village (A1)**

At this location, average of PM10, PM2.5, SO<sub>2</sub>, NO<sub>2</sub> values Average 81.49, 31.27, 13.73 & 16.24 µg/m<sup>3</sup> respectively. All above the values were found within the Limits. And the results given in **Annexure-1**.

**Mariyammanahalli Village (A2)**

At this location, average of PM10, PM2.5, SO<sub>2</sub>, NO<sub>2</sub> values Average 73.32, 19.17, 12.64 & 15.10 µg/m<sup>3</sup> respectively. All above the values were found within the Limits. And the results given in **Annexure-2**.

**Hanumanahalli Village (A3)**

At this location, average of PM10, PM2.5, SO<sub>2</sub>, NO<sub>2</sub> values Average 63.61, 21.29, 11.75 & 14.90 µg/m<sup>3</sup> respectively. All above the values were found within the Limits. Results given in **Annexure-3**.

**Galemmanagudi Village (A4)**

At this location, average of PM10, PM2.5, SO<sub>2</sub>, NO<sub>2</sub> values Average 83.68, 26.58, 13.64 & 16.65 µg/m<sup>3</sup> respectively. All above the values were found within the Limits. Results given in **Annexure-4**.

**G Nagalapura Village (A5)**

At this location, average of PM10, PM2.5, SO<sub>2</sub>, NO<sub>2</sub> values Average 65.00, 18.26, 11.97 & 15.44 µg/m<sup>3</sup> respectively. All above the values were found within the Limits. Results given in **Annexure-5**.

**Gunda Tanda Village (A6)**

At this location, average of PM10, PM2.5, SO<sub>2</sub>, NO<sub>2</sub> values Average 48.63, 17.31, 11.41 & 14.20 µg/m<sup>3</sup> respectively. All above the values were found within the Limits. Results given in **Annexure-6**.

**5.1 FUGITIVE DUST CONCENTRATION**

Fortnightly fugitive air quality was monitored all plant area SPM value minimum 258.32  $\mu\text{g}/\text{m}^3$ , maximum value 1949.58  $\mu\text{g}/\text{m}^3$  and average value 1342.52  $\mu\text{g}/\text{m}^3$ . The Fugitive air quality 1<sup>st</sup> & 2<sup>nd</sup> Fortnight Results given in **Annexure-7 to Annexure-10**.

**5.2 STACK MONITORING**

Stack emission level was monitored all chimneys' PM values ( $\text{mg}/\text{Nm}^3$ ) 1<sup>st</sup> and 2<sup>nd</sup>Fortnight Minimum Value 6.02  $\text{mg}/\text{Nm}^3$ , Maximum Value 47.69  $\text{mg}/\text{Nm}^3$  & Average Value 29.28  $\text{mg}/\text{Nm}^3$ . 1<sup>st</sup> & 2<sup>nd</sup> Fortnight Results are given in **Annexure-11 to Annexure-37**.

**5.3 NOISE LEVEL MEASUREMENT**

Noise level was recorded at 30 locations each in Ambient and work zone area using Sound Level Meter (Equinox-EQ 107 Instrument / Lutron) The Day time noise level values were ranging between 42.8 to 73.4 dB (A). The noise level status is given in **Annexure-38 to Annexure-39**.

**5.4** Water Sample Collected at 17 locations in side plant and surrounding nearest villages and nearest surface water Sample Collected every Month. The Water Analysis Test Report is given in **Annexure-41 to Annexure-52**.

**5.5 CONCLUSION**

All the monitored Environmental parameters were found to be well within the statutory norms and the same are enclosed as follows.



# GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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Ph : 08394 355369

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TC-15435

ANNEXURE-01

GEMS-LD/TF/11/01

## ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	: WO/ADMIN/FY24/R018 - 450000125
Sample collected by	: Global Environment & Mining Services
Discipline	: Chemical
Group	: Atmospheric Pollution
Sample Type	: Ambient Air Quality Monitoring
Particulars of Sample Collected	: Respirable Dust Sampler, FPS Sampler
Month	: <b>FEBRUARY-2025</b>
Location	: <b>A1-Danapur Village</b>
Duration of Monitoring	: 24 Hour
Report Issued Date	: <b>03.03.2025</b>
Report Number	: <b>ULR-TC1543525000004731F</b>

### RESULTS

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.02.2025	04.02.2025	7741	93.10	100	33.45	60	10.82	80	13.84	80
04.02.2025	05.02.2025	7765	87.35		42.56		13.66		15.58	
10.02.2025	11.02.2025	7962	95.31		26.41		16.95		19.13	
11.02.2025	12.02.2025	8020	92.73		42.80		12.27		15.73	
17.02.2025	18.02.2025	8152	64.99		23.68		13.25		17.13	
18.02.2025	19.02.2025	8206	79.78		31.99		14.81		16.49	
24.02.2025	25.02.2025	8422	64.84		22.95		12.68		14.49	
25.02.2025	26.02.2025	8456	73.81		26.34		15.43		17.54	
Average			81.49		31.27		13.73		16.24	

#### Note:

- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.
- "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
3	Serial No	R.D.S. / 197-C-21	PM2.5/PM10 Sampler / 158-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

INFERENCE As per NAAQMS Standards (2009),  
Report Status: - Measured Values for the above parameters are within the limit.

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15 days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
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- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey





## GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3<sup>rd</sup> Main Road, Basaveswara Badavane,

**HOSAPETE - 583201**, Dist., Vijayanagara (Karnataka)

Ph : 08394 355369

e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in

**ANNEXURE-01**  
**GEMS-LD/TF/11/01**

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY24/R018  
Sample collected by : Global Environment & Mining Services  
Discipline : Chemical  
Group : Atmospheric Pollution  
Sample Type : Ambient Air Quality Monitoring  
Particulars of Sample Collected : CO Analyzer  
Month : **FEBRUARY-2025**  
Location : **A1-Danapur Village**  
Duration of Monitoring : 1 Hour  
Report Issued Date : **03.03.2025**  
Report Number : **GEMS/BMM/NAAQ/2024-25/4731**

#### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	03.02.2025	7741	0.15	4.0
2	04.02.2025	7765	0.11	
3	10.02.2025	7962	0.12	
4	11.02.2025	8020	0.15	
5	17.02.2025	8152	0.16	
6	18.02.2025	8206	0.12	
7	24.02.2025	8422	0.17	
8	25.02.2025	8456	0.13	

**Note:** CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)

**ND** - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

**INFERENCE** As per NAAQMS Standards (2009),  
Report Status: - Measured Values for the above parameters are within the limit

*Naveen*  
**Analyzed By**  
Naveen Kumar G  
Chemist

*Naveen*  
**Authorized Signatory**  
K. Ramakrishna Reddy  
Technical Manager



- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
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Website : www.globalmining.in



TC-15435

ANNEXURE-02  
GEMS-LD/TF/11/01

## ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY24/R018 - 450000125  
Sample collected by : Global Environment & Mining Services  
Discipline : Chemical  
Group : Atmospheric Pollution  
Sample Type : Ambient Air Quality Monitoring  
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler  
Month : FEBRUARY-2025  
Location : A2-Mariyammanahalli Village  
Duration of Monitoring : 24 Hour  
Report Issued Date : 03.03.2025  
Report Number : ULR-TC1543525000004730F

### RESULTS

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.02.2025	04.02.2025	7740	76.79	100	22.77	60	14.61	80	16.71	80
04.02.2025	05.02.2025	7764	67.58		17.92		13.59		16.12	
10.02.2025	11.02.2025	7961	82.73		17.91		11.96		14.72	
11.02.2025	12.02.2025	8153	70.77		20.55		9.44		11.78	
19.02.2025	20.02.2025	8232	91.38		24.03		13.74		16.70	
20.02.2025	21.02.2025	8298	50.53		15.10		9.49		10.57	
26.02.2025	27.02.2025	8424	67.98		18.15		13.17		17.51	
27.02.2025	28.02.2025	8526	78.81		16.93		15.13		16.68	
Average			73.32		19.17		12.64		15.10	

#### Note:

- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.  
➤ "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Greentech instruments / GTI -151-N	Enviro instruments / EI-133
3	Serial No	466-DTE-2023	PM2.5 /PM10 Sampler / 159-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

#### INFERENCE

As per NAAQMS Standards (2009),  
Report Status: - Measured Values for the above parameters are within the limit.

*Naveen Kumar G*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15 days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
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(Consulting Engineers, Mine designers, Geologist & Surveyors)

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HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

Ph : 08394 355369

e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in

ANNEXURE-02  
GEMS-LD/TF/11/01

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
 Customer Reference : WO/ADMIN/FY24/R018  
 Sample collected by : Global Environment & Mining Services  
 Discipline : Chemical  
 Group : Atmospheric Pollution  
 Sample Type : Ambient Air Quality Monitoring  
 Particulars of Sample Collected : CO Analyser  
 Month : FEBRUARY-2025  
 Location : A2-Mariyammanahalli Village  
 Duration of Monitoring : 1 Hour  
 Report Issued Date : 03.03.2025  
 Report Number : GEMS/BMM/NAAQ/2024-25/4730

#### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	03.02.2025	7740	0.13	4.0
2	04.02.2025	7764	0.12	
3	10.02.2025	7961	0.15	
4	11.02.2025	8153	0.11	
5	19.02.2025	8232	0.15	
6	20.02.2025	8298	0.13	
7	26.02.2025	8424	<0.01	
8	27.02.2025	8526	<0.01	

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)

ND - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
-----------	---

*Naveen*  
 Analysed By  
 Naveen Kumar G  
 Chemist

*K. Ramakrishna Reddy*  
 Authorised Signatory  
 K. Ramakrishna Reddy  
 Technical Manager



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TC-15435

ANNEXURE-03

GEMS-LD/TF/11/01

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY24/R018 - 450000125  
Sample collected by : Global Environment & Mining Services  
Discipline : Chemical  
Group : Atmospheric Pollution  
Sample Type : Ambient Air Quality Monitoring  
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler  
Month : FEBRUARY-2025  
Location : A3-Hanumanahalli Village  
Duration of Monitoring : 24 Hour  
Report Issued Date : 03.03.2025  
Report Number : ULR-TC1543525000004789F

#### RESULTS

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
06.02.2025	07.02.2025	7842	70.83	100	21.55	60	10.60	80	16.27	80
07.02.2025	08.02.2025	7872	74.66		27.15		10.91		12.86	
10.02.2025	11.02.2025	7982	48.63		18.31		12.16		13.75	
11.02.2025	12.02.2025	8021	80.63		28.87		12.22		15.15	
17.02.2025	18.02.2025	8141	47.80		12.44		11.40		16.43	
18.02.2025	19.02.2025	8311	63.99		24.40		11.55		15.08	
24.02.2025	25.02.2025	8423	67.24		16.21		11.70		13.07	
25.02.2025	26.02.2025	8457	55.09		21.43		13.46		16.61	
Average			63.61		21.29		11.75		14.90	

#### Note:

- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.  
➤ "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
3	Serial No	R.D.S. / 197-C-21	PM2.5 / PM10 Sampler / 160-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

INFERENCE	As per NAAQMS Standards (2009). Report Status: - Measured Values for the above parameters are within the limit.
-----------	--

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

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e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in

ANNEXURE-03  
GEMS-LD/TF/11/01

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
 Customer Reference : WO/ADMIN/FY24/RO18  
 Sample collected by : Global Environment & Mining Services  
 Discipline : Chemical  
 Group : Atmospheric Pollution  
 Sample Type : Ambient Air Quality Monitoring  
 Particulars of Sample Collected : CO Analyzer  
 Month : FEBRUARY-2025  
 Location : A3-Hanumanahalli Village  
 Duration of Monitoring : 1 Hour  
 Report Issued Date : 03.03.2025  
 Report Number : GEMS/BMM/NAAQ/2024-25/4789

#### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	06.02.2025	7842	0.15	4.0
2	07.02.2025	7872	0.13	
3	10.02.2025	7982	0.12	
4	11.02.2025	8021	0.14	
5	17.02.2025	8141	0.10	
6	18.02.2025	8311	0.16	
7	24.02.2025	8423	0.14	
8	25.02.2025	8457	0.13	

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)

ND - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025
INFERENCE		As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit

*Naveen*  
 Analysed By  
 Naveen Kumar G  
 Chemist

*K. Ramakrishna Reddy*  
 Authorised Signatory  
 K. Ramakrishna Reddy  
 Technical Manager



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TC-15435

ANNEXURE-04

GEMS-LD/TF/11/01

## ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.

Customer Reference : WO/ADMIN/FY24/RO18 - 450000125

Sample collected by : Global Environment & Mining Services

Discipline : Chemical

Group : Atmospheric Pollution

Sample Type : Ambient Air Quality Monitoring

Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler

Month : FEBRUARY-2025

Location : A4-Galemmanagudi Village

Duration of Monitoring : 24 Hour

Report Issue Date : 03.03.2025

Report Number : ULR-TC1543525000004732F

### RESULTS

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.02.2025	04.02.2025	7742	79.73	100	26.62	60	12.24	80	13.15	80
04.02.2025	05.02.2025	7766	65.92		21.30		9.65		12.64	
10.02.2025	11.02.2025	7963	95.73		28.79		12.49		15.85	
11.02.2025	12.02.2025	8026	89.43		24.12		12.67		16.51	
17.02.2025	18.02.2025	8154	90.12		35.66		18.95		22.16	
18.02.2025	19.02.2025	8208	77.06		26.19		14.48		19.81	
24.02.2025	25.02.2025	8425	93.71		29.10		14.50		17.58	
25.02.2025	26.02.2025	8459	77.76		20.88		14.12		15.52	
Average			83.68		26.58		13.64		16.65	

#### Note:

- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.
- "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
3	Serial No	R.D.S./198-C-21	PM2.5 /PM10 Sampler / 158-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

INFERENCE As per NAAQMS Standards (2009),  
Report Status: - Measured Values for the above parameters are within the limit.

*Naveen Kumar G*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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Ph : 08394 355369

e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in

ANNEXURE-04  
GEMS-LD/TF/11/01

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY24/RO18  
Sample collected by : Global Environment & Mining Services  
Discipline : Chemical  
Group : Atmospheric Pollution  
Sample Type : Ambient Air Quality Monitoring  
Particulars of Sample Collected : CO Analyser  
Month : FEBRUARY-2025  
Location : A4-Galemmanagudi Village  
Duration of Monitoring : 1 Hour  
Report Issued Date : 03.03.2025  
Report Number : GEMS/BMM/NAAQ/2024-25/4732

#### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	03.02.2025	7742	0.16	4.0
2	04.02.2025	7766	0.12	
3	10.02.2025	7963	0.17	
4	11.02.2025	8026	0.12	
5	17.02.2025	8154	0.14	
6	18.02.2025	8208	0.16	
7	24.02.2025	8425	0.14	
8	25.02.2025	8459	0.12	

**Note:** CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)

ND - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
-----------	---

Analysed By  
Naveen Kumar G  
Chemist

Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey





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Ph : 08394 355369

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Website : www.globalmining.in



TC-15435

ANNEXURE-05  
GEMS-LD/TF/11/01

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY24/RO18 - 450000125  
Sample collected by : Global Environment & Mining Services  
Discipline : Chemical  
Group : Atmospheric Pollution  
Sample Type : Ambient Air Quality Monitoring  
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler  
Month : FEBRUARY-2025  
Location : A5-G Nagalapura Village  
Duration of Monitoring : 24 Hour  
Report Issue Date : 03.03.2025  
Report Number : ULR-TC1543525000004733F

### RESULTS

Parameters			PM10 [µg/m <sup>3</sup> ]		PM2.5 [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.02.2025	04.02.2025	7743	54.51	100	18.26	60	12.62	80	16.59	80
04.02.2025	05.02.2025	7767	62.73		17.90		10.77		14.56	
10.02.2025	11.02.2025	7964	64.25		13.48		9.87		14.07	
11.02.2025	12.02.2025	8028	54.52		14.08		10.86		15.06	
17.02.2025	18.02.2025	8155	61.86		20.71		12.29		16.32	
18.02.2025	19.02.2025	8209	83.34		23.30		10.83		13.12	
24.02.2025	25.02.2025	8426	69.66		21.91		14.67		17.70	
25.02.2025	26.02.2025	8460	69.13		16.42		13.86		16.08	
Average			65.00		18.26		11.97		15.44	

Note:

- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.  
➤ "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
3	Serial No	R.D.S. / 198-C-21	PM2.5 / PM10 Sampler / 159-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

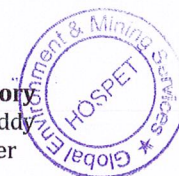
INFERENCE

As per NAAQMS Standards (2009).

Report Status: - Measured Values for the above parameters are within the limit.

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15 Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey





## GLOBAL ENVIRONMENT & MINING SERVICES LLP

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ANNEXURE-05  
GEMS-LD/TF/11/01

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
 Customer Reference : WO/ADMIN/FY24/R018  
 Sample collected by : Global Environment & Mining Services  
 Discipline : Chemical  
 Group : Atmospheric Pollution  
 Sample Type : Ambient Air Quality Monitoring  
 Particulars of Sample Collected : CO Analyser  
 Month : FEBRUARY-2025  
 Location : A5- G Nagalapura Village  
 Duration of Monitoring : 1 Hour  
 Report Issued Date : 03.03.2025  
 Report Number : GEMS/BMM/NAAQ/2024-25/4733

#### RESULTS


Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	03.02.2025	7743	<0.01	4.0
2	04.02.2025	7767	0.13	
3	10.02.2025	7964	0.12	
4	11.02.2025	8028	0.15	
5	17.02.2025	8155	0.14	
6	18.02.2025	8209	<0.01	
7	24.02.2025	8426	<0.01	
8	25.02.2025	8460	<0.01	


Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)

ND - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
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 Analysed By  
 Naveen Kumar G  
 Chemist

  
 Authorised Signatory  
 K. Ramakrishna Reddy  
 Technical Manager



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TC-15435

ANNEXURE-06  
GEMS-LD/TF/11/01

## ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
Customer Reference : WO/ADMIN/FY24/R018 - 450000125  
Sample collected by : Global Environment & Mining Services  
Discipline : Chemical  
Group : Atmospheric Pollution  
Sample Type : Ambient Air Quality Monitoring  
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler  
Month : FEBRUARY-2025  
Location : A6-Gunda Tanda Village  
Duration of Monitoring : 24 Hour  
Report Issue Date : 03.03.2025  
Report Number : ULR-TC15435250000044734F

### RESULTS

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.02.2025	04.02.2025	7744	42.50	100	17.88	60	10.94	80	13.32	80
04.02.2025	05.02.2025	7768	54.03		17.08		11.96		15.43	
13.02.2025	14.02.2025	7965	51.39		13.92		10.69		14.15	
14.02.2025	15.02.2025	8029	62.56		20.25		11.24		13.41	
17.02.2025	18.02.2025	8156	41.11		16.05		11.91		15.24	
18.02.2025	19.02.2025	8210	51.23		21.48		12.30		15.01	
24.02.2025	25.02.2025	8427	37.23		17.66		9.53		10.64	
25.02.2025	26.02.2025	8461	48.97		14.18		12.76		16.41	
Average			48.63		17.31		11.41		14.20	

#### Note:

- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.
- "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
3	Serial No	R.D.S./200-C-21	PM2.5 /PM10 Sampler / 160-K-20
4	Calibration Date	08.07.2024	28.03.2024
5	Calibration Due Date	07.07.2025	27.03.2025

INFERENCE As per NAAQMS Standards (2009),  
Report Status: - Measured Values for the above parameters are within the limit.

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

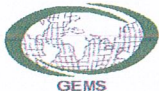
*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
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**ANNEXURE-06**  
**GEMS-LD/TF/11/01**

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
 Customer Reference : WO/ADMIN/FY24/RO18  
 Sample collected by : Global Environment & Mining Services  
 Discipline : Chemical  
 Group : Atmospheric Pollution  
 Sample Type : Ambient Air Quality Monitoring  
 Particulars of Sample Collected : CO Analyser  
 Month : **FEBRUARY-2025**  
 Location : **A6-Gunda Tanda Village**  
 Duration of Monitoring : 1 Hour  
 Report Issued Date : **03.03.2025**  
 Report Number : **GEMS/BMM/NAAQ/2024-25/4183**

#### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	03.02.2025	7744	<0.01	4.0
2	04.02.2025	7768	<0.01	
3	13.02.2025	7965	<0.01	
4	14.02.2025	8029	<0.01	
5	17.02.2025	8156	<0.01	
6	18.02.2025	8210	<0.01	
7	24.02.2025	8427	<0.01	
8	25.02.2025	8461	<0.01	

**Note:** CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour)

**ND** - Not Detected

SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
-----------	---

*Naveen*  
**Analysed By**  
 Naveen Kumar G  
 Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
 K. Ramakrishna Reddy  
 Technical Manager



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**ANNEXURE-07**  
**GEMS-LD/TF/11/01**

### **FORTNIGHTLY FUGITIVE AIR QUALITY MONITORING DATA**

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
3	Sample collected by	:	GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	:	HVS Sampler (HVS-01, HVS-02, HVS-03, HVS-04, HVS-05)
5	Month	:	<b>FEBRUARY-2025(1<sup>st</sup> Fort Night)</b>
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	<b>03.03.2025</b>
10	Report Number	:	<b>GEMS/BMM/FM/2024-25/4808</b>

### **RESULTS**

Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ( $\mu\text{g}/\text{m}^3$ )	Standard
<b>I. Beneficiation Plant-1</b>						
1.	Main Canteen	7866	07.02.2025	08.02.2025	1015.64	2000
2.	Near Iron Ore Bottom Hopper	7864	07.02.2025	08.02.2025	1796.45	2000
3.	Iron Ore Screen	7865	07.02.2025	08.02.2025	1921.01	2000
<b>II. Pellet Plant-I</b>						
4.	Near Pellet Plant	7867	07.02.2025	08.02.2025	1008.27	2000
5.	Annual Cooler Pellet Discharge bin	7868	07.02.2025	08.02.2025	1176.09	2000
6.	Pellet Stock Yard	7916	08.02.2025	09.02.2025	583.91	2000
<b>III. Sponge Iron Division-1 (kiln 1 &amp; 2)</b>						
7.	Control Room SID-1	7952	10.02.2025	11.02.2025	1923.53	2000
8.	Near Product bin	7953	10.02.2025	11.02.2025	1813.17	2000
9.	Coal Feeding Area	7954	10.02.2025	11.02.2025	1946.94	2000
<b>IV. Induction Furnace &amp; Rolling Mill - 1</b>						
10.	IF Office	7912	08.02.2025	09.02.2025	1864.04	2000
11.	TMT Stock Yard	7913	08.02.2025	09.02.2025	1900.99	2000
12.	RML Gasifier	7914	08.02.2025	09.02.2025	787.27	2000
<b>V. Power Plant 25 MW-1</b>						
13.	25 MW ESP	7955	10.02.2025	11.02.2025	1697.41	2000
14.	25 MW ACC	8011	11.02.2025	12.02.2025	589.84	2000
<b>VI. Site Services</b>						
15.	PGP- coal handling system	7915	08.02.2025	09.02.2025	831.76	2000
16.	IF Slag Crusher	7956	10.02.2025	11.02.2025	589.84	2000
17.	Main Gate	8012	11.02.2025	12.02.2025	813.65	2000
18.	Fly ash Dump	7837	06.02.2025	07.02.2025	924.47	2000

**Note:** SPM- Suspended Particulate matter. ( $\mu\text{g}/\text{m}^3$ ), **INFERENCE:** The Measured Values are within the limits.

SL NO	INSTRUMENT DETAILS	HVS-01	HVS-02	HVS-03	HVS-04	HVS-05
1	Instrument Name	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler
2	Make & Model	Enviro Instrumets/El-043	Enviro Instrumets/El-043	Enviro Instrumets/El-043	Greentech/GTI-251	Greentech/GTI-251
3	Serial No	H.V.S./39-F-2024	H.V.S./40-F-2024	H.V.S./41-F-2024	460-DTF-2024	461-DTF-2024
4	Calibration Date	23.09.2024	23.09.2024	23.09.2024	03.06.2024	03.06.2024
5	Calibration Due Date	22.09.2025	22.09.2025	22.09.2025	02.06.2025	02.06.2025

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



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ANNEXURE-08  
GEMS-LD/TF/11/01

### FORTNIGHTLY FUGITIVE AIR QUALITY MONITORING DATA

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
3	Sample collected by	:	GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	:	HVS Sampler (HVS-01, HVS-02, HVS-03, HVS-04, HVS-05)
5	Month	:	FEBRUARY-2025(2 <sup>nd</sup> Fort Night)
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4) 1999 RA 2014
9	Report Issued Date	:	03.03.2025
10	Report Number	:	GEMS/BMM/FM/2024-25/5084

### RESULTS

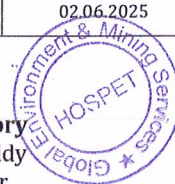
Sl. NO.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ( $\mu\text{g}/\text{m}^3$ )	Standard
<b>I. Beneficiation Plant-1</b>						
1.	Main Canteen	8364	22.02.2025	23.02.2025	1353.73	2000
2.	Near Iron Ore Bottom Hopper	8362	22.02.2025	23.02.2025	1924.90	2000
3.	Iron Ore Screen	8363	22.02.2025	23.02.2025	743.53	2000
<b>II. Pellet Plant-I</b>						
4.	Near Pellet Plant	8302	22.02.2025	23.02.2025	1794.29	2000
5.	Annual Cooler Pellet Discharge bin	8303	22.02.2025	23.02.2025	1061.62	2000
6.	Pellet Stock Yard		24.02.2025	25.02.2025	1904.79	2000
<b>III. Sponge Iron Division-1 ( kiln 1 &amp; 2)</b>						
7.	Control Room SID-I	8447	25.02.2025	26.02.2025	1854.46	2000
8.	Near Product bin	8448	25.02.2025	26.02.2025	1650.70	2000
9.	Coal Feeding Area	8449	25.02.2025	26.02.2025	1723.70	2000
<b>IV. Induction Furnace &amp; Rolling Mill</b>						
10.	IF Office	8414	24.02.2025	25.02.2025	1661.45	2000
11.	TMT Stock Yard	8415	24.02.2025	25.02.2025	605.83	2000
12.	RML Gasifier	8416	24.02.2025	25.02.2025	1859.78	2000
<b>V. Power Plant 25 MW-1</b>						
13.	25 MW ESP	8450	25.02.2025	26.02.2025	1838.99	2000
14.	25 MW ACC	8469	26.02.2025	27.02.2025	258.32	2000
<b>VI. Site Services</b>						
15.	PGP- Coal handling system	8417	24.02.2025	25.02.2025	1773.53	2000
16.	IF Slag Crusher	8451	25.02.2025	26.02.2025	560.86	2000
17.	Main Gate	8470	26.02.2025	27.02.2025	299.99	2000
18.	Fly ash Dump	8340	21.02.2025	22.02.2025	1792.64	2000

Note: SPM - Suspended Particulate matter ( $\mu\text{g}/\text{m}^3$ ), INFERENCE: The Measured Values are within the limits.

Sl. NO	INSTRUMENT DETAILS	HVS-01	HVS-02	HVS-03	HVS-04	HVS-05
1	Instrument Name	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler
2	Make & Model	Enviro Instruments/EI-043	Enviro Instruments/EI-043	Enviro Instruments/EI-043	Greentech/GTI-251	Greentech/GTI-251
3	Serial No	H.V.S./39-F-2024	H.V.S./40-F-2024	H.V.S./41-F-2024	460-DTF-2024	461-DTF-2024
4	Calibration Date	23.09.2024	23.09.2024	23.09.2024	03.06.2024	03.06.2024
5	Calibration Due Date	22.09.2025	22.09.2025	22.09.2025	02.06.2025	02.06.2025

Analysed By  
Naveen Kumar G  
Chemist

Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey





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### ANNEXURE-8A GEMS-LD/TF/11/01

#### FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	HVS Sampler (HVS-01, HVS-02, HVS-03, HVS-04, HVS-05)
5	Month	:	FEBRUARY-2025(1 <sup>st</sup> Fort Night)
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	03.03.2025
10	Report Number	:	GEMS/BMM/FM/2024-25/4897

#### RESULTS

Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ( $\mu\text{g}/\text{m}^3$ )	Standard
<b>Blast Furnace</b>						
1.	RMHS	8013	11.02.2025	12.02.2025	1908.64	2000
2.	Stock House	8014	11.02.2025	12.02.2025	1680.96	2000
3.	Gas Network Area	8015	11.02.2025	12.02.2025	1713.33	2000
4.	Blower Area	8071	12.02.2025	13.02.2025	429.28	2000
5.	Gas Cleaning plant (GCP)	8072	12.02.2025	13.02.2025	1922.47	2000
6.	Stove Area	8073	12.02.2025	13.02.2025	1891.43	2000
7.	Control ROOM (CR)	8074	12.02.2025	13.02.2025	1164.45	2000
8.	Pig Costing Machine (PCM)	8104	13.02.2025	14.02.2025	1333.08	2000
9.	Slag Granulation Plant (SGP)	8108	13.02.2025	14.02.2025	780.00	2000
10.	Cost House Area	8075	12.02.2025	13.02.2025	1911.99	2000
<b>SMS Area</b>						
1.	Stock House/Vibro Feeders	8105	13.02.2025	14.02.2025	462.84	2000
2.	Laddle Tapping	8106	13.02.2025	14.02.2025	445.44	2000
3.	Slag pouring Area	8107	13.02.2025	14.02.2025	503.10	2000
<b>MBM</b>						
1.	Near Re-Heating Furnace	8128	14.02.2025	15.02.2025	561.85	2000

Note: SPM -Suspended Particulate matter ( $\mu\text{g}/\text{m}^3$ ), INFERENCE: The Measured Values are within the limits.

SL NO	INSTRUMENT DETAILS	HVS-01	HVS-02	HVS-03	HVS-04	HVS-05
1	Instrument Name	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler
2	Make & Model	Enviro Instrumets/EI-043	Enviro Instrumets/EI-043	Enviro Instrumets/EI-043	Greentech/GTI-251	Greentech/GTI-251
3	Serial No	H.V.S./39-F-2024	H.V.S./40-F-2024	H.V.S./41-F-2024	460-DTF-2024	461-DTF-2024
4	Calibration Date	23.09.2024	23.09.2024	23.09.2024	03.06.2024	03.06.2024
5	Calibration Due Date	22.09.2025	22.09.2025	22.09.2025	02.06.2025	02.06.2025

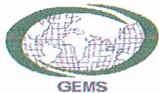
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Analysed By  
Naveen Kumar G  
Chemist

*Naveen*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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ANNEXURE-09

GEMS-LD/TF/11/01

### FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	HVS Sampler (HVS-01, HVS-02, HVS-03, HVS-04, HVS-05)
5	Month	:	<b>FEBRUARY-2025(1<sup>st</sup> Fort Night)</b>
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	<b>03.03.2025</b>
10	Report Number	:	<b>GEMS/BMM/FM/2024-25/4708</b>

#### RESULTS

Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ( $\mu\text{g}/\text{m}^3$ )	Standard
<b>I. Beneficiation Plant-II</b>						
1.	Ball Mill Area (Zero Meter)	7708	01.02.2025	02.02.2025	1085.48	2000
2.	Near Cone Crusher	7710	01.02.2025	02.02.2025	1632.20	2000
3.	Concentrate Thickener	7709	01.02.2025	02.02.2025	1167.30	2000
<b>II. Pellet Plant</b>						
4.	PR-6	7712	01.02.2025	02.02.2025	758.00	2000
5.	Annual Cooler Pellet Discharge bin	7711	01.02.2025	02.02.2025	1586.84	2000
6.	Additive Grinding Building	7730	03.03.2025	04.02.2025	1864.78	2000
<b>III. Sponge Iron Division -2 (Kiln 3 &amp; 4)</b>						
7.	Control room	7731	03.03.2025	04.02.2025	1939.46	2000
8.	Near Weigh bridge (dispatch)	7732	03.03.2025	04.02.2025	1031.12	2000
9.	Pellet Storage bin	7735	04.02.2025	05.02.2025	780.31	2000
10.	Transfer House area	7733	03.03.2025	04.02.2025	1760.01	2000
11.	Production Separation Bin-PSB	7734	03.03.2025	04.02.2025	1932.18	2000
<b>IV. Sponge Iron Division -3 (Kiln 5 &amp; 6)</b>						
12.	Near Control room	7756	04.02.2025	05.02.2025	1875.90	2000
13.	Near Coal Crusher	7758	04.02.2025	05.02.2025	1794.87	2000
14.	Near Product bin	7757	04.02.2025	05.02.2025	1657.11	2000
15.	Coal Dryer	7799	05.02.2025	06.02.2025	1935.09	2000
<b>V. Wagon Tipper/RMHS</b>						
16.	Near Tipping point	7759	04.02.2025	05.02.2025	1852.14	2000
17.	Monsoon Shed (CPU)	7800	05.02.2025	06.02.2025	1466.47	2000
18.	MCC Room (2 <sup>nd</sup> Gate)	7801	05.02.2025	06.02.2025	514.10	2000
<b>VI. Power Plant-70 MW</b>						
19.	70MW-DM Plant (Near R.O. Plant)	7802	05.02.2025	06.02.2025	1542.64	2000
20.	2 <sup>nd</sup> gate weigh bridge Near Coal Screen	7836	06.02.2025	07.02.2025	1487.52	2000
21.	CFBC boiler	7803	05.02.2025	06.02.2025	1879.82	2000
<b>VII. 2X70MW Power Plant</b>						
22.	Near Boiler	7933	06.02.2025	07.02.2025	1949.58	2000
23.	Near Coal storage Shed	7834	06.02.2025	07.02.2025	1653.38	2000
24.	Dolochar Processing Area	7835	06.02.2025	07.02.2025	901.26	2000

Note: SPM -Suspended Particulate matter ( $\mu\text{g}/\text{m}^3$ ), INFERENCE: The Measured Values are within the limits.

SL NO	INSTRUMENT DETAILS	HVS-01	HVS-02	HVS-03	HVS-04	HVS-05
1	Instrument Name	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler
2	Make & Model	Enviro Instrumets/EI-043	Enviro Instrumets/EI-043	Enviro Instrumets/EI-043	Greentech/GTI-251	Greentech/GTI-251
3	Serial No	H.V.S./39-F-2024	H.V.S./40-F-2024	H.V.S./41-F-2024	460-DTF-2024	461-DTF-2024
4	Calibration Date	23.09.2024	23.09.2024	23.09.2024	03.06.2024	03.06.2024
5	Calibration Due Date	22.09.2025	22.09.2025	22.09.2025	02.06.2025	02.06.2025

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Analysed By  
Naveen Kumar G  
Chemist

*Naveen*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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ANNEXURE-10  
GEMS-LD/TF/11/01

### FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	HVS Sampler (HVS-01, HVS-02, HVS-03, HVS-04, HVS-05)
5	Month	:	FEBRUARY-2025(2 <sup>ND</sup> Fort Night)
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	03.03.2025
10	Report Number	:	GEMS/BMM/FM/2024-25/4964

#### RESULTS

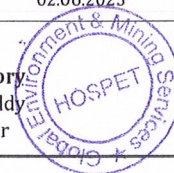
Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ( $\mu\text{g}/\text{m}^3$ )	Standard
<b>I. Beneficiation Plant-II</b>						
1.	Ball Mill Area (Zero Meter)	8143	17.02.2025	18.02.2025	1590.43	2000
2.	Near Cone Crusher	8145	17.02.2025	18.02.2025	1331.76	2000
3.	Concentrate Thickner	8144	17.02.2025	18.02.2025	1356.23	2000
<b>II. Pellet Plant-I</b>						
4.	PR-6	8146	17.02.2025	18.02.2025	718.40	2000
5.	Annual Cooler Pellet Discharge bin	8147	17.02.2025	18.02.2025	1119.80	2000
6.	Additive Grinding Building	8197	18.02.2025	19.02.2025	1827.84	2000
<b>III. Sponge Iron Division - 2 (Kiln 3&amp;4)</b>						
7.	Control room	8198	18.02.2025	19.02.2025	1872.08	2000
8.	Near Weigh bridge (dispatch)	8247	19.02.2025	20.02.2025	597.18	2000
9.	Pellet Storage bin	8202	18.02.2025	19.02.2025	859.69	2000
10.	Transfer House area	8199	18.02.2025	19.02.2025	1888.80	2000
11.	Production Separation Bin-PSB	8200	18.02.2025	19.02.2025	1930.43	2000
<b>IV. Sponge Iron Division - 2 (Kiln 5&amp;6)</b>						
12.	Near Control room	8248	19.02.2025	20.02.2025	1351.14	2000
13.	Near Coal Crusher	8250	19.02.2025	20.02.2025	1725.08	2000
14.	Near Product bin	8249	19.02.2025	20.02.2025	1848.17	2000
15.	Coal Drier	8302	20.02.2025	21.02.2025	548.63	2000
<b>V. Wagon Tipper/RMHS</b>						
16.	Near Tipping point	8251	19.02.2025	20.02.2025	1269.89	2000
17.	Monsoon Shed (CPU)	8303	20.02.2025	21.02.2025	511.79	2000
18.	MCC Room (2 <sup>nd</sup> Gate)	8304	20.02.2025	21.02.2025	718.83	2000
<b>VI. Power Plant-70 MW</b>						
19.	70MW-DM Plant (Near R.O. Plant)	8305	20.02.2025	21.02.2025	823.66	2000
20.	2 <sup>nd</sup> gate weigh bridge Near Coal Screen	8336	21.02.2025	22.02.2025	1691.98	2000
21.	CFBC boiler	8306	20.02.2025	21.02.2025	612.27	2000
<b>VII. 2X70MW Power Plant</b>						
22.	Near Boiler	8337	21.02.2025	22.02.2025	1856.15	2000
23.	Near Coal storage Shed	8338	21.02.2025	22.02.2025	1917.24	2000
24.	CPP Dolochar Process Area	8339	21.02.2025	22.02.2025	996.04	2000

Note: SPM - Suspended Particulate matter ( $\mu\text{g}/\text{m}^3$ ), INFERENCE: The Measured Values are within the limits.

Sl NO	INSTRUMENT DETAILS	HVS-01	HVS-02	HVS-03	HVS-04	HVS-05
1	Instrument Name	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler
2	Make & Model	Enviro Instrumets/EI-043	Enviro Instrumets/EI-043	Enviro Instrumets/EI-043	Greentech/GT1-251	Greentech/GT1-251
3	Serial No	H.V.S./39-F-2024	H.V.S./40-F-2024	H.V.S./41-F-2024	460-DTF-2024	461-DTF-2024
4	Calibration Date	23.09.2024	23.09.2024	23.09.2024	03.06.2024	03.06.2024
5	Calibration Due Date	22.09.2025	22.09.2025	22.09.2025	02.06.2025	02.06.2025

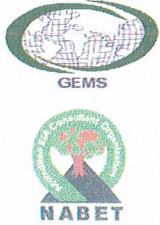
*Naveen*  
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Naveen Kumar G  
Chemist

*Naveen*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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**ANNEXURE-10A**  
**GEMS-LD/TF/11/01**

### **FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING**


1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	HVS Sampler (HVS-01, HVS-02, HVS-03, HVS-04, HVS-05)
5	Month	:	<b>FEBRUARY-2025(2<sup>nd</sup> Fort Night)</b>
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	<b>03.03.2025</b>
10	Report Number	:	<b>GEMS/BMM/FM/2024-25/5099</b>

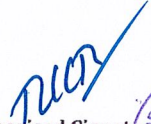
#### **RESULTS**

Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ( $\mu\text{g}/\text{m}^3$ )	Standard
<b>Blast Furnace</b>						
1.	RMHS	8471	26.02.2025	27.02.2025	1962.21	2000
2.	Stock House	8472	26.02.2025	27.02.2025	1646.87	2000
3.	Gas Network Area	8473	26.02.2025	27.02.2025	1422.95	2000
4.	Blower Area	8518	27.02.2025	28.02.2025	1940.86	2000
5.	Gas Cleaning plant (GCP)	8519	27.02.2025	28.02.2025	1883.69	2000
6.	Stove Area	8520	27.02.2025	28.02.2025	1940.43	2000
7.	Control ROOM (CR)	8521	27.02.2025	28.02.2025	1296.17	2000
8.	Pig Costing Machine (PCM)	8541	28.02.2025	01.03.2025	923.75	2000
9.	Slag Granulation Plant (SGP)	8542	28.02.2025	01.03.2025	399.03	2000
10.	Cost House Area	8522	27.02.2025	28.02.2025	1903.31	2000
<b>SMS Area</b>						
1.	Stock House/Vibro Feeders	8543	28.02.2025	01.03.2025	351.21	2000
2.	Ladle Tapping	8544	28.02.2025	01.03.2025	1808.83	2000
3.	Slag pouring Area	8546	28.02.2025	01.03.2025	1856.82	2000
<b>MBM</b>						
1.	Near Re-Heating Furnace	8546	28.02.2025	01.03.2025	763.52	2000

**Note:** SPM -Suspended Particulate matter ( $\mu\text{g}/\text{m}^3$ ), **INFERENCE:** The Measured Values are within the limits.

SL NO	INSTRUMENT DETAILS	HVS-01	HVS-02	HVS-03	HVS-04	HVS-05
1	Instrument Name	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler	High Volume Sampler
2	Make & Model	Enviro Instrumets/EI-043	Enviro Instrumets/EI-043	Enviro Instrumets/EI-043	Greentech/GTI-251	Greentech/GTI-251
3	Serial No	H.V.S./39-F-2024	H.V.S./40-F-2024	H.V.S./41-F-2024	460-DTF-2024	461-DTF-2024
4	Calibration Date	23.09.2024	23.09.2024	23.09.2024	03.06.2024	03.06.2024
5	Calibration Due Date	22.09.2025	22.09.2025	22.09.2025	02.06.2025	02.06.2025

  
Analysed By  
Naveen Kumar G  
Chemist

  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

**ANNEXURE-12**  
**GEMS-LD/TF/10/01**

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhak Stack sampler/ <b>VBSS-2</b> Sl. No: Stack Monitoring Kit/ <b>032308</b>
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: <b>Pellet Plant-1 ESP</b>
10	Month of Sampling	: <b>FEBRUARY-2025</b>
11	Date of Sample Received	: 03.02.2025&18.02.2025
12	Date of Sample Analysis	: 04.02.2025&19.02.2025
13	Date of Sample Analysis completion	: 04.02.2025&19.02.2025
14	Report Issued Date	: <b>03.03.2025</b>
15	Report Number	: <b>ULR-TC1543525000004726F</b>

#### Stack Details

1	Fuel Used	Coal & furnace oil
2	Stack Height (mtr)	100.0
3	Stack Diameter (mtr)	4.4

#### Emission Details

Sl. No.	Parameters	Method	Unit	Results		Permissible Limit
				03.02.2025	18.02.2025	
	Date of Monitoring Sample Code			7736	8204	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	28	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	68	65	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	5.90	5.77	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m <sup>3</sup> /hr	323258	315730	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm <sup>3</sup> /hr	282458	278109	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	36.70	28.87	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm <sup>3</sup>	124	136	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	47	80	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.019	0.010	NS

Note:

➤ 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.

➤ "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

Note: NS- Not Specified, RA: Reaffirmed, INFERENCE: The Measured Values are within the limits.

*Naveen Kumar G*  
**Analysed By**  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
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TC-15435

ANNEXURE-13  
GEMS-LD/TF/10/01

### Analysis Report of Stack Emission

- Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- Customer Reference : WO/ADMIN/FY24/RO18 - 450000125
- Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2  
Sl. No: Stack Monitoring Kit/ 032308
- Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- Discipline : Chemical
- Group : Atmospheric Pollution
- Sample Type : Stack Monitoring
- Sampling Location : 2X100 TPD Sponge iron plant Kiln 1 & 2
- Month of Sampling : FEBRUARY-2025
- Date of Sample Received : 04.02.2025&24.02.2025
- Date of Sample Analysis : 05.02.2025&25.02.2025
- Date of Sample Analysis completion : 06.02.2025&26.02.2025
- Report Issued Date : 03.03.2025
- Report Number : ULR-TC1543525000004746F

### Stack Details

- Fuel Used : Coal
- Stack Height (mtr) : 60.0
- Stack Diameter (mtr) : 2.00

Note:

### Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				04.02.2025	24.02.2025	
	Date of Monitoring					
	Sample Code			7760		
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	28	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	169	173	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.96	7.15	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m <sup>3</sup> /hr	78704	80872	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm <sup>3</sup> /hr	53035	53993	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	25.09	22.42	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm <sup>3</sup>	102	135	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	39	32	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.098	0.087	1

➤ 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.

➤ "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

Note: NS- Not Specified. RA: Reaffirmed, INFERENCE: The Measured Values are within the limits.

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



Note:

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- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey





## GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3<sup>rd</sup> Main Road, Basaveswara Badavane,

HOSAPETE – 583201, Dist., Vijayanagara (Karnataka)

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e-mail : gems\_hpt@yahoo.com

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TC-15435

ANNEXURE-14  
GEMS-LD/TF/10/01

### Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2  
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : FEBRUARY-2025(1st Fort Night)
- 10 Date of Sample Received : 13.02.2025
- 11 Date of Sample Analysis : 14.02.2025
- 12 Date of Sample Analysis completion : 15.02.2025
- 13 Report Issued Date : 03.03.2025
- 14 Report Number : ULR-TC1543525000004944F

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/N m <sup>3</sup>
<b>Induction Furnace 1 &amp; 2</b>											
1	Induction Furnace 1	13.02.2025	8106	Electric Power	29	36	6.03	30	1.2	6.54	150
2	Induction Furnace 2	13.02.2025	8110		31	39	6.31	30	1.3	8.35	150

Sl. No	Induction Furnance 1 & 2	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
1	Induction Furnance 1	24538	23621	50
2	Induction Furnance 2	30153	28682	50

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

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Website : www.globalmining.in



TC-15435

**ANNEXURE-15**

**GEMS-LD/TF/10/01**

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhak Stack sampler/ <b>VBSS-2</b> Sl. No: Stack Monitoring Kit/ <b>032308</b>
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: <b>Rolling mill reheating furnace</b>
10	Month of Sampling	: <b>FEBRUARY-2025</b>
11	Date of Sample Received	: 07.02.2025&22.02.2025
12	Date of Sample Analysis	: 08.02.2025&24.02.2025
13	Date of Sample Analysis completion	: 08.02.2025&25.02.2025
14	Report Issued Date	: <b>03.03.2025</b>
15	Report Number	: <b>ULR-TC1543525000004811F</b>

#### Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	30.0
3	Stack Diameter (mtr)	0.8

#### Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
	Date of Monitoring Sample Code			07.02.2025	22.02.2025	
				7871	8369	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	<sup>0</sup> C	31	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	<sup>0</sup> C	198	181	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.76	7.74	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m <sup>3</sup> /hr	31613	31516	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm <sup>3</sup> /hr	19993.4	20664.9	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	45.57	47.69	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm <sup>3</sup>	82	78	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	130	114	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.011	0.031	1

Note: NS- Not Specified. RA: Reaffirmed, **INFERENCE:**The Measured Values are within the limits.

*Naveen Kumar G*  
**Analysed By**  
**Naveen Kumar G**  
 Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
**K. Ramakrishna Reddy**  
 Technical Manager



#### Note:

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TC-15435

**ANNEXURE-16**  
**GEMS-LD/TF/10/01**

## Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District
2	Customer Reference	: WO/ADMIN/FY24/R018 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhak Stack sampler/ <b>VBSS-2</b> Sl. No: Stack Monitoring Kit/ <b>032308</b>
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: <b>AFBC Boiler ESP (25 MW Power Plant)</b>
10	Month of Sampling	: <b>FEBRUARY-2025</b>
11	Date of Sample Received	: -
12	Date of Sample Analysis	: -
13	Date of Sample Analysis completion	: -
14	Report Issued Date	: <b>03.03.2025</b>
15	Report Number	: -

## Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	65.0
3	Stack Diameter (mtr)	2.5

## Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
	Date of Monitoring Sample Code			-	-	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	Shutdown	Shutdown	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C			-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec			-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m³/hr			-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm³/hr			-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm³			50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm³			NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm³			NS
9	Carbon Monoxide	GEMS/SOP/69	%			NS

**Note:** NS- Not Specified. RA: Reaffirmed,

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-17

GEMS-LD/TF/10/01

## Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2  
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : FEBRUARY-2025(1st Fort Night)
- 10 Date of Sample Received : 14.02.2025
- 11 Date of Sample Analysis : 15.02.2025
- 12 Date of Sample Analysis completion : 15.02.2025
- 13 Report Issued Date : 03.03.2025
- 14 Report Number : ULR-TC1543525000004957F

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant -I											
1	Iron Ore dump hopper	14.02.2025	8131	-	27	34	5.14	30	0.4	17.59	50
2	Iron Ore Screen bin	14.02.2025	8132	-	30	35	5.80	30	0.4	15.13	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
1	Iron Ore dump hopper	2327	2255	-
2	Iron Ore Screen bin	2624	2532	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager

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Website : www.globalmining.in



TC-15435

**ANNEXURE-18**  
**GEMS-LD/TF/10/01**

### Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ **VBSS-2**  
Sl. No: Stack Monitoring Kit/ **032308**
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : **FEBRUARY-2025(1st Fort Night)**
- 10 Date of Sample Received : 12.02.2025
- 11 Date of Sample Analysis : 13.02.2025
- 12 Date of Sample Analysis completion : 13.02.2025
- 13 Report Issued Date : **03.03.2025**
- 14 Report Number : **ULR-TC1543525000004930F**

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
<b>Chimneys attached to Bag Filter (De dusting Units)</b>											
<b>RMHS</b>											
3	Screen, Coal Crusher (CPU)	12.02.2025	8078	-	38	38	5.29	35	1.5	32.38	50
4	Main Crusher	12.02.2025	8079	-	30	34	4.86	25	0.5	17.04	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
3	Screen, Coal Crusher (CPU)	33683	32198	-
4	Main Crusher	3434	3318	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

*Naveen Kumar G*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-19

GEMS-LD/TF/10/01

## Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2  
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : FEBRUARY-2025 (1st Fort Night)
- 10 Date of Sample Received : 03.02.2025 & 04.02.2025
- 11 Date of Sample Analysis : 04.02.2025 & 05.02.2025
- 12 Date of Sample Analysis completion : 05.02.2025 & 06.02.2025
- 13 Report Issued Date : 03.03.2025
- 14 Report Number : ULR-TC1543525000004726F

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant -I											
5	AGB Main Bag Filter	03.02.2025	7737	-	29	34	5.21	6.5	0.50	25.09	50
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	03.02.2025	7738	-	29	36	5.78	3.0	0.30	26.42	50
7	Bentonite Powder bin top bag filter	03.02.2025	7739	-	37	37	5.47	3.0	0.30	28.94	50
8	H-4 Conveyor discharge bag filter	Shutdown	-	-	-	-	-	7.0	0.50	-	50
9	P-1 Bag Filter	04.02.2025	7761	-	29	37	5.18	7.0	0.50	34.79	50

### Note:

- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.
- "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
5	AGB Main Bag Filter	3681	3569	-
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	1470	1416	-
7	Bentonite Powder bin top bag filter	1392	1332	-
8	H-4 Conveyor discharge bag filter	-	-	-
9	P-1 Bag Filter	3665	3518	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255 (Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255 (Part 03) (RA 2014)

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



### Note:

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TC-15435

ANNEXURE-20  
GEMS-LD/TF/10/01

## Analysis Report of Stack Emission

- Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- Customer Reference : WO/ADMIN/FY24/R018 - 450000125
- Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2  
Sl. No: Stack Monitoring Kit/ 032308
- Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- Discipline : Chemical
- Group : Atmospheric Pollution
- Sample Type : Stack Monitoring
- Month of Sampling : FEBRUARY-2025(1st Fort Night)
- Date of Sample Received : 04.02.2025&05.02.2025
- Date of Sample Analysis : 05.02.2025&06.02.2025
- Date of Sample Analysis completion : 05.02.2025&06.02.2025
- Report Issued Date : 03.03.2025
- Report Number : ULR-TC1543525000004748F

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
2 X 100 TPD Sponge Iron Kiln 1 & 2											
10	Cooler-1 Discharge & Blending Chute	04.02.2025	7762	---	30	34	4.96	30	1.20	28.82	50
11	Cooler-2 Discharge	04.02.2025	7763	---	31	35	5.48	30	1.20	31.42	50
12	Intermediate Bin & Blending	05.02.2025	7806	---	28	35	5.71	30	1.20	32.65	50
13	Product House	05.02.2025	7808	---	30	36	5.71	30	1.20	35.02	50

### Note:

- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.
- "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

Sl. No	2 X 100 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
10	Cooler-1 Discharge & Blending Chute	20197	19535	-
11	Cooler-2 Discharge	22326	21510	-
12	Intermediate Bin & Blending	23232	22451	-
13	Product House	23244	22322	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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# GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3<sup>rd</sup> Main Road, Basaveswara Badavane,

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e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in



TC-15435

**ANNEXURE-21**  
**GEMS-LD/TF/10/01**

## Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ **VBSS-2**  
Sl. No: Stack Monitoring Kit/ **032308**
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : **FEBRUARY-2025(1 st Fort Night)**
- 10 Date of Sample Received : 13.02.2025
- 11 Date of Sample Analysis : 14.02.2025
- 12 Date of Sample Analysis completion : 14.02.2025
- 13 Report Issued Date : **03.03.2025**
- 14 Report Number : **ULR-TC1543525000004748F**

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
<b>Induction Furnance 1 &amp; 2</b>											
1	Induction Furnance 1	13.02.2025	...	Electric	29	36	6.03	30	1.2	6.54	50
2	Induction Furnance 2	13.02.2025	...	Power	31	39	6.31	30	1.3	8.35	50

Sl. No	Induction Furnance 1 & 2	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
1	Induction Furnance 1	24538	23621	-
2	Induction Furnance 2	30153	28682	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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Website : www.globalmining.in



TC-15435

**ANNEXURE-22**

**GEMS-LD/TF/10/01**

## Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ **VBSS-2**  
Sl. No: Stack Monitoring Kit/ **032308**
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : **FEBRUARY-2025(2nd Fort Night)**
- 10 Date of Sample Received : 26.02.2025
- 11 Date of Sample Analysis : 27.02.2025
- 12 Date of Sample Analysis completion : 27.02.2025
- 13 Report Issued Date : **03.03.2025**
- 14 Report Number : **ULR-TC1543525000005100F**

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant											
1	Iron Ore dump hopper	26.02.2025	8474	---	32	36	5.10	30	0.40	19.74	50
2	Iron Ore Screen bin	26.02.2025	8475	---	33	37	5.72	30	0.40	22.73	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
1	Iron Ore dump hopper	23.07	2215	-
2	Iron Ore Screen bin	2588	2476	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-23  
GEMS-LD/TF/10/01

## Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler / VBSS-2  
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : FEBRUARY-2025(2nd Fort Night)
- 10 Date of Sample Received : 27.02.2025 & 28.02.2025
- 11 Date of Sample Analysis : 28.02.2025 & 01.03.2025
- 12 Date of Sample Analysis completion : 28.02.2025 & 01.03.2025
- 13 Report Issued Date : 03.03.2025
- 14 Report Number : ULR-TC1543525000005122F

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
RMHS											
3	Screen, Coal Crusher(CPU)	27.02.2025	8523	-	32	39	5.52	30	1.50	30.47	50
4	Main Crusher	28.02.2025	5848	-	33	36	4.96	25	0.50	13.87	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
3	Screen, Coal Crusher (CPU)	35103	33405	-
4	Main Crusher	3505	3370	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager

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TC-15435

ANNEXURE-24

GEMS-LD/TF/10/01

## Analysis Report of Stack Emission

- Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- Customer Reference : WO/ADMIN/FY24/R018 - 450000125
- Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2  
Sl. No: Stack Monitoring Kit/ 032308
- Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- Discipline : Chemical
- Group : Atmospheric Pollution
- Sample Type : Stack Monitoring
- Month of Sampling : FEBRUARY-2025 (2nd Fort Night)
- Date of Sample Received : 18.02.2025 & 19.02.2025
- Date of Sample Analysis : 19.02.2025 & 20.02.2025
- Date of Sample Analysis completion : 19.02.2025 & 20.02.2025
- Report Issued Date : 03.03.2025
- Report Number : ULR-TC1543525000004984F

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/N m <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant-I											
5	AGB Main Bag Filter	18.02.2025	8203	---	29	34	5.37	6.5	0.50	26.85	50
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	18.02.2025	8204	---	31	36	5.61	3.0	0.30	23.97	50
7	Bentonite Powder bin top bag filter	18.02.2025	8205	---	32	37	5.42	3.0	0.30	25.61	50
8	H-4 Conveyor discharge bag filter	-	-	---	-	-	-	7.0	0.50	-	50
9	P-1 Bag Filter	19.02.2025	8255	---	30	36	5.22	7.0	0.50	32.95	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
5	AGB Main Bag Filter	3797	3680	-
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	1428	1373	-
7	Bentonite Powder bin top bag filter	1379	1321	-
8	H-4 Conveyor discharge bag filter	-	-	-
9	P-1 Bag Filter	3693	3558	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255 (Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255 (Part 03) (RA 2014)

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-25  
GEMS-LD/TF/10/01

### Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2  
Sl. No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : FEBRUARY-2025(2nd Fort Night)
- 10 Date of Sample Received : 24.02.2025&25.02.2025
- 11 Date of Sample Analysis : 25.02.2025&26.02.2025
- 12 Date of Sample Analysis completion : 25.02.2025&26.02.2025
- 13 Report Issued Date : 03.03.2025
- 14 Report Number : ULR-TC1543525000005074F

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/N m <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
2 X 100 TPD Sponge Iron Kiln 1 & 2											
10	Cooler-1 Discharge & Blending Chute	24.02.2025	8418	---	34	39	5.24	30	1.20	27.57	50
11	Cooler-2 Discharge	25.02.2025	8453	---	30	35	5.40	30	1.20	30.31	50
12	Intermediate Bin & Blending	25.02.2025	8454	---	32	36	5.62	30	1.20	29.27	50
13	Product House	25.02.2025	8455	---	33	38	5.79	30	1.20	33.13	50

Sl. No	2 X 100 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
10	Cooler-1 Discharge & Blending Chute	21347	20295	-
11	Cooler-2 Discharge	21973	21226	-
12	Intermediate Bin & Blending	22877	21958	-
13	Product House	23582	22468	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

Analysed By  
Naveen Kumar G  
Chemist

Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-26  
GEMS-LD/TF/10/01

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No: Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: Pellet Plant-2 ESP
10	Month of Sampling	: FEBRUARY-2025
11	Date of Sample Received	: 01.02.2025 & 17.02.2025
12	Date of Sample Analysis	: 03.02.2025 & 18.02.2025
13	Date Sample Analysis Completion	: 03.02.2025 & 19.02.2025
14	Report Issued Date	: 03.03.2025
15	Report Number	: ULR-TC1543524000004709F

### Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	100
3	Stack Diameter (mtr)	4.4

### Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
				01.02.2025	17.02.2025	
	Date of Monitoring					
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	7713	8148	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	28	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	79	74	-
4	Gas flow rate at Stack Condition	IS-11255(Part 3)1985(RA 2014)	m <sup>3</sup> /hr	6.44	6.10	-
5	Gas flow rate at NTP	IS-11255(Part 3)1985(RA 2014)	Nm <sup>3</sup> /hr	352665	333983	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	298484	286746	-
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>	32.02	29.16	50
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm <sup>3</sup>	193.0	156.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	76.0	64.0	NS
				0.014	0.017	1%

#### Note:

- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.
- "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

Note: NS- Not Specified. RA: Reaffirmed. INFERENCE: The Measured Values are within the limits.

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-27  
GEMS-LD/TF/10/01

### Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ VBSS2  
Sl.No: Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Sampling Location : SID Axis 3&4
- 10 Month of Sampling : FEBRUARY-2025
- 11 Date of Sample Received : 08.02.2025&18.02.2025
- 12 Date of Sample Analysis : 10.02.2025&19.02.2025
- 13 Date Sample Analysis Completion : 05.01.2025&20.02.2025
- 14 Report Issued Date : 03.03.2025
- 15 Report Number : ULR-TC1543525000003655F

#### Stack Details

- 1 Fuel Used : Coal
- 2 Stack Height (mtr) : 70.0
- 3 Stack Diameter (mtr) : 3.00

#### Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
	Date of Monitoring Sample Code			08.02.2025	18.02.2025	
				7917	8179	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	126	129	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.28	6.93	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m <sup>3</sup> /hr	185373	176434	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr	138376	130755	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	30.41	34.38	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>	279.0	247.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm <sup>3</sup>	32.0	39.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.069	0.072	1%

Note: NS- Not Specified. RA: Reaffirmed. INFERENCE: The Measured Values are within the limits.

Analysed By  
Naveen Kumar G  
Chemist

Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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Website : www.globalmining.in



TC-15435

**ANNEXURE-28**  
**GEMS-LD/TF/10/01**

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ <b>VBSS2</b> Sl.No: Stack Monitoring Kit/ <b>032308</b>
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: <b>SID Axis 5&amp;6</b>
10	Month of Sampling	: <b>FEBRUARY-2025</b>
11	Date of Sample Received	: 06.02.2025&20.02.2025
12	Date of Sample Analysis	: 07.02.2025&21.02.2025
13	Date Sample Analysis Completion	: 08.02.2025&22.02.2025
14	Report Issued Date	: <b>03.03.2025</b>
15	Report Number	: <b>ULR-TC1543525000004773F</b>

### Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	70.0
3	Stack Diameter (mtr)	3.00

### Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				05.02.2025	20.02.2025	
	Date of Monitoring					
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	7804	8307	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	28	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	129	131	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m <sup>3</sup> /hr	7.09	7.23	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr	180562	183925	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	133779	135418	-
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>	37.12	35.97	50
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	325	394	NS
9	Carbon Monoxide	GEMS/SOP/69	%	52	49	NS
				0.031	0.038	1%

Note: NS- Not Specified. RA: Reaffirmed. **INFERENCE:** The Measured Values are within the limits.

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

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TC-15435

**ANNEXURE-29**  
**GEMS-LD/TF/10/01**

### Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ **VBSS2**  
Sl.No: Stack Monitoring Kit/ **032308**
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Sampling Location : **1X70 MW-CFBC Boiler ESP**
- 10 Month of Sampling : **FEBRUARY-2025**
- 11 Date of Sample Received : 06.02.2025 & 22.02.2025
- 12 Date of Sample Analysis : 07.02.2025 & 24.02.2025
- 13 Date Sample Analysis Completion : 07.02.2025 & 22.02.2025
- 14 Report Issued Date : **03.03.2025**
- 15 Report Number : **ULR-TC1543525000005035F**

#### Stack Details

- 1 Fuel Used Coal
- 2 Stack Height (mtr) 70.0
- 3 Stack Diameter (mtr) 3.00

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
				06.02.2025	21.02.2025	
				7838	8341	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	28	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	126	124	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.05	7.29	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m <sup>3</sup> /hr	179497	185440	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr	133902	138977	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	37.57	30.44	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>	263	245	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	59	40	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.024	0.019	1%

Note: NS- Not Specified. RA: Reaffirmed. **INFERENCE:**

*Naveen Kumar G*  
**Analysed By**  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-30

GEMS-LD/TF/10/01

## Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: 2X70 MW CFBC Boiler ESP
10	Month of Sampling	: FEBRUARY-2025
11	Date of Sample Received	: 10.02.2025&25.02.2025
12	Date of Sample Analysis	: 11.02.2025&26.02.2025
13	Date Sample Analysis Completion	: 11.02.2025&26.02.2025
14	Report Issued Date	: 03.03.2025
15	Report Number	: ULR-TC1543525000004867F

### Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	110.0
3	Stack Diameter (mtr)	8.00

### Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				10.02.2025	25.02.2025	
	Date of Monitoring			7957	8452	
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	119	123	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.05	7.23	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m <sup>3</sup> /hr	1275960	1308198	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr	969607	983312	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	38.64	40.16	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>	34	38	600
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	254	273	300
9	Carbon Monoxide	GEMS/SOP/69	%	0.041	0.053	NS

Note: NS- Not Specified. RA: Reaffirmed **INFERENCE:** The Measured Values are within the limits

*Naveen Kumar G*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-30A  
GEMS-LD/TF/10/01

## Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: SMS
10	Month of Sampling	: FEBRUARY-2025
11	Date of Sample Received	: 11.02.2025&26.02.2025
12	Date of Sample Analysis	: 12.02.2025&27.02.2025
13	Date Sample Analysis Completion	: 13.02.2025&27.02.2025
14	Report Issued Date	: 03.03.2025
15	Report Number	: ULR-TC1543525000004898F

## Stack Details

1	Fuel Used	-
2	Stack Height (mtr)	86
3	Stack Diameter (mtr)	2.4

## Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				11.02.2025	26.02.2025	
				8016	8476	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	81	78	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.90	7.17	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m <sup>3</sup> /hr	112459	116751	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr	94631	99109	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	36.70	37.62	50

Note: NS- Not Specified. RA: Reaffirmed **INFERENCE:** The Measured Values are within the limits

Analysed By  
Naveen Kumar G  
Chemist

Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

**ANNEXURE-30B**  
**GEMS-LD/TF/10/01**

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ <b>VBSS2</b> Sl.No: Stack Monitoring Kit/ <b>032308</b>
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: <b>Barmill</b>
10	Month of Sampling	: <b>FEBRUARY-2025</b>
11	Date of Sample Received	: 12.02.2025&27.02.2025
12	Date of Sample Analysis	: 13.02.2025&28.02.2025
13	Date Sample Analysis Completion	: 14.02.2025&28.02.2025
14	Report Issued Date	: <b>03.03.2025</b>
15	Report Number	: <b>ULR-TC1543524000004454F</b>

### Stack Details

1	Fuel Used	-
2	Stack Height (mtr)	87
3	Stack Diameter (mtr)	3.0

### Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				12.02.2025	27.02.2025	
	Date of Monitoring					
	Sample Code			8076		
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	28	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	188	192	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.45	7.54	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m <sup>3</sup> /hr	189487	192002	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr	122311	122982	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	40.30	37.49	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>	396	403	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	61	68	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.778	0.820	NS

Note: NS- Not Specified. RA: Reaffirmed **INFERENCE:** The Measured Values are within the limits

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-30C  
GEMS-LD/TF/10/01

### Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ VBSS2  
Sl.No:Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Sampling Location : Blast Furnance -Stove Waste Gas
- 10 Month of Sampling : FEBRUARY-2025
- 11 Date of Sample Received : 13.02.2025&28.02.2025
- 12 Date of Sample Analysis : 14.02.2025&01.03.2025
- 13 Date Sample Analysis Completion : 14.02.2025&01.03.2025
- 14 Report Issued Date : 03.03.2025
- 15 Report Number : ULR-TC1543525000005135F

#### Stack Details

- 1 Fuel Used : -
- 2 Stack Height (mtr) : 80
- 3 Stack Diameter (mtr) : 2.4

#### Emission Details

Sl. No	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
				13.02.2025	28.02.2025	
	Date of Monitoring					
	Sample Code			8117	8548	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	31	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	189	158	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	8.08	7.41	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m <sup>3</sup> /hr	205731	120748	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr	132561	83399	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	37.05	15.21	30.0
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>	73	81	200
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	21	25	150
9	Carbon Monoxide	GEMS/SOP/69	%	0.345	0.334	1%

Note: NS- Not Specified. RA: Reaffirmed **INFERENCE:** The Measured Values are within the limits

*Naveen*  
**Analysed By**  
 Naveen Kumar G  
 Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
 K. Ramakrishna Reddy  
 Technical Manager



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TC-15435

ANNEXURE-31  
GEMS-LD/TF/10/01

## Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Month of Sampling	: FEBRUARY-2025(1 <sup>st</sup> Fort Night)
10	Date of Sample Received	: 12.02.2025
11	Date of Sample Analysis	: 13.02.2025
12	Date Sample Analysis Completion	: 13.02.2025
13	Report Issued Date	: 03.03.2025
14	Report Number	: ULR-TC1543525000004929F

## RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant-2											
1	Iron Ore Cone Crusher	NOT IN OPERATION	-	---	-	-	-	30	1.20	-	50
2	Iron Ore Screening	12.02.2025	8077	Coal	32	35	5.45	30	0.90	25.98	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
1	Iron Ore Cone Crusher	-	-	-
2	Iron Ore Screening	12493	12021	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The Measured Values are within the limits.

*Naveen Kumar G*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-32  
GEMS-LD/TF/10/01

## Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Month of Sampling	: FEBRUARY-2025(1 <sup>st</sup> Fort Night)
10	Date of Sample Received	: 01.02.2025
11	Date of Sample Analysis	: 03.02.2025
12	Date Sample Analysis Completion	: 03.02.2025
13	Report Issued Date	: 03.03.2025
14	Report Number	: ULR-TC1543525000004710F

## RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant-II											
3	AGB main bag Filter	01.02.2025	7714	---	29	35	5.36	6.5	0.5	40.69	50
4	Lime & Bentonite Powder bin top bag filter	01.02.2025	7714	---	30	36	4.96	6.5	0.5	21.45	50
5	AGB De dusting Bag Filter	-	-	---	-	-	-	6	0.6	-	50
6	Powder Coal main bag filter	-	-	---	-	-	-	6	0.6	-	50
7	RP-6 Conveyor bag Filter	-	-	---	-	-	-	6	0.3	-	50
8	Pellet discharge bin bag filter	01.02.2025	7716	---	32	39	5.68	20	0.5	29.90	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
3	AGB main bag Filter	3791	3665	-
4	Lime & Bentonite Powder bin top bag filter	3507	3368	-
5	AGB De dusting Bag Filter	-	-	-
6	Powder Coal main bag filter	-	-	-
7	RP-6 Conveyor bag Filter	-	-	-
8	Pellet discharge bin bag filter	4013	3714	-

### Note:

- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.
- "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The measured values are within the limits

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*Naveen*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



### Note:

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TC-15435

**ANNEXURE-33**  
**GEMS-LD/TF/10/01**

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Month of Sampling	: <b>FEBRUARY-2025(1<sup>st</sup> Fort Night)</b>
10	Date of Sample Received	: 07.02.2025,08.02.2025,10.02.2025 &11.02.2025
11	Date of Sample Analysis	: 08.02.2025,10.02.2025,11.02.2025&12.02.2025
12	Date Sample Analysis Completion	: 08.02.2025,10.02.2025,11.02.2025&12.02.2025
13	Report Issued Date	: <b>03.03.2025</b>
14	Report Number	: <b>ULR-TC1543525000004809F</b>

### RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
<b>Chimneys attached to Bag Filter (De dusting Units)</b>											
<b>2 X 500 TPD Sponge Iron Kiln 1 &amp; 2</b>											
9	Cooler Discharge -1	07.02.2025	7869	---	31	36	5.71	30	1.20	6.02	50
10	Cooler Discharge -2	08.02.2025	7918	---	29	36	5.50	30	1.20	26.74	50
11	Coal stock house	08.02.2025	7919	---	31	35	5.07	30	1.20	16.02	50
12	PSB 1 System-1	10.02.2025	7958	---	28	37	5.24	30	1.20	33.42	50
13	PSB 1 System-2	10.02.2025	7959	---	30	38	5.62	30	1.20	28.64	50
14	PSB 2 System-1 MCC	10.02.2025	7960	---	31	38	5.53	30	1.20	32.06	50
15	PSB 1 System-2 Road	11.02.2025	8017	---	29	37	5.57	30	1.20	34.29	50
16	Junction House Old & New	11.02.2025	8019	---	30	35	5.27	30	1.20	27.82	50
17	Storage Bunker	11.02.2025	8018	---	31	35	5.01	30	1.20	22.46	50
18	Dispatch	-	-	---	-	-	-	30	1.20	-	50

Sl. No	2 X 500 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
9	Cooler Discharge -1	23250	22313	-
10	Cooler Discharge -2	22397	21566	-
11	Coal stock house	20664	19901	-
12	PSB 1 System-1	21331	20441	-
13	PSB 1 System-2	22873	21833	-
14	PSB 2 System-1 MCC	22505	21462	-
15	PSB 1 System-2 Road	22685	21778	-
16	Junction House Old & New	21472	20687	-
17	Storage Bunker	20383	19628	-
18	Dispatch	-	-	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

**INFERENCE:** The Measured Values are within the limits

*Naveen Kumar G*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

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TC-15435

ANNEXURE-34  
GEMS-LD/TF/10/01

### Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ VBSS2  
Sl.No:Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : FEBRUARY-2025(1st Fort Night)
- 10 Date of Sample Received : 05.02.2025,06.02.2025&07.02.2025
- 11 Date of Sample Analysis : 06.02.2025,07.02.2025&08.02.2025
- 12 Date Sample Analysis Completion : 07.02.2025&07.02.2025&08.02.2025
- 13 Report Issued Date : 03.03.2025
- 14 Report Number : ULR-TC1543525000004786F

### RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/s	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
<b>Chimneys attached to Bag Filter (De dusting Units)</b>											
<b>2X500 TPD Sponge Iron Kiln 3&amp;4</b>											
19	DE 3, Axis 3 CD	05.02.2025	7805	---	31	37	5.91	30	1.20	32.18	50
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	06.02.2025	7839	---	29	35	5.71	30	1.20	29.71	50
21	DE 8 & 12 I-Bin, (Stand By)	06.02.2025	7840	---	32	36	5.60	30	1.90	35.09	50
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	06.02.2025	7841	---	33	37	5.41	30	1.90	37.14	50
23	Coal Dryer	07.02.2025	7870	---	32	40	6.31	30	1.20	40.75	50

Sl. No	2X500 TPD Sponge Iron Kiln 3&4	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
19	DE 3, Axis 3 CD	24046	23000	-
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	23241	22448	-
21	DE 8 & 12 I-Bin, (Stand By)	57159	54899	-
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	55196	52801	-
23	Coal Dryer	25705	24370	-

INFERENCE: The Measured Values are within the limits.

Analysed By  
Naveen Kumar G  
Chemist

Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

**ANNEXURE-35**  
**GEMS-LD/TF/10/01**

### Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ **VBSS2**  
Sl.No:Stack Monitoring Kit/ **032308**
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : **FEBRUARY-2025(2<sup>nd</sup> Fort Night)**
- 10 Date of Sample Received : 27.02.2025
- 11 Date of Sample Analysis : 28.02.2025
- 12 Date Sample Analysis Completion : 28.02.2025
- 13 Report Issued Date : **03.03.2025**
- 14 Report Number : **ULR-TC1543525000005122F**

### RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant-2											
1	Iron Ore Cone Crusher	-	-	---	-	-	-	-	-	-	50
2	Iron Ore Screening	27.02.2025	8524	---	32	35	4.86	30	0.90	25.21	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
1	Iron Ore Cone Crusher	-	-	-
2	Iron Ore Screening	1587	1521	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

**INFERENCE:** The Measured Values are within the limits.

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

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TC-15435

ANNEXURE-36  
GEMS-LD/TF/10/01

## Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No: Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Month of Sampling	: FEBRUARY-2025(2 <sup>nd</sup> Fort Night)
10	Date of Sample Received	: 17.02.2025
11	Date of Sample Analysis	: 18.02.2025
12	Date Sample Analysis Completion	: 18.02.2025
13	Report Issued Date	: 03.03.2025
14	Report Number	: ULR-TC1543525000004967F

## RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant											
3	AGB main bag Filter	17.02.2025	8149	---	29	34	5.22	6.5	0.50	21.52	50
4	Lime & Bentonite Powder bin top bag filter	17.02.2025	8150	---	31	35	4.86	6.5	0.50	25.21	50
5	AGB De dusting Bag Filter	-	-	---	-	-	-	6	0.60	-	50
6	Powder Coal main bag filter	-	-	---	-	-	-	6	0.60	-	50
7	RP-6 Conveyor bag Filter	-	-	---	-	-	-	6	0.30	-	50
8	Pellet discharge bin bag filter	17.02.2025	8151	---	32	305	5.76	2.0	0.50	30.91	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
3	AGB main bag Filter	3301	3177	-
4	Lime & Bentonite Powder bin top bag filter	1587	1521	-
5	AGB De dusting Bag Filter	-	-	-
6	Powder Coal main Bagfilter	-	-	-
7	RP-6 Conveyor bag Filter	-	-	-
8	Pellet discharge bin Bagfilter	4070	3884	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE:--The Measured Values are within the limits.

Analysed By  
Naveen Kumar G  
Chemist

Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager

### Note:

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TC-15435

ANNEXURE-37

GEMS-LD/TF/10/01

### Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.202421 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Month of Sampling	: FEBRUARY-2025(2 <sup>nd</sup> Fort Night)
10	Date of Sample Received	: 19.02.2025,20.02.2025&21.02.2025&22.02.2025
11	Date of Sample Analysis	: 20.02.2025,21.02.2025&22.02.2025&24.02.2025
12	Date Sample Analysis Completion	: 21.02.2025,22.02.2025&22.02.2025&24.02.2025
13	Report Issued Date	: 03.03.2025
14	Report Number	: ULR-TC1543525000005007F

### RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
2 X 500 TPD Sponge Iron Kiln 1 & 2											
9	Cooler Discharge -1	19.02.2025	8253	Coal	33	37	5.58	30	1.2	28.80	50
10	Cooler Discharge -2	19.02.2025	8254	Coal	33	38	5.41	30	1.2	26.64	50
11	Coal stock house	20.02.2025	8308	Coal	29	34	4.98	30	1.2	14.00	50
12	PSB 1 System-1	20.02.2025	8309	Coal	32	37	5.33	30	1.2	33.53	50
13	PSB 1 System-2	20.02.2025	8310	Coal	33	38	5.20	30	1.2	32.31	50
14	PSB 2 System-1 MCC	21.02.2025	8342	Coal	30	37	5.80	30	1.2	31.60	50
15	PSB 1 System-2 Road	21.02.2025	8343	Coal	32	38	5.35	30	1.2	33.30	50
16	Junction House Old & New	21.02.2025	8344	Coal	33	39	5.76	30	1.2	36.05	50
17	Storage Bunker	22.02.2025	8361	Coal	30	35	5.12	30	1.2	24.98	50
18	Dispatch	-	-	---	-	-	-	30	1.2	-	50

Sl. No	2 X 500 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
9	Cooler Discharge -1	22705	21754	-
10	Cooler Discharge -2	22043	21038	-
11	Coal stock house	20263	19614	-
12	PSB 1 System-1	21694	20737	-
13	PSB 1 System-2	21194	20180	-
14	PSB 2 System-1 MCC	20400	19702	-
15	PSB 1 System-2 Road	20115	19353	-
16	Junction House Old & New	18772	17971	-
17	Storage Bunker	18161	17490	-
18	Dispatch	-	-	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The Measured Values are within the limits.

*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-38  
GEMS-LD/TF/10/01

### Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Vayubodhan Stack sampler/ VBSS2  
Sl.No:Stack Monitoring Kit/ 032308
- 5 Instrument Details : Calibration Date: 28.03.2024  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : FEBRUARY-2025 (2<sup>nd</sup> Fort Night)
- 10 Date of Sample Received : 22.02.2025&24.02.2025
- 11 Date of Sample Analysis : 24.02.2025&25.02.2025
- 12 Date Sample Analysis Completion : 24.02.2025&25.02.2025
- 13 Report Issued Date : 03.03.2025
- 14 Report Number : ULR-TC1543525000005048F

### RESULTS

Sl. NO	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/s	Height (m)	Diameter (m)	PM mg/Nm <sup>3</sup>	KSPCB Std mg/Nm <sup>3</sup>
Chimneys attached to Bag Filter (De dusting Units)											
2X500 TPD Sponge Iron Kiln 3&4											
19	DE 3, Axis 3 CD	22.02.2025	8365	---	33	36	5.86	30	1.20	31.11	50
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	22.02.2025	8366	---	34	37	5.53	30	1.20	33.93	50
21	DE 8 & 12 I-Bin, (Stand By)	24.02.2025	8419	---	30	36	5.67	30	1.90	32.67	50
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	24.02.2025	8420	---	33	38	5.83	30	1.90	34.85	50
23	Coal Dryer	----	----	---	---	---	---	30	1.20	---	50

Sl. No	2X500 TPD Sponge Iron Kiln 3&4	Gas flow rate at Stack Condition m <sup>3</sup> /hr	Gas flow rate at NTP Nm <sup>3</sup> /hr	KSPCB Std
19	DE 3, Axis 3 CD	18079	17390	-
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	19586	18771	-
21	DE 8 & 12 I-Bin, (Stand By)	51041	49267	-
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	50225	48290	-
23	Coal Dryer	---	---	-

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The Measured Values are within the limits.

*Naveen Kumar G*  
Analysed By  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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## GLOBAL ENVIRONMENT & MINING SERVICES LLP

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TC-15435

**ANNEXURE-40**

**GEMS-LD/TF/08/01**

### NOISE LEVEL MONITORING REPORT

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
 Customer Reference : WO/ADMIN/FY24/RO18 - 450000125  
 Sample collected by : Global Environment & Mining Services  
 Discipline : Chemical  
 Group : Atmospheric Pollution  
 Sample Type : Noise Level Monitoring  
 Particulars of Sample Collected : Lutron: SL- 4023SD  
 Sl. No: Q679952  
 Instrument Details : Date of Calibration: 16.12.2024  
 Calibration Due Date: 15.12.2025  
 Month : **FEBRUARY-2025**  
 Report Issue Date : **03.03.2025**  
 Method Adopted : IS 9989-1981 Reaffirmed 2014  
 Report No : **ULR-TC1543525000004714F**

Sl. No	Location	Date of Monitoring	Noise Level dB (A)		
			Day Time		Standard
			Min	Max	
1	Main Gate	01.02.2025	50.0	55.0	75
2	Near ATM	01.02.2025	42.8	51.8	75
3	Transit House	03.03.2025	52.8	62.5	75
4	CAAQMS Station	03.03.2025	49.6	55.0	75
5	Gunda Road	04.02.2025	50.1	58.9	75
6	Gunda Railway Station	04.02.2025	46.0	60.2	75
7	Bagging Shed	05.02.2025	62.4	67.2	75
8	Railway Siding	05.02.2025	52.4	60.0	75
9	4th Gate	06.02.2025	51.3	59.6	75
10	Bricks Plant	06.02.2025	54.4	67.2	75
11	Kempuhalla (Wagon Tippler)	07.02.2025	46.2	55.0	75
12	Danapura Bridge	07.02.2025	57.3	66.0	75
13	2nd Gate	08.02.2025	52.3	62.5	75
14	Project Store	08.02.2025	44.8	54.3	75
15	Dispatch (Truck Parking Area)	08.02.2025	58.3	66.0	75

**Note:** Each Location above the Noise Level taken Readings 15 Minutes.

**Note:**

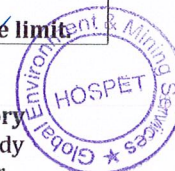
- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.
- "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

#### INFERENCE

As per CPCB Standards,

**Report Status: - Measured Values for the above parameters are within the limit**

*[Signature]*  
**Authorised Signatory**  
**K. Ramakrishna Reddy**  
**Technical Manager**



**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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TC-15435

**ANNEXURE-41**  
**GEMS-LD/TF/08/01**

### NOISE LEVEL MONITORING REPORT

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
 Customer Reference : WO/ADMIN/FY24/R018 - 450000125  
 Sample collected by : Global Environment & Mining Services  
 Discipline : Chemical  
 Group : Atmospheric Pollution  
 Sample Type : Noise Level Monitoring  
 Particulars of Sample Collected : Lutron: SL- 4023SD  
 Sl. No: Q679952  
 Instrument Details : Date of Calibration: 16.12.2024  
 Calibration Due Date: 15.12.2025  
 Month : **FEBRUARY-2025**  
 Report Issue Date : **03.03.2025**  
 Method Adopted : IS 9989-1981 Reaffirmed 2014  
 Report No : **ULR-TC1543525000004970F**

Sl. No	Location	Date of Monitoring	Noise Level dB (A)		
			Day Time		Standard
			Min	Max	
1	Main Gate	17.02.2025	50.2	57.8	75
2	Near ATM	17.02.2025	47.6	57.8	75
3	Transit House	18.02.2025	49.6	65.2	75
4	CAAQMS Station	18.02.2025	42.9	59.2	75
5	Gunda Road	19.02.2025	54.1	63.5	75
6	Gunda Railway Station	19.02.2025	53.4	61.9	75
7	Bagging Shed	20.02.2025	52.8	67.8	75
8	Railway Siding	20.02.2025	52.4	69.6	75
9	4th Gate	21.02.2025	52.8	62.9	75
10	Bricks Plant	21.02.2025	52.8	68.3	75
11	Kempuhalla (Wagon Tippler)	22.02.2025	52.4	59.6	75
12	Danapura Bridge	22.02.2025	53.4	65.0	75
13	2nd Gate	24.02.2025	52.4	60.2	75
14	Project Store	24.02.2025	47.6	57.2	75
15	Dispatch (Truck Parking Area)	24.02.2025	62.4	73.4	75

**Note: Each Location above the Noise Level taken Readings 15 Minutes.**

**Note:**

- 01.02.2025 to 04.02.2025 Sampling NABL Certificate TC-5323 to be Consider.
- "This certificate supersedes Certificate No. TC-5323, issued on 31/03/2023, due to a change in the legal entity of the laboratory. The validity period for this new certificate is from 05/02/2025 to 30/03/2025, under the Certificate of Accreditation for GLOBAL ENVIRONMENT & MINING SERVICES LLP."

<b>INFERENCE</b>	<b>As per CPCB Standards, Report Status: - Measured Values for the above parameters are within the limit.</b>
------------------	---

*[Signature]*  
**Authorised Signatory**  
**K. Ramakrishna Reddy**  
**Technical Manager**



**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15 Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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TC-15435

ANNEXURE-42

GEMS-LD/TF/08/01

### AMBIENT NOISE LEVEL MONITORING REPORT

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.  
 Customer Reference : WO/ADMIN/FY24/RO18 - 450000125  
 Sample collected by : Global Environment & Mining Services  
 Discipline : Chemical  
 Group : Atmospheric Pollution  
 Sample Type : Noise Level Monitoring  
 Particulars of Sample Collected : Lutron: SL- 4023SD  
 Sl. No: Q679953  
 Instrument Details : Date of Calibration: 16.12.2024  
 Calibration Due Date: 15.12.2025  
 Month : FEBRUARY-2025  
 Report Issue Date : 03.03.2025  
 Method Adopted : IS 9989-1981 Reaffirmed 2014  
 Report No : ULR-TC1543525000004715F

Sl. No	Location	Date of Monitoring	Noise Level dB (A)							
			Day Time			Standard	Night Time			Standard
			Min	Max	Avg		Min	Max	Avg	
1	Danapur Village	01.02.2025	43.8	55.3	49.55	55	32.1	40.5	36.30	45
2	Mariyammana Halli	05.02.2025	42.6	51.4	47.00		35.2	42.6	38.90	
3	Hanumana Halli	03.02.2025	41.8	53.4	47.60		36.4	42.6	39.50	
4	Galemmanagudi	04.02.2025	45.9	56.4	51.15		38.4	39.0	38.70	
5	G.Nagalapura Village	06.02.2025	41.9	55.1	48.50		37.9	40.2	39.05	
6	Gunda Tanda Village	07.02.2025	46.5	52.4	49.45		34.8	40.9	37.85	

Note: Each Location above the Noise Level taken Readings 15 Minutes.

INFERENCE	As per CPCB Standards, Report Status: - Measured Values for the above parameters are within the limit.
-----------	---

*[Signature]*  
 Authorised Signatory  
 K. Ramakrishna Reddy  
 Technical Manager

#### NOISE: (AMBIENT STANDARDS)

Area code	Category of Area	Limit in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Area	50	40

#### Note:

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TC-15435

ANNEXURE-43  
GEMS-LD/TF/23/01

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Water
8	Sample Type	: Ground Water
9	Sample Code	: 7923
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: 03.03.2025
15	Report Number	: ULR-TC1543525000004841F

### Results

Sl. No.	Parameters	Protocol	Unit	Danapur Village (GW1)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 <sup>rd</sup> Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.33	6.5 to 8.5	NR
2.	Conductivity	APHA 23 <sup>rd</sup> Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	1960	-	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1200	500	2000
4.	Turbidity (NTU)	APHA 23 <sup>rd</sup> Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.4	1	5
5.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO <sub>4</sub>	APHA 23 <sup>rd</sup> Edition 2017 4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	233.87	200	400
7.	Phosphorus as P	APHA 23 <sup>rd</sup> Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	<0.01	-	-
8.	Sodium as Na	APHA 23 <sup>rd</sup> Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	243.8	-	-
9.	Potassium as K	APHA 23 <sup>rd</sup> Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.00	-	-
10.	Calcium as Ca	APHA 23 <sup>rd</sup> Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	64.32	75	200
11.	Magnesium as Mg	APHA 23 <sup>rd</sup> Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	34.02	30	100
12.	Total Hardness as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	550	200	600
13.	Chloride as Cl	APHA 23 <sup>rd</sup> Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	308.7	250	1000
14.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.94	1	1.5
15.	Nitrate Nitrogen as NO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	13.16	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	460	200	600

#### Note:

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TC-15435

### ANNEXURE-43

17.	Acidity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	0.00	-	-
18.	Total Iron as Fe	APHA 23 <sup>rd</sup> Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.12	0.30	NR
19.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

**Note: GW1: Danapur Village. NR-No relaxation.**

<b>INFERENCE</b>	<b>As per Standards IS: 10500:2012</b> <b>Report Status: - Measured Values for the above parameters are within the limits.</b>
------------------	---

*Naveen*  
**Analysed By**  
**Naveen Kumar G**  
**Chemist**

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
**K. Ramakrishna Reddy**  
**Technical Manager**



#### Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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ANNEXURE-43  
GEMS-LD/TF/23/01


### Analysis Report of Water Quality Data


1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical/Biological
7	Group	: Water
8	Sample Type	: Ground Water
9	Sample Code	: 7923
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: 03.03.2025
15	Report Number	: GEMS/WATER/2024-2025/4841

### Results

Sl. No	Parameters	Protocol	Unit	Danapur Village (GW1)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
3.	Total Coli form count	IS : 15185:2016	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 15185:2016	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

  
Analysed By  
Naveen Kumar G  
Chemist

  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

**ANNEXURE-44**  
**GEMS-LD/TF/23/01**

## Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Water
8	Sample Type	: Ground Water
9	Sample Code	: 7925
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: 03.03.2025
15	Report Number	: ULR-TC1543525000004843F

## Results

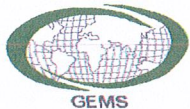
Sl. No	Parameters	Protocol	Unit	Hanumanahalli Village (GW2)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 <sup>rd</sup> Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.54	6.5 to 8.5	NR
2.	Conductivity	APHA 23 <sup>rd</sup> Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	900	-	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	490	500	2000
4.	Turbidity (NTU)	APHA 23 <sup>rd</sup> Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.6	1	5
5.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO <sub>4</sub>	APHA 23 <sup>rd</sup> Edition 2017 4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	67.83	200	400
7.	Phosphorus as P	APHA 23 <sup>rd</sup> Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	<0.01	-	-
8.	Sodium as Na	APHA 23 <sup>rd</sup> Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	152.9	-	-
9.	Potassium as K	APHA 23 <sup>rd</sup> Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	<1.0	-	-
10.	Calcium as Ca	APHA 23 <sup>rd</sup> Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	32.06	75	200
11.	Magnesium as Mg	APHA 23 <sup>rd</sup> Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	14.58	30	100
12.	Total Hardness as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	140	200	600
13.	Chloride as Cl	APHA 23 <sup>rd</sup> Edition 2017 4500 Cl-	mg/L	92.1	250	1000
14.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.72	1	1.5
15.	Nitrate Nitrogen as NO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	18.26	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	180	200	600

### Note:

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TC-15435

### ANNEXURE-44

17.	Acidity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	0.00	-	-
18.	Total Iron as Fe	APHA 23 <sup>rd</sup> Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.10	0.30	NR
19.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

**Note: GW2: Hanumanahalli Village. NR-No relaxation.**

#### INFERENCE

**As per Standards IS: 10500:2012**

**Report Status: - Measured Values for the above parameters are within the limit.**

*Naveen*  
**Analysed By**  
**Naveen Kumar G**  
 Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
**K. Ramakrishna Reddy**  
 Technical Manager



#### Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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ANNEXURE-44  
GEMS-LD/TF/23/01

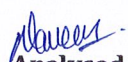
### Analysis Report of Water Quality Data

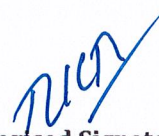
1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical/Biological
7	Group	: Water
8	Sample Type	: Ground Water
9	Sample Code	: 7925
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: 03.03.2025
15	Report Number	: GEMS/WATER/2024-2025/4843

### Results

Sl. No	Parameters	Protocol	Unit	Hanumanahalli Village (GW2)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
3.	Total Coli form count	IS : 15185:2016	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 15185:2016	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

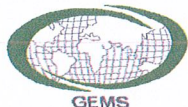
  
Analysed By  
Naveen Kumar G  
Chemist

  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-45

GEMS-LD/TF/23/01

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Water
8	Sample Type	: Ground Water
9	Sample Code	: 7926
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: 03.03.2025
15	Report Number	: ULR-TC15435250000004844F

### Results

Sl. No	Parameters	Protocol	Unit	Galemmana Gudi Village (GW3)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.77	6.5 to 8.5	NR
2.	Conductivity	APHA 23rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	2300	-	-
3.	Total Dissolved Solids	APHA 23rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1380	500	2000
4.	Turbidity (NTU)	APHA 23rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.4	1	5
5.	Total Suspended Solids	APHA 23rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO <sub>4</sub>	APHA 23rd Edition 2017 4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	152.0	200	400
7.	Phosphorus as P	APHA 23rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	419.8	-	-
9.	Potassium as K	APHA 23rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.00	-	-
10.	Calcium as Ca	APHA 23rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	88.17	75	200
11.	Magnesium as Mg	APHA 23rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	80.08	30	100
12.	Total Hardness as CaCO <sub>3</sub>	APHA 23rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	550	200	600
13.	Chloride as Cl	APHA 23rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	359.4	250	1000
14.	Fluoride as F	APHA 23rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	1.09	1	1.5
15.	Nitrate Nitrogen as NO <sub>3</sub>	APHA 23rd Edition 2017 4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	18.92	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 23rd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	450	200	600

#### Note:

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### ANNEXURE-45

17.	Acidity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23 <sup>rd</sup> Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.11	0.30	NR
19.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

**Note: GW3: GalemmanaGudi Village. NR-No relaxation.**

#### INFERENCE

**As per Standards IS: 10500:2012**

**Report Status: - Measured Values for the above parameters are Within the limits.**

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



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**ANNEXURE-45**  
**GEMS-LD/TF/23/01**

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical/Biological
7	Group	: Water
8	Sample Type	: Ground Water
9	Sample Code	: 7926
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: 03.03.2025
15	Report Number	: GEMS/WATER/2024-2025/4844

### Results

Sl. No	Parameters	Protocol	Unit	Galemmana Gudi Village (GW3)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
3.	Total Coli form count	IS : 15185:2016	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 15185:2016	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

**Note: Ab: Absent, NR: No Relaxation**

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-46

GEMS-LD/TF/23/01

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Water
8	Sample Type	: Ground Water
9	Sample Code	: 7924
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: 03.03.2025
15	Report Number	: ULR-TC1543525000004842F

### Results

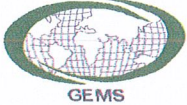
Sl. No	Parameters	Protocol	Unit	Mariyammana Halli Village (GW4)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.46	6.5 to 8.5	NR
2.	Conductivity	APHA 23rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	3000	-	-
3.	Total Dissolved Solids	APHA 23rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1770	500	2000
4.	Turbidity (NTU)	APHA 23rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.4	1	5
5.	Total Suspended Solids	APHA 23rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO <sub>4</sub>	APHA 23rd Edition 2017 4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	207.54	200	400
7.	Phosphorus as P	APHA 23rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	<0.01	-	-
8.	Sodium as Na	APHA 23rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	447.3	-	-
9.	Potassium as K	APHA 23rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	<1.0	-	-
10.	Calcium as Ca	APHA 23rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	220.44	75	200
11.	Magnesium as Mg	APHA 23rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	51.03	30	100
12.	Total Hardness as CaCO <sub>3</sub>	APHA 23rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	760	200	600
13.	Chloride as Cl	APHA 23rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	520.7	250	1000
14.	Fluoride as F	APHA 23rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.58	1	1.5
15.	Nitrate Nitrogen as NO <sub>3</sub>	APHA 23rd Edition 2017 4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	19.64	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 23rd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	490	200	600

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TC-15435

### ANNEXURE-46

17.	Acidity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	0.00	-	-
18.	Total Iron as Fe	APHA 23 <sup>rd</sup> Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.13	0.30	NR
19.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

**Note: GW4: Mariyammanahalli Village. NR-No relaxation**

<b>INFERENCE</b>	<b>As per Standards IS: 10500:2012</b> <b>Report Status: - Measured Values for the above parameters are Within the limit.</b>
------------------	--

*Naveen*  
**Analysed By**  
**Naveen Kumar G**  
**Chemist**

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
**K. Ramakrishna Reddy**  
**Technical Manager**

#### Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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## GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3<sup>rd</sup> Main Road, Basaveswara Badavane,

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e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in

ANNEXURE-46  
GEMS-LD/TF/23/01

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical/Biological
7	Group	: Water
8	Sample Type	: Ground Water
9	Sample Code	: 7924
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: 03.03.2025
15	Report Number	: GEMS/WATER/2024-2025/4842

### Results

Sl. No	Parameters	Protocol	Unit	Mariyammana Halli Village (GW4)	Standards as per IS: 19500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
3.	Total Coli form count	IS : 15185:2016	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 15185:2016	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By  
Naveen Kumar G  
Chemist

Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

**ANNEXURE-47**  
**GEMS-LD/TF/23/01**

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Water
8	Sample Type	: Ground Water
9	Sample Code	: <b>7927</b>
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: <b>03.03.2025</b>
15	Report Number	: <b>ULR-TC1543525000004845F</b>

### Results

Sl. No	Parameters	Protocol	Unit	Gunda Thanda (GW5)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 <sup>rd</sup> Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	<b>7.80</b>	6.5 to 8.5	NR
2.	Conductivity	APHA 23 <sup>rd</sup> Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	<b>950</b>	-	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	<b>560</b>	500	2000
4.	Turbidity (NTU)	APHA 23 <sup>rd</sup> Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	<b>0.5</b>	1	5
5.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<b>&lt;1.0</b>	-	-
6.	Sulphate as SO <sub>4</sub>	APHA 23 <sup>rd</sup> Edition 2017 4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	<b>48.61</b>	200	400
7.	Phosphorus as P	APHA 23 <sup>rd</sup> Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	<b>&lt;0.01</b>	-	-
8.	Sodium as Na	APHA 23 <sup>rd</sup> Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	<b>157.5</b>	-	-
9.	Potassium as K	APHA 23 <sup>rd</sup> Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	<b>&lt;1.0</b>	-	-
10.	Calcium as Ca	APHA 23 <sup>rd</sup> Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	<b>48.09</b>	75	200
11.	Magnesium as Mg	APHA 23 <sup>rd</sup> Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	<b>7.29</b>	30	100
12.	Total Hardness as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	<b>150</b>	200	600
13.	Chloride as Cl	APHA 23 <sup>rd</sup> Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	<b>152.0</b>	250	1000
14.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	<b>1.11</b>	1	1.5
15.	Nitrate Nitrogen as NO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	<b>16.02</b>	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	<b>210</b>	200	600

#### Note:

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### ANNEXURE-47

17.	Acidity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23 <sup>rd</sup> Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.12	0.30	NR
19.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

**Note: GW5: Gunda Thanda. NR-No relaxation.**

#### INFERENCE

**As per Standards IS: 10500:2012**

**Report Status: - Measured Values for the above parameters are within the limit.**

*Naveen*  
**Analysed By**  
**Naveen Kumar G**  
**Chemist**

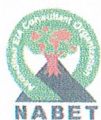
*K. Ramakrishna Reddy*  
**Authorised Signatory**  
**K. Ramakrishna Reddy**  
**Technical Manager**



#### Note:

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e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in

ANNEXURE-47  
GEMS-LD/TF/23/01

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical/Biological
7	Group	: Water
8	Sample Type	: Ground Water
9	Sample Code	: 7927
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: 03.03.2025
15	Report Number	: GEMS/WATER/2024-2025/4845

### Results

Sl. No	Parameters	Protocol	Unit	Gunda Thanda (GW5)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
3.	Total Coli form count	IS : 15185:2016	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 15185:2016	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By  
Naveen Kumar G  
Chemist

Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

**ANNEXURE-48**

**GEMS-LD/TF/23/01**

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: <b>7928</b>
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: <b>03.03.2025</b>
15	Report Number	: <b>ULR-TC1543525000004846F</b>

### Results

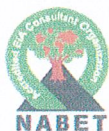
Sl. No	Parameters	Protocol	Unit	Gunda Village (GW6)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 <sup>rd</sup> Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	<b>7.37</b>	6.5 to 8.5	NR
2.	Conductivity	APHA 23 <sup>rd</sup> Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	<b>1850</b>	-	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	<b>1150</b>	500	2000
4.	Turbidity (NTU)	APHA 23 <sup>rd</sup> Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	<b>0.6</b>	1	5
5.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<b>&lt;1.0</b>	-	-
6.	Sulphate as SO <sub>4</sub>	APHA 23 <sup>rd</sup> Edition 2017 4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	<b>159.69</b>	200	400
7.	Phosphorus as P	APHA 23 <sup>rd</sup> Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	<b>&lt;0.01</b>	-	-
8.	Sodium as Na	APHA 23 <sup>rd</sup> Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	<b>483.4</b>	-	-
9.	Potassium as K	APHA 23 <sup>rd</sup> Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	<b>&lt;1.0</b>	-	-
10.	Calcium as Ca	APHA 23 <sup>rd</sup> Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	<b>32.26</b>	75	200
11.	Magnesium as Mg	APHA 23 <sup>rd</sup> Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	<b>17.01</b>	30	100
12.	Total Hardness as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	<b>400</b>	200	600
13.	Chloride as Cl	APHA 23 <sup>rd</sup> Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	<b>198.1</b>	250	1000
14.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	<b>0.78</b>	1	1.5
15.	Nitrate Nitrogen as NO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	<b>16.98</b>	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	<b>320</b>	200	600

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TC-15435

### ANNEXURE-48

17.	Acidity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	0.00	-	-
18.	Total Iron as Fe	APHA 23 <sup>rd</sup> Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.13	0.30	NR
19.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR

**Note: GW6:** Gunda Village. **NR**-No relaxation.

<b>INFERENCE</b>	<b>As per Standards IS: 10500:2012</b> <b>Report Status: - Measured Values for the above parameters are within the limit.</b>
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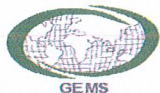
*Naveen*  
**Analysed By**  
**Naveen Kumar G**  
 Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
**K. Ramakrishna Reddy**  
 Technical Manager

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**ANNEXURE-48**  
**GEMS-LD/TF/23/01**

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical/Biological
7	Group	: Water
8	Sample Type	: Ground Water
9	Sample Code	: <b>7928</b>
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: <b>03.03.2025</b>
15	Report Number	: <b>GEMS/WATER/2024-2025/4846</b>

### Results

Sl. No	Parameters	Protocol	Unit	Gunda Village (GW6)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	Color	APHA-23RD Edition-2120 C (Pg No. 2 -7 to 2-8)	Hazen	<5	5	15
2.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	<b>BDL</b>	0.003	NR
3.	Total Coli form count	IS : 15185:2016	1 CFU/ 100 ml	<b>Absent</b>	Shall not be detectable in any 100ml sample	-
4.	<i>Escherichia coli</i> count	IS : 15185:2016	1 CFU/ 100 ml	<b>Absent</b>	Shall not be detectable in any 100ml sample	-

**Note: Ab: Absent, NR: No Relaxation**

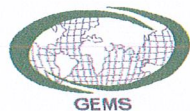
*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

*Naveen*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-49  
GEMS-LD/TF/23/01

### Analysis Report of Water Quality Data

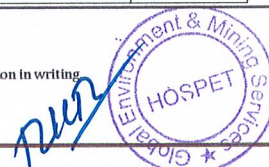
1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Water
8	Sample Type	: RO Drinking Water
9	Sample Code	: 7929
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: 03.03.2025
15	Report Number	: ULR-TC1543525000004847F

### Results

Sl. No	Parameters	Protocol	Unit	RO Drinking Water	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 <sup>rd</sup> Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	8.41	6.5 to 8.5	NR
2.	Conductivity	APHA 23 <sup>rd</sup> Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	180	-	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	100	500	2000
4.	Turbidity (NTU)	APHA 23 <sup>rd</sup> Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.1	1	5
5.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO <sub>4</sub>	APHA 23 <sup>rd</sup> Edition 2017 4500 -SO <sub>4</sub> <sup>2-</sup> E (Page No. 4-199 to 4-200)	mg/L	7.90	200	400
7.	Phosphorus as P	APHA 23 <sup>rd</sup> Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	<0.01	-	-
8.	Sodium as Na	APHA 23 <sup>rd</sup> Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	3.52	-	-
9.	Potassium as K	APHA 23 <sup>rd</sup> Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.00	-	-
10.	Calcium as Ca	APHA 23 <sup>rd</sup> Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	16.03	75	200
11.	Magnesium as Mg	APHA 23 <sup>rd</sup> Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	2.43	30	100
12.	Total Hardness as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	60.0	200	600
13.	Chloride as Cl	APHA 23 <sup>rd</sup> Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	27.65	250	1000
14.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	<0.01	1	1.5
15.	Nitrate Nitrogen as NO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 4500 NO <sub>3</sub> E (Pg. No.4-131 to 4-132)	mg/L	2.74	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	40.0	200	600

#### Note:

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## GLOBAL ENVIRONMENT & MINING SERVICES LLP

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TC-15435

### ANNEXURE-49

17.	Acidity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	0.00	-	-
18.	Total Iron as Fe	APHA 23 <sup>rd</sup> Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.09	0.30	NR
19.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	5	15
23.	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23 <sup>rd</sup> Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.01	0.05	NR
26.	Mercury as Hg	APHA 23 <sup>rd</sup> Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.001	0.001	NR

**Note: W6:** RO Drinking Water. **NR**-No relaxation. **Ab**-Absent.

#### INFERENCE

**As per Standards IS: 10500:2012**

**Report Status: - Measured Values for the above parameters are within the limit.**

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

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**ANNEXURE-49**  
**GEMS-LD/TF/23/01**

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical/Biological
7	Group	: Water
8	Sample Type	: RO Drinking Water
9	Sample Code	: <b>7929</b>
10	Date of Sampling	: 08.02.2025
11	Sample Received	: 09.02.2025
12	Date of Analysis	: 10.02.2025
13	Date of Analysis Completion	: 15.02.2025
14	Report Issue Date	: <b>03.03.2025</b>
15	Report Number	: <b>GEMS/RO/2024-2025/4847</b>

### Results

Sl. No	Parameters	Protocol	Unit	RO Drinking Water	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	colour	IS: 3025 (PART 4)- 1984, RA-2012 Platinum cobalt Method	Hazen	<5	5	15
2.	Odour	IS: 3025 (PART 5)- 1983, RA-2012, True Odour	-	Agreeable	Agreeable	Agreeable
3.	Total Residual chlorine	IS:3025 (part 26)-1986, RA-2003, Iodometric method	mg/L	Nil	0.2	1.0
4.	Oil & Grease	Clause 6 of IS 3025 (Part 39) Infrared	mg/L	Nil	0.6	No Relaxation
5.	Cadmium as Cd	APHA-23RD Edition-3111 -B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.002	NR
6.	Selenium as Se	APHA 23 <sup>rd</sup> Edition 3114 B. Direct Air Acetylene Flame Method	mg/L	BDL	0.02	No Relaxation
7.	Cyanides (as CN)	APHA 23 <sup>rd</sup> Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	0.04	No Relaxation
8.	Phenolic Compound as phenols	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	1.0	-
9.	Anionic detergents (as MBAS)	APHA 23 <sup>rd</sup> Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	0.3	1.0
10.	Boron as B	APHA 23 <sup>rd</sup> Edition 2017 4500 B-B (p.no.4-25 to 4-26)	mg/L	BDL	0.4	1.0
11.	Escherichia coli count	IS:15185:2016	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation,

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

*Naveen*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

**ANNEXURE-50**  
**GEMS-LD/TF/23/01**

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Composite Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: <b>Sewage Treatment Plant (Outlet)</b>
9	Date of Sampling	: 08.02.2025
10	Sample Received	: 09.02.2025
11	Date of Analysis	: 10.02.2025
12	Date of Analysis Completion	: 15.02.2025
13	Report Issue Date	: <b>03.03.2025</b>
14	Report Number	: <b>ULR-TC1543525000004855F</b>

Sl. No.	Parameters	Protocol	Unit	Results			As per KSPCB Std
				STP 45 KLD	STP-1 90 KLD	STP-2 90 KLD	
		<b>Sample code</b>	-	7937	7938	7939	
1.	pH	APHA 23 <sup>rd</sup> Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.16	7.34	7.28	6.5 to 8.5
2.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	10.0	16.0	14.0	<20
3.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	2.0	4.0	2.0	<10
4.	Chemical Oxygen Demand as COD	APHA 23 <sup>rd</sup> Edition 2017 5220 C (Pg. No.5-18 to 5-19)	mg/L	20.16	40.32	20.16	<50
5.	Oil & Grease	APHA 23 <sup>rd</sup> Edition 2017 5520 B (Pg. No.5-41 to 5-42)	mg/L	4.0	6.0	2.0	10

**Note:** BDL-Below detectable Limit. **INFERENCE:** The Measured values are within the Limit.

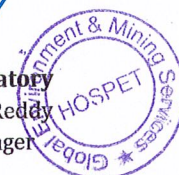
**STP 45 KLD** - Near Fortivia

**STP-1 90 KLD** -Near ISP Area

**STP-2 90 KLD** -Near Gunda Guest House

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

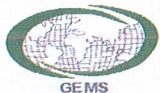
*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



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ANNEXURE-50  
GEMS-LD/TF/23/01

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Composite Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: Sewage Treatment Plant (Outlet)
9	Date of Sampling	: 08.02.2025
10	Sample Received	: 09.02.2025
11	Date of Analysis	: 10.02.2025
12	Date of Analysis Completion	: 15.02.2025
13	Report Issue Date	: 03.03.2025
14	Report Number	: GEMS/RO/2024-2025/4855

Sl. No.	Parameters	Protocol	Unit	Results			As per KSPCB Std
				STP 45 KLD	STP-1 90 KLD	STP-2 90 KLD	
		Sample code	-	7937	7938	7939	
1.	Color	APHA 23 <sup>RD</sup> Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	5	5	5	-
2.	Odour	IS: 3025 (PART 5)- 1983, RA-2012, True Odour	-	Agree able	Agree able	Agree able	-
3.	Cyanides (as CN)	APHA 23 <sup>RD</sup> Edition 4500 CN (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL	BDL	-
4.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	BDL	-
5.	Chromium (as Cr <sup>6+</sup> )	APHA-23 <sup>RD</sup> Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	<0.001	<0.001	<0.001	-
6.	Ammonical Nitrogen as N	IS:3025 (part 34)-1988, RA-2023	mg/L	0.56	2.0	0.40	5
7.	Total Nitrogen as N	IS:3025 (part 34)-1988, RA-2023	mg/L	4.02	3.24	5.08	10
8.	Fecal coliform	APHA-23 <sup>RD</sup> Edition-9221 E (Pg. No.9-77 to 9-78)	CFU/100ml	42	21	18	Less than 100

**Note:** BDL-Below detectable Limit. **INFERENCE:** The Measured values are within the Limit.

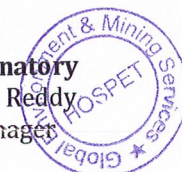
**STP 45 KLD** – Near Fortivia

**STP-1 90 KLD** –Near ISP Area

**STP-2 90 KLD** –Near Gunda Guest House

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Naveen Kumar G  
Chemist

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



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TC-15435

ANNEXURE-51  
GEMS-LD/TF/23/01

### Analysis Report of Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Composite Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: <b>Waste Water</b>
9	Date of Sampling	: 08.02.2025
10	Sample Received	: 09.02.2025
11	Date of Analysis	: 10.02.2025
12	Date of Analysis Completion	: 15.02.2025
13	Report Issue Date	: <b>03.03.2025</b>
14	Report Number	: <b>ULR-TC1543525000004848F</b>

### Results

Sl. No.	Parameters	Protocol	Unit	Results		As per KSPCB Std
				Neutralization Pit 70 MW Power Plant	Neutralization Pit 2x70 MW Power Plant	
				Sample Code		
				7930	7931	
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	8.36	7.82	6.5 to 9.0
2.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	24.0	18.0	100
3.	Chemical Oxygen Demand as COD	APHA 23 <sup>rd</sup> Edition 2017 5220 C (Pg. No.5-18 to 5-19)	mg/L	80.64	60.48	250
4.	Oil & Grease	APHA 23rd Edition 2017 5520 B (Pg. No.5-41 to 5-42)	mg/L	8.0	4.0	10

Note: BDL-Below detectable Limit.

INFERENCE: The Measured values are within the Limit.

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

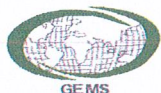
*K. Ramakrishna Reddy*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager

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ANNEXURE-52  
GEMS-LD/TF/23/01

### Analysis Report of Surface Water Quality Data

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Pollution & Environment
- 8 Sample Type : **Surface Water**
- 9 Date of Sampling : 09.02.2025
- 10 Sample Received : 09.02.2025
- 11 Date of Analysis : 10.02.2025
- 12 Date of Analysis Completion : 15.02.2025
- 13 Report Issue Date : **03.03.2025**
14. Report Number : **GEMS/SW/2024-2025/4263**

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				Danayakanakere Upstream	Danayakanakere Downstream	
		<b>Sample code</b>		<b>7930</b>	<b>7931</b>	
1.	pH	APHA 23 <sup>rd</sup> Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.58	7.16	6.5-8.5
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	0.00	0.00	3.0
3.	Fluorides as F	APHA 23 <sup>rd</sup> Edition 4500F-D (Pg. No.4-90 to 4-91)	mg/L	0.74	0.52	1.3
4.	Arsenic as As	APHA-23 <sup>rd</sup> Edition-3114-B (Pg. No.3-36 to 3-40)	mg/L	<0.1	<0.1	0.2
5.	Dissolved Oxygen	APHA 23 <sup>rd</sup> Edition 4500 C (Pg. No.4-146)	mg/L	5.4	5.4	>5.0
6.	Color	APHA 23 <sup>rd</sup> Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	5	5	300
7.	Cyanides (as CN)	APHA 23 <sup>rd</sup> Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL	0.05
8.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	0.005
9.	Chromium (as Cr <sup>6+</sup> )	APHA-23 <sup>rd</sup> Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	<0.001	<0.001	1.0
10.	Anionic detergents (as MBAS)	APHA 23 <sup>rd</sup> Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	BDL	1.0
11.	<b>Total Coliform Organisms</b>					
	Total Coli forms	IS : 1622:1981	MPN/100 ml	Absent	Absent	500
	<i>Escherichia coli</i> or <i>E. coli</i>	IS : 1622:1981	MPN/100 ml	Absent	Absent	-

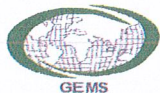
*Naveen*  
Analysed By  
Naveen Kumar G  
Chemist

*Naveen*  
Authorised Signatory  
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Technical Manager



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ANNEXURE-53

GEMS-LD/TF/23/01

### Analysis Report of Surface Water Quality Data

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Pollution & Environment
- 8 Sample Type : Surface Water
- 9 Date of Sampling : 08.02.2025
- 10 Sample Received : 09.02.2025
- 11 Date of Analysis : 10.02.2025
- 12 Date of Analysis Completion : 15.02.2025
- 13 Report Issue Date : 03.03.2025
- 14 Report Number : GEMS/SW/2024-2025/4852

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				KempuHalla Upstream	KempuHalla Downstream	
		Sample code		7934	7935	
1.	pH	APHA 23 <sup>rd</sup> Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	8.10	7.58	6.5-8.5
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	0.00	0.00	3.0
3.	Fluorides as F	APHA 23 <sup>rd</sup> Edition 4500F D (Pg. No.4-90 to 4-91)	mg/L	0.58	0.62	1.5
4.	Arsenic as As	APHA-23 <sup>rd</sup> Edition-3114 -B (Pg. No.3 -36 to 3-40)	mg/L	<0.1	<0.1	0.2
5.	Dissolved Oxygen	APHA 23 <sup>rd</sup> Edition 4500 C (Pg. No.4-146)	mg/L	5.6	5.4	>5.0
6.	Color	APHA 23 <sup>rd</sup> Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	15	15	300
7.	Cyanides (as CN)	APHA 23 <sup>rd</sup> Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL	0.05
8.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	0.005
9.	Chromium (as Cr <sup>6+</sup> )	APHA-23 <sup>rd</sup> Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	<0.001	<0.001	1.0
10.	Anionic detergents (as MBAS)	APHA 23 <sup>rd</sup> Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	BDL	1.0
11.	Total Coliform Organisms,					
	Total Coli forms	IS : 1622:1981	MPN/ 100 ml	Absent	Absent	500
	Escherichia coli or E. coli	IS : 1622:1981	MPN/ 100 ml	Absent	Absent	-

*Naveen*  
**Analysed By**  
 Naveen Kumar G  
 Chemist

*K. Ramakrishna Reddy*  
**Authorised Signatory**  
 K. Ramakrishna Reddy  
 Technical Manager



- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey





## GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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**ANNEXURE-54**  
**GEMS-LD/TF/23/01**

### Analysis Report of Surface Water Quality Data

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical/Biological
- 7 Group : Pollution & Environment
- 8 Sample Type : **Surface Water**
- 9 Date of Sampling : 08.02.2025
- 10 Sample Received : 09.02.2025
- 11 Date of Analysis : 10.02.2025
- 12 Date of Analysis Completion : 15.02.2025
- 13 Report Issue Date : **03.03.2025**
- 14 Report Number : **GEMS/SW/2024-2025/4854**

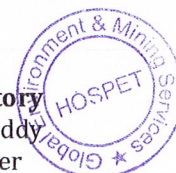
Sl. No.	Parameters	Protocol	Unit	Results	IS 2296 -1982 CLASS -B
				Tungabhadra dam	
			Sample Code	7936	
1.	pH	APHA 23 <sup>rd</sup> Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.36	6.5-8.5
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	2.0	3.0
3.	Fluorides as F	APHA 23 <sup>rd</sup> Edition 4500F- D (Pg. No.4-90 to 4-91)	mg/L	0.46	1.5
4.	Arsenic as As	APHA-23 <sup>rd</sup> Edition-3114 -B (Pg. No.3 -36 to 3-40)	mg/L	BDL	0.2
5.	Dissolved Oxygen	APHA 23 <sup>rd</sup> Edition 4500 C (Pg. No.4-146)	mg/L	5.6	>5.0
6.	Color	APHA 23 <sup>rd</sup> Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	<5	300
7.	Cyanides (as CN)	APHA 23 <sup>rd</sup> Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	0.05
8.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	0.005
9.	Chromium (as Cr <sup>6+</sup> )	APHA-23 <sup>rd</sup> Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	BDL	1.0
10.	Anionic detergents (as MBAS)	APHA 23 <sup>rd</sup> Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	1.0
11.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	240	-
12.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	12.0	-
13.	<b>Total Coliform Organisms,</b>				
	Total Coli forms	IS:1622:1981	MPN/100 ml	24	500
	<i>Escherichia coli</i> or <i>E. coli</i>	IS:1622:1981	MPN/100 ml	Absent	-

Note: BDL-Below detectable Limit

INFERENCE: The measured values are within the Limit.

*Naveen*  
**Analysed By**  
Naveen Kumar G  
Chemist

*Naveen*  
**Authorised Signatory**  
K. Ramakrishna Reddy  
Technical Manager



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