



# **BMM Ispat Ltd.,**

## **ENVIRONMENTAL MONITORING REPORT**



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

**November-2024**

**Prepared by**



**GLOBAL ENVIRONMENT & MINING SERVICES**

**NABL & MOEFCC Recognized Laboratory**

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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**, 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, 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:03.12.2024**



**Priyanka B M**  
**(Sr. Chemist)**



## 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 **NOVEMBER-2024**. 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 2.5µm) PM<sub>2.5</sub>.

#### **2.2.1 PARTICULATE MATTER (PM<sub>10</sub>)(size less than 10µm).**

##### **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 ( $W_i$ ) 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 ( $W_f$ ).

## **2.2.2 Particulate Matter (PM<sub>2.5</sub>)(size less than 2.5 $\mu$ m)**

### **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  $\mu$ g/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 sulphonc 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, SO2, NO2 values Average 65.23, 21.69, 11.08 & 12.72 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, SO2, NO2 values Average 69.68, 20.30, 10.51 & 12.35 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, SO2, NO2 values Average 60.88, 20.12, 9.50 & 11.41 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, SO2, NO2 values Average 58.04, 19.98, 9.62 & 11.48 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, SO2, NO2 values Average 53.19, 17.26, 9.81 & 11.74 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, SO2, NO2 values Average 51.24, 18.12, 10.23 & 11.99 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 284.17  $\mu\text{g}/\text{m}^3$ , maximum value 1883.48  $\mu\text{g}/\text{m}^3$  and average value 965.61  $\mu\text{g}/\text{m}^3$ . 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 9.76  $\text{mg}/\text{Nm}^3$ , Maximum Value 40.05  $\text{mg}/\text{Nm}^3$  & Average Value 27.27  $\text{mg}/\text{Nm}^3$ . 1<sup>st</sup> & 2<sup>nd</sup> Fortnight Results are given in **Annexure-11 to Annexure-37**.

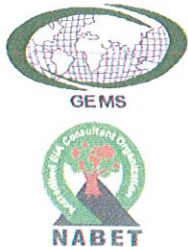
**5.3 NOISE LEVEL MEASUREMENT**

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 41.6 to 69.4 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

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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TC-5323

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 : NOVEMBER-2024  
Location : A1-Danapur Village  
Duration of Monitoring : 24 Hour  
Report Issued Date : 03.12.2024  
Report Number : ULR-TC532324000003041F

#### 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
04.11.2024	05.11.2024	5034	66.57	100	23.38	60	12.26	80	14.03	80
05.11.2024	06.11.2024	5074	46.30		15.67		8.49		10.87	
11.11.2024	12.11.2024	5280	71.02		23.69		12.50		14.80	
12.11.2024	13.11.2024	5328	45.28		16.38		8.29		9.11	
18.11.2024	19.11.2024	5476	80.28		28.58		11.33		12.66	
19.11.2024	20.11.2024	5521	73.96		20.22		10.73		11.83	
25.11.2024	26.11.2024	5698	64.39		19.63		11.33		13.92	
26.11.2024	27.11.2024	5735	74.02		25.94		13.69		14.52	
Average			65.23		21.69		11.08		12.72	

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.

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B  
Sr. Chemist

#### 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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- 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

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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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/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 : NOVEMBER-2024  
 Location : A1-Danapur Village  
 Duration of Monitoring : 1 Hour  
 Report Issued Date : 03.12.2024  
 Report Number : GEMS/BMM/NAAQ/2024-25/2606

#### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	04.11.2024	5034	0.16	4.0
2	05.11.2024	5074	0.10	
3	11.11.2024	5280	0.12	
4	12.11.2024	5328	0.10	
5	18.11.2024	5476	0.16	
6	19.11.2024	5521	0.12	
7	25.11.2024	5698	0.12	
8	26.11.2024	5735	0.10	

**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
-----------	---

*Anusha*  
 Analyzed By  
 Anusha M  
 Chemist

*P. B. M.*  
 Verified By  
 Priyanka B M  
 Sr. Chemist

- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
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e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

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	: <b>NOVEMBER-2024</b>
Location	: <b>A2-Mariyammanahalli Village</b>
Duration of Monitoring	: 24 Hour
Report Issued Date	: <b>03.12.2024</b>
Report Number	: <b>ULR-TC53232400003042F</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
04.11.2024	05.11.2024	5035	74.75	100	24.70	60	11.02	80	15.02	80
05.11.2024	06.11.2024	5075	69.86		21.87		12.85		14.41	
11.11.2024	12.11.2024	5281	72.63		17.62		9.80		10.93	
12.11.2024	13.11.2024	5329	78.13		22.26		10.22		12.07	
18.11.2024	19.11.2024	5477	70.49		17.20		9.14		11.08	
19.11.2024	20.11.2024	5522	65.55		18.15		10.37		12.00	
25.11.2024	26.11.2024	5697	58.82		21.01		9.89		10.86	
26.11.2024	27.11.2024	5734	67.18		19.58		10.82		12.46	
Average			69.68		20.30		10.51		12.35	

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.

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka B M*  
Verified By  
Priyanka B M  
Sr. Chemist

#### 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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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 : **NOVEMBER-2024**  
 Location : **A2-Mariyammanahalli Village**  
 Duration of Monitoring : 1 Hour  
 Report Issued Date : **03.12.2024**  
 Report Number : **GEMS/BMM/NAAQ/2024-25/3042**

#### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	04.11.2024	5035	0.14	4.0
2	05.11.2024	5075	0.18	
3	11.11.2024	5281	0.12	
4	12.11.2024	5329	0.16	
5	18.11.2024	5477	0.12	
6	19.11.2024	5522	0.18	
7	25.11.2024	5697	<0.01	
8	26.11.2024	5734	<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
-----------	---

*Anusha*  
 Analysed By  
 Anusha M  
 Chemist

*P. B. M.*  
 Verified By  
 Priyanka B M  
 Sr. Chemist



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e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

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 : **NOVEMBER-2024**  
Location : **A3-Hanumanahalli Village**  
Duration of Monitoring : 24 Hour  
Report Issued Date : **03.12.2024**  
Report Number : **ULR-TC532324000003043F**

### 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
04.11.2024	05.11.2024	5036	63.34	100	20.67	60	10.56	80	13.21	80
05.11.2024	06.11.2024	5076	45.59		15.54		7.17		10.58	
14.11.2024	15.11.2024	5405	74.81		23.64		11.18		12.56	
15.11.2024	16.11.2024	5424	43.81		13.16		8.22		9.45	
18.11.2024	19.11.2024	5479	72.12		25.20		10.67		11.07	
19.11.2024	20.11.2024	5524	55.56		20.66		9.08		10.97	
28.11.2024	29.11.2024	5775	62.69		18.02		8.09		10.14	
29.11.2024	30.11.2024	5793	69.16		24.12		11.06		13.27	
Average			60.88		20.12		9.50		11.41	

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.

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist



#### 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-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  
 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 : NOVEMBER-2024  
 Location : A3-Hanumanahalli Village  
 Duration of Monitoring : 1 Hour  
 Report Issued Date : 03.12.2024  
 Report Number : GEMS/BMM/NAAQ/2024-25/3043

#### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	04.11.2024	5036	0.10	4.0
2	05.11.2024	5076	0.14	
3	14.11.2024	5405	0.10	
4	15.11.2024	5424	0.12	
5	18.11.2024	5479	0.18	
6	19.11.2024	5524	0.12	
7	28.11.2024	5775	0.10	
8	29.11.2024	5793	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
-----------	---

*Anusha*  
 Analysed By  
 Anusha M  
 Chemist

*Priyanka*  
 Verified By  
 Priyanka B M  
 Sr. Chemist



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HOSAPETE - 583201, Dist., Vijayanagara (Karnataka)

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e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in



TC-5323

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/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 : **NOVEMBER-2024**  
Location : **A4-Galemmanagudi Village**  
Duration of Monitoring : 24 Hour  
Report Issue Date : **03.12.2024**  
Report Number : **ULR-TC532324000003044F**

#### 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
04.11.2024	05.11.2024	5037	61.07	100	22.72	60	9.16	80	10.76	80
05.11.2024	06.11.2024	5077	46.81		14.57		7.17		9.26	
11.11.2024	12.11.2024	5283	72.70		26.28		11.25		13.30	
12.11.2024	13.11.2024	5331	46.27		13.94		7.29		9.13	
18.11.2024	19.11.2024	5478	61.69		24.68		12.79		14.16	
19.11.2024	20.11.2024	5523	51.08		19.36		8.07		10.39	
25.11.2024	26.11.2024	5699	60.52		17.28		9.49		11.41	
26.11.2024	27.11.2024	5736	64.13		21.01		11.78		13.43	
Average			58.04		19.98		9.62		11.48	

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.

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist

#### Note:

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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/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 : NOVEMBER-2024  
 Location : A4-Galemmanagudi Village  
 Duration of Monitoring : 1 Hour  
 Report Issued Date : 03.12.2024  
 Report Number : GEMS/BMM/NAAQ/2024-25/3044

#### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	04.11.2024	5037	0.18	4.0
2	05.11.2024	5077	0.16	
3	11.11.2024	5283	0.10	
4	12.11.2024	5331	0.16	
5	18.11.2024	5478	0.14	
6	19.11.2024	5523	0.16	
7	25.11.2024	5699	0.12	
8	26.11.2024	5736	0.14	

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
-----------	---

*Anusha*  
 Analysed By  
 Anusha M  
 Chemist

*Priyanka B M*  
 Verified By  
 Priyanka B M  
 Sr. Chemist



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



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Website : www.globalmining.in



TC-5323

**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 - 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 : **NOVEMBER-2024**  
Location : **A5-G Nagalapura Village**  
Duration of Monitoring : 24 Hour  
Report Issue Date : **03.12.2024**  
Report Number : **ULR-TC532324000003045F**

### RESULTS

Parameters			PM10 [µg/m <sup>3</sup> ]		PM2.5 [µg/m <sup>3</sup> ]		SO2 [µg/m <sup>3</sup> ]		NO2 [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
04.11.2024	05.11.2024	5038	52.15	100	17.34	60	10.32	80	12.08	80
05.11.2024	06.11.2024	5078	38.46		15.57		7.29		9.57	
11.11.2024	12.11.2024	5284	68.41		24.96		11.20		13.21	
12.11.2024	13.11.2024	5332	35.44		14.63		8.67		10.15	
18.11.2024	19.11.2024	5480	63.26		17.33		10.23		11.74	
19.11.2024	20.11.2024	5525	59.61		18.05		9.49		10.63	
25.11.2024	26.11.2024	5700	52.47		14.04		10.08		12.83	
26.11.2024	27.11.2024	5737	55.76		16.17		11.21		13.71	
Average			53.19		17.26		9.81		11.74	

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.

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*Priyanka*  
**Verified By**  
Priyanka B  
Sr. Chemist

#### 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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## GLOBAL ENVIRONMENT & MINING SERVICES

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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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 : NOVEMBER-2024  
 Location : A5- G Nagalapura Village  
 Duration of Monitoring : 1 Hour  
 Report Issued Date : 03.12.2024  
 Report Number : GEMS/BMM/NAAQ/2024-25/3045

#### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	04.11.2024	5038	<0.01	4.0
2	05.11.2024	5078	0.10	
3	11.11.2024	5284	0.10	
4	12.11.2024	5332	0.12	
5	18.11.2024	5480	0.10	
6	19.11.2024	5525	<0.01	
7	25.11.2024	5700	<0.01	
8	26.11.2024	5737	<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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*Anusha*  
 Analysed By  
 Anusha M  
 Chemist

*Priyanka*  
 Verified By  
 Priyanka B M  
 Sr. Chemist



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TC-5323

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	: <b>NOVEMBER-2024</b>
Location	: <b>A6-Gunda Tanda Village</b>
Duration of Monitoring	: 24 Hour
Report Issue Date	: <b>03.12.2024</b>
Report Number	: <b>ULR-TC532324000003161F</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 Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
07.11.2024	5137	08.11.2024	63.42	100	20.46	60	9.60	80	11.95	80
08.11.2024	5190	09.11.2024	55.23		22.73		10.33		12.33	
11.11.2024	5282	12.11.2024	66.57		23.52		12.44		14.90	
12.11.2024	5330	13.11.2024	52.76		21.05		10.32		12.07	
21.11.2024	5586	22.11.2024	42.12		15.89		11.49		13.29	
22.11.2024	5610	23.11.2024	46.55		11.62		9.65		10.50	
25.11.2024	5701	26.11.2024	37.39		14.31		8.33		9.21	
26.11.2024	5738	27.11.2024	45.86		15.42		9.65		11.66	
Average			51.24		18.12		10.23		11.99	

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.

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist



#### 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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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  
 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 : NOVEMBER-2024  
 Location : A6-Gunda Tanda Village  
 Duration of Monitoring : 1 Hour  
 Report Issued Date : 03.12.2024  
 Report Number : GEMS/BMM/NAAQ/2024-25/3161

#### RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m <sup>3</sup> ]	Standard
1	07.11.2024	5137	<0.01	4.0
2	08.11.2024	5190	<0.01	
3	11.11.2024	5282	<0.01	
4	12.11.2024	5330	<0.01	
5	21.11.2024	5586	<0.01	
6	22.11.2024	5610	<0.01	
7	25.11.2024	5701	<0.01	
8	26.11.2024	5738	<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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 Anusha M  
 Chemist

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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/RO18
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	: NOVEMBER-2024(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	: 03.12.2024
10	Report Number	: GEMS/BMM/FM/2024-25/3222

### 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	5274	11.11.2024	12.11.2024	1878.93	2000
2.	Near Iron Ore Bottom Hopper	5272	11.11.2024	12.11.2024	590.75	2000
3.	Iron Ore Screen	5273	11.11.2024	12.11.2024	349.92	2000
<b>II. Pellet Plant-I</b>						
4.	Near Pellet Plant	5275	11.11.2024	12.11.2024	1632.57	2000
5.	Annual Cooler Pellet Discharge bin	5276	11.11.2024	12.11.2024	1836.67	2000
6.	Pellet Stock Yard	5287	12.11.2024	13.11.2024	1366.86	2000
<b>III. Sponge Iron Division-1 (kiln 1 &amp; 2)</b>						
7.	Control Room SID-1	5365	13.11.2024	14.11.2024	1827.38	2000
8.	Near Product bin	5366	13.11.2024	14.11.2024	1784.19	2000
9.	Coal Feeding Area	5367	13.11.2024	14.11.2024	1244.43	2000
<b>IV. Induction Furnace &amp; Rolling Mill – 1</b>						
10.	IF Office	5320	12.11.2024	13.11.2024	1694.43	2000
11.	TMT Stock Yard	5321	12.11.2024	13.11.2024	1336.36	2000
12.	RML Gasifier	5322	12.11.2024	13.11.2024	1770.58	2000
<b>V. Power Plant 25 MW-1</b>						
13.	25 MW ESP	5368	13.11.2024	14.11.2024	926.19	2000
14.	25 MW ACC	5398	14.11.2024	15.11.2024	1729.24	2000
<b>VI. Site Services</b>						
15.	PGP- coal handling system	5323	12.11.2024	13.11.2024	277.20	2000
16.	IF Slag Crusher	5364	13.11.2024	14.11.2024	1848.92	2000
17.	Main Gate	5399	14.11.2024	15.11.2024	740.13	2000
18.	Fly ash Dump	5229	09.11.2024	10.10.2024	916.06	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

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist



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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	: <b>NOVEMBER-2024(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>03.12.2024</b>
10	Report Number	: <b>GEMS/BMM/FM/2024-25/3414</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	5603	22.11.2024	23.11.2024	1719.22	2000
2.	Near Iron Ore Bottom Hopper	5601	22.11.2024	23.11.2024	944.04	2000
3.	Iron Ore Screen	5602	22.11.2024	23.11.2024	824.38	2000
<b>II. Pellet Plant-I</b>						
4.	Near Pellet Plant	5604	22.11.2024	23.11.2024	1120.26	2000
5.	Annual Cooler Pellet Discharge bin	5605	22.11.2024	23.11.2024	1558.04	2000
6.	Pellet Stock Yard	5656	23.11.2024	24.11.2024	1322.13	2000
<b>III. Sponge Iron Division-1( kiln 1 &amp; 2)</b>						
7.	Control Room SID-I	5689	25.11.2024	26.11.2024	1687.74	2000
8.	Near Product bin	5690	25.11.2024	26.11.2024	1883.48	2000
9.	Coal Feeding Area	5691	25.11.2024	26.11.2024	1867.88	2000
<b>IV. Induction Furnace &amp; Rolling Mill</b>						
10.	IF Office	5650	23.11.2024	24.11.2024	1778.13	2000
11.	TMT Stock Yard	5651	23.11.2024	24.11.2024	819.24	2000
12.	RML Gasifier	5652	23.11.2024	24.11.2024	1303.77	2000
<b>V. Power Plant 25 MW-1</b>						
13.	25 MW ESP	5692	25.11.2024	26.11.2024	771.31	2000
14.	25 MW ACC	5728	26.11.2024	27.11.2024	587.90	2000
<b>VI. Site Services</b>						
15.	PGP- Coal handling system	5653	23.11.2024	24.11.2024	1204.04	2000
16.	IF Slag Crusher	5693	25.11.2024	26.11.2024	1526.72	2000
17.	Main Gate	5729	26.11.2024	27.11.2024	428.30	2000
18.	Fly ash Dump	5581	21.11.2024	22.11.2024	474.20	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

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Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist



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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	:	NOVEMBER-2024(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	:	03.12.2024
10	Report Number	:	GEMS/BMM/FM/2024-25/3070

### 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)	5068	05.11.2024	06.11.2024	1220.92	2000
2.	Near Cone Crusher	5070	05.11.2024	06.11.2024	284.17	2000
3.	Concentrate Thickner	5069	05.11.2024	06.11.2024	376.54	2000
<b>II. Pellet Plant</b>						
4.	PR-6	5066	05.11.2024	06.11.2024	453.65	2000
5.	Annual Cooler Pellet Discharge bin	5071	05.11.2024	06.11.2024	1718.71	2000
6.	Additive Grinding Building	5106	06.11.2024	07.11.2024	1858.47	2000
<b>III. Sponge Iron Division -2 (Kiln 3 &amp; 4)</b>						
7.	Control room	5107	06.11.2024	07.11.2024	1569.59	2000
8.	Near Weigh bridge (dispatch)	5139	07.11.2024	08.11.2024	1746.15	2000
9.	Pellet Storage bin	5110	06.11.2024	07.11.2024	1854.11	2000
10.	Transfer House area	5108	06.11.2024	07.11.2024	1353.74	2000
11.	Production Separation Bin-PSB	5109	06.11.2024	07.11.2024	1869.61	2000
<b>IV. Sponge Iron Division -3 (Kiln 5 &amp; 6)</b>						
12.	Near Control room	5140	07.11.2024	08.11.2024	1484.80	2000
13.	Near Coal Crusher	5142	07.11.2024	08.11.2024	1782.93	2000
14.	Near Product bin	5141	07.11.2024	08.11.2024	1540.57	2000
15.	Coal Dryer	5143	07.11.2024	08.11.2024	1352.34	2000
<b>V. Wagon Tipper/RMHS</b>						
16.	Near Tipping point	5182	08.11.2024	09.11.2024	1794.95	2000
17.	Monsoon Shed (CPU)	5183	08.11.2024	09.11.2024	778.60	2000
18.	MCC Room (2 <sup>nd</sup> Gate)	5184	08.11.2024	09.11.2024	882.94	2000
<b>VI. Power Plant-70 MW</b>						
19.	70MW-DM Plant (Near R.O. Plant)	5185	08.11.2024	09.11.2024	964.19	2000
20.	2 <sup>nd</sup> gate weigh bridge Near Coal Screen	5225	09.11.2024	10.11.2024	1877.36	2000
21.	CFBC boiler	5186	08.11.2024	09.11.2024	759.64	2000
<b>VII. 2X70MW Power Plant</b>						
22.	Near Boiler	5226	09.11.2024	10.11.2024	1134.14	2000
23.	Near Coal storage Shed	5227	09.11.2024	10.11.2024	1272.59	2000
24.	Dolochar Processing Area	5228	09.11.2024	10.11.2024	490.10	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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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 : NOVEMBER-2024(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 : 03.12.2024
- 10 Report Number : GEMS/BMM/FM/2024-25/3331

#### 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)	5441	16.11.2024	17.11.2024	480.26	2000
2.	Near Cone Crusher	5443	16.11.2024	17.11.2024	419.78	2000
3.	Concentrate Thickner	5442	16.11.2024	17.11.2024	425.25	2000
<b>II. Pellet Plant-I</b>						
4.	PR-6	5444	16.11.2024	17.11.2024	710.13	2000
5.	Annual Cooler Pellet Discharge bin	5445	16.11.2024	17.11.2024	1861	2000
6.	Additive Grinding Building	5469	18.11.2024	19.11.2024	504.99	2000
<b>III. Sponge Iron Division -2 (Kiln 3&amp;4)</b>						
7.	Control room	5470	18.11.2024	19.11.2024	1431.19	2000
8.	Near Weigh bridge (dispatch)	5513	19.11.2024	20.11.2024	1476.38	2000
9.	Pellet Storage bin	5473	18.11.2024	19.11.2024	1688.25	2000
10.	Transfer House area	5471	18.11.2024	19.11.2024	1602.58	2000
11.	Production Separation Bin-PSB	5472	18.11.2024	19.11.2024	1447.57	2000
<b>IV. Sponge Iron Division -2 (Kiln 5&amp;6)</b>						
12.	Near Control room	5514	19.11.2024	20.11.2024	1519.47	2000
13.	Near Coal Crusher	5516	19.11.2024	20.11.2024	1386.23	2000
14.	Near Product bin	5515	19.11.2024	20.11.2024	911.90	2000
15.	Coal Drier	5553	20.11.2024	21.11.2024	1555.29	2000
<b>V. Wagon Tipper/RMHS</b>						
16.	Near Tipping point	5516	19.11.2024	20.11.2024	595.11	2000
17.	Monsoon Shed (CPU)	5554	20.11.2024	21.11.2024	1535.08	2000
18.	MCC Room (2 <sup>nd</sup> Gate)	5555	20.11.2024	21.11.2024	1022.88	2000
<b>VI. Power Plant-70 MW</b>						
19.	70MW-DM Plant (Near R.O. Plant)	5556	20.11.2024	21.11.2024	1304.59	2000
20.	2 <sup>nd</sup> gate weigh bridge Near Coal Screen	5577	21.11.2024	22.11.2024	1299.06	2000
21.	CFBC boiler	5557	20.11.2024	21.11.2024	857.08	2000
<b>VII. 2X70MW Power Plant</b>						
22.	Near Boiler	5578	21.11.2024	22.11.2024	496.08	2000
23.	Near Coal storage Shed	5579	21.11.2024	22.11.2024	303.22	2000
24.	CPP Dolochar Process Area	5580	21.11.2024	22.11.2024	305.01	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

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist



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## GLOBAL ENVIRONMENT & MINING SERVICES

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TC-5323

**ANNEXURE-11**  
**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><br>Sl. No: Stack Monitoring Kit/ <b>032308</b> |
| 5  | Instrument Details                 | : | Calibration Date: 28.03.2024<br>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>NOVEMBER-2024</b>   |
| 11 | Date of Sample Received            | : | 05.11.2024&18.11.2024  |
| 12 | Date of Sample Analysis            | : | 06.11.2024&19.11.2024  |
| 13 | Date of Sample Analysis completion | : | 07.11.2024&20.11.2024  |
| 14 | Report Issued Date                 | : | <b>03.12.2024</b>  |
| 15 | Report Number                      | : | <b>ULR-TC532324000003074F</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
				05.11.2024	18.11.2024	
	Date of Monitoring Sample Code			5072	5474	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	28	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	55	59	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	5.99	5.85	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m <sup>3</sup> /hr	328104	320155	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm <sup>3</sup> /hr	297938	286687	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	34.16	35.54	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm <sup>3</sup>	218.0	167.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	39.0	26.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.012	0.009	NS

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

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*Priyanka*  
**Verified By**  
Priyanka B M  
Sr. Chemist



#### Note:

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TC-5323

ANNEXURE-12  
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 : NOVEMBER-2024
- Date of Sample Received : 11.11.2024&23.11.2024
- Date of Sample Analysis : 12.11.2024&25.11.2024
- Date of Sample Analysis completion : 13.11.2024&25.11.2024
- Report Issued Date : 03.12.2024
- Report Number : ULR-TC532324000003225F

#### Stack Details

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

#### Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				11.11.2024	23.11.2024	
	Date of Monitoring					
	Sample Code			5279	5665	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	27	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	169	166	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.01	6.78	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m <sup>3</sup> /hr	79321	76635	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm <sup>3</sup> /hr	53422	51966	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	22.48	25.22	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm <sup>3</sup>	174.0	159.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	34.0	29.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.114	0.132	1

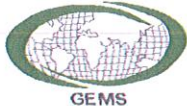
Note: NS- Not Specified. RA: Reaffirmed, INFERENCE: The Measured Values are within the limits.

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka B M*  
Verified By  
Priyanka B M  
Sr. Chemist

#### Note:

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TC-5323

ANNEXURE-13  
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	:	NOVEMBER-2024(1st Fort Night)
10	Date of Sample Received	:	-
11	Date of Sample Analysis	:	-
12	Date of Sample Analysis completion	:	-
13	Report Issued Date	:	03.12.2024
14	Report Number	:	-

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	NOT IN OPERATION	-	Electric Power	-	--	-	30	1.2	-	150
2	Induction Furnace 2	NOT IN OPERATION	-		-	-	-	30	1.3	-	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	-	-	-
2	Induction Furnance 2	-	-	-

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)

  
 Verified By  
 Priyanka B M  
 Sr. Chemist

#### Note:

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TC-5323

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/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 Sampling Location : Rolling mill reheating furnace
- 10 Month of Sampling : NOVEMBER-2024
- 11 Date of Sample Received : 25.11.2024
- 12 Date of Sample Analysis : 26.11.2024
- 13 Date of Sample Analysis completion : 27.11.2024
- 14 Report Issued Date : 03.12.2024
- 15 Report Number : ULR-TC532324000003477F

### 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	
				-	25.11.2024	
	Date of Monitoring			-	5696	
	Sample Code			-	5696	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	Shutdown	27	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C		309	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec		8.18	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m <sup>3</sup> /hr		14810	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm <sup>3</sup> /hr		7581.2	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>		15.45	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm <sup>3</sup>		19.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>		321.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%		0.076	1

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

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist



#### Note:

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2. Water Samples will be destroyed after 15 Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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TC-5323

**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/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>NOVEMBER-2024</b>
11	Date of Sample Received	:	-
12	Date of Sample Analysis	:	-
13	Date of Sample Analysis completion	:	-
14	Report Issued Date	:	<b>03.12.2024</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
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> 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)	m <sup>3</sup> /hr			-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm <sup>3</sup> /hr			-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>			50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm <sup>3</sup>			NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>			NS
9	Carbon Monoxide	GEMS/SOP/69	%			NS

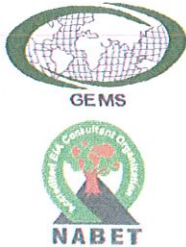
**Note:** NS- Not Specified. RA: Reaffirmed,

**Verified By**  
**Priyanka B M**  
Sr. Chemist



#### **Note:**

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TC-5323

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/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 : NOVEMBER-2024(1st Fort Night)
- 10 Date of Sample Received : 15.11.2024
- 11 Date of Sample Analysis : 16.11.2024
- 12 Date of Sample Analysis completion : 17.11.2024
- 13 Report Issued Date : 03.12.2024
- 14 Report Number : ULR-TC532324000003308F

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	15.11.2024	5426	-	28	34	5.14	30	0.4	15.76	50
2	Iron Ore Screen bin	15.11.2024	5427	-	27	32	5.61	30	0.4	14.12	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	2326	2255	-
2	Iron Ore Screen bin	2537	2471	-

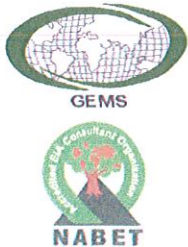
Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist

#### Note:

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TC-5323

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 : NOVEMBER-2024 (1st Fort Night)
- 10 Date of Sample Received : 14.11.2024
- 11 Date of Sample Analysis : 15.11.2024
- 12 Date of Sample Analysis completion : 16.11.2024
- 13 Report Issued Date : 03.12.2024
- 14 Report Number : ULR-TC532324000003294F

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)	14.11.2024	5403	-	28	34	6.12	30	1.5	29.14	50
4	Main Crusher	14.11.2024	5404	-	28	33	5.25	25	0.5	10.29	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)	38946	37720	-
4	Main Crusher	3713	3605	-

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)

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka*  
Verified By  
Priyanka B M  
Sr. Chemist

#### Note:

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TC-5323

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 : NOVEMBER-2024 (1st Fort Night)
- 10 Date of Sample Received : 05.11.2024 & 06.11.2024 & 07.11.2024
- 11 Date of Sample Analysis : 06.11.2024 & 07.11.2024 & 08.11.2024
- 12 Date of Sample Analysis completion : 06.11.2024 & 07.11.2024 & 08.11.2024
- 13 Report Issued Date : 03.12.2024
- 14 Report Number : ULR-TC532324000003075F

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	05.11.2024	5073	-	30	35	5.32	6.5	0.50	20.01	50
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	06.11.2024	5112	-	30	35	5.07	3.0	0.30	21.94	50
7	Bentonite Powder bin top bag filter	06.11.2024	5113	-	31	36	5.51	3.0	0.30	21.52	50
8	H-4 Conveyor discharge bag filter	Shutdown	-	-	-	-	-	7.0	0.50	-	50
9	P-1 Bag Filter	07.11.2024	5146	-	29	38	5.57	7.0	0.50	33.53	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	3762	3627	-
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	1291	1245	-
7	Bentonite Powder bin top bag filter	1401	1346	-
8	H-4 Conveyor discharge bag filter	-	-	-
9	P-1 Bag Filter	3936	3761	-

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)

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist



#### Note:

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TC-5323

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 : NOVEMBER-2024(1st Fort Night)
- 10 Date of Sample Received : 13.11.2024&14.11.2024
- 11 Date of Sample Analysis : 14.11.2024&15.11.2024
- 12 Date of Sample Analysis completion : 14.11.2024&15.11.2024
- 13 Report Issued Date : 03.12.2024
- 14 Report Number : ULR-TC532324000003273F

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	13.11.2024	5371	---	28	34	5.21	30	1.20	27.34	50
11	Cooler-2 Discharge	13.11.2024	5372	---	30	36	5.60	30	1.20	28.83	50
12	Intermediate Bin & Blending	13.11.2024	5373	---	31	35	5.74	30	1.20	31.00	50
13	Product House	14.11.2024	5406	---	27	35	5.65	30	1.20	32.35	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	21205	20567	-
11	Cooler-2 Discharge	22791	21910	-
12	Intermediate Bin & Blending	23382	22537	-
13	Product House	22987	22209	-

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)

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist



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TC-5323

**ANNEXURE-20**  
**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 : **NOVEMBER-2024(2nd Fort Night)**
- 10 Date of Sample Received : -
- 11 Date of Sample Analysis : -
- 12 Date of Sample Analysis completion : -
- 13 Report Issued Date : **03.12.2024**
- 14 Report Number : -

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		-	Electric	-	-	-	30	1.2	-	50
2	Induction Furnance 2		-	Power	-	-	-	30	1.3	-	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	-	-	-
2	Induction Furnance 2	-	-	-

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)

*[Signature]*

**Verified By**  
**Priyanka B M**  
**Sr. Chemist**



**Note:**

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TC-5323

**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 : **NOVEMBER-2024(2nd Fort Night)**
- 10 Date of Sample Received : 28.11.2024
- 11 Date of Sample Analysis : 29.11.2024
- 12 Date of Sample Analysis completion : 30.11.2024
- 13 Report Issued Date : **03.12.2024**
- 14 Report Number : **ULR-TC532324000003511F**

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	28.11.2024	5776	---	27	34	5.11	25	0.40	20.07	50
2	Iron Ore Screen bin	28.11.2024	5777	---	28	34	5.49	30	0.40	14.99	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	2312	2240	-
2	Iron Ore Screen bin	2483	2401	-

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)

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*Priyanka*  
**Verified By**  
Priyanka B M  
Sr. Chemist



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Website : www.globalmining.in



TC-5323

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/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 : NOVEMBER-2024(2nd Fort Night)
- 10 Date of Sample Received : 27.11.2024&28.11.2024
- 11 Date of Sample Analysis : 28.11.2024&29.11.2024
- 12 Date of Sample Analysis completion : 29.11.2024&30.11.2024
- 13 Report Issued Date : 03.12.2024
- 14 Report Number : ULR-TC532324000003500F

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)	27.11.2024	5758	-	28	34	6.21	30	1.50	24.69	50
4	Main Crusher	28.11.2024	5778	-	27	32	5.21	25	0.50	9.76	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)	39509	38209	-
4	Main Crusher	3681	3593	-

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)

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka B M*  
Verified By  
Priyanka B M  
Sr. Chemist



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Website : www.globalmining.in



TC-5323

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/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 : NOVEMBER-2024 (2nd Fort Night)
- 10 Date of Sample Received : 18.11.2024 & 19.11.2024 & 20.11.2024
- 11 Date of Sample Analysis : 19.11.2024 & 20.11.2024 & 21.11.2024
- 12 Date of Sample Analysis completion : 20.11.2024 & 21.11.2024 & 22.11.2024
- 13 Report Issued Date : 03.12.2024
- 14 Report Number : ULR-TC532324000003337F

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	18.11.2024	5475	---	29	34	5.23	6.5	0.50	22.09	50
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	19.11.2024	5519	---	28	34	5.15	3.0	0.30	23.93	50
7	Bentonite Powder bin top bag filter	19.11.2024	5520	---	29	35	5.67	3.0	0.30	21.07	50
8	H-4 Conveyor discharge bag filter	-	-	---				7.0	0.50	-	50
9	P-1 Bag Filter	20.11.2024	5562	---	29	39	5.40	7.0	0.50	33.11	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	3700	3574	-
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	1310	1268	-
7	Bentonite Powder bin top bag filter	1442	1390	-
8	H-4 Conveyor discharge bag filter	-	-	-
9	P-1 Bag Filter	3819	3637	-

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)

Anusha  
Analysed By  
Anusha M  
Chemist

Priyanka  
Verified By  
Priyanka B M  
Sr. Chemist



#### Note:

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TC-5323

ANNEXURE-24  
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	: NOVEMBER-2024(2nd Fort Night)
10	Date of Sample Received	: 26.11.2024&27.11.2024
11	Date of Sample Analysis	: 27.11.2024&28.11.2024
12	Date of Sample Analysis completion	: 28.11.2024&29.11.2024
13	Report Issued Date	: 03.12.2024
14	Report Number	: ULR-TC532324000003492F

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	26.11.2024	5733	---	28	34	5.41	30	1.20	28.48	50
11	Cooler-2 Discharge	27.11.2024	5759	---	26	35	5.85	30	1.20	29.68	50
12	Intermediate Bin & Blending	27.11.2024	5760	---	27	35	5.33	30	1.20	25.43	50
13	Product House	27.11.2024	5761	---	28	36	5.16	30	1.20	31.37	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	22040	21289	-
11	Cooler-2 Discharge	23828	23048	-
12	Intermediate Bin & Blending	21702	20975	-
13	Product House	21020	20213	-

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)

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist

#### Note:

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TC-5323

**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
- 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 : **NOVEMBER-2024**
- 11 Date of Sample Received : 04.11.2024&16.11.2024
- 12 Date of Sample Analysis : 05.11.2024&18.11.2024
- 13 Date Sample Analysis Completion : 06.11.2024&18.11.2024
- 14 Report Issued Date : **03.12.2024**
- 15 Report Number : **ULR-TC532324000003035F**

### 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
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				04.11.2024	16.11.2024	
	Date of Monitoring			5028	5446	
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	27	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	61	67	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.23	6.33	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m <sup>3</sup> /hr	341306	346540	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr	303997	303652	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	27.89	33.23	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>	194.0	264.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm <sup>3</sup>	32.0	52.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.018	0.012	1%

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

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka B M*  
Verified By  
Priyanka B M  
Sr. Chemist

#### Note:

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TC-5323

**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/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 : **NOVEMBER-2024**
- 11 Date of Sample Received : 06.11.2024&19.11.2024
- 12 Date of Sample Analysis : 07.11.2024&20.11.2024
- 13 Date Sample Analysis Completion : 08.11.2024&21.11.2024
- 14 Report Issued Date : **03.12.2024**
- 15 Report Number : **ULR-TC532324000003101F**

#### 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	
				06.11.2024	19.11.2024	
	Date of Monitoring			5111	5518	
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	27	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	128	128	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.08	7.00	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m <sup>3</sup> /hr	180310	178269	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr	133961	132444	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	35.50	40.05	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>	394.0	422.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm <sup>3</sup>	54.0	39.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.158	0.201	1%

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

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka B M*  
Verified By  
Priyanka B M  
Sr. Chemist

#### Note:

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TC-5323

**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/RO18   |
| 3  | Sample collected by             | : GLOBAL Environment & Mining Services   |
| 4  | Particulars of sample collected | : Vayubodhan Stack sampler/ <b>VBSS2</b><br>Sl.No: Stack Monitoring Kit/ <b>032308</b> |
| 5  | Instrument Details              | : Calibration Date: 28.03.2024<br>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>NOVEMBER-2024</b>   |
| 11 | Date of Sample Received         | : 07.11.2024&20.11.2024  |
| 12 | Date of Sample Analysis         | : 08.11.2024&21.11.2024  |
| 13 | Date Sample Analysis Completion | : 09.11.2024&22.11.2024  |
| 14 | Report Issued Date              | : <b>03.12.2024</b>  |
| 15 | Report Number                   | : <b>ULR-TC532324000003123F</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	
				07.11.2024	20.11.2024	
	Date of Monitoring			5144	5559	
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	27	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	131	132	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.22	7.20	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m <sup>3</sup> /hr	183753	183164	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr	135487	134755	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	31.22	32.63	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>	394.0	1280	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	54.0	349	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.158	0.194	1%

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

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka*  
Verified By  
Priyanka B M  
Sr. Chemist



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TC-5323

**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/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 : NOVEMBER-2024
- 11 Date of Sample Received : 08.11.2024&22.11.2024
- 12 Date of Sample Analysis : 09.11.2024&23.11.2024
- 13 Date Sample Analysis Completion : 09.11.2024&23.11.2024
- 14 Report Issued Date : 03.12.2024
- 15 Report Number : ULR-TC532324000003160F

#### 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
				1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
				08.11.2024	22.11.2024	
	Date of Monitoring					
	Sample Code			5189	5655	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	26	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	122	125	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.76	6.92	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m <sup>3</sup> /hr	172091	175996	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr	129677	131706	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>	29.81	28.07	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>	116.0	134.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>	14.0	16.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.018	0.021	1%

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

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka B M*  
Verified By  
Priyanka B M  
Sr. Chemist

#### Note:

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TC-5323

**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/ <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>2X70 MW CFBC Boiler ESP</b>
10	Month of Sampling	: <b>NOVEMBER-2024</b>
11	Date of Sample Received	: -
12	Date of Sample Analysis	: -
13	Date Sample Analysis Completion	: -
14	Report Issued Date	: <b>03.12.2024</b>
15	Report Number	: -

### 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
	Date of Monitoring			1 <sup>st</sup> Fort Night	2 <sup>nd</sup> Fort Night	
	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)1985(RA 2014)	m <sup>3</sup> /hr			-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm <sup>3</sup> /hr			-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm <sup>3</sup>			50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm <sup>3</sup>			600
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm <sup>3</sup>			300
9	Carbon Monoxide	GEMS/SOP/69	%			NS

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

**Verified By**  
Priyanka B M  
Sr. Chemist



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TC-5323

**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 Month of Sampling : **NOVEMBER-2024(1<sup>st</sup> Fort Night)**
- 10 Date of Sample Received : 15.11.2024
- 11 Date of Sample Analysis : 16.11.2024
- 12 Date Sample Analysis Completion : 16.11.2024
- 13 Report Issued Date : **03.12.2024**
- 14 Report Number : **ULR-TC532324000003307F**

### 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>Beneficiation Plant-2</b>											
1	Iron Ore Cone Crusher	-	-	---	-	-	-	30	1.20	-	50
2	Iron Ore Screening	15.11.2024	5425	Coal	27	33	5.52	30	0.90	18.53	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	12634	12300	-

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.

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*P. B. M.*  
**Verified By**  
Priyanka B M  
Sr. Chemist

**Note:**

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## GLOBAL ENVIRONMENT & MINING SERVICES

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Website : www.globalmining.in



TC-5323

**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/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>NOVEMBER-2024(1<sup>st</sup> Fort Night)</b>
10	Date of Sample Received	: 04.11.2024&05.11.2024
11	Date of Sample Analysis	: 05.11.2024&06.11.2024
12	Date Sample Analysis Completion	: 05.11.2024&06.11.2024
13	Report Issued Date	: <b>04.11.2024</b>
14	Report Number	: <b>ULR-TC532324000003036F</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>
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant-II											
3	AGB main bag Filter	04.11.2024	5029	---	29	34	5.38	6.5	0.5	22.08	50
4	Lime & Bentonite Powder bin top bag filter	04.11.2024	5030	---	30	35	5.79	6	0.35	17.89	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	05.11.2024	5073	---	30	39	5.84	20	0.5	27.18	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	3803	3675	-
4	Lime & Bentonite Powder bin top bag filter	2006	1931	-
5	AGB De dusting Bag Filter	-	-	-
6	Powder Coal main bag filter	-	-	-
7	RP-6 Conveyor bag Filter	-	-	-
8	Pellet discharge bin bag filter	4126	3930	-

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

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*Priyanka*  
**Verified By**  
Priyanka B M  
Sr. Chemist

**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-5323

### 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<br>Sl.No: Stack Monitoring Kit/ 032308 |
| 5  | Instrument Details              | : Calibration Date: 28.03.2024<br>Calibration Due Date: 27.03.2025       |
| 6  | Discipline                      | : Chemical   |
| 7  | Group                           | : Atmospheric Pollution  |
| 8  | Sample Type                     | : Stack Monitoring   |
| 9  | Month of Sampling               | : <b>NOVEMBER-2024(1<sup>st</sup> Fort Night)</b>                        |
| 10 | Date of Sample Received         | : 07.11.2024, 08.11.2024, 09.11.2024 & 11.11.2024                        |
| 11 | Date of Sample Analysis         | : 08.11.2024, 09.11.2024, 11.11.2024 & 12.11.2024                        |
| 12 | Date Sample Analysis Completion | : 09.11.2024, 09.11.2024, 12.11.2024 & 13.11.2024                        |
| 13 | Report Issued Date              | : <b>03.12.2024</b>  |
| 14 | Report Number                   | : <b>ULR-TC532324000003124F</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>
Chimneys attached to Bag Filter (De dusting Units)											
2 X 500 TPD Sponge Iron Kiln 1 & 2											
9	Cooler Discharge -1	07.11.2024	5145	---	30	36	5.61	30	1.2	26.78	50
10	Cooler Discharge -2	08.11.2024	5187	---	30	35	5.54	30	1.2	27.99	50
11	Coal stock house	08.11.2024	5188	---	30	34	4.80	30	1.2	11.90	50
12	PSB 1 System-1	09.11.2024	5230	---	28	36	5.37	30	1.2	34.35	50
13	PSB 1 System-2	09.11.2024	5231	---	29	37	5.01	30	1.2	30.70	50
14	PSB 2 System-1 MCC	09.11.2024	5232	---	30	38	5.65	30	1.2	35.30	50
15	PSB 1 System-2 Road	09.11.2024	5233	---	31	35	5.86	30	1.2	30.50	50
16	Junction House Old & New	11.11.2024	5277	---	30	36	5.58	30	1.2	36.01	50
17	Storage Bunker	11.11.2024	5278	---	31	35	5.32	30	1.2	27.90	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	22857	21971	-
10	Cooler Discharge -2	22563	21770	-
11	Coal stock house	19549	18911	-
12	PSB 1 System-1	21864	21075	-
13	PSB 1 System-2	20412	19601	-
14	PSB 2 System-1 MCC	23002	21962	-
15	PSB 1 System-2 Road	23871	23002	-
16	Junction House Old & New	22731	21853	-
17	Storage Bunker	21670	20886	-
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

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist

#### Note:

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TC-5323

**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/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 : **NOVEMBER-2024 (1st Fort Night)**
- 10 Date of Sample Received : 12.11.2024&13.11.2024
- 11 Date of Sample Analysis : 13.11.2024&14.11.2024
- 12 Date Sample Analysis Completion : 13.11.2024&14.11.2024
- 13 Report Issued Date : **03.12.2024**
- 14 Report Number : **ULR-TC532324000003246F**

### 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	12.11.2024	5324	---	27	35	5.37	30	1.2	30.28	50
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	12.11.2024	5325	---	28	36	5.70	30	1.2	35.09	50
21	DE 8 & 12 I-Bin, (Stand By)	12.11.2024	5326	---	30	37	5.91	30	1.9	33.54	50
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	12.11.2024	5327	---	30	38	5.82	30	1.9	29.07	50
23	Coal Dryer	13.11.2024	5369	---	27	40	6.42	27	1.2	34.45	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	21848	21127	-
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	23205	22356	-
21	DE 8 & 12 I-Bin, (Stand By)	60315	57813	-
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	59376	56677	-
23	Coal Dryer	26160	24903	-

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

*Anusha*  
**Analyzed By**  
Anusha M  
Chemist

*Priyanka*  
**Verified By**  
Priyanka B M  
Sr. Chemist

**Note:**

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TC-5323

### 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	: NOVEMBER-2024(2 <sup>nd</sup> Fort Night)
10	Date of Sample Received	: 29.11.2024
11	Date of Sample Analysis	: 30.11.2024
12	Date Sample Analysis Completion	: 30.11.2024
13	Report Issued Date	: 03.12.2024
14	Report Number	: ULR-TC532324000003517F

#### 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	29.11.2024	5792	---	27	34	5.25	30	0.90	17.01	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	12035	11679	-

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.

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist



#### Note:

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TC-5323

**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/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 : **NOVEMBER-2024(2<sup>nd</sup> Fort Night)**
- 10 Date of Sample Received : 16.11.2024 & 18.11.2024
- 11 Date of Sample Analysis : 18.11.2024 & 19.11.2024
- 12 Date Sample Analysis Completion : 19.11.2024 & 20.11.2024
- 13 Report Issued Date : **03.12.2024**
- 14 Report Number : **ULR-TC532324000003319F**

### 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	16.11.2024	5447	---	28	34	5.54	6.5	0.5	25.26	50
4	Lime & Bentonite Powder bin top bag filter	16.11.2024	5448	---	29	35	5.29	6	0.35	19.53	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	18.11.2024	5449	---	29	40	5.89	20	0.5	34.09	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	4167	3951	-

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

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*P. B. M.*  
**Verified By**  
Priyanka B M  
Sr. Chemist



**Note:**

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TC-5323

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: 28.03.202421  
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : NOVEMBER-2024(2<sup>nd</sup>Fort Night)
- 10 Date of Sample Received : 20.11.2024,21.11.2024,22.11.2024&23.11.2024
- 11 Date of Sample Analysis : 21.11.2024,22.11.2024,23.11.2024&25.11.2024
- 12 Date Sample Analysis Completion : 22.11.2024,23.11.2024,23.11.2024&25.11.2024
- 13 Report Issued Date : 03.12.2024
- 14 Report Number : ULR-TC532324000003385F

### 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	20.11.2024	5558	Coal	30	34	5.81	30	1.2	26.89	50
10	Cooler Discharge -2	21.11.2024	5582	Coal	27	34	5.67	30	1.2	28.32	50
11	Coal stock house	21.11.2024	5583	Coal	28	33	5.05	30	1.2	11.79	50
12	PSB 1 System-1	21.11.2024	5584	Coal	29	35	5.59	30	1.2	31.48	50
13	PSB 1 System-2	21.11.2024	5585	Coal	29	36	5.46	30	1.2	32.11	50
14	PSB 2 System-1 MCC	22.11.2024	5606	Coal	30	36	5.84	30	1.2	34.68	50
15	PSB 1 System-2 Road	22.11.2024	5607	Coal	29	36	5.92	30	1.2	32.03	50
16	Junction House Old & New	23.11.2024	5647	Coal	29	36	5.71	30	1.2	35.38	50
17	Storage Bunker	23.11.2024	5648	Coal	30	34	5.20	30	1.2	24.04	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	23644	22869	-
10	Cooler Discharge -2	23088	22347	-
11	Coal stock house	20556	20002	-
12	PSB 1 System-1	22752	21949	-
13	PSB 1 System-2	22223	21355	-
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.

Anusha  
Analysed By  
Anusha M  
Chemist

Verified By  
Priyanka B M  
Sr. Chemist

#### Note:

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TC-5323

**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/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 : **NOVEMBER-2024(2<sup>nd</sup> Fort Night)**
- 10 Date of Sample Received : 25.11.2024&26.11.2024
- 11 Date of Sample Analysis : 26.11.2024&27.11.2024
- 12 Date Sample Analysis Completion : 27.11.2024&28.11.2024
- 13 Report Issued Date : **03.12.2024**
- 14 Report Number : **ULR-TC532324000003475F**

### 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	25.11.2024	5694	---	28	35	5.19	30	1.20	30.77	50
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	25.11.2024	5695	---	29	37	5.85	30	1.20	34.17	50
21	DE 8 & 12 I-Bin, (Stand By)	26.11.2024	5730	---	27	37	5.75	30	1.90	35.58	50
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	26.11.2024	5731	---	26	36	5.56	30	1.90	30.12	50
23	Coal Dryer	26.11.2024	5732	---	28	39	6.36	30	1.20	36.96	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	20808	19856	-

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.

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*Priyanka B M*  
**Verified By**  
Priyanka B M  
Sr. Chemist

**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.
3. 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.
4. 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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TC-5323

ANNEXURE-38  
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  
Instrument Details : SL No: Q679952  
Month : **NOVEMBER-2024**  
Report Issue Date : **03.12.2024**  
Method Adopted : IS 9989-1981 Reaffirmed 2014  
Report No : **ULR-TC532324000003077F**

Sl. No	Location	Date of Monitoring	Noise Level dB (A)		
			Day Time		Standard
			Min	Max	
1	Main Gate	04.11.2024	50.4	57.1	75
2	Near ATM	04.11.2024	46.1	53.4	75
3	Transit House	05.11.2024	56.9	64.1	75
4	CAAQMS Station	05.11.2024	46.8	54.6	75
5	Gunda Road	06.11.2024	49.9	60.2	75
6	Gunda Railway Station	06.11.2024	52.8	58.2	75
7	Bagging Shed	07.11.2024	57.5	66.4	75
8	Railway Siding	07.11.2024	53.5	63.4	75
9	4th Gate	08.11.2024	49.0	56.2	75
10	Bricks Plant	08.11.2024	46.0	52.4	75
11	Kempuhalla (Wagon Tippler)	09.11.2024	47.6	58.1	75
12	Danapura Bridge	09.11.2024	59.3	69.4	75
13	2nd Gate	11.11.2024	48.2	58.0	75
14	Project Store	11.11.2024	46.2	55.6	75
15	Dispatch (Truck Parking Area)	12.11.2024	58.3	66.2	75

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

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

  
**Verified By**  
Priyanka B M  
Sr. Chemist



**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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TC-5323

**ANNEXURE-39**  
**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  
Instrument Details : SL No: Q679952  
Month : **NOVEMBER-2024**  
Report Issue Date : **03.12.2024**  
Method Adopted : IS 9989-1981 Reaffirmed 2014  
Report No : **ULR-TC532324000003322F**

Sl. No	Location	Date of Monitoring	Noise Level dB (A)		
			Day Time		Standard
			Min	Max	
1	Main Gate	16.11.2024	49.2	61.4	75
2	Near ATM	16.11.2024	46.4	54.8	75
3	Transit House	18.11.2024	50.6	59.6	75
4	CAAQMS Station	18.11.2024	42.8	58.8	75
5	Gunda Road	19.11.2024	51.8	60.2	75
6	Gunda Railway Station	19.11.2024	47.1	56.8	75
7	Bagging Shed	20.11.2024	50.0	69.2	75
8	Railway Siding	20.11.2024	50.2	69.5	75
9	4th Gate	21.11.2024	50.2	57.1	75
10	Bricks Plant	21.11.2024	41.6	50.0	75
11	Kempuhalla (Wagon Tippler)	22.11.2024	49.6	62.5	75
12	Danapura Bridge	22.11.2024	56.9	66.0	75
13	2nd Gate	23.11.2024	58.7	69.4	75
14	Project Store	23.11.2024	46.0	56.8	75
15	Dispatch (Truck Parking Area)	23.11.2024	60.2	68.3	75

**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.**

*Priyanka B M*

**Verified By**  
**Priyanka B M**  
**Sr. Chemist**



#### Note:

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TC-5323

ANNEXURE-40  
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  
Instrument Details : SL No: Q679953  
Month : NOVEMBER-2024  
Report Issue Date : 03.12.2024  
Method Adopted : IS 9989-1981 Reaffirmed 2014  
Report No : ULR-TC532324000003104F

Sl. No	Location	Date of Monitoring	Noise Level dB (A)						
			Day Time			Standard	Night Time		
			Min	Max	Avg		Min	Max	Avg
1	Danapur Village	04.11.2024	44.9	53.1	51.34	55	38.1	41.6	39.86
2	Mariyammana Halli	05.11.2024	46.2	54.8	50.26		40.3	43.1	40.12
3	Hanumana Halli	06.11.2024	45.6	53.6	51.48		39.6	42.8	41.36
4	Galemmanagudi	07.11.2024	44.8	54.6	53.12		38.9	41.6	40.22
5	G.Nagalapura Village	08.11.2024	44.6	51.6	49.86		37.6	40.2	38.96
6	Gunda Tanda Village	09.11.2024	43.2	52.8	50.12		38.1	41.3	39.52

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.
-----------	---

Verified By  
Priyanka B M  
Sr. Chemist

#### 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-5323

**ANNEXURE-41**  
**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>5452</b>
10	Date of Sampling	: 16.11.2024
11	Sample Received	: 16.11.2024
12	Date of Analysis	: 16.11.2024
13	Date of Analysis Completion	: 22.11.2024
14	Report Issue Date	: <b>03.12.2024</b>
15	Report Number	: <b>ULR-TC532324000003324F</b>

### 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)	-	<b>7.10</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>2520</b>	-	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	<b>1512</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>281.38</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>Nil</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>493.3</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>0.0</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>133.58</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>44.01</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>515.1</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>332.5</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>0.74</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>15.42</b>	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2017 2320 B	mg/L	<b>473.0</b>	200	600

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TC-5323

(Pg. No.2-37 to 2-39)

### ANNEXURE-41

17.	Acidity as CaCO <sub>3</sub>	APHA 22nd Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23rd Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.16	0.30	NR
19.	Nickel as Ni	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.02	NR
20.	Manganese as Mn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23rd Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23rd 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.**

#### INFERENCE

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

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

*Anusha*  
**Analysed By**  
**Anusha M**  
**Chemist**

*Priyanka*  
**Verified By**  
**Priyanka B M**  
**Sr. Chemist**

#### Note:

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ANNEXURE-41  
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 : Pollution & Environment
- 8 Sample Type : Ground Water
- 9 Sample Code : 5452
- 10 Date of Sampling : 16.11.2024
- 11 Sample Received : 16.11.2024
- 12 Date of Analysis : 18.11.2024
- 13 Date of Analysis Completion : 22.11.2024
- 14 Report Issue Date : 03.12.2024
- 15 Report Number : GEMS/WATER/2024-2025/3324

### 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

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka B M*  
Verified By  
Priyanka B M  
Sr. Chemist



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TC-5323

ANNEXURE-42  
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	: 5453
10	Date of Sampling	: 16.11.2024
11	Sample Received	: 16.11.2024
12	Date of Analysis	: 16.11.2024
13	Date of Analysis Completion	: 22.11.2024
14	Report Issue Date	: 03.12.2024
15	Report Number	: ULR-TC532324000003325F

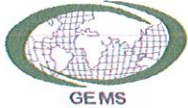
### Results

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)	-	7.65	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	860	-	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	516	500	2000
4.	Turbidity (NTU)	APHA 23 <sup>rd</sup> Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.2	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	145.3	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	Nil	-	-
8.	Sodium as Na	APHA 23 <sup>rd</sup> Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	109.85	-	-
9.	Potassium as K	APHA 23 <sup>rd</sup> Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 <sup>rd</sup> Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	28.33	75	200
11.	Magnesium as Mg	APHA 23 <sup>rd</sup> Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	24.51	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	171.7	200	600
13.	Chloride as Cl	APHA 23 <sup>rd</sup> Edition 2017 4500 Cl-	mg/L	95.0	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	0.43	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	12.63	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2017 2320 B	mg/L	154.0	200	600

#### Note:

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Ph : 08394 355369

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TC-5323

(Pg. No.2-37 to 2-39)

### ANNEXURE-42

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

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*P. bl*  
**Verified By**  
Priyanka B M  
Sr. Chemist

#### Note:

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ANNEXURE-42  
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	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 5453
10	Date of Sampling	: 16.11.2024
11	Sample Received	: 16.11.2024
12	Date of Analysis	: 18.11.2024
13	Date of Analysis Completion	: 22.11.2024
14	Report Issue Date	: 03.12.2024
15	Report Number	: GEMS/WATER/2024-2025/3325

### 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

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka B M*  
Verified By  
Priyanka B M  
Sr. Chemist



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GEMS



NABET

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TC-5323

**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                           | : Pollution & Environment   |
| 8  | Sample Type                     | : Ground Water  |
| 9  | Sample Code                     | : 5454  |
| 10 | Date of Sampling                | : 16.11.2024  |
| 11 | Sample Received                 | : 16.11.2024  |
| 12 | Date of Analysis                | : 16.11.2024  |
| 13 | Date of Analysis Completion     | : 22.11.2024  |
| 14 | Report Issue Date               | : 03.12.2024  |
| 15 | Report Number                   | : ULR-TC5323240000003326F   |

**Results**

Sl. No	Parameters	Protocol	Unit	Galemmana Gudi Village (GW3)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 <sup>rd</sup> Edition 2017 4500 H <sup>+</sup> B (Pg. No.4-95 to 4-99)	-	7.69	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	2250	-	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1350	500	2000
4.	Turbidity (NTU)	APHA 23 <sup>rd</sup> Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.5	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	165.36	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	Nil	-	-
8.	Sodium as Na	APHA 23 <sup>rd</sup> Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	288.45	-	-
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	137.63	75	200
11.	Magnesium as Mg	APHA 23 <sup>rd</sup> Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	53.83	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	565.6	200	600
13.	Chloride as Cl	APHA 23 <sup>rd</sup> Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	365.75	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	1.42	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	13.32	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2017 2320 B	mg/L	506.0	200	600

**Note:**

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TC-5323

(Pg. No.2-37 to 2-39)

### ANNEXURE-43

17.	Acidity as CaCO <sub>3</sub>	APHA 22nd Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23rd Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.14	0.30	NR
19.	Nickel as Ni	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.02	NR
20.	Manganese as Mn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<1.0	5	15
23.	Lead as Pb	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23rd Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<0.01	0.01	0.05
25.	Chromium as Cr	APHA 23rd 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.**

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*Priyanka*  
**Verified By**  
Priyanka B M  
Sr. Chemist



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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	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 5454
10	Date of Sampling	: 16.11.2024
11	Sample Received	: 16.11.2024
12	Date of Analysis	: 18.11.2024
13	Date of Analysis Completion	: 22.11.2024
14	Report Issue Date	: 03.12.2024
15	Report Number	: GEMS/WATER/2024-2025/3326

### 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	-

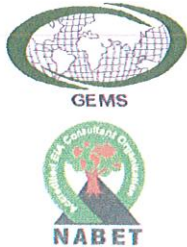
Note: Ab: Absent, NR: No Relaxation

*Anusha*  
Analysed By  
Anusha M  
Chemist

*P. B. M.*  
Verified By  
Priyanka B M  
Sr. Chemist



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TC-5323

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	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 5455
10	Date of Sampling	: 16.11.2024
11	Sample Received	: 16.11.2024
12	Date of Analysis	: 16.11.2024
13	Date of Analysis Completion	: 22.11.2024
14	Report Issue Date	: 03.12.2024
15	Report Number	: ULR-TC532324000003327F

### Results

Sl. No	Parameters	Protocol	Unit	Mariyammana Halli Village (GW4)	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)	-	6.90	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	3050	-	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1830	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	224.32	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	Nil	-	-
8.	Sodium as Na	APHA 23 <sup>rd</sup> Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	382.4	-	-
9.	Potassium as K	APHA 23 <sup>rd</sup> Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0	-	-
10.	Calcium as Ca	APHA 23 <sup>rd</sup> Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	198.35	75	200
11.	Magnesium as Mg	APHA 23 <sup>rd</sup> Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	75.84	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	808.0	200	600
13.	Chloride as Cl	APHA 23 <sup>rd</sup> Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	536.75	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	0.62	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	19.58	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	627.0	200	600

#### Note:

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GEMS



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TC-5323

**ANNEXURE-44**

17.	Acidity as CaCO <sub>3</sub>	APHA 22nd Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23rd Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	<b>0.16</b>	0.30	NR
19.	Nickel as Ni	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.02</b>	0.02	NR
20.	Manganese as Mn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.1</b>	0.10	0.30
21.	Copper as Cu	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.01</b>	0.05	1.50
22.	Zinc as Zn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;1.0</b>	5	15
23.	Lead as Pb	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<b>&lt;0.01</b>	0.01	NR
24.	Arsenic as As	APHA 23rd Edition 2017 3114 B. (Pg. No.3-36 to 3-40)	mg/L	<b>&lt;0.01</b>	0.01	0.05
25.	Chromium as Cr	APHA 23rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<b>&lt;0.01</b>	0.05	NR

**Note: GW4: Mariyammanahalli Village. NR-No relaxation****INFERENCE****As per Standards IS: 10500:2012****Report Status: - Measured Values for the above parameters are Beyond the limit.**

*Anusha*  
Analysed By  
Anusha M  
Chemist

*P. B. M.*  
Verified By  
Priyanka B M  
Sr. Chemist

**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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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	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 5455
10	Date of Sampling	: 16.11.2024
11	Sample Received	: 16.11.2024
12	Date of Analysis	: 18.11.2024
13	Date of Analysis Completion	: 22.11.2024
14	Report Issue Date	: 03.12.2024
15	Report Number	: GEMS/WATER/2024-2025/3327

### Results

Sl. No	Parameters	Protocol	Unit	Mariyammana Halli Village (GW4)	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

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka*  
Verified By  
Priyanka B M  
Sr. Chemist



- 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

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in



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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/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	: 5456
10	Date of Sampling	: 16.11.2024
11	Sample Received	: 16.11.2024
12	Date of Analysis	: 16.11.2024
13	Date of Analysis Completion	: 22.11.2024
14	Report Issue Date	: 03.12.2024
15	Report Number	: ULR-TC532324000003328F

### Results

Sl. No	Parameters	Protocol	Unit	Gunda Thanda (GW5)	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)	-	7.65	6.5 to 8.5	NR
2.	Conductivity	APHA 23rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	450	-	-
3.	Total Dissolved Solids	APHA 23rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	270	500	2000
4.	Turbidity (NTU)	APHA 23rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.2	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	46.43	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	50.98	-	-
9.	Potassium as K	APHA 23rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	5.91	-	-
10.	Calcium as Ca	APHA 23rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	28.33	75	200
11.	Magnesium as Mg	APHA 23rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	7.33	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	101.0	200	600
13.	Chloride as Cl	APHA 23rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	33.25	250	1000
14.	Fluoride as F	APHA 23rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.64	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	8.56	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 22nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	132.0	200	600

#### Note:

- 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

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### ANNEXURE-45

17.	Acidity as CaCO <sub>3</sub>	APHA 22 <sup>nd</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	<0.01	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.

*Anusha*  
**Anusha M**  
 Chemist

*Priyanka B M*  
**Verified By**  
**Priyanka B M**  
 Sr. Chemist

#### Note:

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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 : Pollution & Environment
- 8 Sample Type : Ground Water
- 9 Sample Code : 5456
- 10 Date of Sampling : 16.11.2024
- 11 Sample Received : 16.11.2024
- 12 Date of Analysis : 18.11.2024
- 13 Date of Analysis Completion : 22.11.2024
- 14 Report Issue Date : 03.12.2024
15. Report Number : GEMS/WATER/2024-2025/3328

### 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

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka B M*  
Verified By  
Priyanka B M  
Sr. Chemist



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TC-5323

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	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 5457
10	Date of Sampling	: 16.11.2024
11	Sample Received	: 16.11.2024
12	Date of Analysis	: 16.11.2024
13	Date of Analysis Completion	: 22.11.2024
14	Report Issue Date	: 03.12.2024
15	Report Number	: ULR-TC532324000003329F

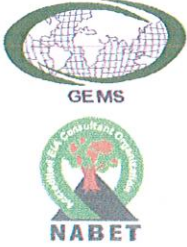
### Results

Sl. No	Parameters	Protocol	Unit	Gunda Village (GW6)	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)	-	7.10	6.5 to 8.5	NR
2.	Conductivity	APHA 23rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	2400	-	-
3.	Total Dissolved Solids	APHA 23rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1440	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	183.41	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	495.15	-	-
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	109.29	75	200
11.	Magnesium as Mg	APHA 23rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	53.86	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	494.9	200	600
13.	Chloride as Cl	APHA 23rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	342.0	250	1000
14.	Fluoride as F	APHA 23rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.83	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	13.26	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 22nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	396.0	200	600

#### Note:

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TC-5323

## ANNEXURE-46

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

**Note: GW6: G.Nagalapura. NR-No relaxation.**

### INFERENCE

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

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

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*Priyanka B M*  
**Verified By**  
Priyanka B M  
Sr. Chemist

### 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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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 : Pollution & Environment
- 8 Sample Type : Ground Water
- 9 Sample Code : 5457
- 10 Date of Sampling : 16.11.2024
- 11 Sample Received : 16.11.2024
- 12 Date of Analysis : 18.11.2024
- 13 Date of Analysis Completion : 22.11.2024
- 14 Report Issue Date : 03.12.2024
15. Report Number : GEMS/WATER/2024-2025/3329

### 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	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

*Anusha*  
Analysed By  
Anusha M  
Chemist

*P. B. M.*  
Verified By  
Priyanka B M  
Sr. Chemist

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



TC-5323

**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	: Pollution & Environment
8	Sample Type	: RO Drinking Water
9	Sample Code	: <b>5458</b>
10	Date of Sampling	: 16.11.2024
11	Sample Received	: 16.11.2024
12	Date of Analysis	: 16.11.2024
13	Date of Analysis Completion	: 22.11.2024
14	Report Issue Date	: <b>03.12.2024</b>
15	Report Number	: <b>ULR-TC532324000003330F</b>

### 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)	-	<b>7.32</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>130</b>	-	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	<b>78</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</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>6.32</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>Nil</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>3.76</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>0.00</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>8.09</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>2.44</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>30.3</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>28.5</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>0.06</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>2.48</b>	45	NR
16.	Total Alkalinity as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	<b>33.0</b>	200	600

**Note:**

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## GLOBAL ENVIRONMENT & MINING SERVICES

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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TC-5323

### ANNEXURE-47

17.	Acidity as CaCO <sub>3</sub>	APHA 22 <sup>nd</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	0.07	0.30	NR
19.	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	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.**

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*P. B. M.*  
**Verified By**  
Priyanka B M  
Sr. Chemist



#### 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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**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 : Pollution & Environment
- 8 Sample Type : RO Drinking Water
- 9 Sample Code : 5458
- 10 Date of Sampling : 16.11.2024
- 11 Sample Received : 16.11.2024
- 12 Date of Analysis : 18.11.2024
- 13 Date of Analysis Completion : 22.11.2024
- 14 Report Issue Date : 03.12.2024
- 15 Report Number : GEMS/RO/2024-2025/3330

### Results

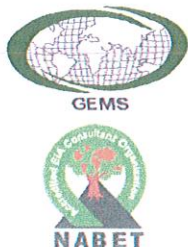
Sl. No	Parameters	Protocol	Unit	RO Drinking Water	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	colour	IS: 3025 (PART 4)- 1984, RA-2012 Platinum cobalt Method	Hazen	<5	5	15
2.	Odour	IS: 3025 (PART 5)- 1983, RA-2012, True Odour	-	Agreeable	Agreeable	Agreeable
3.	Total Residual 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	0.5	No Relaxation
5.	Cadmium as Cd	APHA-23RD Edition-3111 –B (Pg No.3 -20 to 3-21)	mg/L	BDL	0.003	NR
6.	Selenium as Se	APHA 23 <sup>rd</sup> Edition 3114 B. Direct Air Acetylene Flame Method	mg/L	BDL	0.01	No Relaxation
7.	Cyanides (as CN)	APHA 23 <sup>rd</sup> Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	0.05	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	0.2	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	0.5	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,

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*P. B.*  
**Verified By**  
Priyanka B M  
Sr. Chemist

- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
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TC-5323

**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 : 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 : 16.11.2024
- 10 Sample Received : 16.11.2024
- 11 Date of Analysis : 16.11.2024
- 12 Date of Analysis Completion : 22.11.2024
- 13 Report Issue Date : **03.12.2024**
- 14 Report Number : **ULR-TC532324000003351F**

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>	-	5465	5466	5467	
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.65	7.84	7.06	6.5 to 8.5
2.	Total Suspended Solids	APHA 23rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	12.0	6.0	10.0	<20
3.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	2.0	6.0	4.0	<10
4.	Chemical Oxygen Demand as COD	APHA 23rd Edition 2017 5220 C (Pg. No.5-18 to 5-19)	mg/L	18.8	37.6	20.16	<50
5.	Oil & Grease	APHA 23rd Edition 2017 5520 B (Pg. No.5-41 to 5-42)	mg/L	4.0	2.0	6.0	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

*Anusha*  
**Analysed By**  
Anusha M  
Chemist

*P. B. M.*  
**Verified By**  
Priyanka B M  
Sr. Chemist



**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.
3. 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.
4. Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
5. Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
6. Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey



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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/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	: <b>Sewage Treatment Plant (Outlet)</b>
9	Date of Sampling	: 16.11.2024
10	Sample Received	: 16.11.2024
11	Date of Analysis	: 18.11.2024
12	Date of Analysis Completion	: 22.11.2024
13	Report Issue Date	: 03.12.2024
14	Report Number	: GEMS/RO/2024-2025/3351

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>	-	5465	5466	5467	
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	2.24	0.14	5
7.	Total Nitrogen as N	IS:3025 (part 34)-1988, RA-2023	mg/L	6.12	2.86	4.06	10
8.	Fecal coliform	APHA-23 <sup>RD</sup> Edition-9221 E (Pg. No.9-77 to 9-78)	CFU/100ml	48	26	24	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

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka*  
Verified By  
Priyanka B M  
Sr. Chemist



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Website : www.globalmining.in



TC-5323

**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	: 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	: 16.11.2024
10	Sample Received	: 16.11.2024
11	Date of Analysis	: 16.11.2024
12	Date of Analysis Completion	: 22.11.2024
13	Report Issue Date	: <b>03.12.2024</b>
14	Report Number	: <b>ULR-TC532324000003352F</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		
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	8.70	8.95	6.5 to 9.0
2.	Total Suspended Solids	APHA 23rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	8.0	4.0	100
3.	Chemical Oxygen Demand as COD	APHA 23rd Edition 2017 5220 C (Pg. No.5-18 to 5-19)	mg/L	41.6	20.8	250
4.	Oil & Grease	APHA 23rd Edition 2017 5520 B (Pg. No.5-41 to 5-42)	mg/L	6.0	4.0	10

Note: BDL-Below detectable Limit.

INFERENCE: The Measured values are within the Limit.

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka*  
Verified By  
Priyanka B M  
Sr. Chemist



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

### Analysis Report of Surface Water Quality Data

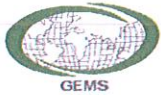
- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/R018
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Pollution & Environment
- 8 Sample Type : **Surface Water**
- 9 Date of Sampling : 16.11.2024
- 10 Sample Received : 16.11.2024
- 11 Date of Analysis : 18.11.2024
- 12 Date of Analysis Completion : 22.11.2024
- 13 Report Issue Date : **03.12.2024**
- 14 Report Number : **GEMS/SW/2024-2025/3355**

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				Danayakanakere Upstream	Danayakanakere Downstream	
Sample code				5504	5505	
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.61	7.60	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	0.64	0.56	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	6.3	6.8	>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	-

*Anusha*  
Analysed By  
Anusha M  
Chemist

*Priyanka*  
Verified By  
Priyanka B M  
Sr. Chemist

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ANNEXURE-51  
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 : 16.11.2024
- 10 Sample Received : 16.11.2024
- 11 Date of Analysis : 18.11.2024
- 12 Date of Analysis Completion : 22.11.2024
- 13 Report Issue Date : 03.12.2024
- 14 Report Number : GEMS/SW/2024-2025/3356

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				KempuHalla Upstream	KempuHalla Downstream	
		Sample code		5506	5507	
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.93	7.75	6.5-8.5
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	6.0	8.0	3.0
3.	Fluorides as F	APHA 23 <sup>RD</sup> Edition 4500F-D (Pg. No.4-90 to 4-91)	mg/L	1.03	1.26	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	5.8	5.6	>5.0
6.	Color	APHA 23 <sup>RD</sup> Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	10	10	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
	Escherichia coli or E. coli	IS : 1622:1981	MPN/ 100 ml	Absent	Absent	-

*Anusha*  
Analysed By  
Anusha M  
Chemist

*P. B. M.*  
Verified By  
Priyanka B M  
Sr. Chemist



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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/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 : 16.11.2024
- 10 Sample Received : 16.11.2024
- 11 Date of Analysis : 18.11.2024
- 12 Date of Analysis Completion : 22.11.2024
- 13 Report Issue Date : 03.12.2024
- 14 Report Number : GEMS/SW/2024-2025/3357

Sl. No.	Parameters	Protocol	Unit	Results	IS 2296 -1982 CLASS -B
				Tungabhadra dam	
			Sample Code	5508	
1.	pH	APHA 23 <sup>rd</sup> Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.85	6.5-8.5
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	4.0	3.0
3.	Fluorides as F	APHA 23 <sup>rd</sup> Edition 4500F- D (Pg. No.4-90 to 4-91)	mg/L	0.30	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	6.2	>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	204	-
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.	Total Coliform Organisms,				
	Total Coli forms	IS : 1622:1981	MPN/100 ml	Absent	500
	Escherichia coli or E. coli	IS : 1622:1981	MPN/100 ml	Absent	-

Note: BDL-Below detectable Limit

INFERENCE: The measured values are within the Limit.

*Anusha*  
**Analysed By**  
 Anusha M  
 Chemist

*Priyanka*  
**Verified By**  
 Priyanka B M  
 Sr. Chemist



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