



BMM Ispat Ltd.,

ENVIRONMENTAL MONITORING REPORT



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

SEPTEMBER-2024

Prepared by



GLOBAL ENVIRONMENT & MINING SERVICES

NABL & MOEFCC Recognized Laboratory

(Consulting Engineers, Mine Designers, Geologists & Surveyors)

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PREFACE

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


As part of the conditions and inherent concern on health of the employees and surroundings **M/s. BMM Ispat Ltd.**, as appointed **M/s. Global Environment & Mining Services**, 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:01.10.2024


K. Ramakrishna Reddy
(Technical Manager)



1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

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

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

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

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

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



1.2 PROMOTERS OF THE PROJECT

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

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

BMM ISPAT LIMITED

(Registered Office & Works)

#114, Danapur

Hosapete - 583 222

Vijayanagara Dist., Karnataka

Phone +91 08394-264000, +91 9686550808/09

Fax - 08394 264010

1.3 Site Location

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

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

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

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

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

1.4 The report includes environmental monitoring data collected at above site for the month of **SEPTEMBER-2024**. The Parameters monitored are:

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

2.0 SCOPE AND METHODOLOGY

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 PM₁₀, Particulate Matter (size less than 2.5µm) PM_{2.5}.

2.2.1 PARTICULATE MATTER (PM₁₀)(size less than 10µm).

Purpose

The purpose of this protocol is to provide guidelines for monitoring and analysis of Particulate Matter PM₁₀ in ambient air

Reference Method: IS 5182 Part 23 Method of Measurement of Air Pollution: Respirable Suspended Particulate Matter (PM₁₀) 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 PM₁₀ in the designated size range is calculated by dividing the weight gain of the filter by the volume of air sampled.

Sampling

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

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

Analysis

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

2.2.2 Particulate Matter (PM_{2.5})(size less than 2.5µm)

Purpose

The purpose of this protocol is to provide guidelines for monitoring and analysis of Particulate Matter PM_{2.5} in ambient air.

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

Particulate Matter (PM_{2.5}) 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_{2.5} 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_{2.5} size ranges divided by the actual volume of air sampled, and is expressed in µg/m³. 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 (SO₂)

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

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

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

Sampling

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

Analysis

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

2.2.4 Nitrogen Di Oxide (NO₂):**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 (NO₂) is collected by bubbling air through a solution of sodium hydroxide and sodium arsenite. The concentration of nitrite ion (NO₂) 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(NH₃)**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

(1.2m³/min) sampling method capable of detecting sub.ng/m³ concentration of PAH in 24 hours sample (i.e., collected in 3 shifts of 8 hour each with 480 m³ 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 (CS₂). The substances desorbed in the CS₂ 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 μ m or below and with a stationary phase film thickness less than 1.5 μ 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 60 Sample 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 57.79, 18.11, 8.43 & 9.97 µg/m³ 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 53.55, 12.77, 7.58 & 9.14 µg/m³ 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 49.95, 15.08, 8.51 & 10.36 µg/m³ 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 47.11, 15.90, 9.00 & 10.43 µg/m³ 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 46.25, 11.23, 7.34 & 9.18 µg/m³ 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 47.72, 10.18, 7.73 & 9.57 µg/m³ 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 173.33 $\mu\text{g}/\text{m}^3$, maximum value 1793.76 $\mu\text{g}/\text{m}^3$ and average value 730.28 $\mu\text{g}/\text{m}^3$. The Fugitive air quality 1st & 2nd Fortnight Results given in **Annexure-7 to Annexure-10**.

5.2 STACK MONITORING

Stack emission level was monitored all chimneys' PM values (mg/Nm^3) 1st and 2nd Fortnight Minimum Value 11.03 mg/Nm^3 , Maximum Value 37.40 mg/Nm^3 & Average Value 27.45 mg/Nm^3 . 1st & 2nd 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 45.0 to 73.50 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.



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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 : SEPTEMBER-2024
 Location : A1-Danapur Village
 Duration of Monitoring : 24 Hour
 Report Issued Date : 01.10.2024
 Report Number : ULR-TC532324000002081F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
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
05.09.2024	06.09.2024	3471	60.42	100	22.75	60	9.24	80	11.28	80
06.09.2024	07.09.2024	3514	58.72		14.85		7.38		9.22	
12.09.2024	13.09.2024	3658	61.40		20.07		9.52		10.64	
13.09.2024	14.09.2024	3705	64.05		17.74		8.76		9.54	
19.09.2024	20.09.2024	3854	53.74		27.23		8.24		9.38	
20.09.2024	21.09.2024	3881	57.10		14.41		7.56		9.12	
26.09.2024	27.09.2024	4083	50.51		11.48		8.12		10.36	
27.09.2024	28.09.2024	4131	56.40		16.37		8.64		10.22	
Average			57.79		18.11		8.43		9.97	

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

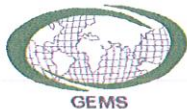
INFERENCE As per NAAQMS Standards (2009),
Report Status: - Measured Values for the above parameters are within the limit.

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

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



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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 : SEPTEMBER-2024

Location : A1-Danapur Village

Duration of Monitoring : 24 Hour

Report Issued Date : 01.10.2024

Report Number : ULR-TC532324000002081F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
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
05.09.2024	06.09.2024	3471	60.42	100	22.75	60	9.24	80	11.28	80
06.09.2024	07.09.2024	3514	58.72		14.85		7.38		9.22	
12.09.2024	13.09.2024	3658	61.40		20.07		9.52		10.64	
13.09.2024	14.09.2024	3705	64.05		17.74		8.76		9.54	
19.09.2024	20.09.2024	3854	53.74		27.23		8.24		9.38	
20.09.2024	21.09.2024	3881	57.10		14.41		7.56		9.12	
26.09.2024	27.09.2024	4083	50.51		11.48		8.12		10.36	
27.09.2024	28.09.2024	4131	56.40		16.37		8.64		10.22	
Average			57.79		18.11		8.43		9.97	

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.

Priyanka
Analysed By
Priyanka B M
Chemist

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



Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
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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 Analyser
Month : SEPTEMBER-2024
Location : A1-Danapur Village
Duration of Monitoring : 1 Hour
Report Issued Date : 01.10.2024
Report Number : GEMS/BMM/NAAQ/2024-25/2081

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	05.09.2024	3471	0.18	4.0
2	06.09.2024	3514	0.16	
3	12.09.2024	3658	0.18	
4	13.09.2024	3705	0.12	
5	19.09.2024	3854	0.10	
6	20.09.2024	3881	0.12	
7	26.09.2024	4083	<0.01	
8	27.09.2024	4131	<0.01	

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

ND - Not Detected

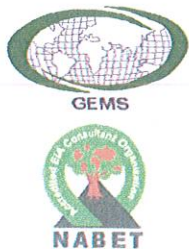
SL NO	INSTRUMENT DETAILS	
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO
3	Serial No	180883821
4	Calibration Date	08.07.2024
5	Calibration Due Date	07.07.2025

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

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

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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 : SEPTEMBER-2024
Location : A2-Mariyammanahalli Village
Duration of Monitoring : 24 Hour
Report Issued Date : 01.10.2024
Report Number : ULR-TC532324000002021F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
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
02.09.2024	03.09.2024	3388	47.64	100	13.29	60	7.84	80	9.16	80
03.09.2024	04.09.2024	3403	61.24		11.57		8.72		10.38	
09.09.2024	10.09.2024	3558	49.11		10.76		6.38		7.56	
10.09.2024	11.09.2024	3573	44.57		11.60		7.22		8.78	
16.09.2024	17.09.2024	3772	53.72		14.48		8.30		10.12	
17.09.2024	18.09.2024	3799	57.68		18.74		6.12		7.64	
23.09.2024	24.09.2024	3963	55.69		11.74		8.66		9.82	
24.09.2024	25.09.2024	4011	58.76		10.01		7.38		9.68	
Average			53.55		12.77		7.58		9.14	

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

Priyanka B M
Analysed By
Priyanka B M
Chemist

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



Note:

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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/RO18
 Sample collected by : Global Environment & Mining Services
 Discipline : Chemical
 Group : Atmospheric Pollution
 Sample Type : Ambient Air Quality Monitoring
 Particulars of Sample Collected : CO Analyser
 Month : SEPTEMBER-2024
 Location : A2-Mariyammanahalli Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 01.10.2024
 Report Number : GEMS/BMM/NAAQ/2024-25/2021

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	02.09.2024	3388	0.12	4.0
2	03.09.2024	3403	0.14	
3	09.09.2024	3558	0.14	
4	10.09.2024	3573	0.12	
5	16.09.2024	3772	0.10	
6	17.09.2024	3799	<0.01	
7	23.09.2024	3963	0.10	
8	24.09.2024	4011	<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

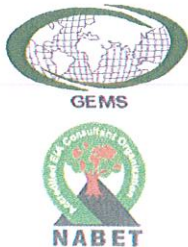
INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit
-----------	---

Analysed By
 Priyanka B M
 Chemist

Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



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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 : SEPTEMBER-2024
Location : A3-Hanumanahalli Village
Duration of Monitoring : 24 Hour
Report Issued Date : 01.10.2024
Report Number : ULR-TC532324000002082F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
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
05.09.2024	06.09.2024	3472	43.23	100	15.51	60	7.12	80	10.34	80
06.09.2024	07.09.2024	3515	42.80		17.15		9.35		10.12	
09.09.2024	13.09.2024	3659	52.10		16.04		8.24		9.54	
10.09.2024	14.09.2024	3706	45.53		13.02		9.38		11.26	
19.09.2024	20.09.2024	3855	60.18		19.92		7.92		9.64	
20.09.2024	21.09.2024	3882	52.48		10.28		8.64		10.28	
23.09.2024	27.09.2024	4084	59.20		13.52		8.12		10.12	
24.09.2024	28.09.2024	4132	44.11		15.22		9.34		11.54	
Average			49.95		15.08		8.51		10.36	

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.

Priyanka B M
Analysed By
Priyanka B M
Chemist

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



Note:

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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 Analyser
 Month : SEPTEMBER-2024
 Location : A3-Hanumanahalli Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 01.10.2024
 Report Number : GEMS/BMM/NAAQ/2024-25/2082

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	05.09.2024	3472	0.14	4.0
2	06.09.2024	3515	0.12	
3	09.09.2024	3659	0.10	
4	10.09.2024	3706	0.10	
5	19.09.2024	3855	0.12	
6	20.09.2024	3882	0.14	
7	23.09.2024	4084	0.12	
8	24.09.2024	4132	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
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 Analysed By
 Priyanka B M
 Chemist


 Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



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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/RO18 - 450000125
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Ambient Air Quality Monitoring
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler
Month : SEPTEMBER-2024
Location : A4-Galemmanagudi Village
Duration of Monitoring : 24 Hour
Report Issue Date : 01.10.2024
Report Number : ULR-TC532324000002083F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
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
05.09.2024	06.09.2024	3473	59.35	100	14.44	60	8.38	80	9.26	80
06.09.2024	07.09.2024	3516	40.56		19.03		10.12		13.52	
12.09.2024	13.09.2024	3660	50.18		24.81		9.36		10.12	
13.09.2024	14.09.2024	3707	43.02		13.33		7.38		8.16	
19.09.2024	20.09.2024	3856	45.19		21.66		8.22		10.34	
20.09.2024	21.09.2024	3883	58.96		10.47		9.64		11.12	
26.09.2024	27.09.2024	4085	41.54		12.36		8.38		9.24	
27.09.2024	28.09.2024	4133	38.10		11.10		10.52		11.68	
Average			47.11		15.90		9.00		10.43	

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.

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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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 : SEPTEMBER-2024
Location : A4-Galemmanagudi Village
Duration of Monitoring : 1 Hour
Report Issued Date : 01.10.2024
Report Number : GEMS/BMM/NAAQ/2024-25/2083

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	05.09.2024	3473	0.12	4.0
2	06.09.2024	3516	0.16	
3	12.09.2024	3660	0.10	
4	13.09.2024	3707	0.12	
5	19.09.2024	3856	0.14	
6	20.09.2024	3883	0.12	
7	26.09.2024	4085	0.10	
8	27.09.2024	4133	0.12	

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

ND - Not Detected

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

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


Analysed By
Priyanka B M
Chemist


Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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



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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 : SEPTEMBER-2024
Location : A5-G Nagalapura Village
Duration of Monitoring : 24 Hour
Report Issue Date : 01.10.2024
Report Number : ULR-TC532324000002084F

RESULTS

Parameters			PM10 [µg/m ³]		PM2.5 [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
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
05.09.2024	06.09.2024	3474	49.32	100	11.67	60	8.34	80	10.08	80
06.09.2024	07.09.2024	3517	61.08		12.25		7.12		9.34	
12.09.2024	13.09.2024	3661	34.67		10.35		7.64		9.52	
13.09.2024	14.09.2024	3708	32.22		8.28		6.12		8.06	
19.09.2024	20.09.2024	3857	41.23		7.91		7.58		9.22	
20.09.2024	21.09.2024	3884	40.08		15.41		7.54		8.32	
26.09.2024	27.09.2024	4086	58.61		12.54		8.06		9.64	
27.09.2024	28.09.2024	4134	52.77		11.42		7.32		9.22	
Average			46.25		11.23		7.34		9.18	

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.

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15 Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
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ANNEXURE-05
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
 Customer Reference : WO/ADMIN/FY24/RO18
 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 : SEPTEMBER-2024
 Location : A5- G Nagalapura Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 01.10.2024
 Report Number : GEMS/BMM/NAAQ/2024-25/2084

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	05.09.2024	3474	0.14	4.0
2	06.09.2024	3517	0.10	
3	12.09.2024	3661	0.12	
4	13.09.2024	3708	<0.01	
5	19.09.2024	3857	<0.01	
6	20.09.2024	3884	<0.01	
7	26.09.2024	4086	<0.01	
8	27.09.2024	4134	<0.01	

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

ND - Not Detected

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

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

Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager



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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 : **SEPTEMBER-2024**
 Location : **A6-Gunda Tanda Village**
 Duration of Monitoring : 24 Hour
 Report Issue Date : **01.10.2024**
 Report Number : **ULR-TC532324000002022F**

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
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
02.09.2024	03.09.2024	3389	54.56	100	10.78	60	7.26	80	8.54	80
03.09.2024	04.09.2024	3404	35.98		8.20		5.12		7.66	
12.09.2024	10.09.2024	3559	53.20		10.47		8.34		11.12	
13.09.2024	11.09.2024	3574	40.63		8.58		7.65		9.34	
16.09.2024	17.09.2024	3773	53.49		13.05		9.12		11.06	
17.09.2024	18.09.2024	3800	43.16		11.18		7.60		8.34	
26.09.2024	24.09.2024	3964	46.18		8.65		8.12		11.36	
27.09.2024	25.09.2024	4012	54.62		10.53		8.64		9.12	
Average			47.72		10.18		7.73		9.57	

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.

Priyanka B M
Analysed By
Priyanka B M
Chemist

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

**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
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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 : SEPTEMBER-2024
 Location : A6-Gunda Tanda Village
 Duration of Monitoring : 1 Hour
 Report Issued Date : 01.10.2024
 Report Number : GEMS/BMM/NAAQ/2024-25/2022

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	02.09.2024	3389	<0.01	4.0
2	03.09.2024	3404	<0.01	
3	12.09.2024	3559	<0.01	
4	13.09.2024	3574	<0.01	
5	16.09.2024	3773	<0.01	
6	17.09.2024	3800	<0.01	
7	26.09.2024	3964	<0.01	
8	27.09.2024	4012	<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
-----------	---

Priyanka B M
 Analysed By
 Priyanka B M
 Chemist

K. Ramakrishna Reddy
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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	:	RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
5	Month	:	SEPTEMBER-2024(1st Fort Night)
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	01.10.2024
10	Report Number	:	GEMS/BMM/FM/2024-25/2149

RESULTS

Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ($\mu\text{g}/\text{m}^3$)	Standard
I. Beneficiation Plant-1						
1.	Main Canteen	3579	10.09.2024	11.09.2024	939.50	2000
2.	Near Iron Ore Bottom Hopper	3577	10.09.2024	11.09.2024	756.46	2000
3.	Iron Ore Screen	3578	10.09.2024	11.09.2024	1542.62	2000
II. Pellet Plant-I						
4.	Near Pellet Plant	3612	11.09.2024	12.09.2024	1177.08	2000
5.	Annual Cooler Pellet Discharge bin	3613	11.09.2024	12.09.2024	1793.76	2000
6.	Pellet Stock Yard	3614	11.09.2024	12.09.2024	460.23	2000
III. Sponge Iron Division-1 (kiln 1 & 2)						
7.	Control Room SID-1	3700	13.09.2024	14.09.2024	809.32	2000
8.	Near Product bin	3701	13.09.2024	14.09.2024	882.16	2000
9.	Coal Feeding Area	3702	13.09.2024	14.09.2024	1323.44	2000
IV. Induction Furnace & Rolling Mill – 1						
10.	IF Office	3649	12.09.2024	13.09.2024	448.80	2000
11.	TMT Stock Yard	3650	12.09.2024	13.09.2024	263.57	2000
12.	RML Gasifier	3651	12.09.2024	13.09.2024	408.76	2000
V. Power Plant 25 MW-1						
13.	25 MW ESP	3652	12.09.2024	13.09.2024	458.36	2000
14.	25 MW ACC	3715	14.09.2024	14.09.2024	589.28	2000
VI. Site Services						
15.	PGP- coal handling system	3615	11.09.2024	12.09.2024	520.91	2000
16.	IF Slag Crusher	3703	13.09.2024	14.09.2024	1047.23	2000
17.	Main Gate	3716	14.09.2024	14.09.2024	334.61	2000
18.	Fly ash Dump	3565	09.09.2024	10.09.2024	287.06	2000

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

SL NO	INSTRUMENT DETAILS	GEMS-01	GEMS-02	GEMS-03	GEMS-04	GEMS-05
1	Instrument Name	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler
2	Make & Model	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151
3	Serial No	RDS / 241-DTC-2020	RDS / 243-DTL-2020	RDS / 244-DTL-2020	RDS / 193-DTH-2019	RDS / 197-DTH-2019
4	Calibration Date	28.03.2024	28.03.2024	28.03.2024	28.03.2024	28.03.2024
5	Calibration Due Date	27.03.2025	27.03.2025	27.03.2025	27.03.2025	27.03.2025

Priyanka B M
Analysed By
Priyanka B M
Chemist

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



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

FORTNIGHTLY FUGITIVE AIR QUALITY MONITORING DATA

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
3	Sample collected by	:	GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	:	RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
5	Month	:	SEPTEMBER-2024(2nd Fort Night)
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4)1999 RA 2014
9	Report Issued Date	:	01.10.2024
10	Report Number	:	GEMS/BMM/FM/2024-25/2446

RESULTS

Sl. NO.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ($\mu\text{g}/\text{m}^3$)	Standard
I. Beneficiation Plant-1						
1.	Main Canteen	4036	25.09.2024	26.09.2024	531.74	2000
2.	Near Iron Ore Bottom Hopper	4035	25.09.2024	26.09.2024	506.11	2000
3.	Iron Ore Screen	4034	25.09.2024	26.09.2024	535.04	2000
II. Pellet Plant-I						
4.	Near Pellet Plant	4076	26.09.2024	27.09.2024	545.99	2000
5.	Annual Cooler Pellet Discharge bin	4077	26.09.2024	27.09.2024	517.40	2000
6.	Pellet Stock Yard	4078	26.09.2024	27.09.2024	471.40	2000
III. Sponge Iron Division-1(kiln 1 & 2)						
7.	Control Room SID-I	4168	28.09.2024	28.09.2024	508.42	2000
8.	Near Product bin	4169	28.09.2024	28.09.2024	473.12	2000
9.	Coal Feeding Area	4170	28.09.2024	28.09.2024	494.10	2000
IV. Induction Furnace & Rolling Mill						
10.	IF Office	4123	27.09.2024	28.09.2024	496.01	2000
11.	TMT Stock Yard	4124	27.09.2024	28.09.2024	510.53	2000
12.	RML Gasifier	4125	27.09.2024	28.09.2024	503.463	2000
V. Power Plant 25 MW-1						
13.	25 MW ESP	4126	27.09.2024	28.09.2024	496.13	2000
14.	25 MW ACC	4127	27.09.2024	28.09.2024	486.14	2000
VI. Site Services						
15.	PGP- Coal handling system	4079	26.09.2024	27.09.2024	491.51	2000
16.	IF Slag Crusher	4171	28.09.2024	28.09.2024	481.57	2000
17.	Main Gate	4172	28.09.2024	28.09.2024	540.77	2000
18.	Fly ash Dump	4010	24.09.2024	25.09.2024	487.60	2000

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

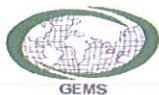
Sl NO	INSTRUMENT DETAILS	GEMS-01	GEMS-02	GEMS-03	GEMS-04	GEMS-05
1	Instrument Name	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler
2	Make & Model	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151
3	Serial No	RDS / 241-DTC-2020	RDS / 243-DTL-2020	RDS / 244-DTL-2020	RDS / 193-DTH-2019	RDS / 197-DTH-2019
4	Calibration Date	28.03.2024	28.03.2024	28.03.2024	28.03.2024	28.03.2024
5	Calibration Due Date	27.03.2025	27.03.2025	27.03.2025	27.03.2025	27.03.2025

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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Chemist

Technical Manager

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	:	RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
5	Month	:	SEPTEMBER-2024(1 st Fort Night)
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	01.10.2024
10	Report Number	:	GEMS/BMM/FM/2024-25/2015

RESULTS

Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ($\mu\text{g}/\text{m}^3$)	Standard
I. Beneficiation Plant-II						
1.	Ball Mill Area (Zero Meter)	3379	02.09.2024	03.09.2024	327.60	2000
2.	Near Cone Crusher	3381	02.09.2024	03.09.2024	1157.98	2000
3.	Concentrate Thickner	3380	02.09.2024	03.09.2024	1223.95	2000
II. Pellet Plant						
4.	PR-6	3382	02.09.2024	03.09.2024	1027.84	2000
5.	Annual Cooler Pellet Discharge bin	3396	03.09.2024	04.09.2024	1771.42	2000
6.	Additive Grinding Building	3397	03.09.2024	04.09.2024	967.76	2000
III. Sponge Iron Division -2 (Kiln 3 & 4)						
7.	Control room	3429	04.09.2024	05.09.2024	1526.28	2000
8.	Near Weigh bridge (dispatch)	3430	04.09.2024	05.09.2024	580.06	2000
9.	Pellet Storage bin	3431	04.09.2024	05.09.2024	973.70	2000
10.	Transfer House area	3399	03.09.2024	04.09.2024	1048.20	2000
11.	Production Separation Bin-PSB	3398	03.09.2024	04.09.2024	1066.04	2000
IV. Sponge Iron Division -3 (Kiln 5 & 6)						
12.	Near Control room	3432	04.09.2024	05.09.2024	843.82	2000
13.	Near Coal Crusher	3464	05.09.2024	06.09.2024	1727.86	2000
14.	Near Product bin	3433	04.09.2024	05.09.2024	1654.91	2000
15.	Coal Dryer	3465	05.09.2024	06.09.2024	392.06	2000
V. Wagon Tipper/RMHS						
16.	Near Tipping point	3466	05.09.2024	06.09.2024	277.78	2000
17.	Monsoon Shed (CPU)	3467	05.09.2024	06.09.2024	349.57	2000
18.	MCC Room (2 nd Gate)	3508	06.09.2024	06.09.2024	329.11	2000
VI. Power Plant-70 MW						
19.	70MW-DM Plant (Near R.O. Plant)	3509	06.09.2024	06.09.2024	577.79	2000
20.	2 nd gateweigh bridge Near Coal Screen	3576	10.09.2024	11.09.2024	544.14	2000
21.	CFBC boiler	3510	06.09.2024	06.09.2024	553.34	2000
VII. 2X70MW Power Plant						
22.	Near Boiler	3562	09.09.2024	10.09.2024	629.02	2000
23.	Near Coal storage Shed	3563	09.09.2024	10.09.2024	644.19	2000
24.	Dolochar Processing Area	3564	09.09.2024	10.09.2024	459.49	2000

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

SL NO	INSTRUMENT DETAILS	GEMS-01	GEMS-02	GEMS-03	GEMS-04	GEMS-05
1	Instrument Name	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler
2	Make & Model	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151
3	Serial No	RDS / 241-DTC-2020	RDS / 243-DTL-2020	RDS / 244-DTL-2020	RDS / 193-DTH-2019	RDS / 197-DTH-2019
4	Calibration Date	28.03.2024	28.03.2024	28.03.2024	28.03.2024	28.03.2024
5	Calibration Due Date	27.03.2025	27.03.2025	27.03.2025	27.03.2025	27.03.2025

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

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

FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
5	Month	:	SEPTEMBER-2024(2ND Fort Night)
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	01.10.2024
10	Report Number	:	GEMS/BMM/FM/2024-25/2311

RESULTS

Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ($\mu\text{g}/\text{m}^3$)	Standard
I. Beneficiation Plant-II						
1.	Ball Mill Area (Zero Meter)	3822	18.09.2024	19.09.2024	561.05	2000
2.	Near Cone Crusher	3824	18.09.2024	19.09.2024	227.58	2000
3.	Concentrate Thickner	3823	18.09.2024	19.09.2024	1009.76	2000
II. Pellet Plant-I						
4.	PR-6	3825	18.09.2024	19.09.2024	782.36	2000
5.	Annual Cooler Pellet Discharge bin	3847	19.09.2024	20.09.2024	502.97	2000
6.	Additive Grinding Building	3848	19.09.2024	20.09.2024	873.04	2000
III. Sponge Iron Division -2 (Kiln 3&4)						
7.	Control room	3873	20.09.2024	21.09.2024	323.81	2000
8.	Near Weigh bridge (dispatch)	3874	20.09.2024	21.09.2024	173.33	2000
9.	Pellet Storage bin	3850	20.09.2024	21.09.2024	1759.66	2000
10.	Transfer House area	3851	19.09.2024	20.09.2024	1788.71	2000
11.	Production Separation Bin-PSB	3849	19.09.2024	20.09.2024	825.07	2000
IV. Sponge Iron Division -2 (Kiln 5&6)						
12.	Near Control room	3876	20.09.2024	21.09.2024	418.62	2000
13.	Near Coal Crusher	3919	21.09.2024	21.09.2024	1564.44	2000
14.	Near Product bin	3918	21.09.2024	21.09.2024	1720.86	2000
15.	Coal Drier	3920	21.09.2024	21.09.2024	330.19	2000
V. Wagon Tipper/RMHS						
16.	Near Tipping point	3921	21.09.2024	21.09.2024	539.96	2000
17.	Monsoon Shed (CPU)	3972	23.09.2024	24.09.2024	935.75	2000
18.	MCC Room (2 nd Gate)	3973	23.09.2024	24.09.2024	299.62	2000
VI. Power Plant-70 MW						
19.	70MW-DM Plant (Near R.O. Plant)	3974	23.09.2024	24.09.2024	298.79	2000
20.	2 nd gate weigh bridge Near Coal Screen	4033	25.09.2024	26.09.2024	331.62	2000
21.	CFBC boiler	3975	23.09.2024	24.09.2024	425.71	2000
VII. 2X70MW Power Plant						
22.	Near Boiler	4007	24.09.2024	25.09.2024	485.19	2000
23.	Near Coal storage Shed	4008	24.09.2024	25.09.2024	346.17	2000
24.	CPP Dolochar Process Area	4009	24.09.2024	25.09.2024	1045.35	2000

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

SL NO	INSTRUMENT DETAILS	GEMS-01	GEMS-02	GEMS-03	GEMS-04	GEMS-05
1	Instrument Name	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Sampler
2	Make & Model	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-151
3	Serial No	RDS / 241-DTC-2020	RDS / 243-DTL-2020	RDS / 244-DTL-2020	RDS / 193-DTH-2019	RDS / 197-DTH-2019
4	Calibration Date	28.03.2024	28.03.2024	28.03.2024	28.03.2024	28.03.2024
5	Calibration Due Date	27.03.2025	27.03.2025	27.03.2025	27.03.2025	27.03.2025

Analysed By
Priyanka B M

Authorised Signatory
K. Ramakrishna Reddy



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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/ **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 : **Pellet Plant-1 ESP**
- 10 Month of Sampling : **SEPTEMBER-2024**
- 11 Date of Sample Received : 03.09.2024 & 16.09.2024
- 12 Date of Sample Analysis : 04.09.2024 & 17.09.2024
- 13 Date of Sample Analysis completion : 05.09.2024 & 18.09.2024
- 14 Report Issued Date : **01.10.2024**
- 15 Report Number : **ULR-TC532324000002028F**

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
	Date of Monitoring			03.09.2024	16.09.2024	
	Sample Code			3401	3769	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	27	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	69	62	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.00	6.01	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	328601	329098	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	285458	292595	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	37.40	30.19	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³	212.0	231.0	NS
8	Nitrogen Dioxide	IS: 11255 (Part 7): 2005 (RA 2017)	mg/Nm ³	49.0	58.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.026	0.018	NS

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

[Signature]
Analysed By
Priyanka B M
Chemist

[Signature]
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

**Note:**

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15 Days, 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.
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TC-5323

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

Analysis Report of Stack Emission

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services, Hosapete
4	Particulars of sample collected	: Vayubodhak Stack sampler/ 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	: 2X100 TPD Sponge iron plant Kiln 1 & 2
10	Month of Sampling	: SEPTEMBER-2024
11	Date of Sample Received	: 06.09.2024&19.09.2024
12	Date of Sample Analysis	: 09.09.2024&20.09.2024
13	Date of Sample Analysis completion	: 09.09.2024&21.09.2024
14	Report Issued Date	: 01.10.2024
15	Report Number	: ULR-TC532324000002116F

Stack Details

1	Fuel Used	Coal
2	Stack Height (mtr)	60.0
3	Stack Diameter (mtr)	2.00

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
				06.09.2024	19.09.2024	
	Date of Monitoring					
	Sample Code					
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	3513	3853	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	27	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	166	171	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	7.17	7.08	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	81085	80076	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	54882	53716	-
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³	16.71	28.67	50
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	169.0	141.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	56.0	46.0	NS
				0.162	0.148	1

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

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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TC-5323

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

Analysis Report of Stack Emission

- Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- Customer Reference : WO/ADMIN/FY24/RO18 - 450000125
- Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- Particulars of sample collected : Vayubodhak Stack sampler/ VBSS-2
Sl. No: Stack Monitoring Kit/ 032308
- Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- Discipline : Chemical
- Group : Atmospheric Pollution
- Sample Type : Stack Monitoring
- Month of Sampling : SEPTEMBER-2024(1st Fort Night)
- Date of Sample Received : -
- Date of Sample Analysis : -
- Date of Sample Analysis completion : -
- Report Issued Date : -
- 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 ³	KSPCB Std mg/Nm ³
Induction Furnace 1 & 2											
1	Induction Furnace 1	-	-	Electric Power	-	-	-	30	1.2	-	150
2	Induction Furnace 2	-	-		-	-	-	30	1.3	-	150

Sl. No	Induction Furnace 1 & 2	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
1	Induction Furnace 1	-	-	-
2	Induction Furnace 2	-	-	-

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

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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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 | : | SEPTEMBER-2024 |
| 11 | Date of Sample Received | : | - |
| 12 | Date of Sample Analysis | : | - |
| 13 | Date of Sample Analysis completion | : | - |
| 14 | Report Issued Date | : | - |
| 15 | Report Number | : | - |

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

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

[Signature]
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

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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/ 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	:	AFBC Boiler ESP (25 MW Power Plant)
10	Month of Sampling	:	SEPTEMBER-2024
11	Date of Sample Received	:	-
12	Date of Sample Analysis	:	-
13	Date of Sample Analysis completion	:	-
14	Report Issued Date	:	-
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 st Fort Night	2 nd 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 ³ /hr			-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr			-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³			50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³			NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³			NS
9	Carbon Monoxide	GEMS/SOP/69	%			NS

Note: NS- Not Specified. RA: Reaffirmed,

[Signature]
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

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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 : **SEPTEMBER-2024(1st Fort Night)**
- 10 Date of Sample Received : 14.09.2024
- 11 Date of Sample Analysis : 16.09.2024
- 12 Date of Sample Analysis completion : 16.09.2024
- 13 Report Issued Date : **01.10.2024**
- 14 Report Number : **ULR-TC532324000002237F**

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant - I											
1	Iron Ore dump hopper	14.09.2024	3721	-	30	35	5.29	25	0.40	15.72	50
2	Iron Ore Screen bin	14.09.2024	3722	-	31	36	5.57	30	0.40	18.15	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
1	Iron Ore dump hopper	2394	2305	-
2	Iron Ore Screen bin	2521	2418	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	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]
Analysed By
Priyanka B M
Chemist

[Signature]
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

**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 : **SEPTEMBER-2024(1st Fort Night)**
- 10 Date of Sample Received : 13.09.2024
- 11 Date of Sample Analysis : 14.09.2024
- 12 Date of Sample Analysis completion : 14.09.2024
- 13 Report Issued Date : **01.10.2024**
- 14 Report Number : **ULR-TC532324000002224F**

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
RMHS											
3	Screen, Coal Crusher (CPU)	-	-	-	-	-	-	30	1.50	-	50
4	Main Crusher	13.09.2024	3704	-	27	34	5.04	25	0.50	11.36	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
3	Screen, Coal Crusher (CPU)	-	-	-
4	Main Crusher	3565	3452	-

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

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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TC-5323

ANNEXURE-18
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
- Month of Sampling : SEPTEMBER-2024(1st Fort Night)
- Date of Sample Received : 03.09.2024&04.09.2024 & 05.09.2024
- Date of Sample Analysis : 04.09.2024& 05.09.2024 & 06.09.2024
- Date of Sample Analysis completion : 05.09.2024& 06.09.2024 & 06.09.2024
- Report Issued Date : 01.10.2024
- Report Number : ULR-TC532324000002029F

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant -I											
5	AGB Main Bag Filter	03.09.2024	3402	-	27	35	5.60	6.5	0.50	23.53	50
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	04.09.2024	3434	-	28	34	5.39	3.0	0.30	28.62	50
7	Bentonite Powder bin top bag filter	04.09.2024	3435	-	27	33	5.57	3.0	0.30	24.98	50
8	H-4 Conveyor discharge bag filter	Shutdown	-	-	-	-	-	7.0	0.50	-	50
9	P-1 Bag Filter	05.09.2024	3470	-	29	39	5.75	7.0	0.50	34.62	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
5	AGB Main Bag Filter	3956	3804	-
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	1372	1328	-
7	Bentonite Powder bin top bag filter	1417	1376	-
8	H-4 Conveyor discharge bag filter	-	-	-
9	P-1 Bag Filter	4066	3865	-

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

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

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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 : **SEPTEMBER-2024(1st Fort Night)**
- 10 Date of Sample Received : 11.09.2024&12.09.2024
- 11 Date of Sample Analysis : 12.09.2024&13.09.2024
- 12 Date of Sample Analysis completion : 13.09.2024&13.09.2024
- 13 Report Issued Date : **01.10.2024**
- 14 Report Number : **ULR-TC532324000002171F**

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
2 X 100 TPD Sponge Iron Kiln 1 & 2											
10	Cooler-1 Discharge & Blending Chute	11.09.2024	3619	---	30	34	5.51	30	1.20	22.51	50
11	Cooler-2 Discharge	12.09.2024	3653	---	26	34	5.13	30	1.20	23.84	50
12	Intermediate Bin & Blending	12.09.2024	3654	---	27	35	5.52	30	1.20	25.67	50
13	Product House	12.09.2024	3655	---	28	36	5.71	30	1.20	27.67	50

Sl. No	2 X 100 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
10	Cooler-1 Discharge & Blending Chute	22425	21658	-
11	Cooler-2 Discharge	20876	20232	-
12	Intermediate Bin & Blending	22496	21717	-
13	Product House	23258	22314	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	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)

Priyanka B M
Analysed By
Priyanka B M
Chemist

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

**Note:**

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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/R018 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ **VBSS-2**
Sl. No: Stack Monitoring Kit/ **032308**
- 5 Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : **SEPTEMBER-2024(2nd Fort Night)**
- 10 Date of Sample Received : -
- 11 Date of Sample Analysis : -
- 12 Date of Sample Analysis completion : -
- 13 Report Issued Date : -
- 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 ³	KSPCB Std mg/Nm ³
Induction Furnance 1 & 2											
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 ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
1	Induction Furnance 1	-	-	-
2	Induction Furnance 2	-	-	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	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)

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

**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 : **SEPTEMBER-2024(2nd Fort Night)**
- 10 Date of Sample Received : 27.09.2024
- 11 Date of Sample Analysis : 28.09.2024
- 12 Date of Sample Analysis completion : 28.09.2024
- 13 Report Issued Date : **01.10.2024**
- 14 Report Number : **ULR-TC532324000002512F**

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant											
1	Iron Ore dump hopper	27.09.2024	4129	---	27	33	5.17	25	0.40	16.52	50
2	Iron Ore Screen bin	27.09.2024	4130	---	28	34	5.68	30	0.40	15.07	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
1	Iron Ore dump hopper	2338	2274	-
2	Iron Ore Screen bin	2571	2490	-

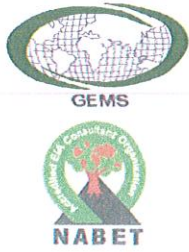
Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

[Signature]
Analysed By
Priyanka B M
Chemist

[Signature]
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

**Note:**

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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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 : **SEPTEMBER-2024(2nd Fort Night)**
- 10 Date of Sample Received : 28.09.2024
- 11 Date of Sample Analysis : 30.09.2024
- 12 Date of Sample Analysis completion : 30.09.2024
- 13 Report Issued Date : **01.10.2024**
- 14 Report Number : **ULR-TC532324000002540F**

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
RMHS											
3	Screen, Coal Crusher(CPU)	-	-	-	-	-	-	30	1.50	-	50
4	Main Crusher	28.09.2024	4173	-	28	34	5.24	25	0.50	17.41	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
3	Screen, Coal Crusher (CPU)	-	-	-
4	Main Crusher	3707	3590	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	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)

Priyanka B M
Analysed By
Priyanka B M
Chemist

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

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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 : **SEPTEMBER-2024(2nd Fort Night)**
- 10 Date of Sample Received : 16.09.2024 & 17.09.2024
- 11 Date of Sample Analysis : 17.09.2024 & 18.09.2024
- 12 Date of Sample Analysis completion : 18.09.2024 & 19.09.2024
- 13 Report Issued Date : **01.10.2024**
- 14 Report Number : **ULR-TC532324000002273F**

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant-I											
5	AGB Main Bag Filter	16.09.2024	3770	---	30	34	5.36	6.5	0.50	24.77	50
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	16.09.2024	3771	---	30	35	5.59	3.0	0.30	26.28	50
7	Bentonite Powder bin top bag filter	17.09.2024	3797	---	29	35	5.39	3.0	0.30	21.80	50
8	H-4 Conveyor discharge bag filter	-	-	---	-	-	-	7.0	0.50	-	50
9	P-1 Bag Filter	17.09.2024	3798	---	30	36	5.80	7.0	0.50	31.55	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
5	AGB Main Bag Filter	3790	3666	-
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	1423	1371	-
7	Bentonite Powder bin top bag filter	1371	1321	-
8	H-4 Conveyor discharge bag filter	-	-	-
9	P-1 Bag Filter	4100	3935	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	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)

Priyanka B M
Analysed By
Priyanka B M
Chemist

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

**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/R018 - 450000125
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhak Stack sampler/ **VBSS-2**
Sl. No: Stack Monitoring Kit/ **032308**
- 5 Instrument Details : Calibration Date: 28.03.2024
Calibration Due Date: 27.03.2025
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Sample Type : Stack Monitoring
- 9 Month of Sampling : **SEPTEMBER-2024(2nd Fort Night)**
- 10 Date of Sample Received : 25.09.2024
- 11 Date of Sample Analysis : 26.09.2024
- 12 Date of Sample Analysis completion : 27.09.2024
- 13 Report Issued Date : **01.10.2024**
- 14 Report Number : **ULR-TC532324000002447F**

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
2 X 100 TPD Sponge Iron Kiln 1 & 2											
10	Cooler-1 Discharge & Blending Chute	25.09.2024	4037	---	25	34	5.37	30	1.20	25.77	50
11	Cooler-2 Discharge	25.09.2024	4038	---	26	35	5.63	30	1.20	27.50	50
12	Intermediate Bin & Blending	25.09.2024	4039	---	27	34	5.85	30	1.20	28.89	50
13	Product House	25.09.2024	4040	---	27	37	5.81	30	1.20	30.02	50

Sl. No	2 X 100 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
10	Cooler-1 Discharge & Blending Chute	21863	21200	-
11	Cooler-2 Discharge	22910	22044	-
12	Intermediate Bin & Blending	23837	23038	-
13	Product House	23660	22633	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	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)

Priyanka B M
Analysed By
Priyanka B M
Chemist

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

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/RO18
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Vayubodhan Stack sampler/ VBSS2 Sl.No: Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: Pellet Plant-2 ESP
10	Month of Sampling	: SEPTEMBER-2024
11	Date of Sample Received	: 02.09.2024&23.09.2024
12	Date of Sample Analysis	: 03.09.2024&24.09.2024
13	Date Sample Analysis Completion	: 04.09.2024&25.09.2024
14	Report Issued Date	: 01.10.2024
15	Report Number	: ULR-TC532324000002016F

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 st Fort Night	2 nd Fort Night	
				02.09.2024	23.09.2024	
	Date of Monitoring					
	Sample Code			3383	3976	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	26	28	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	71	69	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.39	6.48	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	349750	354524	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	302303	308181	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	31.27	34.33	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	427.0	435	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm ³	68.0	59	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.019	0.034	1%

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

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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/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	: SID Axis 3&4
10	Month of Sampling	: SEPTEMBER-2024
11	Date of Sample Received	: 04.09.2024&17.09.2024
12	Date of Sample Analysis	: 05.09.2024&18.09.2024
13	Date Sample Analysis Completion	: 06.09.2024 &19.09.2024
14	Report Issued Date	: 01.10.2024
15	Report Number	: ULR-TC532324000002053F

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 st Fort Night	2 nd Fort Night	
				04.09.2024	17.09.2024	
	Date of Monitoring					
	Sample Code			3433	3796	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	27	28	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	122	127	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.90	6.82	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	175717	173618	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	132497	129158	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	35.79	32.06	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	219.0	248.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm ³	58.0	65.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.102	0.117	1%

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

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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/ 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 5&6
10	Month of Sampling	: SEPTEMBER-2024
11	Date of Sample Received	: 05.09.2024&18.09.2024
12	Date of Sample Analysis	: 06.09.2024&19.09.2024
13	Date Sample Analysis Completion	: 07.09.2024&20.09.2024
14	Report Issued Date	: 01.10.2024
15	Report Number	: ULR-TC532324000002078F

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 st Fort Night	2 nd Fort Night	
				05.09.2024	18.09.2024	
	Date of Monitoring					
	Sample Code			3468	3826	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	28	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	133	132	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.05	7.18	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	179536	182790	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	131535	134480	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	30.55	36.15	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	224	241	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	331	328	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.116	0.121	1%

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

Priyanka B M
Analysed By
Priyanka B M
Chemist

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



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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	: SEPTEMBER-2024
11	Date of Sample Received	: -
12	Date of Sample Analysis	: -
13	Date Sample Analysis Completion	: -
14	Report Issued Date	: -
15	Report Number	: -

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

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

[Signature]
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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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/ VBSS2 Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2024 Calibration Due Date: 27.03.2025
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: 2X70 MW CFBC Boiler ESP
10	Month of Sampling	: SEPTEMBER-2024
11	Date of Sample Received	: -
12	Date of Sample Analysis	: -
13	Date Sample Analysis Completion	: -
14	Report Issued Date	: -
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 st Fort Night	2 nd 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 ³ /hr			-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr			-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³			50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³			600
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³			300
9	Carbon Monoxide	GEMS/SOP/69	%			NS

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

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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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 : **SEPTEMBER-2024(1st Fort Night)**
- 10 Date of Sample Received : 12.09.2024
- 11 Date of Sample Analysis : 13.09.2024
- 12 Date Sample Analysis Completion : 13.09.2024
- 13 Report Issued Date : **01.10.2024**
- 14 Report Number : **ULR-TC532324000002195F**

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant-2											
1	Iron Ore Cone Crusher	-	-	---	-	-	-	30	1.20	-	50
2	Iron Ore Screening	12.09.2024	3657	Coal	27	35	5.08	30	0.90	17.10	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
1	Iron Ore Cone Crusher	-	-	-
2	Iron Ore Screening	11627	11188	-

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

INFERENCE: The Measured Values are within the limits.

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

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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	: SEPTEMBER-2024(1 st Fort Night)
10	Date of Sample Received	: 02.09.2024&03.09.2024
11	Date of Sample Analysis	: 03.09.2024&04.09.2024
12	Date Sample Analysis Completion	: 03.09.2024&04.09.2024
13	Report Issued Date	: 01.10.2024
14	Report Number	: ULR-TC532324000002017F

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant-II											
3	AGB main bag Filter	02.09.2024	3384	---	27	34	5.23	6.5	0.5	25.92	50
4	Lime & Bentonite Powder bin top bag filter	02.09.2024	3385	---	27	36	5.49	6	0.35	21.88	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	03.09.2024	3400	---	28	38	5.53	20	0.5	31.36	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /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 bag filter	-	-	-
7	RP-6 Conveyor bag Filter	-	-	-
8	Pellet discharge bin bag filter	3909	3724	-

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

INFERENCE: The measured values are within the limits

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:

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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/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	: SEPTEMBER-2024(1 st Fort Night)
10	Date of Sample Received	: 05.09.2024,06.09.2024,09.09.2024&10.09.2024
11	Date of Sample Analysis	: 06.09.2024.09.09.2024.10.09.2024&11.09.2024
12	Date Sample Analysis Completion	: 06.09.2024.09.09.2024.10.09.2024&11.09.2024
13	Report Issued Date	: 01.10.2024
14	Report Number	: ULR-TC532324000002079F

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
2 X 500 TPD Sponge Iron Kiln 1 & 2											
9	Cooler Discharge -1	05.09.2024	3469	---	29	35	5.78	30	1.2	28.90	50
10	Cooler Discharge -2	06.09.2024	3511	---	28	36	5.80	30	1.2	28.20	50
11	Coal stock house	06.09.2024	3512	---	28	34	5.07	30	1.2	11.03	50
12	PSB 1 System-1	09.09.2024	3566	---	27	35	5.91	30	1.2	33.44	50
13	PSB 1 System-2	09.09.2024	3567	---	28	37	5.57	30	1.2	31.22	50
14	PSB 2 System-1 MCC	09.09.2024	3568	---	27	36	5.87	30	1.2	35.85	50
15	PSB 1 System-2 Road	09.09.2024	3569	---	27	36	6.00	30	1.2	32.12	50
16	Junction House Old & New	10.09.2024	3580	---	27	37	5.77	30	1.2	36.28	50
17	Storage Bunker	10.09.2024	3581	---	28	36	5.44	30	1.2	26.85	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 ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
9	Cooler Discharge -1	23526	22642	-
10	Cooler Discharge -2	23629	22659	-
11	Coal stock house	20644	19915	-
12	PSB 1 System-1	24068	23280	-
13	PSB 1 System-2	22681	21783	-
14	PSB 2 System-1 MCC	23899	22985	-
15	PSB 1 System-2 Road	24435	23487	-
16	Junction House Old & New	23484	22557	-
17	Storage Bunker	22134	21321	-
18	Dispatch	-	-	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	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

Priyanka B M
Analysed By
Priyanka B M
Chemist

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



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 : **SEPTEMBER-2024(1st Fort Night)**
- 10 Date of Sample Received : 10.09.2024&11.09.2024
- 11 Date of Sample Analysis : 11.09.2024&12.09.2024
- 12 Date Sample Analysis Completion : 11.09.2024&12.09.2024
- 13 Report Issued Date : **01.10.2024**
- 14 Report Number : **ULR-TC532324000002152F**

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
2X500 TPD Sponge Iron Kiln 3&4											
19	DE 3, Axis 3 CD	10.09.2024	3582	---	29	37	5.37	30	1.2	34.57	50
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	10.09.2024	3583	---	29	38	5.43	30	1.2	35.20	50
21	DE 8 & 12 I-Bin, (Stand By)	11.09.2024	3616	---	27	37	6.02	30	1.9	30.43	50
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	11.09.2024	3617	---	28	38	5.72	30	1.9	36.22	50
23	Coal Dryer	11.09.2024	3618	---	30	40	6.19	27	1.2	33.91	50

Sl. No	2X500 TPD Sponge Iron Kiln 3&4	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
19	DE 3, Axis 3 CD	21866	20945	-
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	22109	21098	-
21	DE 8 & 12 I-Bin, (Stand By)	61454	58982	-
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	58419	55822	-
23	Coal Dryer	25194	23880	-

INFERENCE: The Measured Values are within the limits.

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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/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	: SEPTEMBER-2024(2 nd Fort Night)
10	Date of Sample Received	: 27.09.2024
11	Date of Sample Analysis	: 28.09.2024
12	Date Sample Analysis Completion	: 28.09.2024
13	Report Issued Date	: 01.10.2024
14	Report Number	: ULR-TC532324000002511F

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant-2											
1	Iron Ore Cone Crusher	-	-	---	-	-	-	-	-	-	50
2	Iron Ore Screening	27.09.2024	4130	---	28	35	5.30	30	0.90	13.46	50

Sl. No	Beneficiation Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
1	Iron Ore Cone Crusher	-	-	-
2	Iron Ore Screening	12156	11710	-

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

INFERENCE: The Measured Values are within the limits.

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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	: SEPTEMBER-2024(2 nd Fort Night)
10	Date of Sample Received	: 26.09.2024
11	Date of Sample Analysis	: 27.09.2024
12	Date Sample Analysis Completion	: 28.09.2024
13	Report Issued Date	: 01.10.2024
14	Report Number	: ULR-TC532324000002475F

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant											
3	AGB main bag Filter	26.09.2024	4080	---	26	35	5.39	6.5	0.5	23.50	50
4	Lime & Bentonite Powder bin top bag filter	26.09.2024	4081	---	27	34	5.55	6	0.35	20.24	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	26.09.2024	4082	---	28	39	5.71	20	0.5	28.20	50

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /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	4035	3833	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	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

Priyanka B M
Analysed By
Priyanka B M
Chemist

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



Note:

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

Analysis Report of Stack Emission

- Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- Customer Reference : WO/ADMIN/FY24/R018
- Sample collected by : GLOBAL Environment & Mining Services
- Particulars of sample collected : Vayubodhan Stack sampler/ VBSS2
Sl.No:Stack Monitoring Kit/ 032308
- Instrument Details : Calibration Date: 28.03.202421
Calibration Due Date: 27.03.2025
- Discipline : Chemical
- Group : Atmospheric Pollution
- Sample Type : Stack Monitoring
- Month of Sampling : SEPTEMBER-2024(2ndFort Night)
- Date of Sample Received : 18.09.2024,19.09.2024,20.09.2024,21.09.2024
- Date of Sample Analysis : 19.09.2024,20.09.2024,21.09.2024,23.09.2024
- Date Sample Analysis Completion : 20.09.2024,21.09.2024,21.09.2024,23.09.2024
- Report Issued Date : 01.10.2024
- Report Number : ULR-TC532324000002313F

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
2 X 500 TPD Sponge Iron Kiln 1 & 2											
9	Cooler Discharge -1	18.09.2024	3827	Coal	30	35	5.63	30	1.2	29.03	50
10	Cooler Discharge -2	18.09.2024	3828	Coal	31	36	5.72	30	1.2	26.67	50
11	Coal stock house	19.09.2024	3851	Coal	30	35	5.27	30	1.2	14.88	50
12	PSB 1 System-1	19.09.2024	3852	Coal	30	36	5.28	30	1.2	29.65	50
13	PSB 1 System-2	20.09.2024	3877	Coal	27	35	5.22	30	1.2	31.30	50
14	PSB 2 System-1 MCC	20.09.2024	3878	Coal	28	37	5.52	30	1.2	33.97	50
15	PSB 1 System-2 Road	20.09.2024	3879	Coal	30	38	5.72	30	1.2	26.78	50
16	Junction House Old & New	20.09.2024	3880	Coal	30	37	6.00	30	1.2	35.85	50
17	Storage Bunker	21.09.2024	3922	Coal	27	35	5.31	30	1.2	24.50	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 ³ /hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
9	Cooler Discharge -1	22945	22130	-
10	Cooler Discharge -2	23302	22389	-
11	Coal stock house	21465	20694	-
12	PSB 1 System-1	21500	20661	-
13	PSB 1 System-2	21237	20532	-
14	PSB 2 System-1 MCC	20400	19702	-
15	PSB 1 System-2 Road	20115	19353	-
16	Junction House Old & New	18770	17971	-
17	Storage Bunker	18161	17490	-
18	Dispatch	-	-	-

Parameter	Protocol
Particulate Matter (mg/Nm ³)	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.

Priyanka B M
Analysed By
Priyanka B M
Chemist

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



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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	: SEPTEMBER-2024 (2 nd Fort Night)
10	Date of Sample Received	: 21.09.2024, 23.09.2024
11	Date of Sample Analysis	: 23.09.2024, 24.09.2024
12	Date Sample Analysis Completion	: 23.09.2024, 24.09.2024
13	Report Issued Date	: 01.10.2024
14	Report Number	: ULR-TC532324000002369F

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 ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
2X500 TPD Sponge Iron Kiln 3&4											
19	DE 3, Axis 3 CD	21.09.2024	3923	---	28	36	5.60	30	1.20	32.16	50
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House (Stand By)	21.09.2024	3924	---	30	37	5.72	30	1.20	34.24	50
21	DE 8 & 12 I-Bin, (Stand By)	21.09.2024	3925	---	31	38	5.94	30	1.90	27.97	50
22	DE 9 & 10 PSB 1 & 2 Product Separation bin	23.09.2024	3977	---	30	37	5.73	30	1.90	35.35	50
23	Coal Dryer	23.09.2024	3978	---	30	40	6.20	30	1.20	33.23	50

Sl. No	2X500 TPD Sponge Iron Kiln 3&4	Gas flow rate at Stack Condition m ³ /hr	Gas flow rate at NTP Nm ³ /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 ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)

INFERENCE: The Measured Values are within the limits.

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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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
Sl. No: Q679952
Instrument Details : Calibration Date: 02.11.2023
Due Calibration: 01.11.2024
Month : SEPTEMBER-2024
Report Issue Date : 01.10.2024
Method Adopted : IS 9989-1981 Reaffirmed 2014
Report No : ULR-TC532324000002019F

Sl. No	Location	Date of Monitoring	Noise Level dB (A)		
			Day Time		Standard
			Min	Max	
1	Main Gate	02.09.2024	49.2	54.6	75
2	Near ATM	02.09.2024	46.4	54.6	75
3	Transit House	03.09.2024	53.6	58.2	75
4	CAAQMS Station	03.09.2024	50.8	59.8	75
5	Gunda Road	04.09.2024	53.4	69.4	75
6	Gunda Railway Station	04.09.2024	68.4	73.5	75
7	Bagging Shed	05.09.2024	59.6	67.8	75
8	Railway Siding	05.09.2024	68.4	73.5	75
9	4th Gate	06.09.2024	53.4	59.2	75
10	Bricks Plant	06.09.2024	62.6	70.5	75
11	Kempuhalla (Wagon Tippler)	09.09.2024	52.4	58.9	75
12	Danapura Bridge	09.09.2024	57.6	66.8	75
13	2nd Gate	10.09.2024	57.6	64.8	75
14	Project Store	10.09.2024	46.5	54.8	75
15	Dispatch (Truck Parking Area)	11.09.2024	61.6	72.4	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.
-----------	---

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

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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
 Sl. No: Q679952
 Instrument Details : Calibration Date: 02.11.2023
 Due Calibration: 01.11.2024
 Month : **SEPTEMBER-2024**
 Report Issue Date : **01.10.2024**
 Method Adopted : IS 9989-1981 Reaffirmed 2014
 Report No : **ULR-TC532324000002278F**

Sl. No	Location	Date of Monitoring	Noise Level dB (A)		
			Day Time		Standard
			Min	Max	
1	Main Gate	16.09.2024	47.6	59.2	75
2	Near ATM	16.09.2024	45.0	51.0	75
3	Transit House	17.09.2024	56.4	63.5	75
4	CAAQMS Station	17.09.2024	50.0	57.8	75
5	Gunda Road	18.09.2024	55.7	62.3	75
6	Gunda Railway Station	18.09.2024	62.4	69.6	75
7	Bagging Shed	19.09.2024	56.0	68.9	75
8	Railway Siding	19.09.2024	68.1	72.4	75
9	4th Gate	20.09.2024	52.0	59.8	75
10	Bricks Plant	20.09.2024	60.1	66.0	75
11	Kempuhalla (Wagon Tippler)	21.09.2024	49.2	58.6	75
12	Danapura Bridge	21.09.2024	62.1	68.5	75
13	2nd Gate	23.09.2024	49.2	56.8	75
14	Project Store	23.09.2024	48.0	52.6	75
15	Dispatch (Truck Parking Area)	23.09.2024	62.8	72.5	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.
------------------	---

[Signature]
Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager

**Note:**

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- Water Samples will be destroyed after 15 Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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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
 Sl. No: Q679953
 Instrument Details : Calibration Date: 02.11.2023
 Due Calibration: 01.11.2024
 Month : **SEPTEMBER-2024**
 Report Issue Date : **01.10.2024**
 Method Adopted : IS 9989-1981 Reaffirmed 2014
 Report No : **ULR-TC532324000002023F**

Sl. No	Location	Date of Monitoring	Noise Level dB (A)							
			Day Time			Standard	Night Time			Standard
			Min	Max	Avg		Min	Max	Avg	
1	Danapur Village	02.09.2024	43.2	56.2	53.12	55	38.6	43.1	40.12	45
2	Mariyammana Halli	04.09.2024	41.8	54.1	51.08		39.8	42.8	41.84	
3	Hanumana Halli	03.09.2024	42.6	53.8	52.14		39.2	43.9	41.92	
4	Galemmanagudi	05.09.2024	43.1	55.6	53.48		39.6	43.6	41.86	
5	G.Nagalapura Village	06.09.2024	42.6	53.1	51.12		38.2	42.1	40.02	
6	Gunda Tanda Village	08.09.2024	40.2	51.6	50.24		37.6	40.6	39.22	

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

TCN
Authorised Signatory
 K. Ramakrishna Reddy
 Technical Manager

NOISE: (AMBIENT STANDARDS)

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

Note:

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e-mail : gems_hpt@yahoo.com

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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	: 3724
10	Date of Sampling	: 14.09.2024
11	Sample Received	: 14.09.2024
12	Date of Analysis	: 14.09.2024
13	Date of Analysis Completion	: 20.09.2024
14	Report Issue Date	: 01.10.2024
15	Report Number	: ULR-TC532324000002240F

Results

Sl. No.	Parameters	Protocol	Unit	Danapur Village (GW1)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.33	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	3250	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1950	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.3	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	382.18	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	581.45	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	136.22	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	57.40	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	576.8	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	421.08	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.41	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	18.26	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	539.0	200	600

Note:

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17.	Acidity as CaCO ₃	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	0.20	0.30	NR
19.	Nickel as Ni	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	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.**

[Signature]
Analysed By
Priyanka B M
Chemist

[Signature]
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

**Note:**

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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ANNEXURE-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
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	: 3724
10	Date of Sampling	: 14.09.2024
11	Sample Received	: 14.09.2024
12	Date of Analysis	: 14.09.2024
13	Date of Analysis Completion	: 20.09.2024
14	Report Issue Date	: 01.10.2024
15	Report Number	: GEMS/WATER/2024-2025/2240

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 : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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ANNEXURE-42
GEMS-LD/TF/23/01**Analysis Report of Water Quality Data**

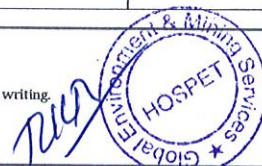
1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/RO18 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: Ground Water
9	Sample Code	: 3726
10	Date of Sampling	: 14.09.2024
11	Sample Received	: 14.09.2024
12	Date of Analysis	: 14.09.2024
13	Date of Analysis Completion	: 20.09.2024
14	Report Issue Date	: 01.10.2024
15	Report Number	: ULR-TC532324000002242F

Results

Sl. No	Parameters	Protocol	Unit	Hanumanahalli Village (GW2)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.56	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	3300	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1980	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.4	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	402.84	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	310.0	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	115.58	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	72.45	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	587.1	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl-	mg/L	669.9	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	1.44	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	20.54	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	583.0	200	600

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ANNEXURE-42

17.	Acidity as CaCO ₃	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	0.18	0.30	NR
19.	Nickel as Ni	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	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.**

Priyanka B M
Analysed By
Priyanka B M
Chemist

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

**Note:**

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Website: www.globalmining.in

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 : 3726
- 10 Date of Sampling : 14.09.2024
- 11 Sample Received : 14.09.2024
- 12 Date of Analysis : 14.09.2024
- 13 Date of Analysis Completion : 20.09.2024
- 14 Report Issue Date : 01.10.2024
15. Report Number : GEMS/WATER/2024-2025/2242

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 : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation


Analysed By
Priyanka B M
Chemist


Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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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/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	: 3727
10	Date of Sampling	: 14.09.2024
11	Sample Received	: 14.09.2024
12	Date of Analysis	: 14.09.2024
13	Date of Analysis Completion	: 20.09.2024
14	Report Issue Date	: 01.10.2024
15	Report Number	: ULR-TC5323240000002243F

Results

Sl. No	Parameters	Protocol	Unit	Galemmana Gudi Village (GW3)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.94	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	2400	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1440	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.3	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	215.8	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	357.0	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	144.48	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	52.39	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	576.8	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	378.01	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	1.41	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	16.52	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	429.0	200	600

Note:

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17.	Acidity as CaCO ₃	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	0.19	0.30	NR
19.	Nickel as Ni	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	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.****Analysed By**
Priyanka B M
Chemist
Authorised Signatory
K. Ramakrishna Reddy
Technical Manager**Note:**

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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.
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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/RO18
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	: 3727
10	Date of Sampling	: 14.09.2024
11	Sample Received	: 14.09.2024
12	Date of Analysis	: 14.09.2024
13	Date of Analysis Completion	: 20.09.2024
14	Report Issue Date	: 01.10.2024
15	Report Number	: GEMS/WATER/2024-2025/2243

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 : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

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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/R018 - 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	: 3725
10	Date of Sampling	: 14.09.2024
11	Sample Received	: 14.09.2024
12	Date of Analysis	: 14.09.2024
13	Date of Analysis Completion	: 20.09.2024
14	Report Issue Date	: 01.10.2024
15	Report Number	: ULR-TC532324000002241F

Results

Sl. No	Parameters	Protocol	Unit	Mariyammana Halli Village (GW4)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	8.00	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	1600	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	960	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.2	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	201.36	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	255.9	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	78.43	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	32.44	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	329.6	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	133.98	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.71	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	14.56	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	352.0	200	600

Note:

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ANNEXURE-44

17.	Acidity as CaCO ₃	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	0.12	0.30	NR
19.	Nickel as Ni	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	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: GW4: Mariyammanahalli Village. NR-No relaxation**INFERENCE****As per Standards IS: 10500:2012****Report Status: - Measured Values for the above parameters are within the limit.**

P. B. M.
Analysed By
Priyanka B M
Chemist

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

**Note:**

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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/RO18
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	:	3725
10	Date of Sampling	:	14.09.2024
11	Sample Received	:	14.09.2024
12	Date of Analysis	:	14.09.2024
13	Date of Analysis Completion	:	20.09.2024
14	Report Issue Date	:	01.10.2024
15	Report Number	:	GEMS/WATER/2024-2025/2241

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 : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

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 - 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	: 3728
10	Date of Sampling	: 14.09.2024
11	Sample Received	: 14.09.2024
12	Date of Analysis	: 14.09.2024
13	Date of Analysis Completion	: 20.09.2024
14	Report Issue Date	: 01.10.2024
15	Report Number	: ULR-TC532324000002244F

Results

Sl. No	Parameters	Protocol	Unit	Gunda Thanda (GW5)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.97	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	830	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	498	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.3	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	45.16	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	115.75	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	78.43	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	4.91	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	216.3	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	66.99	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	1.12	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	5.69	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	264.0	200	600

Note:

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ANNEXURE-45

17.	Acidity as CaCO ₃	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	0.10	0.30	NR
19.	Nickel as Ni	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	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	0.220	0.05	1.50
22.	Zinc as Zn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.109	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: 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.**

Priyanka B M
Analysed By
Priyanka B M
Chemist

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

**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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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
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	: 3728
10	Date of Sampling	: 14.09.2024
11	Sample Received	: 14.09.2024
12	Date of Analysis	: 14.09.2024
13	Date of Analysis Completion	: 20.09.2024
14	Report Issue Date	: 01.10.2024
15	Report Number	: GEMS/WATER/2024-2025/2244

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 : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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



GLOBAL ENVIRONMENT & MINING SERVICES

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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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/R018 - 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	: 3729
10	Date of Sampling	: 14.09.2024
11	Sample Received	: 14.09.2024
12	Date of Analysis	: 14.09.2024
13	Date of Analysis Completion	: 20.09.2024
14	Report Issue Date	: 01.10.2024
15	Report Number	: ULR-TC532324000002245F

Results

Sl. No	Parameters	Protocol	Unit	G. Naglapura (GW6)	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H ⁺ B (Pg. No.4-95 to 4-99)	-	7.61	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	2350	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1410	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.4	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	152.63	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	471.3	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.0	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	103.2	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	67.45	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	535.6	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	306.24	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	1.39	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	10.56	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	462.0	200	600

Note:

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17.	Acidity as CaCO ₃	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	<0.02	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	0.175	0.05	1.50
22.	Zinc as Zn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.099	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.**

Priyanka B M
Analysed By
Priyanka B M
Chemist

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

**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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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/RO18
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	: 3729
10	Date of Sampling	: 14.09.2024
11	Sample Received	: 14.09.2024
12	Date of Analysis	: 14.09.2024
13	Date of Analysis Completion	: 20.09.2024
14	Report Issue Date	: 01.10.2024
15	Report Number	: GEMS/WATER/2024-2025/2245

Results

Sl. No	Parameters	Protocol	Unit	G.Nagalapura (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 : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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TC-5323

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

Analysis Report of Water Quality Data

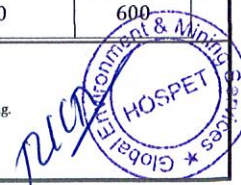
1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY24/R018 - 450000125
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: RO Drinking Water
9	Sample Code	: 3730
10	Date of Sampling	: 14.09.2024
11	Sample Received	: 14.09.2024
12	Date of Analysis	: 14.09.2024
13	Date of Analysis Completion	: 20.09.2024
14	Report Issue Date	: 01.10.2024
15	Report Number	: ULR-TC532324000002246F

Results

Sl. No	Parameters	Protocol	Unit	RO Drinking Water	Standards as per IS: 10500:2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.56	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	150	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	90	500	2000
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.0	1	5
5.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	<1.0	-	-
6.	Sulphate as SO ₄	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	12.16	200	400
7.	Phosphorus as P	APHA 23 rd Edition 2017 4500-P D (Page No. 4-163 to 4-164)	mg/L	Nil	-	-
8.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg. No.3-99 to 3-100)	mg/L	12.73	-	-
9.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-89 to 3-90)	mg/L	0.00	-	-
10.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg. No.3-69 to 3-70)	mg/L	8.25	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	7.50	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	51.5	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	19.14	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.00	1	1.5
15.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	3.26	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	44.0	200	600

Note:

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TC-5323

ANNEXURE-47

17.	Acidity as CaCO ₃	APHA 22 nd Edition 2017 2320 B (Pg. No.2-34 to 2-36)	mg/L	Nil	-	-
18.	Total Iron as Fe	APHA 23 rd Edition 2017 3500 Fe-B. (Pg. No.3-80 to 3-82)	mg/L	0.08	0.30	NR
19.	Nickel as Ni	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.02	0.02	NR
20.	Manganese as Mn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	0.10	0.30
21.	Copper as Cu	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	5	15
23.	Lead as Pb	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	0.01	NR
24.	Arsenic as As	APHA 23 rd 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 rd 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 rd 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.**

Priyanka B M
Analysed By
Priyanka B M
Chemist

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

Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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.
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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/RO18
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	:	3730
10	Date of Sampling	:	14.09.2024
11	Sample Received	:	14.09.2024
12	Date of Analysis	:	14.09.2024
13	Date of Analysis Completion	:	20.09.2024
14	Report Issue Date	:	01.10.2024
15	Report Number	:	GEMS/RO/2024-2025/2246

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 rd Edition 3114 B. Direct Air Acetylene Flame Method	mg/L	BDL	0.01	No Relaxation
7.	Cyanides (as CN)	APHA 23 rd 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 rd Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	0.2	1.0
10.	Boron as B	APHA 23 rd Edition 2017 4500 B-B (p.no.4-25 to 4-26)	mg/L	BDL	0.5	1.0
11.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Absent	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation,

P. K. K.
Analysed By
K. K. K.
Chemist

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



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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	:	14.09.2024
10	Sample Received	:	14.09.2024
11	Date of Analysis	:	14.09.2024
12	Date of Analysis Completion	:	20.09.2024
13	Report Issue Date	:	01.10.2024
14	Report Number	:	ULR-TC532324000002226F

Sl. No.	Parameters	Protocol	Unit	Results			As per KSPCB Std
				STP 45 KLD	STP-1 90 KLD	STP-2 90 KLD	
		Sample code	-	3710	3711	3712	
1.	pH	APHA 23 rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.93	7.67	7.35	6.5 to 8.5
2.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	8.0	12.0	10.0	<20
3.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	4.0	6.0	2.0	<10
4.	Chemical Oxygen Demand as COD	APHA 23 rd Edition 2017 5220 C (Pg. No.5-18 to 5-19)	mg/L	22.88	37.44	16.64	<50
5.	Oil & Grease	APHA 23 rd Edition 2017 5520 B (Pg. No.5-41 to 5-42)	mg/L	4.0	8.0	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

Priyanka B M
Analysed By
Priyanka B M
Chemist

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

Note:

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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	: Sewage Treatment Plant (Outlet)
9	Date of Sampling	: 14.09.2024
10	Sample Received	: 14.09.2024
11	Date of Analysis	: 14.09.2024
12	Date of Analysis Completion	: 20.09.2024
13	Report Issue Date	: 01.10.2024
14	Report Number	: GEMS/RO/2024-2025/2226


Sl. No.	Parameters	Protocol	Unit	Results			As per KSPCB Std
				STP 45 KLD	STP-1 90 KLD	STP-2 90 KLD	
		Sample code	-	3710	3711	3712	
1.	Color	APHA 23 RD 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	-	Agreeable	Agreeable	Agreeable	-
3.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL	BDL	-
4.	Phenolic Compounds (as C ₆ H ₅ OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	BDL	-
5.	Chromium (as Cr ⁶⁺)	APHA-23 RD 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	2.80	0.14	5
7.	Total Nitrogen as N	IS:3025 (part 34)-1988, RA-2023	mg/L	6.12	8.14	4.38	10
8.	Fecal coliform	APHA-23 RD Edition-9221 E (Pg. No.9-77 to 9-78)	CFU/100ml	18	22	14	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


Analysed By
Priyanka B M
Chemist


Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



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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/R018 - 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	: Waste Water
9	Date of Sampling	: 14.09.2024
10	Sample Received	: 14.09.2024
11	Date of Analysis	: 14.09.2024
12	Date of Analysis Completion	: 20.09.2024
13	Report Issue Date	: 01.10.2024
14	Report Number	: ULR-TC532324000002247F

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		
				3731	3732	
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	8.30	8.22	6.5 to 9.0
2.	Total Suspended Solids	APHA 23rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	14.0	10.0	100
3.	Chemical Oxygen Demand as COD	APHA 23rd Edition 2017 5220 C (Pg. No.5-18 to 5-19)	mg/L	63.12	42.08	250
4.	Oil & Grease	APHA 23rd Edition 2017 5520 B (Pg. No.5-41 to 5-42)	mg/L	6.0	2.0	10

Note: BDL-Below detectable Limit.

INFERENCE: The Measured values are within the Limit.

Analysed By
Priyanka B M
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager



Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
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ANNEXURE-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 : 14.09.2024
- 10 Sample Received : 14.09.2024
- 11 Date of Analysis : 14.09.2024
- 12 Date of Analysis Completion : 20.09.2024
- 13 Report Issue Date : **01.10.2024**
- 14 Report Number : **GEMS/SW/2024-2025/2249**

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				Danayakanakere Upstream	Danayakanakere Downstream	
Sample code				3733	3734	
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.61	7.57	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 RD Edition 4500F- D (Pg. No.4-90 to 4-91)	mg/L	0.85	0.69	1.5
4.	Arsenic as As	APHA-23 RD Edition-3114 -B (Pg. No.3 -36 to 3-40)	mg/L	<0.1	<0.1	0.2
5.	Dissolved Oxygen	APHA 23 RD Edition 4500 C (Pg. No.4-146)	mg/L	5.5	5.6	>5.0
6.	Color	APHA 23 RD Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	15	15	300
7.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL	0.05
8.	Phenolic Compounds (as C ₆ H ₅ OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	0.005
9.	Chromium (as Cr ⁶⁺)	APHA-23 RD 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 RD Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	BDL	1.0
11.	Total Coliform Organisms					
	Total Coli forms	IS : 15185 : 2016	MPN/ 100 ml	Absent	Absent	500
	Escherichia coli or E. coli	IS : 15185 : 2016	MPN/ 100 ml	Absent	Absent	-


Analysed By
 Priyanka B M
 Chemist


Authorised Signatory
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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/RO18
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Pollution & Environment
- 8 Sample Type : **Surface Water**
- 9 Date of Sampling : 14.09.2024
- 10 Sample Received : 14.09.2024
- 11 Date of Analysis : 14.09.2024
- 12 Date of Analysis Completion : 20.09.2024
- 13 Report Issue Date : 01.10.2024
- 14 Report Number : GEMS/SW/2024-2025/2251

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				KempuHalla Upstream	KempuHalla Downstream	
Sample code				3735	3736	
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	8.23	8.33	6.5-8.5
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	2.0	4.0	3.0
3.	Fluorides as F	APHA 23 RD Edition 4500F- D (Pg. No.4-90 to 4-91)	mg/L	1.37	1.03	1.5
4.	Arsenic as As	APHA-23 RD Edition-3114 -B (Pg. No.3 -36 to 3-40)	mg/L	<0.1	<0.1	0.2
5.	Dissolved Oxygen	APHA 23 RD Edition 4500 C (Pg. No.4-146)	mg/L	6.2	5.6	>5.0
6.	Color	APHA 23 RD Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	15	15	300
7.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN- (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL	0.05
8.	Phenolic Compounds (as C ₆ H ₅ OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	0.005
9.	Chromium (as Cr ⁶⁺)	APHA-23 RD 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 RD Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	BDL	1.0
11.	Total Coliform Organisms,					
	Total Coli forms	IS : 15185 : 2016	MPN/ 100 ml	Absent	Absent	500
	Escherichia coli or E. coli	IS : 15185 : 2016	MPN/ 100 ml	Absent	Absent	-

Priyanka B M
Analysed By
Priyanka B M
Chemist

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

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ANNEXURE-52

GEMS-LD/TF/23/01

Analysis Report of Surface Water Quality Data

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY24/RO18
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical/Biological
- 7 Group : Pollution & Environment
- 8 Sample Type : **Surface Water**
- 9 Date of Sampling : 14.09.2024
- 10 Sample Received : 14.09.2024
- 11 Date of Analysis : 14.09.2024
- 12 Date of Analysis Completion : 20.09.2024
- 13 Report Issue Date : **01.10.2024**
- 14 Report Number : **GEMS/SW/2024-2025/2253**

Sl. No.	Parameters	Protocol	Unit	Results	IS 2296 -1982 CLASS -B
				Tungabhadra dam	
Sample Code				3737	
1.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.97	6.5-8.5
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	2.0	3.0
3.	Fluorides as F	APHA 23 RD Edition 4500F· D (Pg. No.4-90 to 4-91)	mg/L	0.57	1.5
4.	Arsenic as As	APHA-23 RD Edition-3114 –B (Pg. No.3 -36 to 3-40)	mg/L	BDL	0.2
5.	Dissolved Oxygen	APHA 23 RD Edition 4500 C (Pg. No.4-146)	mg/L	6.9	>5.0
6.	Color	APHA 23 RD Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	5	300
7.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN· (Pg. No.4-45 to 4-46)	mg/L	BDL	0.05
8.	Phenolic Compounds (as C ₆ H ₅ OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	0.005
9.	Chromium (as Cr ⁶⁺)	APHA-23 RD Edition-3500 Cr B (Pg. No.3-71 to 3-72)	mg/L	BDL	1.0
10.	Anionic detergents (as MBAS)	APHA 23 RD Edition 5540 C (Pg. No.5-55 to 5-57)	mg/L	BDL	1.0
11	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	138	-
12	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	6.0	-
13.	Total Coliform Organisms,				
	Total Coli forms	IS : 15185 : 2016	MPN/ 100 ml	Absent	500
	Escherichia coli or E. coli	IS : 15185 : 2016	MPN/ 100 ml	Absent	-

Note: BDL-Below detectable Limit

INFERENCE: The measured values are within the Limit.

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Analysed By
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Chemist

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