



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

NOVEMBER - 2023

Prepared by





GLOBAL ENVIRONMENT & MINING SERVICES NABL & MOEFCC Recognized Laboratory

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PREFACE

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

As part of the conditions and inherent concern on health of the employees and surroundings **M/s. BMM Ispat Ltd.**, as appointed **M/s. Global Environment & Mining Services, Hosapete**, to carry out the environmental pollution monitoring on AAQ Monitoring, Fugitive monitoring, Noise Monitoring, Water Analysis & Stack monitoring 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, Noise Monitoring, Water Analysis & Stack monitoring 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: 07.12.2023

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.

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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 <u>Site Location</u>

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

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

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

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

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

1.4 The report includes environmental monitoring data collected at above site for the

month of **NOVEMBER-2023**. The Parameters monitored are:

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

2.0 SCOPE AND METHODOLOGY

2.1 <u>PREAMBLE</u>

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 2.5μ m) PM2.5.

2.2.1 PARTICULATE MATTER (PM<u>10)</u>(size less than 10μm).

<u>Purpose</u>

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.

<u>Analysis</u>

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 20-30° C and 40-50% relative humidity 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<u>2.5)</u>(size less than 2.5μm)

Purpose

The purpose of this protocol is to provide guidelines for monitoring and analysis of Particulate Matter PM2.5 in ambient air.

<u>Reference Method:</u> USEPA 2001 Method of Measurement of Air Pollution: Particulate Matter (PM2.5) 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 PM2.5 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 PM2.5 size ranges divided by the actual volume of air sampled, and is expressed in μ g/m3. The microprocessor reads averages and stores five-minute averages of ambient temperature, ambient pressure, filter temperature and volumetric flow rate. In

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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 <u>Sulphur Dioxide (SO2)</u>

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

<u>Reference Method:</u> 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.

<u>Analysis</u>

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 <u>Nitrogen Di Oxide (NO₂):</u>

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 di-hydrochloride (NEDA) and measuring the absorbance of the highly coloured azo-dye at 540 nm.

2.2.5 <u>Ozone (Chemical method)</u>

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.

<u>Analysis</u>

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<u>(NH₃)</u>

<u>Purpose</u>

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

<u>Analysis</u>

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 <u>Benzo(a)Pyrene</u>

<u>Purpose</u>

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 \sim 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.

<u>Filtration</u>

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

Sample injection

Take 2μ l 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 <u>Benzene</u>

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 (FI D) is used for analysis while quantification is performed using the internal/external standard.

Gas Chromatograph

Any suitable gas chromatograph with flame ionization detector (FlO) with fused silica capillary columns having a length of25 m or more, an internal diameter of 320 11m or below and with a stationary phase film thickness less than 1.5 11m 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 <u>Carbon Monoxide (CO)</u>

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 Pis 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)

<u>Purpose</u>

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 <u>Stack Monitoring</u>

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 <u>Stack Emissions Monitoring Methodology</u>

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 <u>Traverse Point Calculation</u>

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 <u>BUFFERZONE AMBIENT AIR QUALITY STATUS</u> Danapur Village (A1)

At this location, average of PM10, PM2.5, SO2, NO2 values Average 73.47., 23.06, $10.61 \& 11.88 \mu g/m3$ 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 67.06, 16.87, 9.06 & $10.45 \ \mu g/m3$ 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 74.99, 19.34, 8.66 & 10.41 μ g/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 66.00, 19.27, 7.83 & 9.90 μ g/m3 respectively. All above the values were found within the Limits. Results given in **Annexure-4**.

Gunda Village (A5)

At this location, average of PM10, PM2.5, SO2, NO2 values Average 58.05, 18.26, 7.23 & 9.28 μ g/m3respectively. 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 65.81, 16.16, 7.47 &9.50 μ g/m3respectively. All above the values were found within the Limits. Results given in **Annexure-6**.

5.1 <u>FUGITIVE DUST CONCENTRATION</u>

Fortnightly fugitive air quality was monitored all plant area SPM value minimum 122.85 μ g/m³, maximum value 1964.17 μ g/m³ and average value 845.02 μ g/m³. 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/Nm³) 1st and 2ndFortnight Minimum Value 5.82 mg/Nm³, Maximum Value 42.46 mg/Nm³ & Average Value 26.84 mg/Nm³. 1st & 2nd Fortnight Results are given in **Annexure-11** to **Annexure-37**.

5.3 AMBIENT 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 / SL-4023) The Day & Night time noise level values were ranging between 45.6 to 74.8 dB (A) and 41.6 to 68.2 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 <u>CONCLUSION</u>

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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: www.globalmining.in

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

WO/ADMIN/FY24/RO18

Name of the Industry **Customer Reference** Sample collected by Discipline Group Sample Type Particulars of Sample Collected Month Location Duration of Monitoring

Website

- **Atmospheric Pollution** Ambient Air Quality Monitoring : :
- **Respirable Dust Sampler, FPS Sampler**

Global Environment & Mining Services

BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.

NOVEMBER - 2023 :

Chemical

- **A1-Danapur Village**
- 24 Hour . 06.12.2023 :

Report Issued Date Report Number

ULR-TC532323000001326F

RESULTS

	Parameters			10 n³]	РМ [µg/	m ³]	ՏՕ [µg/	m ³]	N([µg/	m ³]
Reference Method		IS:5182: 2006 USEPA 2001 (Part-23) Gravimetric (RF-2017) Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)				
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
06.11.2023	07.11.2023	3674	78.29		23.10		11.59		12.13	
07.11.2023	08.11.2023	3711	86.74		24.72		7.97		8.83	
14.11.2023	15.11.2023	3840	61.49		22.13		11.27	-	13.43	
18.11.2023	19.11.2023	3924	80.63		23.77		10.42		10.13	
20.11.2023	21.11.2023	3933	70.35	100	20.20	60	9.14	80	14.25	80
21.11.2023	22.11.2023	3946	65.43		26.29		9.57		9.54	
25.11.2023	26.11.2023	4018	69.10		21.13		11.59		15.43	
27.11.2023	28.11.2023	4038	75.72		23.11		13.29		11.31	
	Average		73.47		23.06		10.61		11.88	

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 06.03.2023						
4	Calibration Date	08.07.2023							
5 Calibration Due Date		24.07.2024	05.03.2024						

INFERENCE

Note

1.

4. 5.

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



Authorised Signatory K. Ramakrishna Reddy Technical Manager

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

The result listed refers only to the tested samples & applicable parameters, Endorsement of products is herder intervention 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 Described to Course works of Monthan Laboratory and the Course of the Course of the Course of the Monthan Con Coll Coll Science of the Course of the Course of the Course of the Monthan Con Coll Coll Science of the Course of the Course of the Coll Science of the Course 2. 3.



(Consulting Engineers, Mine designers, Geologist & Surveyors) 3rd Main Road, Basaveswara Badavane, **HOSAPETE – 583201**, Dist., Vijayanagara (Karnataka) Ph : 08394 355369 e-mail : gems_hpt@yahoo.com Website: www.globalmining.in

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. Name of the Industry **Customer Reference** WO/ADMIN/FY24/R018 **Global Environment & Mining Services** Sample collected by Discipline Chemical : Group **Atmospheric Pollution** : Sample Type Ambient Air Quality Monitoring Particulars of Sample Collected **CO** Analyser . Month **NOVEMBER - 2023** : **A1-Danapur Village** Location : **Duration of Monitoring** 1 Hour : **Report Issued Date** : 06.12.2023

RESULTS

SI. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m³]	Standard
1	06.11.2023	3674	0.14	
2	07.11.2023	3711	0.11	
3	14.11.2023	3840	0.18	
4	18.11.2023	3924	0.10	4.0
5	20.11.2023	3933	0.13	4.0
6	21.11.2023	3946	0.15	
7	25.11.2023	4018	0.11	
8	27.11.2023	4038	0.13	

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour) ND - Not Detected

SL NO	INSTRUMENT DETAILS					
1	Instrument Name	CO Gas Detector				
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CO				
3	Serial No	180883821				
4	Calibration Date	08.07.2023				
5	Calibration Due Date	07.07.2024				

INFERENCE As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit	
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Analysed By T.R.Pooja Chemist

Authorised Signatory K. Ramakrishna Reddy Technical Manager

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



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: www.globalmining.in

Website



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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry **Customer Reference** Sample collected by Discipline Group Sample Type Particulars of Sample Collected Month Location **Duration of Monitoring Report Issued Date**

Report Number

BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.

- WO/ADMIN/FY24/RO18 5
- **Global Environment & Mining Services**
- Chemical
- **Atmospheric Pollution** :
- Ambient Air Quality Monitoring
- **Respirable Dust Sampler, FPS Sampler**
- **NOVEMBER 2023** :
- A2-Mariyammanahalli Village •
- 24 Hour :
- 06.12.2023 :
- ULR-TC532323000001293F :

RESULTS

Parameters			PM₁ [μg/r			/1 _{2.5} /m ³]	SC [µg/		Ν([μg/	-
Reference Method		IS:5182: 2006 (Part-23) (RF-2017) USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)				
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.11.2023	04.11.2023	3620	65.05		15.23		9.78	80	10.95	80
04.11.2023	05.11.2023	3643	56.51		13.27		6.38 10.63		8.36	
09.11.2023	10.11.2023	3763	51.80		18.19				10.84	
10.11.2023	11.11.2023	3803	69.27		18.96		8.08		12.37	
16.11.2023	17.11.2023	3883	60.26	100	14.22	60	10.31		10.13	
17.11.2023	18.11.2023	3907	86.87		22.44		7.23		8.25	
23.11.2023	24.11.2023	3983	77.85]	12.65		11.27		13.43	
24.11.2023	25.11.2023	4000	68.89]	19.96		8.82		9.30	
	Average		67.06		16.87		9.06		10.45	

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	15.05.2023	06.03.2023						
5	Calibration Due Date	14.05.2024	05.03.2024						

INFERENCE

Note: 1. 2.

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4. 5.

As per NAAQMS Standards (2009),

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

T.R.Pooi Chemist

Authorised Signatory

K. Ramakrishna Reddy **Technical Manager**

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

Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard. This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only Recognised by Ministry of Environment, Forest and Climate Change for Laboratory



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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

- Name of the Industry **Customer Reference** Sample collected by Discipline Group Sample Type Particulars of Sample Collected Month Location **Duration of Monitoring Report Issued Date**
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. :
- WO/ADMIN/FY24/R018 ;
- **Global Environment & Mining Services** :
- Chemical :
- **Atmospheric Pollution**
- Ambient Air Quality Monitoring :
- **CO** Analyser :
- NOVEMBER-2023 :
- : A2-Mariyammanahalli Village
- 1 Hour : 06.12.2023

:

RESULTS

SI. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	03.11.2023	3620	0.10	
2	04.11.2023	3643	0.13	
3	09.11.2023	3763	0.10	-
4	10.11.2023	3803	0.15	-
5	16.11.2023	3883	0.20	4.0
6	17.11.2023	3907	0.16	-
7	23.11.2023	3983	0.14	-
8	24.11.2023	4000	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-70-70-00					
3	Serial No	180883821					
4	Calibration Date	08.07.2023					
5 Calibration Due Date		07.07.2024					

As per NAAQMS Standards (2009),

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

T.R.Poda Chemist

INFERENCE

Authorised Signatory K. Ramakrishna Reddy

Technical Manager

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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/RO18
Sample collected by	: Global Environment & Mining Services
Discipline	: Chemical
Group	: Atmospheric Pollution
Sample Type	: Ambient Air Quality Monitoring
Particulars of Sample Collected	: Respirable Dust Sampler, FPS Sampler
Month	: NOVEMBER - 2023
Location	: A3-Hanumanahalli Village
Duration of Monitoring	: 24 Hour
Report Issued Date	: 06.12.2023
Report Number	: ULR-TC532323000001290F

RESULTS

Parameters			PM [μg/1		РМ: [µg/1		SO [μg/1	-	ΝC [μg/	-
Reference Method		e IS:5182: 2006 USEPA 200 (Part-23) Gravimetri		netric	IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)			
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.11.2023	04.11.2023	3617	64.46		17.14		8.82		11.66	80
04.11.2023	05.11.2023	3640	69.40		15.73		7.23		8.60	
09.11.2023	10.11.2023	3762	70.66		18.44	1	11.37	11.37 9.14 6.48 8.61	12.49	
10.11.2023	11.11.2023	3802	68.97		23.43		9.14		11.31	
20.11.2023	21.11.2023	3932	77.79	100	22.00	60	6.48		8.72	
21.11.2023	22.11.2023	3945	89.23		19.59]	8.61		9.78	
23.11.2023	24.11.2023	3982	78.90	1	18.12	1	7.97	1	9.84	
24.11.2023	25.11.2023	3999	80.52]	20.24	1	9.67	1	10.84	
	Average		74.99		19.34	1	8.66	1	10.41	

SL NO		INSTRUMENT DETAILS	
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
3	Serial No	R.D.S. / 197-C-21	PM2.5 /PM10 Sampler / 160-K-20
4	Calibration Date	08.07.2023	06.03.2023
5	Calibration Due Date	24.07.2024	05.03.2024

INFERENCE

Note:

1. 2.

3. 4. 5. 6.

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

Analysed T.R.Pooj Chemist

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

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

- Name of the Industry Customer Reference Sample collected by Discipline Group Sample Type Particulars of Sample Collected Month Location Duration of Monitoring Report Issued Date
- : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- : WO/ADMIN/FY24/RO18
- : Global Environment & Mining Services
- : Chemical
- : Atmospheric Pollution
- : Ambient Air Quality Monitoring
- : CO Analyser
- : NOVEMBER-2023
 - A3-Hanumanahalli Village
- : 1 Hour

:

: 06.12.2023

RESULTS

SI. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	03.11.2023	3617	0.12	
2	04.11.2023	3640	0.10	
3	09.11.2023	3762	0.16	-
4	10.11.2023	3802	0.15	
5	20.11.2023	3932	0.17	4.0
6	21.11.2023	3945	0.14	-
7	23.11.2023	3982	0.13	-
8	24.11.2023	3999	0.17	-

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour) ND - Not Detected

SL NO	SL NO INSTRUMENT DETAILS				
1	Instrument Name	CO Gas Detector			
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-C0			
3	Serial No	180883821			
4	Calibration Date	08.07.2023			
5	Calibration Due Date	07.07.2024			

As per NAAQMS Standards (2009),

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

Chemist

INFERENCE

Authorised Signatory K. Ramakrishna Reddy Technical Manager

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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	:	Respirable Dust Sampler, FPS Sampler
Month	:	NOVEMBER - 2023
Location	:	A4-Galemmanagudi Village
Duration of Monitoring	:	24 Hour
Report Issue Date	:	06.12.2023
Report Number	:	ULR-TC532323000001291F

RESULTS

	Parameters		РМ [µg/		РМ [µg/	l _{2.5} (m ³]		0 ₂ /m ³]	Ν [μg/	D ₂ 'm ³]
	Reference Method		IS:5182 (Part (RF-2	-23)	USEPA Gravimetr		(Pa	2: 2001 rt-2) 2017)	IS :5 (Part-6 (RF-2	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.11.2023	04.11.2023	3618	60.83		17.25		7.97		10.72	
04.11.2023	05.11.2023	3641	59.01		24.07		9.67		8.60	
09.11.2023	10.11.2023	3764	56.08		28.46		8.08		9.66	
10.11.2023	11.11.2023	3804	57.06		13.78		7.12		7.54	
16.11.2023	17.11.2023	3884	79.77	100	31.00	60	6.27	80	8.72	80
17.11.2023	18.11.2023	3908	76.81		16.30		8.93		9.46	
23.11.2023	24.11.2023	3984	80.83		13.04		8.29		10.12	
24.11.2023	25.11.2023	4001	57.62		10.28		6.27		10.54	
	Average		66.00		19.27		7.83		9.42	

	INSTRUMENT DETAILS	
Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133
Serial No	R.D.S./198-C-21	PM2.5 /PM10 Sampler / 158-K-20
Calibration Date	08.07.2023	06.03.2023
Calibration Due Date	07.07.2024	05.03.2024
	Make & Model Serial No Calibration Date	Instrument NameRespirable Dust Sampler (RDS)Make & ModelEnviro instruments / EI-142 NLSerial NoR.D.S./198-C-21Calibration Date08.07.2023

INFERENCE

1. 2. 3. 4. 5. 6.

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



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

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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-04 GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

- Name of the Industry **Customer Reference** Sample collected by Discipline Group Sample Type Particulars of Sample Collected Month Location **Duration of Monitoring Report Issued Date**
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. :
- WO/ADMIN/FY24/R018 :
- **Global Environment & Mining Services** 5
- Chemical :
- Atmospheric Pollution :
- Ambient Air Quality Monitoring ÷
- **CO** Analyser 5
 - **NOVEMBER-2023** 3
 - A4-Galemmanagudi Village ÷
- 1 Hour 06.12.2023 ÷

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RESULTS

SI. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m³]	Standard
1	03.11.2023	3618	0.12	
2	04.11.2023	3641	0.10	
3	09.11.2023	3764	0.14	
4	10.11.2023	3804	0.13	4.0
5	16.11.2023	3884	0.11	4.0
6	17.11.2023	3908	0.15	
7	23.11.2023	3984	0.18	
8	24.11.2023	4001	0.17	

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour) ND - Not Detected

SL NO	INST	RUMENT DETAILS
1	Instrument Name	CO Gas Detector
2	Make & Model	Vasthi Instruments Pvt Ltd & VS-70-70-CC
3	Serial No	180883821
4	Calibration Date	08.07.2023
5	Calibration Due Date	07.07.2024

INFERENCE

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

Chemist

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

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



GLOBALENVIRONMENT & MINING SERVICES (Consulting Engineers, Mine designers, Geologist & Surveyors)

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	: WO/ADMIN/FY24/RO18
Sample collected by	: Global Environment & Mining Services
Discipline	: Chemical
Group	: Atmospheric Pollution
Sample Type	: Ambient Air Quality Monitoring
Particulars of Sample Collected	: Respirable Dust Sampler, FPS Sampler
Month	: NOVEMBER - 2023
Location	: A5-Gunda Village
Duration of Monitoring	: 24 Hour
Report Issue Date	: 06.12.2023
Report Number	: ULR-TC532323000001325F
	DECIT

	Parameters		PM1 [µg/m		PM: [µg/		SO2 [μg/n		NC [µg/)2 m31
	Reference Method		IS:5182: (Part-2 (RF-20	2006 23)	USEPA Gravimetr	2001	IS:5182: (Part (RF-20	2001 -2)	IF8/ IS :5 (Part-6 (RF-2	182:) 2006
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
06.11.2023	07.11.2023	3673	43.27		16.28		9.99		10.25	
07.11.2023	08.11.2023	3710	57.02		20.73		6.38		8.83	
09.11.2023	10.11.2023	3765	61.92		16.06		7.55		10.95	
10.11.2023	11.11.2023	3805	55.65		14.57		5.42		8.01	
16.11.2023	17.11.2023	3846	85.25	100	25.91	60	6.59	80	9.54	80
17.11.2023	18.11.2023	3909	70.56		28.96		5.95		8.72	
23.11.2023	24.11.2023	3985	42.66		9.23		5.43		7.77	
24.11.2023	25.11.2023	4002	48.10]	14.32		10.52		10.13	
	Average		58.05		18.26		7.23		9.28	

L 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	Serial No R.D.S. / 198-C-21				
4	Calibration Date	08.07.2023	06.03.2023			
5	Calibration Due Date	24.07.2024	05.03.2024			

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



Note

1. 2.

3. 4. 5, 6.

enta U U HOSPET -Authorised Signatory K. Ramakrishna Reddy **Technical Manager**

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-05 GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry **Customer Reference** Sample collected by Discipline Group Sample Type Particulars of Sample Collected Month Location **Duration of Monitoring Report Issued Date**

- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. •
- WO/ADMIN/FY24/RO18 :
 - **Global Environment & Mining Services** :
 - Chemical :
 - **Atmospheric Pollution** :
 - Ambient Air Quality Monitoring
- **CO** Analyser
 - **NOVEMBER-2023**
- **A5-Gunda Village** :
- 1 Hour :
- 06.12.2023 :

RESULTS

SI. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m³]	Standard
1	06.11.2023	3673	< 0.01	
2	07.11.2023	3710	< 0.01	
3	09.11.2023	3765	< 0.01	
4	10.11.2023	3805	< 0.01	4.0
5	16.11.2023	3846	< 0.01	4.0
6	17.11.2023	3909	< 0.01	
7	23.11.2023	3985	< 0.01	
8	24.11.2023	4002	< 0.01	

Note: CO - GEMS/SOP/86/as per CO Analyzer Manual (1 Hour) ND - Not Detected

SL NO	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	08.07.2023					
5	Calibration Due Date	07.07.2024					

As per NAAQMS Standards (2009),

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

Chemis

ent HOSPE Authorised Signatory

K. Ramakrishna Reddy **Technical Manager**

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



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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry **Customer Reference** Sample collected by Discipline Group Sample Type Particulars of Sample Collected Month Location **Duration of Monitoring Report Issue Date**

Report Number

- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
 - : WO/ADMIN/FY24/RO18
 - **Global Environment & Mining Services** :
- Chemical :
- **Atmospheric Pollution**
- Ambient Air Quality Monitoring
- Respirable Dust Sampler, FPS Sampler :
- **NOVEMBER 2023** :
- A6-Gunda Tanda Village
- 24 Hour :

:

06.12.2023

ULR-TC532323000001292F :

RESULTS

	Parameters			10 m³]	PM; [μg/1		SO [µg/1		NC [µg/	-
Reference Method		IS:5182 (Part- (RF-20	-23)	USEPA Gravim Meth	etric	IS:5182: (Part (RF-20	-2)	IS :51 (Part-6) (RF-2)	2006	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
03.11.2023	04.11.2023	3619	63.83		15.43		8.92	· · · ·	10.13	
04.11.2023	05.11.2023	3642	52.73		12.42		7.33		9.19	
13.11.2023	14.11.2023	3839	58.93		15.53		8.82		11.43	
14.11.2023	15.11.2023	3842	67.65		14.86		5.00		7.66	
16.11.2023	17.11.2023	3885	73.78	100	13.56	60	8.29	80	10.72	80
17.11.2023	18.11.2023	3910	86.18		29.27		5.31		7.89	
27.11.2023	28.11.2023	4037	65.38		15.82		7.33		9.66	
28.11.2023	29.11.2023	4049	58.03		12.39		8.72		9.35	
	Average		65.81		16.16		7.47		9.50	

	INSTRUMENT DETAILS		
Instrument Name	Instrument Name Respirable Dust Sampler (RDS)		
Make & Model	Enviro instruments / EI-142 NL	Enviro instruments / EI-133	
Serial No	R.D.S./200-C-21	PM2.5 /PM10 Sampler / 160-K-20	
Calibration Date	08.07.2023	06.03.2023	
Calibration Due Date	ration Due Date 07.07.2024		
	Make & Model Serial No Calibration Date	Instrument NameRespirable Dust Sampler (RDS)Make & ModelEnviro instruments / EI-142 NLSerial NoR.D.S./200-C-21Calibration Date08.07.2023	

As per NAAQMS Standards (2009), INFERENCE

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



Note

1 2.

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ment HOSPE + 52 Authorised Signatory K. Ramakrishna Reddy

Technical Manager

- 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 be reporduced 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.
- 3. 4. 5.

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(Consulting Engineers, Mine designers, Geologist & Surveyors) 3rd Main Road, Basaveswara Badavane, HOSAPETE - 583201, Dist., Vijayanagara (Karnataka) :08394 355369 Ph e-mail : gems_hpt@yahoo.com Website: www.globalmining.in

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry **Customer Reference** Sample collected by Discipline Group Sample Type Particulars of Sample Collected Month Location **Duration of Monitoring Report Issued Date**

BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. 1

WO/ADMIN/FY24/R018 :

Global Environment & Mining Services :

Chemical 1

: Atmospheric Pollution

Ambient Air Quality Monitoring :

CO Analyser :

NOVEMBER-2023 1

A6-Gunda Tanda Village

1 Hour :

1

06.12.2023 :

RESULTS

SI. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m ³]	Standard
1	03.11.2023	3619	< 0.01	
2	04.11.2023	3642	< 0.01	
3	13.11.2023	3839	< 0.01	
4	14.11.2023	3842	< 0.01	4.0
5	16.11.2023	3885	< 0.01	4.0
6	17.11.2023	3910	< 0.01	
7	27.11.2023	4037	< 0.01	
8	28.11.2023	4049	<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	08.07.2023					
5	Calibration Due Date	07.07.2024					

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

.R.Pod Chemist

INFERENCE

ent HOSPE 19 Authorised Signatory -K. Ramakrishna Reddy **Technical Manager**

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

FORTNIGHTLY FUGITIVE AIR QUALITY MONITORING DATA

- 1 Name of the Industry . BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. 2 **Customer Reference** WO/ADMIN/FY24/R018 GLOBAL Environment & Mining Services, Hosapete 3 Sample collected by : Particulars of sample collected RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05) 4 : 5 Month
 - NOVEMBER-2023(1st Fort Night) :
 - Chemical :
- Discipline 6 Group 7
- 8 Method adopted
- 9 **Report Issued Date**
- 10 **Roport Number**
- : IS 5182 (Part 4): 1999 RA 2014 : 06.12.2023

: GEMS/BMM/FM/2023-24/1301

RESULTS

: Atmospheric Pollution

SI. No	b. Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM (µg/m³)	Standard
I. Ber	eficiation Plant-1			bumpie necespe	(µ8/ …)	
1.	Main Canteen	3705	07.11.2023	08.11.2023	194.49	2000
2.	Main Crusher	3703	07.11.2023	08.11.2023	226.30	2000
3.	Iron Ore Screen	3704	07.11.2023	08.11.2023	196.44	2000
II. Pe	llet Plant-I					
4.	Near Pellet Plant	3706	07.11.2023	08.11.2023	743.86	2000
5.	Annual Cooler Pellet Discharge bin	3729	08.11.2023	09.11.2023	542.96	2000
6.	Pellet Stock Yard	3752	09.11.2023	10.11.2023	834.77	2000
III. Sp	oonge Iron Division-1(kiln 1 & 2)					
7.	Control Room SID-1	3753	09.11.2023	10.11.2023	1039.83	2000
8.	Near Product bin	3754	09.11.2023	10.11.2023	152.67	2000
9.	Coal Feeding Area	3755	09.11.2023	10.11.2023	340.62	2000
IV. In	duction Furnace & Rolling Mill – 1					
10.	IF Office	3793	10.11.2023	11.11.2023	1787.53	2000
11.	TMT Stock Yard	3794	10.11.2023	11.11.2023	1204.62	2000
12.	RML Gasifier	3795	10.11.2023	11.11.2023	1921.17	2000
V. Por	wer Plant 25 MW-1					
13.	25 MW ESP	3796	10.11.2023	11.11.2023	237.10	2000
14.	25 MW ACC	3812	11.11.2023	12.11.2023	1335.20	2000
VI. Sit	e Services					
15.	PGP- coal handling system	3756	09.11.2023	10.11.2023	122.85	2000
16.	IF Slag Crusher	3797	10.11.2023	11.11.2023	185.88	2000
17.	Main Gate	3813	11.11.2023	12.11.2023	728.52	2000
18.	Fly ash Dump	3730	08.11.2023	09.11.2023	1537.12	2000
ote: SPM	I- Suspended Particulate matter. (μg/m³), INFEREN	CE: The Measured Values a	re within the limits.			
SL NO	INSTRUMENT DETAILS GEMS-01	GEMS-02	GEMS-03	GEMS-04	G	EMS-05

NO	INSTRUMENT DETAILS	GEMS-01	GEMS-02	GEMS-03	GEMS-04	GEMS-05
1	Instrument Name	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dust Respirable Du Sampler Sampler		Respirable Dust Sampler
2	Make & Model Greentech Instruments/ GTI-151 Greentech Instruments/ GTI-151 I		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	01.04.2023	01.04.2023	01.04.2023	01.04.2023	01.04.2023
5	Calibration Due Date	31.03.2024	31.03.2024	31.03.2024	31.03.2024	31.03.2024



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

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GLOBAL Environment & Mining Services, Hosapete

BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.

RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)

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

FORTNIGHTLY FUGITIVE AIR QUALITY MONITORING DATA

WO/ADMIN/FY24/R018

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- 1 Name of the Industry
- 2 Customer Reference
- 3 Sample collected by
- 4 Particulars of sample collected
- 5 Month
- 6 Discipline
- 7 Group
- 7 Group
- 8 Method adopted
- 9 Report Issued Date
- 10 Roport Number
- Poport Number
- GEMS/BMM/FM/2023-24/1347

IS 5182 (Part 4)1999 RA 2014

NOVEMBER-2023(2nd Fort Night)

RESULTS

Atmospheric Pollution

Chemical

06.12.2023

				100110				
SI. NO	. Locat	ion / Plant	Sample	Date Of	Date Of	SP		Standard
I Dave			Code	Monitoring	Sample Receipt	(µg/	(m ³)	Junuaru
	eficiation Plant-1					T		
1.	Main Canteen		3953	22.11.2023	23.11.2023	1068	8.02	2000
2.	Main Crusher		3951	22.11.2023	23.11.2023	655	.52	2000
3.	Iron Ore Screen		3952	22.11.2023	23.11.2023	378	.54	2000
II. Pel	let Plant-I							
4.	Near Pellet Plant		3954	22.11.2023	23.11.2023	1334	1.65	2000
5.	Annual Cooler Pe	ellet Discharge bin	3955	22.11.2023	23.11.2023	971	.76	2000
6.	Pellet Stock Yard	Pellet Stock Yard		23.11.2023	24.11.2023	1196		2000
III. Sp	onge Iron Division-	1(kiln 1 & 2)						
7.	Control Room SI	D-I	3992	23.11.2023	24.11.2023	203	.77	2000
8.	Near Product bin	1	3993	23.11.2023	24.11.2023	352	.31	2000
9.	Coal Feeding Are		3994	23.11.2023	24.11.2023	571	.76	2000
IV. Inc	luction Furnace & F	Rolling Mill						
10.	IF Office		3978	24.11.2023	25.11.2023	508	.40	2000
11.	TMT Stock Yard		3979	24.11.2023	25.11.2023	1581		2000
12.	RML Gasifier		3980	24.11.2023	25.11.2023	1872		2000
V. Pov	ver Plant 25 MW-1							
13.	25 MW ESP		3995	24.11.2023	25.11.2023	638	.05	2000
14.	25 MW ACC		4016	25.11.2023	26.11.2023	231		2000
VI. Site	e Services							2000
15.	PGP- Coal handlin	ng system	3981	23.11.2023	24.11.2023	465.	39	2000
16.	IF Slag Crusher		3996	24.11.2023	25.11.2023	1170		2000
17.	Main Gate		4017	25.11.2023	26.11.2023	511.		2000
18.	Fly ash Dump		3941	21.112023	22.11.2023	819.		2000
te: SPM	- Suspended Particulate ma	atter (µg/m³), INFERENCE	The Measured Values			0171		AI 0 0 0
CI	INSTRUMENT DETAILS	GEMS-01	GEMS-02	GEMS-03	GEMS-04	-	GEMS-	05
1	Instrument Name	Respirable Dust Sampler	Respirable Dust Sampler	Respirable Dus Sampler	st Respirable D Sampler		Respirable	

NO	INSTROMENT DETAILS	GEMI3-01	GEMS-02	GEMS-03	GEMS-04	GEMS-05
1	Instrument Name		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	01.04.2023	01.04.2023	01.04.2023	01.04.2023	01.04.2023
5	Calibration Due Date	31.03.2024	31.03.2024	31.03.2024	31.03.2024	nent 91493.2024

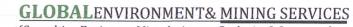
Analysed By T.R.Pooja Chemist

Authorised Signatory K. Ramakrishna Reddy Technical Manager

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ANNEXURE-09 GEMS-LD/TF/11/01

FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING

	1Name of the Industry:BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.2Customer Reference:WO/ADMIN/FY24/R0183Sample collected by:GLOBAL Environment & Mining Services4Particulars of sample collected:RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)5Month:NOVEMBER-2023(1st Fort Night)6Discipline:Chemical								
		ine	:						
	7 Group		:	Atmospheric Pollution					
		l adopted	:		(Part 4): 1999 RA 2	014			
	9 Report	Issued Date	:	06.12.2	023				
	10 Report	Number	:	GEMS/B	MM/FM/2023-24	/1287			
				RESU					
SI. N	io. L	ocation / Plant		Sample Code	Date Of Monitoring	Date Of Sample Receipt		SPM	Standard
I. Ber	neficiation Plant-II			Gout	Monitoring	Sample Receipt	[(μ	g/m³)	
1.		o Meter)		3608	02.11.2023	03.11.2023	7	56.71	2000
2.		Near Monsoon Shed)		3610	02.11.2023	03.11.2023		61.71	2000
3.	Concentrate Thick			3609	02.11.2023	03.11.2023	Concession and the second	32.43	2000
	llet Plant-I								
4.				3611	02.11.2023	03.11.2023	29	91.28	2000
5.				3612	02.11.2023	03.11.2023	60	03.91	2000
6.	Additive Grinding Building			3631	03.11.2023	04.11.2023	the second se	46.96	2000
	oonge Iron Division -2 (Kiln 1 & 2)							
7.				3632	03.11.2023	04.11.2023		15.24	2000
8.	Near Weigh bridge	(dispatch)		3633	03.11.2023	04.11.2023	89	97.30	2000
9.	Pellet Storage bin			3654	03.11.2023	04.11.2023			2000
10.				3634	03.11.2023	04.11.2023	1421.55		2000
11.				3635	04.11.2023	05.11.2023	187	73.291	2000
	oonge Iron Division -2 (
12.				3632	04.11.2023	05.11.2023	and strength is not strength in strength i	90.81	2000
13.				3657	04.11.2023	05.11.2023		43.30	2000
14.				3656	04.11.2023	05.11.2023			2000
15.	the second secon			3658	558 04.11.2023 05.11.2023 767.77			2000	
	igon Tipper/RMHS								
16.	11 01			3664	06.11.2023	07.11.2023		50.15	2000
17.				3665	06.11.2023	07.11.2023		4.71	2000
18.		te)		3666	06.11.2023	07.11.2023	46	7.14	2000
	wer Plant-70 MW								
19.	70MW-DM Plant (M			3667	06.11.2023	07.11.2023		5.17	2000
20.		ge Near Coal Screen		3702	07.11.2023	08.11.2023	The second s	4.35	2000
21.				3668	06.11.2023	07.11.2023	52	5.59	2000
	X70MW Power Plant			052.5					
22.	Near Boiler	1]		3726	08.11.2023	09.11.2023	the second se	06.82	2000
23.				3727	08.11.2023	09.11.2023	the second s	02.72	2000
24.	CPP Dolocher Proc		DENCE #	3728	08.11.2023	09.11.2023	13	8.22	2000
SL	M -Suspended Particulat INSTRUMENT DETAILS	GEMS-01		he Measured	GEMS-03	GEMS-04		GF	MS-05
<u>NO</u>	Instrument Name	Respirable Dust	Respir	able Dust	Respirable Dust	Respirable Dust		Respir	able Dust
		Sampler		mpler	Sampler	Sampler			mpler
2			entech nts/GTI-151	Greentech Instruments/GTI-151	Greentech Instruments/ GTI-:	151		entech	
3			3-DTL-2020	RDS / 244-DTL-2020	RDS / 193-DTH-20		Contra participation in the second	nts/GTI-151	
4							17	,	7-DTH-2019
5	Calibration Due Date	01.04.2023		4.2023 3.2024	01.04.2023 31.03.2024	01.04.2023 31.03.2024	_	01.	4.2023
	Analys T. P. Chen	ed By Doja	51.0		51.05.6024	Authorised S K. Ramakrish Technical M	ina Re	eddy 90	582024 15 0SPET 80 0 * 5801

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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	:			MS-02, GEMS-03,	GEMS-04, GE	MS-05)				
5	Month	:	NOVEMBER-2023(2 nd Fort Night)								
6	Discipline	:	: Chemical								
7	Group	:	Atmospher	ic Pollution							
8	Method adopted	:	IS 5182 (Pa	art 4): 1999 RA 2	2014						
9	Report Issued Date	:	06.12.202	23							
10	Report Number	: GEMS/BMM/FM/2023-24/1302									
			RESULT								
	Location / Plant		Sample	Date Of	Date Of	SPM	<i>a</i>				

and the owner wanted to be	and the state of the							
SI.	No.	Location / Plant		Sampl		Date Of	SPM	Standard
I. Beneficiation Plant-II		Code	Monitoring	Sample Receipt	(μg/m³)	Standard		
1. Ball Mill Area (Zero Meter)				0.054	46.44.0000			2000
		(Near Monsoon Shed)		3874 3876	<u> </u>	17.11.2023	547.55	2000
	3. Concentrate Thi			3875	16.11.2023	17.11.2023 17.11.2023	426.19 492.74	2000
II. F	Pellet Plant			5075	10.11.2025	17.11.2023	492.74	2000
	4. PR-6			3877	16.11.2023	17.11.2023	1303.85	2000
	5. Annual Cooler Pe	ellet Discharge bin		3878	16.11.2023	17.11.2023	758.74	2000
	6. Additive Grindin			3898	17.11.2023	18.11.2023	377.54	2000
	Sponge Iron Division -2	2 (Kiln 1 & 2)						
	7. Control room			3899	17.11.2023	18.11.2023	411.01	2000
	8. Near Weigh brid			3900	17.11.2023	18.11.2023	1250.35	2000
the second second second second	9. Pellet Storage bin				17.11.2023	18.11.2023	1674.49	2000
	0. Transfer House a 1. Production Separ			3901	17.11.2023	18.11.2023	1964.17	2000
	1. Production Separ Sponge Iron Division -2			3902	18.11.2023	19.11.2023	1420.54	2000
	2. Near Control roo			2017	40.44.0000	10.11.0000		
	3. Near Coal Crushe			3917 3919	18.11.2023	19.11.2023	565.75	2000
	4. Near Product bin			3919	18.11.2023 18.11.2023	19.11.2023	1906.84	2000
	5. Coal Dryer			3910	18.11.2023	19.11.2023	801.06	2000
	Vagon Tipper/RMHS			3920	10.11.2025	19.11.2023	1144.98	2000
	6. Near Tipping poi	nt		3925	20.11.2023	22.11.2023	1317.28	2000
1				3926	20.11.2023	21.11.2023	1133.67	2000
1				3927	20.11.2023	21.11.2023	397.63	2000
VI. I	Power Plant-70 MW			0721	20.11.2025	21.11.2023	397.03	2000
1	9. 70MW-DM Plant	(Near R.O. Plant)		3928	20.11.2023	21.11.2023	619.34	2000
2		dge Near Coal Screen		3947	21.11.2023	22.11.2023	709.99	2000
2				3929	20.11.2023	21.11.2023	1061.52	2000
	2X70MW Power Plant							2000
22				3960	21.11.2023	22.11.2023	671.51	2000
23				3961	21.11.2023	22.11.2023	429.39	2000
24		ing Area		3962	21.11.2023	22.11.2023	580.94	2000
e: SP SL	M -Suspended Particulat	e matter (μg/m ³), INFE	RENCE: The	e Measured	Values are within the l	imits.		
NO	INSTRUMENT DETAILS	GEMS-01	GEM	S-02	GEMS-03	GEMS-04	GEM	S-05
1	Instrument Name			ble Dust pler	Respirable Dust Sampler	Respirable Dust Sampler	Respira Sam	ble Dust pler
2	Make & Model Greentech Gree		Greer Instrument		Greentech Instruments/ GTI-151	Greentech Instruments/ GTI-15	Gree	ntech
3			RDS / 243-		RDS / 244-DTL-2020	RDS / 193-DTH-2019	9 RDS / 197-	DTH-2019
4 Calibration Date 01.04.2023		01.04.	2023	01.04.2023	01.04.2023		10241in	
5	Calibration Due Date	31.03.2024	31.03.	2024	31.03.2024	31.03.2024	81.03	.2024
	Analy T.R.I	Sed By Pooja				Authorised S K. Ramakrish	ignator HC	SPE
		emist				Technical M	lanager	
		B4' ' ' CT			1 01.			

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

Analysis Report of Stack Emission

		and the second second	
1 2	Name of the Industry Customer Reference	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. WO/ADMIN/FY24/R018
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: 28.03.2023
			Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	;	Pellet Plant-1 ESP
10	Month of Sampling	:	NOVEMBER - 2023
11	Date of Sample Received	:	09.11.2023 & 16.11.2023
12	Date of Sample Analysis	:	09.11.2023 & 16.11.2023
13	Date of Sample Analysis completion	:	10.11.2023 & 17.11.2023
14	Report Issued Date	:	06.12.2023
15	Report Number	:	ULR-TC532323000001370F
			Stack Details
	1 Fuel Used		Coal & furnace oil

- 2 Stack Height (mtr)
- 3 Stack Diameter (mtr)

100.0 4.4

Emission Details

				Res		
SI. No.	Parameters	Method	Unit	1 st Fort Night	2 nd Fort Night	Permissible Limit
14.5.1	Date of Monitoring			09.11.2023	16.11.2023	Limit
	Sample Code			3758	3879	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C	28	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C	71	70	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	5.03	5.06	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m³/hr	290155	57235	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	251289	49713	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	35.65	32.02	100
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³	32.0	32.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	126.0	134.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.016	0.009	NS

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



Note 1

Authorised Signatory K. Ramakrishna Reddy

Technical Manager

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

Analys	sis Re	port	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, Hosapete
4	Particulars of sample collected	:	Vayubodhak Stack sampler/ VBSS-2
			Sl. No:Stack Monitoring Kit/ 032308
5	Instrument Details	:	Calibration Date: 28.03.2023
			Calibration Due Date: 27.03.2024
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	:	NOVEMBER - 2023
11	Date of Sample Received	:	08.11.2023 & 21.11.2023
12	Date of Sample Analysis	:	08.11.2023 & 21.11.2023
13	Date of Sample Analysis completion	:	09.11.2023 & 22.11.2023
14	Report Issued Date	:	06.12.2023
15	Report Number	;	ULR-TC532323000001381F
			Stack Details
	1 Fuel Used		Coal

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

Emission Details

60.0

2.00

			Re						
Parameters	Method	Unit	1 st Fort	2 nd Fort	Permissible				
	r.outou		Night	Night	Limit				
Date of Monitoring			08.11.2023	21.11.2023					
Sample Code			3733	3944					
Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C	29	29	-				
Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C	171	169	-				
Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.01	6.14	-				
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	68320	69541	-				
Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm³/hr	45806	46861	-				
Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	23.91	12.73	100				
Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³	79.0	87.0	NS				
Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	28.0	31.0	NS				
Carbon Monoxide	GEMS/SOP/69	%	0.305	0.328	1				
	Date of Monitoring Sample Code Ambient Temperature Stack Temperature Velocity of Fuel Gas Gas flow rate at Stack Condition Gas flow rate at NTP Particulate Matter Sulphur Dioxide Nitrogen Dioxide	Method Date of Monitoring Sample Code Method Ambient Temperature IS: 11255 (Part 1) - 1985 (RA 2014) Stack Temperature IS: 11255 (Part 1) - 1985 (RA 2014) Velocity of Fuel Gas IS: 11255 (Part 3) - 1985 (RA 2014) Gas flow rate at Stack Condition IS: 11255 (Part 03) (RA 2014) Gas flow rate at NTP IS: 11255 (Part 1) - 1985 (RA 2014) Particulate Matter IS: 11255 (Part 1) - 1985 (RA 2014) Sulphur Dioxide IS: 11255 (Part 1) - 1985 (RA 2014) Nitrogen Dioxide IS: 11255 (Part 7): 2005 (RA 2017)	Method Unit Date of Monitoring Sample Code Ambient Temperature IS: 11255 (Part 1) - 1985 (RA 2014) °C Stack Temperature IS: 11255 (Part 1) - 1985 (RA 2014) °C Velocity of Fuel Gas IS: 11255 (Part 3) - 1985 (RA 2014) m/sec Gas flow rate at Stack Condition IS: 11255 (Part 3) - 1985 (RA 2014) m/sec Gas flow rate at NTP IS: 11255 (Part 03) (RA 2014) Mm³/hr Particulate Matter IS: 11255 (Part 1) - 1985 (RA 2014) mg/Nm³ Sulphur Dioxide IS: 11255 (Part 2): (RA 2014) mg/Nm³ Nitrogen Dioxide IS: 11255 (Part 7): 2005 (RA 2017) mg/Nm³	Parameters Method 1st Fort Night Date of Monitoring 06.11.2023 Date of Monitoring 08.11.2023 Mabient Temperature 1St 11255 (Part 1) - 1985 (RA 2014) 0°C 3733 Ambient Temperature ISt 11255 (Part 1) - 1985 (RA 2014) 0°C 11°T Stack Temperature ISt 11255 (Part 1) - 1985 (RA 2014) 0°C 11°T Velocity of Fuel Gas ISt 11255 (Part 3) - 1985 (RA 2014) 0°C 6601 Gas flow rate at Stack Condition ISt 11255 (Part 3) - 1985 (RA 2014) m3'Arc 66320 Gas flow rate at NTP ISt 11255 (Part 1) - 1985 (RA 2014) m3'Arc 45806 Particulate Matter ISt 11255 (Part 1) - 1985 (RA 2014) mg/Mm ³ 23.91 Sulphur Dioxide ISt 11255 (Part 2): (RA 2014) mg/Mm ³ 79.0 Nitrogen Dioxide ISt 11255 (Part 7): 2005 (RA 2017) mg/Mm ³ 28.0	Method Unit Note in the integration of the integratint of the integration of the integration of the integrat				

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

T.R.Pooja Chemist

Authorised Signator 19 K. Ramakrishna Reddy **Technical Manager**

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

Analysis Report of Stack Emission

BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. Name of the Industry 1 : 2 **Customer Reference** WO/ADMIN/FY24/R018 ÷. Sample collected by 3 **GLOBAL Environment & Mining Services, Hosapete** : Particulars of sample collected Vayubodhak Stack sampler/ VBSS-2 4 5 Sl. No: Stack Monitoring Kit/ 032308 5 **Instrument Details** : Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024 6 Discipline : Chemical 7 Group : Atmospheric Pollution Sample Type 8 : Stack Monitoring 9 Month of Sampling : NOVEMBER - 2023 (1st Fort Night) Date of Sample Received 10 10.11.2023 : Date of Sample Analysis 11 : 10.11.2023 Date of Sample Analysis completion : 11.11.2023 12 13 **Report Issued Date** : 06.12.2023 **Report Number** 14 : ULR-TC532323000001382F

SI. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta ºC	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Indu	Induction Furnance 1 & 2										
1	Induction Furnance 1	10.11.2023	3798	Electric	30	42	5.14	30	1.0	5.82	150
2	Induction Furnance 2	10.11.2023	3799	Power	30	46	5.21	30	1.0	8.09	150

SI. No	Induction Furnance 1 & 2	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
1	Induction Furnance 1	20937	19788	-
2	Induction Furnance 2	24898	23250	-

Parameter	Protocol
Particulate Matter (mg/Nm3)	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)

T.R.Poola Chemist

Authorised Signator K. Ramakrishna Reddy

Technical Manager

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Website : www.globalmining.in



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, Hosapete
4	Particulars of sample collected	:	Vayubodhak Stack sampler / VBSS-2
			Sl. No:Stack Monitoring Kit/ 032308
5	Instrument Details	:	Calibration Date: 28.03.2023
			Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	Rolling mill reheating furnace
10	Month of Sampling	:	NOVEMBER - 2023
11	Date of Sample Received	:	07.11.2023 & 20.11.2023
12	Date of Sample Analysis	:	07.11.2023 & 21.11.2023
13	Date of Sample Analysis completion	:	08.11.2023 & 22.11.2023
14	Report Issued Date	:	06.12.2023
15	Report Number	:	ULR-TC532323000001349F
			Stack Details
	1 Evol Ugod		Cool

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

Emission Details

				Res		
SI.	Parameters		Unit	1 st Fort	2 nd Fort	Permissible
No.		Method	Onic	Night	Night	Limit
	Date of Monitoring			07.11.2023	20.11.2023	
	Sample Code			3709	3934	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	29	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	374	369	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	7.99	7.51	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m³/hr	14465	13597	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	6659.8	6308.9	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	11.66	10.30	100
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³	23.0	19.0	270
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	297.0	315.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.029	0.031	NS

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

T.R. Poc Chemis

Env HOSPI Authorised Signator %) * K. Ramakrishna Reddy **Technical Manager**

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Website : www.globalmining.in



ANNEXURE-15 GEMS-LD/TF/10/01

Analysis Report of Stack Emission . .

			•
1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District
2	Customer Reference	:	WO/ADMIN/FY24/RO18
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: 28.03.2023
			Calibration Due Date: 27.03.2024
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	:	NOVEMBER - 2023
11	Date of Sample Received	:	
12	Date of Sample Analysis	:	
13	Date of Sample Analysis completion	:	- 사망 가슴 가슴 사람들은 것은 것 같아? 나는 것 같아? 옷을 잘 못 하는 것 같아?
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

				Res	ult	
SI. No.	Parameters	Method	Unit	1 st Fort Night	2 nd Fort Night	Permissible Limit
110.	Date of Monitoring			-	-	
	Sample Code			-	-	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C			-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C			-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec			-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m³/hr			-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm³/hr	Shutdown	Shutdown	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³			100
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: Peoffirm	ad			ento	As

Note: NS- Not Specified. RA: Reaffirmed,

Authorised Signator

K. Ramakrishna Reddy **Technical Manager**

Note:

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

Analysis Report of Stack Emission

- Name of the Industry 1
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. : WO/ADMIN/FY24/R018 :

Calibration Date: 28.03.2023

Atmospheric Pollution

Stack Monitoring

Calibration Due Date: 27.03.2024

NOVEMBER - 2023 (1st Fort Night)

Vayubodhak Stack sampler / VBSS-2

Sl. No: Stack Monitoring Kit/ 032308

GLOBAL Environment & Mining Services, Hosapete

- 2 **Customer Reference**
- Sample collected by 3
- Particulars of sample collected 4
- 5 **Instrument** Details
- Discipline 6
- 7 Group
- Sample Type 8
- Month of Sampling 9
- Date of Sample Received 10
- Date of Sample Analysis 11
- 12
- Date of Sample Analysis completion
- **Report Issued Date** 13
- **Report Number** 14

15.11.2023 15.11.2023

Chemical

- : 16.11.2023
- : : 06.12.2023
- ULR-TC532323000001428F :

SI. N O	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Heigh t (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chir	Chimneys attached to Bag Filter (De dusting Units)										
Ben	eficiation Plant -I										
1	Iron Ore dump hopper	15.11.2023	3862	-	30	35	4.63	25	0.40	14.61	50
2	Iron Ore Screen bin	15.11.2023	3863	-	31	36	4.83	30	0.40	16.94	50

SI. No	Beneficiation Plant	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
1	Iron Ore dump hopper	2095	2021	-
2	Iron Ore Screen bin	2185	2100	-

Parameter	Protocol	-
Particulate Matter (mg/Nm3)	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)	

R.Pooja Chemist

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

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ANNEXURE-17 GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- Name of the Industry 1
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. : WO/ADMIN/FY24/R018 5

Calibration Date: 28.03.2023

Calibration Due Date: 27.03.2024

Vayubodhak Stack sampler/ VBSS-2

Sl. No:Stack Monitoring Kit/ 032308

GLOBAL Environment & Mining Services, Hosapete

- **Customer Reference** 2
- Sample collected by 3
- Particulars of sample collected 4

e-mail

- 5 **Instrument** Details
- Discipline 6
- 7 Group
- Sample Type 8
- Month of Sampling 9
- 10 Date of Sample Received
- Date of Sample Analysis 11
- Date of Sample Analysis completion 12
- **Report Issued Date** 13
- **Report Number** 14

NOVEMBER - 2023 (1st Fort Night) : 13.11.2023 & 15.11.2023 1 13.11.2023 & 15.11.2023

Stack Monitoring

: 14.11.2023 & 16.11.2023

Atmospheric Pollution

- : 06.12.2023
- :

Chemical

ULR-TC532323000001430F :

SI. No	Stack Attached to	Date of Monitoring	Sampl e Code	Fuel Used	Ta ºC	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chin	Chimneys attached to Bag Filter (De dusting Units)										
RMI	HS						-				
3	Screen, Coal Crusher(CPU)	15.11.2023	3864	-	29	36	5.35	3.0	0.30	31.85	50
4	Main Crusher	13.11.2023	3828	-	31	35	4.76	35	0.50	11.04	50
	CI		Cast	flow rate	a at Sta	ck	Gas flow r	ate at NTF		SPCB	

SI. No	Beneficiation Plant	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
3	Screen, Coal Crusher (CPU)	34059	32825	-
4	Main Crusher	3358	3238	-

Parameter	Protocol	_
Particulate Matter (mg/Nm3)	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)	

T.R.Poo Chemist

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

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Note: 1. 2.

3. 4. 5. 6.



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Website : www.globalmining.in

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

Analysis Report of Stack Emission BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.

WO/ADMIN/FY24/R018

Calibration Date: 28.03.2023

: NOVEMBER - 2023 (1st Fort Night)

Atmospheric Pollution

: 09.11.2023 & 10.11.2023

: 09.11.2023 & 10.11.2023

Stack Monitoring

Vayubodhak Stack sampler/ VBSS-2

Calibration Due Date: 27.03.2024

Sl. No:Stack Monitoring Kit/ 032308

GLOBAL Environment & Mining Services, Hosapete

- Name of the Industry 1
- **Customer Reference** 2
- Sample collected by 3
- Particulars of sample collected 4

e-mail

- Instrument Details 5
- Discipline 6
- Group 7
- Sample Type 8
- Month of Sampling 9
- 10 Date of Sample Received
- Date of Sample Analysis 11
- Date of Sample Analysis completion 12
- **Report Issued Date** 13
- **Report Number** 14

- : 10.11.2023 & 11.11.2023
- 06.12.2023 :

Chemical

ULR-TC532323000001371F :

SI.		Date of	Sample	Fuel	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
No	Stack Attached to	Monitoring	Code	Used	°C	C	mysee				01
Chim	neys attached to Bag Filter (De dust	ing Units)									
	t Plant -I							1			50
Pelle		09.11.2023	3759	-	30	36	4.55	6.5	0.60	28.66	
5	AGB Main Bag Filter	09.11.2023	5755							23.57	50
	Lime Powder bin top bag Filter/	09.11.2023	3760	-	30	35	4.77	3.0	0.30	23.57	
6	Powder Coal Main Bag Filter	09.11.2025				37	4.71	3.0	0.30	30.85	50
-	Bentonite Powder bin top bag filter	10.11.2023	3800	-	31	37	4./1				50
7		-	-	-	-	-	-	7.0	0.50	-	
8	H-4 Conveyor discharge bag filter					39	4.96	7.0	0.50	26.88	50
9	P-1 Bag Filter	10.11.2023	3801	_	30	39	4.90	1.0			

SI.	Pellet Plant	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
No		4632	4455	
5	AGB Main Bag Filter		1171	
6	Lime Powder bin top bag Filter/ Powder Coal Main	1214	11/1	
	Bag Filter	1199	1150	-
7	Bentonite Powder bin top bag filter		-	-
8	H-4 Conveyor discharge bag filter	0500	3338	
9	P-1 Bag Filter	3508	5550	

	Protocol
Parameter	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
Particulate Matter (mg/Nm3)	15: 11255 (Part 1) - 1965 (reammed 1 - 2)
Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)
	IS-11255(Part 03) (RA 2014)
Gas flow rate at NTP	

Pool Chemist Authorised S K. Ramakrishna **Technical Manager**

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ANNEXURE-19

KSPCR

GEMS-LD/TF/10/01

Analysis Report of Stack Emission

	TRACK Y S	The Hale Wiewanagara District
1 2 3 4	Name of the Industry Customer Reference Sample collected by Particulars of sample collected	 BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. WO/ADMIN/FY24/R018 GLOBAL Environment & Mining Services, Hosapete Vayubodhak Stack sampler/ VBSS-2 Sl. No:Stack Monitoring Kit/ 032308
5	Instrument Details	: Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024
6 7 9 10 11 12 13 14	Date of Sample Analysis Date of Sample Analysis completion Report Issued Date	 Chemical Atmospheric Pollution Stack Monitoring NOVEMBER - 2023 (1st Fort Night) 13.11.2023 14.11.2023 14.11.2023 06.12.2023 ULR-TC532323000001412F

SI. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta ⁰C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	Std mg/Nm ³	
	Chimneys attached to Bag Filter (De dusting Units)											
2 X 100 TPD Sponge Iron Kiln 1 & 2 50												
10	Cooler-1 Discharge &	13.11.2023	3837		30	37	4.91	30	1.20	24.84		
10	Blending Chute					-	-	30	1.20	-	50	
11	Cooler-2 Discharge	-	-						1.00	27.00	50	
	Intermediate Bin &	13.11.2023	3838		31	36	4.66	30	1.20	27.99		
12	Blending	15.11.2020						30	1.20	-	50	
13	Product House	-	-		-	-	-	50	1.00	1	L	

SI. No	2 X 100 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
10	Cooler-1 Discharge & Blending Chute	26066	23107	
		-	-	-
11	Cooler-2 Discharge	10076	18250	-
12	Intermediate Bin & Blending	18976	10200	-
13	Product House	-	-	

Protocol
IS: 11255 (Part 1) - 1985 (reaffirmed 2014)
IS-11255(Part 03) (RA 2014)
IS-11255(Part 03) (RA 2014)
15-11255(Fait 05) (IA 2011)

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

Note

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

Analysis Report of Stack Emission

Name of the Industry 1 BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. : 2 **Customer Reference** WO/ADMIN/FY24/R018 5 3 Sample collected by GLOBAL Environment & Mining Services, Hosapete 4 Particulars of sample collected 4 Vayubodhak Stack sampler/ VBSS-2 1 Sl. No:Stack Monitoring Kit/ 032308 **Instrument Details** 5 ÷ Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024 6 Discipline Chemical 5 7 Group **Atmospheric Pollution** 1 Sample Type 8 **Stack Monitoring** 5 9 Month of Sampling : NOVEMBER - 2023 (2nd Fort Night) 10 Date of Sample Received : 28.11.2023 11 Date of Sample Analysis : 28.11.2023 Date of Sample Analysis completion : 29.11.2023 12 **Report Issued Date** 13 : 06.12.2023 14 **Report Number** : ULR-TC532323000001372F

SI. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta ⁰C	TS ºC	V m/Se c	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³	
Indu	Induction Furnance 1 & 2											
1	Induction Furnance 1	-	-	Electric	-	-	-	30	1.0	-	50	
2	Induction Furnance 2	28.11.2023	4048	Power	29	42	5.13	30	1.0	8.29	50	

SI. No	Induction Furnance 1 & 2	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
1	Induction Furnance 1		-	-
2	Induction Furnance 2	24559	23218	-

Parameter	Protocol
Particulate Matter (mg/Nm3)	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)

Chemist

Authorise K. Ramakrishna Technical Manag

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

BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.

GLOBAL Environment & Mining Services, Hosapete

Analysis Report of Stack Emission

WO/ADMIN/FY24/R018

: Calibration Date: 28.03.2023

Atmospheric Pollution

Stack Monitoring

Vayubodhak Stack sampler / VBSS-2

Sl. No:Stack Monitoring Kit/ 032308

Calibration Due Date: 27.03.2024

NOVEMBER - 2023 (2nd Fort Night)

- 1 Name of the Industry
- 2 **Customer Reference**
- 3 Sample collected by
- Particulars of sample collected 4
- **Instrument** Details 5
- Discipline 6
- 7 Group

11

- Sample Type 8
- 9 Month of Sampling
- 10 Date of Sample Received

Date of Sample Analysis

: 30.11.2023

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- : 30.11.2023
- Date of Sample Analysis completion 12 **Report Issued Date**
- 13 **Report Number** 14

: 01.12.2023 : 06.12.2023

Chemical

ULR-TC532323000001384F :

SI. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta ⁰C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³	
Chir	Chimneys attached to Bag Filter (De dusting Units)											
Ben	eficiation Plant											
1	Iron Ore dump hopper	30.11.2023	4059		29	35	4.47	25	0.40	13.45	50	
2	Iron Ore Screen bin	30.11.2023	4060		29	36	4.88	30	0.40	12.94	50	

SI. No	Beneficiation Plant	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
1	Iron Ore dump hopper	2025	1958	-
2	Iron Ore Screen bin	2209	2128	-

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)

T.R.Pooja Chemist

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



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ANNEXURE-22 GEMS-LD/TF/10/01

Analysis Report of Stack Emission

Γ		Data of	Sampla	Fuel	Та	тс	V	Height	Diameter	РМ	KSPCB
	14	Report Number	:	ULR	-TC53	2323(0000138	53F			1
	13	Report Issued Date	:		2.202		0000400	0.0			
	12	Date of Sample Analysis comple	tion :				1.2023				
	11	Date of Sample Analysis	:				1.2023				
	10	Date of Sample Received	:				1.2023				
	9	Month of Sampling	:				3 (2nd For	t Night)			
	8	Sample Type	:		Stack Monitoring						
	7	Group	:		Atmospheric Pollution						
	6	Discipline	:								
	5	Instrument Details	;	 Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024 Chemical 							
		아이는 것은 것이 같은 것이 가지?			Sl. No:Stack Monitoring Kit/ 032308						
	4	Particulars of sample collected	:		Vayubodhak Stack sampler/ VBSS-2						
	3	Sample collected by	:						vices, Hosap	oete	
	2	Customer Reference	:	W0/	WO/ADMIN/FY24/R018						
	1	Name of the Industry	:	BMM	l Ispat	Ltd., D	anapur, H	osapete '	Taluk, Vijay	anagara D	istrict.

SI. 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	Std mg/Nm ³
Chin	nneys attached to Bag Filter	(De dusting Uni	ts)								
RMH	IS										
3	Screen, Coal Crusher(CPU)	25.11.2023	4013	-	29	37	5.32	3.0	0.30	32.96	50
4	Main Crusher	26.11.2023	4015	-	29	35	4.55	35	0.50	9.28	50

SI. No	Beneficiation Plant	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
3	Screen, Coal Crusher(CPU)	33887	32567	-
4	Main Crusher	3223	3115	-

Parameter	Protocol
Particulate Matter (mg/Nm3)	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)

alysed By T.R.Pooja Chemist

ent & **Authorised Sign** K. Ramakrishna Reday Technical Manager

Note:

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

Analysis Report of Stack Emission

WO/ADMIN/FY24/RO18

Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024

Vayubodhak Stack sampler/ VBSS-2

Sl. No:Stack Monitoring Kit/ 032308

: NOVEMBER - 2023 (2nd Fort Night)

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: Chemical

BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.

GLOBAL Environment & Mining Services, Hosapete

- 1 Name of the Industry
- **Customer Reference** 2
- 3 Sample collected by
- 4 Particulars of sample collected
- 5 **Instrument Details**
- 6 Discipline
- 7 Group
- 8 Sample Type
- Month of Sampling 9
- 10 Date of Sample Received
- 11 Date of Sample Analysis
- Date of Sample Analysis completion 12
- 13 **Report Issued Date**
- 14 **Report Number**

: 16.11.2023 & 17.11.2023 : 17.11.2023 & 18.11.2023 06.12.2023 :

: 16.11.2023 & 17.11.2023

: Atmospheric Pollution

: Stack Monitoring

ULR-TC532323000001444F :

SI. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta ⁰C	TS ºC	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/N m ³
Chimneys attached to Bag Filter (De dusting Units)											
Pelle	et Plant-I										
5	AGB Main Bag Filter	16.11.2023	3880		31	36	4.33	6.5	0.60	27.55	50
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	16.11.2023	3881		32	37	4.88	3.0	0.30	23.24	50
7	Bentonite Powder bin top bag filter	17.11.2023	3904		30	36	4.53	3.0	0.30	22.17	50
8	H-4 Conveyor discharge bag filter	-	-		-	-	-	7.0	0.50	-	50
9	P-1 Bag Filter	17.11.2023	3905		31	40	5.07	7.0	0.50	30.04	50

SI. No	Pellet Plant	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm ³ /hr	KSPCB Std
5	AGB Main Bag Filter	4408	4239	-
6	Lime Powder bin top bag Filter/ Powder Coal Main Bag Filter	1242	1190	-
7	Bentonite Powder bin top bag filter	1153	1109	-
8	H-4 Conveyor discharge bag filter	-	-	
9	P-1 Bag Filter	3585	3401	-

Parameter	Protocol	
Particulate Matter (mg/Nm3)	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)	1.SI



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

Note 2

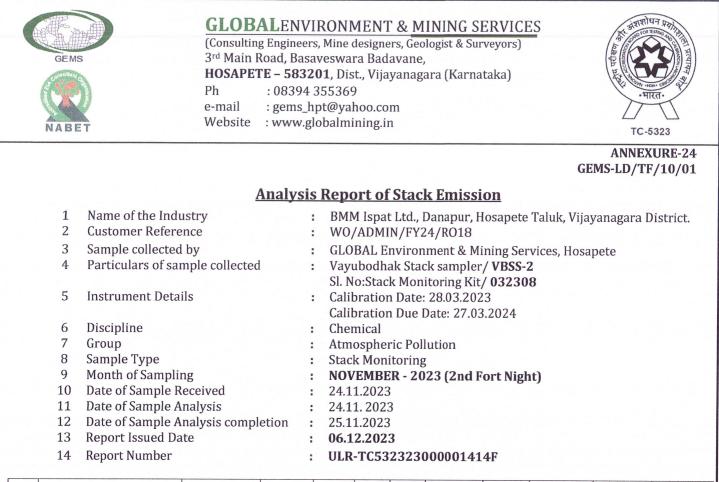
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SI. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta ºC	TS ⁰C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chin	Chimneys attached to Bag Filter (De dusting Units)										
2 X 100 TPD Sponge Iron Kiln 1 & 2											
10	Cooler-1 Discharge & Blending Chute	24.11.2023	3997		31	36	4.70	30	1.20	26.97	50
11	Cooler-2 Discharge	-	-		-	-	-	30	1.20	-	50
12	Intermediate Bin & Blending	24.11.2023	3998		31	37	4.76	30	1.20	28.86	50
13	Product House	-	-		-	-	-	30	1.20	-	50

SI. No	2 X 100 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
10	Cooler-1 Discharge & Blending Chute	19171	18413	-
11	Cooler-2 Discharge		-	-
12	Intermediate Bin & Blending	19529	18685	-
13	Product House	-	-	-

Parameter	Protocol	
Particulate Matter (mg/Nm3)	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)	

lyse T.R.Pooja Chemist

ent HOSPE Authorised Signatory + 58 K. Ramakrishna Reddy **Technical Manager**

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

Analysis Report of Stack Emission

1	Name of the Industry		DMM I
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: 28.03.2023
			Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	Pellet Plant-2 ESP
10	Month of Sampling	:	NOVEMBER-2023
11	Date of Sample Received	:	02.11.2023
12	Date of Sample Analysis	:	02.11.2023
13	Date Sample Analysis Completion	:	03.11.2023
14	Report Issued Date	:	06.12.2023
15	Report Number	:	ULR-TC5323230000001288F
			Stack Details

1	Fuel Used
2	Stack Height (mtr)

3 Stack Diameter (mtr) Coal 100 4.4

Emission Details

				Re		
SI. No.	Parameters	Method	Unit	1 st Fort Night	2 nd Fort Night	Permissible Limit
NO.	Date of Monitoring			02.11.2023	-	Limit
	Sample Code			3613	-	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C	30		-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C	78		-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	5.51		-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m³/hr	302144		-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm³/hr	256251	Shut down	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	29.90		50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	39.0		NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm ³	112.0		NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.019		NS

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

T.R.Poo Chemist

enta OSPE * 5 Authorised Signator K. Ramakrishna Reddy

Technical Manager

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

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

Analysis Report of Stack Emission

1	Name of the Industry Customer Reference	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2		:	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: 28.03.2023
			Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	SID Axis 1 &2
10	Month of Sampling	:	NOVEMBER-2023
11	Date of Sample Received	:	03.11.2023 & 17.11.2023
12	Date of Sample Analysis	:	03.11.2023 & 17.11.2023
13	Date Sample Analysis Completion	:	04.11.2023 & 18.11.2023
14	Report Issued Date	:	06.12.2023
15	Report Number	:	ULR-TC532323000001303F
			Stack Details

1	Fuel Used
2	Stack Height (mtr)
2	Charle Diamatan (matu)

3 Stack Diameter (mtr)

Emission Details

Coal 70.0 3.00

				Res		
SI.	Parameters	Method	Unit	1 st Fort Night	2 nd Fort Night	Permissible
No.	Date of Monitoring			03.11.2023	17.11.2023	Limit
	Sample Code			3636	3903	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	⁰ C	30	29	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	⁰ C	129	127	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) – 1985 (RA 2014)	m/sec	5.81	5.87	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m³/hr	147967	149596	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	109428	111317	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	32.83	35.49	100
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	712.0	789.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm ³	32.0	79.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.078	0.086	1%

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



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

Note: 1. 2.

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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: 28.03.2023
			Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	SID Axis 3&4
10	Month of Sampling	:	NOVEMBER-2023
11	Date of Sample Received	:	04.11.2023 & 18.11.2023
12	Date of Sample Analysis	:	04.11.2023 & 18.11.2023
13	Date Sample Analysis Completion	:	05.11.2023 & 19.11.2023
14	Report Issued Date	:	06.12.2023
15	Report Number	:	ULR-TC532323000001315F
			Stack Details

1	Fuel Used	
2	Stack Height (mtr)	
3	Stack Diameter (mtr)	

Coal 70.0 3.00

Emission Details

				Res		
SI. No.	Parameters	Method	Unit	1 st Fort Night	2 nd Fort Night	Permissible Limit
140.	Date of Monitoring			04.11.2023	18.11.2023	Limit
	Sample Code			3659	3921	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C	30	31	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C	131	125	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.12	5.76	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m ³ /hr	155857	146695	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	114782	109882	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	37.73	42.46	100
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	978.0	823.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	45.0	20.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.185	0.105	1%

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

T.R.Pooja Chemist

ent & HOSPE * S Authorised Signatory

K. Ramakrishna Reddy **Technical Manager**

Note: 1. 2. 3.

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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/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: 28.03.2023
			Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	1X70 MW-CFBC Boiler ESP
10	Month of Sampling	:	NOVEMBER-2023
11	Date of Sample Received	:	06.11.2023 & 29.11.2023
12	Date of Sample Analysis	:	06.11.2023 & 29.11.2023
13	Date Sample Analysis Completion	:	07.11.2023 & 30.11.2023
14	Report Issued Date	:	06.12.2023
15	Report Number	:	ULR-TC532323000001321F
	r		
			Stack Details

1	Fuel Used	
2	Stack Height (mtr)	
3	Stack Diameter (mtr)	

Emission Details

Coal 70.0 3.00

				Re		
SI. No.	Parameters	Method	Unit	1 st Fort 2 nd Fort Night Night		Permissible Limit
	Date of Monitoring			06.11.2023	29.11.2023	Limit
	Sample Code			3669	4058	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	30	28	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C	127	121	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	5.99	5.84	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m³/hr	152625	148629	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr	113676	112385	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	25.94	30.29	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	362.0	297.0	600
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	21.0	26.0	300
9	Carbon Monoxide	GEMS/SOP/69	%	0.194	0.162	NS

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

T.R.Poo Chemi

enta HOSPE Authorised Signatory

K. Ramakrishna Reddy **Technical Manager**

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Note:

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

Analysis Report of Stack Emission

1 2 3 4	Name of the Industry Customer Reference Sample collected by Particulars of sample collected	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. WO/ADMIN/FY24/R018 GLOBAL Environment & Mining Services Vayubodhan Stack sampler/ VBSS2 Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	:	Calibration Date: 28.03.2023
			Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	2X70 MW CFBC Boiler ESP
10	Month of Sampling	:	NOVEMBER-2023
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
2	Stack Height (mtr)
3	Stack Diameter (mtr)

Emission Details

Coal 110.0 8.00

				Res		
Sl.	Parameters	Method	Unit	1 st Fort Night	2 nd Fort Night	Permissible Limit
No.	Date of Monitoring			-	-	
	Sample Code			-	-	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C			-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	0C			-
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)	m³/hr			-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm³/hr	Shutdown	Shutdown	-
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

Note:

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enta HOSPET Authorised Sign * 50 K. Ramakrishna Reddy Technical Manager

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

The result listed refers only to the tested samples & application parameters, Endorsheets, Endor



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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.
1	Name of the Industry		
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: 28.03.2023
			Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Month of Sampling	:	NOVEMBER-2023 (1st Fort Night)
10	Date of Sample Received	:	
11	Date of Sample Analysis	:	-
12	Date Sample Analysis Completion	:	
13	Report Issued Date	:	-
14	Report Number	:	승규가 잘 잘 잘 하는 것이 아니는 것이 같은 것이 같은 것이 같은 것이 같이 했다.
			<u>RESULTS</u>

SI. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta ºC	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)											
Bene	ficiation Plant-2										
1	Iron Ore Cone Crusher	-	-		-	-	-	30	1.20	-	50
2	Iron Ore Screening	-	-		-	-	-	30	0.90	-	50

SI. No	Beneficiation Plant	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
1	Iron Ore Cone Crusher	-	-	-
2	Iron Ore Screening	-	-	-

Parameter	Protocol	
Particulate Matter (mg/Nm3)	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.

ent HOSPE1 Authorised Signatory K. Ramakrishna Redey + Technical Manager

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

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Vayubodhan Stack sampler / VBSS2
			Sl.No:Stack Monitoring Kit/ 032308
5	Instrument Details	:	Calibration Date: 28.03.2023
			Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Month of Sampling	:	NOVEMBER-2023 (1st Fort Night)
10	Date of Sample Received	:	02.11.2023 & 04.11.2023
11	Date of Sample Analysis	:	02.11.2023 & 04.11.2023
12	Date Sample Analysis Completion	:	03.11.2023 & 05.11.2023
13	Report Issued Date	:	06.12.2023
14	Report Number	:	ULR-TC532323000001289F

RESULTS

SI. No	SI	ack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta ⁰C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chin	nneys attac	hed to Bag Filter (De du	sting Units)									
Pelle	et Plant-II											
3	AGB mai	n bag Filter	02.11.2023	3614		32	37	4.68	6.5	0.5	27.63	50
4	Lime & E top bag f	Bentonite Powder bin Tilter	02.11.2023	3615		33	36	4.87	3	0.35	29.01	50
5	AGB De o	lusting Bag Filter	-	-		-	-	-	6	0.6	-	50
6	Powder	Coal main bag filter	-	-		-	-	-	6	0.6	-	50
7	RP-6 Cor	weyor bag Filter	-	-		-	-	-	6	0.3	-	50
8	Pellet dis	scharge bin bag filter	04.11.2023	3654		32	39	4.97	20	0.5	31.41	50
	SI. No	Pelle	et Plant			flow rate	at Stack m³/hr		Gas flow rat Nm³/		KSPC Std	
	3	AGB main bag Filter				3301			317	7	-	
	4	Lime & Bentonite Powd	er bin top bag filt	ter		1587	,		152	1	-	
	5	AGB De dusting Bag Filt	er			-			-		-	
	6 Powder Coal main bag fil		lter			-			-		-	
	7	RP-6 Conveyor bag Filte	r			-			-		-	
	8	Pellet discharge bin bag	filter			3518	;		334	7	-	
			Parameter					Drotoco	1		7	

Parameter	Protocol
Particulate Matter (mg/Nm3)	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.

BOJOTR alysed By T.R.Pooja Chemist

Authorised Signatory K. Ramakrishna Reddy Technical Manager



Note:

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

Analysis Report of Stack Emission BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. 1 Name of the Industry 5 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: 28.03.2023 ÷ Calibration Due Date: 27.03.2024 Discipline 6 Chemical 7 Group **Atmospheric Pollution** 8 Sample Type **Stack Monitoring** 5 9 Month of Sampling NOVEMBER-2023 (1st Fort Night) : 10 Date of Sample Received 03.11.2023, 04.11.2023, 06.11.2023, 07.11.2023 & 08.11.2023 11 Date of Sample Analysis 03.11.2023, 04.11.2023, 06.11.2023, 07.11.2023 & 08.11.223 5 12 **Date Sample Analysis Completion** 04.11.2023, 05.11.2023, 07.11.2023, 08.11.2023 & 09.11.2023 5 13 **Report Issued Date** 06.12.2023 14 **Report Number** ULR-TC5323230000001304F : RESULTS KSPCB Date of Sample Fuel Та TS Height Diameter PM Stack Attached to Std Monitoring Code Used ٥C °C m/Sec mg/Nm³ (m) (m) mg/Nm³ Chimneys attached to Bag Filter (De dusting Units) 2 X 500 TPD Sponge Iron Kiln 1 & 2 03.11.2023 3637 ----32 Cooler Discharge -1 36 4.40 30 1.2 35.18 50 04.11.2023 ----Cooler Discharge -2 3660 32 37 30 4.56 1.2 29.66 50 04.11.2023 Coal stock house 3661 ---32 4.74 30 1.2 36 10.79 50 06.11.2023 PSB 1 System-1 3670 ---29 4.58 36 30 1.2 30.55 50 06.11.2023 PSB 1 System-2 3671 ----29 37 4.81 30 1.2 32.86 50 07.11.2023 PSB 2 System-1 MCC 3707 30 37 5.89 30 1.2 34.07 50 07.11.2023 PSB 1 System-2 Road ---3708 30 38 5.05 30 1.2 34.77 50 08.11.2023 ----Junction House Old & New 3731 29 37 5.19 30 1.2 50 34.40 08.11.2023 ---Storage Bunker 3732 29 4.88 30 1.2 36 30.36 50 Dispatch -----30 1.2 50 2 X 500 TPD Sponge Iron SI. Gas flow rate at Stack Gas flow rate at NTP KSPCB No Kiln 1 & 2 Condition m³/hr Nm³/hr Std 9 Cooler Discharge -1 17945 17231 10 Cooler Discharge -2 18597 17804 11 Coal stock house 19338 18561 12 PSB 1 System-1 18670 17954 13 PSB 1 System-2 19623 18797 14 PSB 2 System-1 MCC 20400 19702 15 PSB 1 System-2 Road 20115 19353 Junction House Old & New 16 18772 17971 17 Storage Bunker 18161 17490

Parameter	Protocol
Particulate Matter (mg/Nm3)	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 T.R.Pooi Chemis

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Dispatch

Authorised Signatory K. Ramakrishna Reddy

Technical Manager

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

Analysis Report of Stack Emission

1 Name of the Industry

Instrument Details

Month of Sampling

11 Date of Sample Analysis

Report Issued Date

Report Number

Date of Sample Received

Date Sample Analysis Completion

Discipline

Sample Type

Group

Particulars of sample collected

- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. :
- 2 **Customer Reference** 3 Sample collected by
- WO/ADMIN/FY24/R018 ;
- **GLOBAL Environment & Mining Services** 5
- Vayubodhan Stack sampler / VBSS2 5 Sl.No:Stack Monitoring Kit/ 032308 ÷
 - Calibration Date: 28.03.2023 Calibration Due Date: 27.03.2024
- : Chemical
- **Atmospheric Pollution** :
- Stack Monitoring :
- **NOVEMBER-2023 (1st Fort Night)** :
- : 11.11.2023 & 13.11.2023
- 11.11.2023 & 13.11.2023 :
- 12.11.2023 & 14.11.2023 :
- 06.12.2023 :
- : ULR-TC532323000001388F

RESULTS

SI. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta ⁰C	TS °C	V m/s	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chim	neys attached to Bag Filter (De	dusting Units)									
2X50	0 TPD Sponge Iron Kiln 3&4										
19	DE 3, Axis 3 CD	11.11.2023	3808		29	35	4.73	30	1.2	30.70	50
20	DE 4, DE 7, DE 7A Axis 4 CD Junction House(Stand By)	11.11.2023	3809		30	36	4.87	30	1.2	34.64	50
21	DE 8 & 12 I-Bin, (Stand By)	11.11.2023	3810		31	37	5.20	30	1.9	32.35	50
22	DE 9 &10 PSB 1 & 2 Product Separation bin	11.11.2023	3811		31	38	5.14	30	1.9	34.85	50
23	Coal Dryer	13.11.2023	3836		29	41	5.19	27	1.2	35.33	50

SI. No	2X500 TPD Sponge Iron Kiln 3&4	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/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	-

INFERENCE: The Measured Values are within the limits.

Chemis

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

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be descrived after 150ays, 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



(Consulting Engineers, Mine designers, Geologist & Surveyors) 3rd Main Road, Basaveswara Badavane, HOSAPETE - 583201, Dist., Vijayanagara (Karnataka) Ph :08394 355369 e-mail : gems_hpt@yahoo.com Website : www.globalmining.in



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

Analysis Report of Stack Emission

1	Nama of the In	J		DI							
1	Name of the Inc			: BN	M Ispat	Ltd., D	anapur, l	Hosapete	e Taluk, Vija	yanagara	District.
2	Customer Refer	rence		: W	WO/ADMIN/FY24/RO18						
3	Sample collecte	ed by		: GL	GLOBAL Environment & Mining Services						
4	Particulars of s	ample collect	ed	: Va	Vayubodhan Stack sampler/ VBSS2						
				Sl.	lo:Stack	Monite	oring Kit	/ 03230	8		
5	Instrument Det	tails					28.03.20				
				Ca	ibration	Due Da	ate: 27.0	3.2024			
6	Discipline			: Ch	emical						
7	Group			: Atı	Atmospheric Pollution					생활 관광	
8	Sample Type			: Sta	ck Moni	toring					
9	Month of Samp	ling		: NC	VEMBE	R-2023	(2 nd For	t Night)			
10	Date of Sample	Received		: 25	11.2023						
11	Date of Sample	Analysis		: 25.	11.2023						
12	Date Sample Ar	nalysis Compl	etion	: 26	11.2023						
13	Report Issued I	Date		: 06	12.202	3					
14	Report Number			: UL	R-TC53	23230	00013	89F			
				RE	SULTS						
		Data of	Sample	Fuel	Ta	TC	¥7	Halaht	Diamatan	DM	KSPCB

SI. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta ºC	TS ⁰C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chi	himneys attached to Bag Filter (De dusting Units)										
Bei	neficiation Plant-2										
1	Iron Ore Cone Crusher	-	-		-	-	-	30	1.20	-	50
2	Iron Ore Screening	25.11.2023	4013		30	36	4.89	30	0.90	16.66	50

SI. No	Beneficiation Plant	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
1	Iron Ore Cone Crusher	-		-
2	Iron Ore Screening	11219	10793	-

Parameter	Protocol
Particulate Matter (mg/Nm3)	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.

Authorised Signatory K. Ramakrishna Reddy

Technical Manager

.R.Pooia Chemist

Note

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

1. 2. 3. 4. 5. 6



(Consulting Engineers, Mine designers, Geologist & Surveyors) 3rd Main Road, Basaveswara Badavane, HOSAPETE - 583201, Dist., Vijayanagara (Karnataka) Ph :08394 355369 e-mail : gems_hpt@yahoo.com Website : www.globalmining.in



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

		-	
	Analysis	s Re	<u>port of Stack Emission</u>
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: 28.03.2023 Calibration Due Date: 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Month of Sampling	:	NOVEMBER-2023 (2 nd Fort Night)
10	Date of Sample Received	:	
11	Date of Sample Analysis	:	-
12	Date Sample Analysis Completion	:	-
13	Report Issued Date	:	-
14	Report Number	:	-
			RESULTS

SI. No		Stac	ck 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
Chin	nneys	attach	ed to Bag Filter (De d	lusting Units)									
Pell	et Plar	ıt											
3	AGE	8 main	ı bag Filter	-	-		-	-	-	6.5	0.5	-	50
4			entonite Powder 1g filter	-	-		-	-		3	0.35	-	50
5	AGE	B De di	usting Bag Filter	-	-		-	-	-	6	0.6		50
6	Pow	vder C	oal main bagfilter	-	-		-	-	-	6	0.6	-	50
7	RP-	6 Conv	veyor bag Filter	-	-		-	-	-	6	0.3	-	50
8	Pell	et disc	charge bin bagfilter	-	-		-	-	-	20	0.5	-	50
	SI. Pe		ellet Plant			Gas flow rate at Stack Condition m³/hr			Gas flow rate Nm ³ /l	KSPCB Std			
		3	AGB main bag Filter				-			-			
		4	Lime & Bentonite Po	wder bin top ba	g filter		-					-	
		5	AGB De dusting Bag	Filter						-			
		6	Powder Coal main ba	agfilter	filter			-			-		
		7	RP-6 Conveyor bag F	liter		-						-	
		8	Pellet discharge bi	n bagfilter						_	-		
	L			Parameter					Proto	col	L		
			Particulate	Matter (mg/Nm3)		IS:	11255 (P	art 1) - 19	985 (reaffirm	ed 2014)		ent&	M
Gas flow rate at Stack Condition Gas flow rate at NTP					Protocol IS: 11255 (Part 1) - 1985 (reaffirmed 2014) IS-11255(Part 03) (RA 2014) IS-11255(Part 03) (RA 2014) IS-11255(Part 03) (RA 2014) Is-11255(Part 03) (RA 2014)						133		
				IS-	11255(Pa	rt 03) (R/	4 2014)		/	HOSP	FTICO		
			INFERE	ENCE: The Measu	ired Values	are within	the limi	ts.		1	n^{\prime}	90/5 -	eru: 50
											ised Signator	у	
										K. Ram	akrishna Redd	y	

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.

Technical Manager

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

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HOSPE

Authorised Signatory

K. Ramakrishna Reddy

Technical Manager

Analysis Report of Stack Emission

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- 1 Name of the Industry
- 2 **Customer Reference**
- Sample collected by 3
- 4 Particulars of sample collected
- 5 **Instrument Details**
- 6 Discipline
- 7 Group
- 8 Sample Type
- 9 Month of Sampling
- 10 Date of Sample Received
- Date of Sample Analysis 11
- 12 Date Sample Analysis Completion
- **Report Issued Date** 13
- 14 **Report Number**

- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. : WO/ADMIN/FY24/RO18 5
 - **GLOBAL Environment & Mining Services**

 - Vayubodhan Stack sampler / VBSS2 Sl.No:Stack Monitoring Kit/ 032308
 - Calibration Date: 28.03.2023
 - Calibration Due Date: 27.03.2024 Chemical
 - **Atmospheric Pollution**
- Stack Monitoring 2
 - NOVEMBER-2023 (2ndFort Night)
 - 18.11.2023,20.11.2023, 21.11.2023 & 22.11.2023
 - 18.11.2023,20.11.2023, 21.11.2023 & 22.11.2023
 - 19.11.2023,21.11.2023, 22.11.2023 & 23.11.2023
- 06.12.2023 1
- ULR-TC532323000001442F 5

RESULTS

SI. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	ТS °С	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chim	neys attached to Bag Filter (De dust	ing Units)									
2 X 5	00 TPD Sponge Iron Kiln 1 & 2										
9	Cooler Discharge -1	18.11.2023	3922		32	36	4.28	30	1.2	30.09	50
10	Cooler Discharge -2	18.11.2023	3923		32	37	4.64	30	1.2	30.86	50
11	Coal stock house	20.11.2023	3930		31	35	4.64	30	1.2	11.70	50
12	PSB 1 System-1	20.11.2023	3931		32	37	4.71	30	1.2	34.90	50
13	PSB 1 System-2	21.11.2023	3932		31	38	4.77	30	1.2	35.03	50
14	PSB 2 System-1 MCC	21.11.2023	3943		32	39	5.03	30	1.2	34.94	50
15	PSB 1 System-2 Road	22.11.2023	3956		29	37	5.08	30	1.2	31.31	50
16	Junction House Old & New	22.11.2023	3957		29	38	5.14	30	1.2	36.21	50
17	Storage Bunker	22.11.2023	3959		31	36	5.83	30	1.2	26.24	50
18	Dispatch	-	-		-	-	-	30	1.2	-	50

SI. No	2 X 500 TPD Sponge Iron Kiln 1 & 2	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
9	Cooler Discharge -1	17465	16803	-
10	Cooler Discharge -2	18915	18130	-
11	Coal stock house	18906	18247	-
12	PSB 1 System-1	19187	18391	-
13	PSB 1 System-2	19432	18566	-
14	PSB 2 System-1 MCC	20400	19702	-
15	PSB 1 System-2 Road	20115	19353	-
16	Junction House Old & New	18722	17971	-
17	Storage Bunker	18161	17490	-
18	Dispatch	-	-	-

Parameter	Protocol	
Particulate Matter (mg/Nm3)	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)	1

INFERENCE: The Measured Values are within the limits.

OTR 190 Analysed By T.R.Poo Chemist

Note: 1.

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

The result has a restort singly to the tested samples or application parameters and produced so produced so inspace. 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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GLOBALENVIRONMENT & MINING SERVICES

(Consulting Engineers, Mine designers, Geologist & Surveyors) 3rd Main Road, Basaveswara Badavane, HOSAPETE - 583201, Dist., Vijayanagara (Karnataka) Ph : 08394 355369 e-mail : gems_hpt@yahoo.com Website : www.globalmining.in



ANNEXURE-37 GEMS-LD/TF/10/01

Analysis Report of Stack Emission

1 Name of the Industry 2 **Customer Reference**

Sample collected by

Instrument Details

Month of Sampling

Report Issued Date

Report Number

Date of Sample Received

Date of Sample Analysis

Date Sample Analysis Completion

Discipline

Sample Type

Group

Particulars of sample collected

- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. : WO/ADMIN/FY24/R018 2
- **GLOBAL Environment & Mining Services** 1
 - Vayubodhan Stack sampler / VBSS2 Sl.No:Stack Monitoring Kit/ 032308
- Calibration Date: 28.03.2023 ÷ Calibration Due Date: 27.03.2024
- : Chemical

:

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- **Atmospheric Pollution**
- **Stack Monitoring** :
 - NOVEMBER-2023 (2nd Fort Night)
- 22.11.2023,23.11.2023 & 24.11.2023 :
 - 22.11.2023,23.11.2023 & 24.11.2023
 - 23.11.2023,24.11.2023 & 25.11.2023
 - 06.12.2023
- ULR-TC532323000001443F :

RESULTS

SI. NO	Stat	ck Attac	ched to	Date of Monitoring	Sample Code	Fuel Used	Ta ºC	TS °C	V m/s	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chir	nneys atta	ched to	Bag Filter (De	e dusting Units)									0/
2X5	00 TPD Sp	onge I	ron Kiln 3&4										
19	DE 3, Axis	3 CD		22.11.2023	3958		33	37	4.75	30	1.20	28.60	50
20	DE 4, DE 7 Junction H	'	Axis 4 CD tand By)	23.11.2023	3975		29	36	5.00	30	1.20	30.50	50
21	DE 8 & 12	I-Bin, (Stand By)	23.11.2023	3976		30	38	5.09	30	1.30	35.47	50
22	DE 9 & 10 PSB 1 & 2 Product Separation bin		& 2 Product	24.11.2023	3990		29	37	5.24	30	1.4	32.66	50
23	Coal Drye	r		24.11.2023	3991		30	42	5.12	35	1.90	33.36	50
	SI. 2X500 TPD Sponge Iron Kiln 3&4				Gas flow rate at Stack Condition m ³ /hr		Ga	Gas flow rate at NTP Nm³/hr		KSPCB Std			
	19 DE 3, Axis 3 CD				18	079		17390		-			
DEADEZ DEZAA' AODI													

	DE 4, DE 7, DE 7A Axis 4 CD Junction		2.070	
20		19586	18771	_
	House(Stand By)	19866	10//1	
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/Nm3)	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.

Chemist

nent & HOSPE IL Authorised Signator K. Ramakrishna Red **Technical Manager**

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

Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard. This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing. Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only. Recognised by Ministry of Environment, Forest and Climate Change for Laboratory

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Note

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2 4.



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ANNEXURE-38 GEMS-LD/TF/08/01

AMBIENT NOISE LEVEL MONITORING REPORT

:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
:	WO/ADMIN/FY24/R018
:	Global Environment & Mining Services
:	Chemical
;	Atmospheric Pollution
:	Noise Level Monitoring
:	Lutron: SL- 4023SD
	Sl. No: Q679952
:	Calibration Date: 02.11.2023
	Due Calibration: 01.11.2024
:	NOVEMBER - 2023
:	06.12.2023
:	IS 9989-1981 Reaffirmed 2014
:	ULR-TC532323000001289F

CI		Data af	Noise Level dB (A)								
Sl. No	Location	Date of Monitoring	Day	Time	Standard	Night	Time	Standard			
NO		Monitoring	Min	Max	Stanuaru	Min	Max	Stanuaru			
1	Main Gate	02.11.2023	47.2	52.3	75	43.8	50.2	70			
2	Near ATM	02.11.2023	45.6	53.2	75	41.6	51.4	70			
3	Transit House	03.11.2023	48.2	58.2	75	46.4	55.6	70			
4	CAAQMS Station	03.11.2023	51.0	58.2	75	48.2	56.1	70			
5	Gunda Road	04.11.2023	53.4	61.2	75	46.8	54.2	70			
6	Gunda Railway Station	04.11.2023	51.5	63.5	75	51.0	61.8	70			
7	Bagging Shed	06.11.2023	60.1	69.2	75	54.6	58.2	70			
8	Railway Siding	06.11.2023	69.0	73.5	75	56.1	62.8	70			
9	4th Gate	07.11.2023	51.4	57.8	75	49.6	53.4	70			
10	Bricks Plant	07.11.2023	49.2	57.8	75	48.7	55.9	70			
11	Kempuhalla (Wagon Tippler)	08.11.2023	46.7	55.0	75	45.8	53.8	70			
12	Danapura Bridge	08.11.2023	51.0	57.2	75	50.2	56.1	70			
13	2nd Gate	09.11.2023	52.8	59.2	75	50.1	53.8	70			
14	Project Store	09.11.2023	46.5	51.2	75	44.6	50.4	70			
15	Dispatch (Truck Parking Area)	09.11.2023	67.2	74.8	75	54.8	63.8	70			

As per CPCB Standards,

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

ment & A HOSPE1 Authorised Signatory K. Ramakrishna Reddy Technical Manager

Note: 1. 2.

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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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/R018
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	:	NOVEMBER - 2023
Report Issue Date	:	06.12.2023
Method Adopted	:	IS 9989-1981 Reaffirmed 2014
Report No	:	ULR-TC532323000001307F

		D 1 6	Noise Level dB (A)								
SI.	Location	Date of	Day	Time	Standard	Night	Time	Standard			
No		Monitoring	Min	Max	Standard	Min	Max	Junuaru			
1	Main Gate	16.11.2023	50.0	55.6	75	46.8	54.8	70			
2	Near ATM	16.11.2023	48.0	52.8	75	41.6	50.8	70			
3	Transit House	17.11.2023	47.2	53.4	75	45.8	51.8	70			
4	CAAQMS Station	17.11.2023	48.2	56.0	75	46.1	53.4	70			
5	Gunda Road	18.11.2023	50.1	56.2	75	48.8	54.8	70			
6	Gunda Railway Station	18.11.2023	47.5	50.2	75	46.1	52.6	70			
7	Bagging Shed	20.11.2023	58.0	63.5	75	54.8	61.8	70			
8	Railway Siding	20.11.2023	69.5	70.1	75	62.1	64.2	70			
9	4th Gate	21.11.2023	55.0	61.5	75	53.2	58.6	70			
10	Bricks Plant	21.11.2023	66.5	70.5	75	62.4	66.8	70			
11	Kempuhalla (Wagon Tippler)	22.11.2023	47.6	57.4	75	45.8	51.8	70			
12	Danapura Bridge	21.11.2023	56.1	59.2	75	54.8	58.2	70			
13	2nd Gate	23.11.2023	51.2	56.4	75	50.1	53.4	70			
14	Project Store	23.11.2023	48.2	55.2	75	46.4	51.9	70			
15	Dispatch (Truck Parking Area)	22.11.2023	63.5	72.4	75	60.1	68.2	70			

As per CPCB Standards,

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

nent & Authorised SignatorySPET 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. 3.

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1. 2



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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/R018
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	:	NOVEMBER - 2023
Report Issue Date	:	06.12.2023
Method Adopted	:	IS 9989-1981 Reaffirmed 2014
Sample Code	:	3644,3663,3675,3713,3734 & 3761
Report No	:	ULR-TC532323000001362F

01		Die				Noise Le	vel dB (A)			
SI.	Location	Date of	Day Time			N	Night Time			
No		Monitoring	Min	Max	Avg	Standard	Min	Max	Avg	Standard
1	Danapur Village	03.11.2023	42.8	54.2	53.12		34.9	42.8	39.01	
2	Mariyammana Halli	02.11.2023	43.6	54.5	53.54		36.8	43.2	40.05	
3	Hanumana Halli	02.11.2023	42.9	53.2	51.98	FF	38.3	43.3	41.95	
4	Galemmanagudi	02.11.2023	43.1	54.4	53.36	55	37.6	42.1	40.78	45
5	Gunda Village	03.11.2023	40.6	52.6	50.12		35.4	40.2	38.53	
6	Gunda Tanda Village	02.11.2023	41.2	51.8	49.86		35.3	41.6	39.43	

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

enta HOSPE **Authorised Sigi** K. Ramakrishna Reday 52 Technical Manager

NOISE: (AMBIENT STANDARDS)

Area code	Catagory of Area	Limit in	dB(A) Leq
Alea coue	Category of Area	Day Time	Night Time
А	Industrial Area	75	70
В	Commercial Area	65	55
С	Residential Area	55	45
D	Silence Area	50	40

Note: 1.

2. 3. 4. 5.

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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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GLOBALENVIRONMENT & MINING SERVICES

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ANNEXURE-41 GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

GEMS-LD/SOP/32

Ground Water

Pollution & Environment

Chemical

3814

- Name of the Industry 1
- : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- WO/ADMIN/FY24/R018 **Customer Reference** Sample collected by
 - **GLOBAL Environment & Mining Services** 5
- Grab Sampling Particulars of sample collected :

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- 5 Sampling Procedure
- Discipline 6
- 7 Group
- 8 Sample Type
- 9 Sample Code
- Date of Sampling 10
- 11 Sample Received
- **Date of Analysis** 12
- Date of Analysis Completion 13
- 14 **Report Issue Date**
- 15 **Report Number**

18.11.2023 : : 06.12.2023

11.11.2023

11.11.2023

11.11.2023

ULR-TC532323000001390F ÷

Results

SI.	Parameters	Protocol	Unit	Danapur Village	Standards as per IS: 10500:2012		
No.	T at anicter 5	FIOLOCOI	UIII	(GW1)	Desirable Limits	Permissible Limits	
1.	рН	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.10	6.5 to 8.5	NR	
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	2500	-	-	
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1500	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 SO4	APHA 23 rd Edition 2017 4500 -SO4 ²⁻ E (Page No. 4-199 to 4-200)	mg/L	210.0	200	400	
7.	Phosphorusas 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	288.02	-	-	
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	128.25	75	200	
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	80.19	30	100	
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	650.0	200	600	
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	509.84	250	1000	
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.42	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	19.42	45	NR	
16.	Total Alkalinity as CaCO ₃	APHA 22nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	520.0	200	600	

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					AN	INEXURE-41
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 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	0.328	0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.254	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 23rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.05	0.05	NR

Note: GW1: Danapur Village. NR-No relaxation. Ab-Absent.

INFERENCE	As per Standards IS: 10500:2012 Report Status: - Measured Values for the above parameters are within above the limits.
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Analysed By Priyanka B M Jr.Chemist

ent HOSPE 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.

Ine 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 2. 3. 4. 5. 6.

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ANNEXURE-41 GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

- Name of the Industry 1
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. :
- **Customer Reference** 2
- WO/ADMIN/FY24/RO18 : : GLOBAL Environment & Mining Services
- Sample collected by : Grab Sampling
- Particulars of sample collected 4
- Sampling Procedure 5
- Chemical :

: 11.11.2023

: 11.11.2023 : 18.11.2023

: 06.12.2023

11.11.2023

: Pollution & Environment

: GEMS-LD/SOP/32

- : Ground Water
 - 3814 1

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- 10 Date of Sampling
- 11 Sample Received
- 12 Date of Analysis

Discipline

Sample Type

Sample Code

Group

- Date of Analysis Completion 13
 - **Report Issue Date**

Results

SI.	Parameters	Protocol		Danapur	Standards as per IS: 10500:2012	
No			Unit	Village (GW1)	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	<0.001	0.003	NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Ab	Shall not be detectable in any 100ml sample	

Note: Ab: Absent, NR: No Relaxation

Analysed By Priyanka B M Jr.Chemist

Authorised Signate K. Ramakrishna Redd **Technical Manager**

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ANNEXURE-42 GEMS-LD/TF/23/01

HOSPE

Analysis Report of Water Quality Data

Pollution & Environment

Grab Sampling

Ground Water

11.11.2023

11.11.2023

: 11.11.2023

: 18.11.2023

GEMS-LD/SOP/32

- Name of the Industry 1 2 **Customer Reference**
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. :
- WO/ADMIN/FY24/R018 : Sample collected by

: Chemical

3816

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- **GLOBAL Environment & Mining Services** 5
- Particulars of sample collected 4
- Sampling Procedure 5
- Discipline 6
- 7 Group

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- 8 Sample Type
- 9 Sample Code
- 10 Date of Sampling
- 11 Sample Received
- 12 Date of Analysis
- 13 Date of Analysis Completion
- 14 Report Issue Date
- 15 **Report Number**

06.12.2023 ULR-TC532323000001392F

Results

SI.	Parameters	Protocol	Unit	Hanumanahalli	Standards as per IS: 10500:2012	
No	Parameters	r rotocor	Ome	Village (GW2)	Desirable Limits	Permissible Limits
1.	рН	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.57	6.5 to 8.5	NR
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	3200		-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1920	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 SO4	APHA 23 rd Edition 2017 4500 -S04 ²⁻ E (Page No. 4-199 to 4-200)	mg/L	165.70	200	400
7.	Phosphorusas 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	545.48	-	-
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	88.17	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	58.32	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	460.0	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl-	mg/L	639.80	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.84	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	17.30	45	NR
16.	Total Alkalinity as CaCO3	APHA 22nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	650.0	200	600

Note 1. 2

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

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					AN	NEXURE-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	0.16	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	0.220	0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.128	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 23rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.05	0.05	NR

Note: GW2: Hanumanahalli Village. NR-No relaxation. Ab-Absent.

As per Standards IS: 10500:2012 **INFERENCE** Report Status: - Measured Values for the above parameters are within the limit.

Analysed By Priyanka B M Ir.Chemist

nt a HOSPET 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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ANNEXURE-42 GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

- Name of the Industry 1
- : BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- **Customer Reference** 2
- : GLOBAL Environment & Mining Services

: WO/ADMIN/FY24/RO18

- Particulars of sample collected 4
- Sampling Procedure 5

Sample collected by

: GEMS-LD/SOP/32 : Chemical

: 11.11.2023

: 11.11.2023

: 11.11.2023

: Grab Sampling

- **Pollution & Environment** :
- Group : Ground Water Sample Type
 - : 3816

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- Sample Code 10 Date of Sampling
- Sample Received 11
- 12 Date of Analysis

Discipline

- 13 Date of Analysis Completion
- **Report Issue Date** 14

: 18.11.2023 06.12.2023

Results

SI.	Parameters	Protocol	Unit	Hanumanahalli	Standards as per IS: 10500:2012	
No			Unit	Village (GW2)	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	<0.001	0.003	NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By Priyanka B M Ir.Chemist

Authorised Signatory

K. Ramakrishna Reddy **Technical Manager**

- Recognised by Ministry of Environment, Forest and Climate Change for Laboratory
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1

Name of the Industry

GLOBALENVIRONMENT & MINING SERVICES

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

Analysis Report of Water Quality Data

: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.

2 **Customer Reference** WO/ADMIN/FY24/R018 5 **GLOBAL Environment & Mining Services** Sample collected by 3 : Particulars of sample collected Grab Sampling 4 1 : GEMS-LD/SOP/32 Sampling Procedure 5 : Chemical Discipline 6 Pollution & Environment 7 Group . : Ground Water 8 Sample Type 3817 9 Sample Code : 10 Date of Sampling : 11.11.2023 : 11.11.2023 Sample Received 11 : 11.11.2023 12 Date of Analysis 13 Date of Analysis Completion : 18.11.2023 Report Issue Date : 06.12.2023 14 : ULR-TC532323000001393F 15 **Report Number Results**

Sl.	D	Drotogol	Unit	Galemmana Gudi Village	Standards 10500	s as per IS:):2012
No	Parameters	Protocol	Onic	(GW3)	Desirable Limits	Permissible Limits
1.	рН	APHA 23rd 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	2500		-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1500	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 SO4	APHA 23 rd Edition 2017 4500 -SO4 ²⁻ E (Page No. 4-199 to 4-200)	mg/L	108.8	200	400
7.	Phosphorusas 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	138.62	-	-
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	144.28	75	200
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	87.48	30	100
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	720.0	200	600
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	524.83	250	1000
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	1.02	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	13.72	45	NR
16.	Total Alkalinity as CaCO ₃	APHA 22nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	450.0	200	600
2. W 3. T 4. T 5. R	Vater Samples will be destroyed after 15Days, Mater Samples will be reproduced wholly or in	s & applicable parameters. Endorsement of products is neither in finerals 3 Months, Filter papers & Thimbles After analysis Discar part & cannot be used as evidence in the Court of law & should n nvoice amount. Any dispute arising out of this report is subject t und Climate Change for Laboratory	d. ot use any advertis	ing media without special pern	nission in writing.	HOSPET



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					AN	NEXURE-43
17.	Acidity as CaCO3	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 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	0.326	0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.232	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 23rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L	<0.05	0.05	NR

Note: GW3: GalemmanaGudi Village. NR-No relaxation. Ab-Absent.

As per Standards IS: 10500:2012 **INFERENCE** Report Status: - Measured Values for the above parameters are above the limits.

Analysed By Priyanka B M Jr.Chemist

Authorised Signator K. Ramakrishna Reddy

Technical Manager

Note:

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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
7	Group	:	Pollution & Environment
8	Sample Type	:	Ground Water
9	Sample Code	:	3817
10	Date of Sampling	:	11.11.2023
11	Sample Received	;	11.11.2023
12	Date of Analysis	:	11.11.2023
13	Date of Analysis Completion	:	18.11.2023
14	Report Issue Date	:	06.12.2023
			<u>Results</u>

SI. No		Desteral	Unit	Galemmana Gudi Village (GW3)	Standards as per IS: 10500:2012	
	Parameters	Protocol	Ome		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	<0.001	0.003	NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By Priyanka B M Jr.Chemist

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

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GLOBALENVIRONMENT & MINING SERVICES

(Consulting Engineers, Mine designers, Geologist & Surveyors) 3rd Main Road, Basaveswara Badavane, HOSAPETE - 583201, Dist., Vijayanagara (Karnataka) :08394 355369 Ph : gems_hpt@yahoo.com e-mail Website : www.globalmining.in



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

Analysis Report of Water Quality Data

Name of the Industry 1 **Customer Reference**

Sample collected by

Sampling Procedure

- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
- WO/ADMIN/FY24/R018
 - **GLOBAL Environment & Mining Services** ÷
- Particulars of sample collected 4
- **Grab Sampling** 1 GEMS-LD/SOP/32 5

11.11.2023

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11.11.2023

18.11.2023

- Chemical
- 5 5
 - **Pollution & Environment**
- Ground Water 3815 5

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- Sample Code
- 10 Date of Sampling

Sample Type

Discipline

Group

- 11 Sample Received
- Date of Analysis 12
- Date of Analysis Completion 13
- Report Issue Date 14
- **Report Number** 15

06.12.2023

ULR-TC532323000001391F Results

Standards as per IS: Mariyammana 10500:2012 Sl. Unit Halli Village **Protocol Parameters** Permissible Desirable No (GW4) Limits Limits APHA 23rd Edition 2017 4500 H+ NR 7.03 6.5 to 8.5 -1. pH B (Pg. No.4-95 to 4-99) APHA 23rd Edition 2017 2510 A μS/cm 2300 -2. Conductivity (Pg. No.2-56 to 2-58) APHA 23rd Edition 2017 2540 C 500 2000 1380 **Total Dissolved Solids** mg/L 3. (Pg. No.2-69 to 2-70) APHA 23rd Edition 2017 2130 B 5 0.6 1 NTU Turbidity (NTU) 4 (Pg. No.2-13 to 2-15) APHA 23rd Edition 2017 2540 D <1.0 mg/L **Total Suspended Solids** 5. (Pg. No.2-70 to 2-71) APHA 23rd Edition 2017 4500 mg/L 132.0 200 400 6. Sulphate as SO₄ -SO42 E (Page No. 4-199 to 4-200) APHA 23rd Edition 2017 4500-P Nil -mg/L Phosphorusas P 7. D (Page No. 4-163 to 4-164) APHA 23rd Edition 2017 Na 3500 B 238.82 mg/L -..... Sodium as Na 8. (Pg. No.3-99 to 3-100) APHA 23rd Edition 2017 K 3500 B 0.0 mg/L -9. Potassium as K (Pg. No.3-89 to 3-90) APHA 23rd Edition 2017 3500 Ca B 200 mg/L 84.16 75 10. Calcium as Ca (Pg. No.3-69 to 3-70) APHA 23rd Edition 2017 3500-B Mg 100 mg/L 46.17 30 11. Magnesium as Mg By calculation (Pg. No.3-86) APHA 23rdEdition 2017 2340 C 600 400.0 200 mg/L Total Hardness as CaCO₃ 12. (Page No. 2-48 to 2-50) APHA 23rd Edition 2017 4500 Cl-399.87 250 1000 mg/L Chloride as Cl 13. (Page No. 4-75 to 4-76) APHA 23rdEdition 2017 4500 F-D 1 1.5 0.22 mg/L Fluoride as F 14. (Page No. 4-90 to 4-91) APHA 23rd Edition 2017 4500 NO3 E 22.62 45 NR Nitrate Nitrogen as NO3 mg/L 15 (Pg. No.4-131 to 4-132) APHA 22nd Edition 2017 2320 B 480.0 200 600 mg/L Total Alkalinity as CaCO₃ 16. (Pg. No.2-37 to 2-39) Note

The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied. 1.

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- : gems_hpt@yahoo.com e-mail
- : www.globalmining.in Website

ANNEXURE-44 APHA 22nd Edition 2017 2320 B Nil mg/L 17. Acidity as CaCO₃ (Pg. No.2-34 to 2-36) APHA 23rd Edition 2017 3500 Fe-B. NR 0.10 0.30 mg/L 18. Total Iron as Fe (Pg. No.3-80 to 3-82) APHA 23rd Edition 3111 B. Direct Air NR mg/L < 0.02 0.02 19. Nickel as Ni Acetylene Flame Method APHA 23rd Edition 3111 B. Direct Air 0.30 0.10 < 0.1 mg/L 20. Manganese as Mn Acetylene Flame Method APHA 23rd Edition 3111 B. Direct Air 0.05 1.50 0.241 mg/L Copper as Cu Acetylene Flame Method 21. APHA 23rd Edition 3111 B. Direct Air 5 15 0.223 mg/L Zinc as Zn Acetylene Flame Method 22. APHA 23rd Edition 3111 B. Direct Air NR 0.01 < 0.01 mg/L Lead as Pb 23. Acetylene Flame Method APHA 23rd Edition 2017 3114 B. 0.05 0.01 mg/L < 0.01 Arsenic as As 24. (Pg. No.3-36 to 3-40) APHA 23rd Edition 2017 3500 Cr-B. NR 0.05 < 0.05 mg/L Chromium as Cr 25. (Pg. No.3-71 to 3-72)

Note: GW4: MariyammanaHalli Village. NR-No relaxation. Ab-Absent.

As per Standards IS: 10500:2012 Report Status: - Measured Values for the above parameters are within the limit. **INFERENCE**

Analysed By Priyanka B M Ir.Chemist

Authorised Signatory K. Ramakrishna Reddy

Technical Manager

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Note:

2. 3. 4. 5. 6.



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

Analysis Report of Water Quality Data

GEMS-LD/SOP/32

Pollution & Environment

- Name of the Industry 1
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. : WO/ADMIN/FY24/RO18 :
- **Customer Reference** 2 Sample collected by 3
- : GLOBAL Environment & Mining Services : Grab Sampling

: 3815

Chemical

: Ground Water

: 11.11.2023

: 11.11.2023

: 06.12.2023

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- Particulars of sample collected 4 5
 - Sampling Procedure
- Discipline 6
- 7 Group
- Sample Type 8
- 9 Sample Code
- Date of Sampling 10
- Sample Received 11
- : 11.11.2023 12 Date of Analysis : 18.11.2023
- Date of Analysis Completion 13
- **Report Issue Date** 14

Results

SI.	Parameters	Protocol	TT14	Mariyammana Halli Village	Standards as per IS: 10500:2012	
No			Unit	(GW4)	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	<0.001	0.003	NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By Priyanka B M Jr.Chemist

HOSPE Authorised Signator

K. Ramakrishna Reddy **Technical Manager**

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

Analysis Report of Water Quality Data

- Name of the Industry 1 **Customer Reference** 2
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. :
- WO/ADMIN/FY24/R018 :

GEMS-LD/SOP/32

Pollution & Environment

Grab Sampling

Ground Water

Chemical

3818

GLOBAL Environment & Mining Services 1 :

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- Sample collected by 3 Particulars of sample collected 4
 - Sampling Procedure
- 5
- Discipline 6 7 Group
- 8 Sample Type
- 9 Sample Code
- Date of Sampling 10
- Sample Received 11
- 12 Date of Analysis
- 13 Date of Analysis Completion
 - **Report Issue Date** 1
- 14 **Report Number** 15
- : 18.11.2023 06.12.2023

11.11.2023

: 11.11.2023

: 11.11.2023

ULR-TC532323000001394F 1

Results

Sl.	Parameters	Dystocol	Harlt	Gunda Thanda	Standards as per IS: 10500:2012		
No		Protocol	Unit	(GW5)	Desirable Limits	Permissible Limits	
1.	рН	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.71	6.5 to 8.5	NR	
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	µS/cm	960	-	-	
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	576	500	2000	
4.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-13 to 2-15)	NTU	0.6	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 SO4	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	34.62	200	400	
7.	Phosphorusas 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	72.16	-	-	
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	40.08	75	200	
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	24.30	30	100	
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	200.0	200	600	
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	89.97	250	1000	
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.25	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	8.72	45	NR	
16.	Total Alkalinity as CaCO3	APHA 22nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L 300.0 200 Ment &				

I ne result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither interred nor implied. Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thinbles 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 1. 2.

3. 4. 5. 6.



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					AN	NEXURE-45
17.	Acidity as CaCO3 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 0.08 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		0.10	0.30
21.	Copper as Cu	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L 0.224		0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.115	5	15
23.	Lead as Pb	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	mg/L <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		0.01	0.05
25.	Chromium as Cr	APHA 23rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L < 0.05 0.05		NR	

Note: GW5: Gunda Thanda. NR-No relaxation. Ab-Absent.

As per Standards IS: 10500:2012 INFERENCE Report Status: - Measured Values for the above parameters are within the limit.

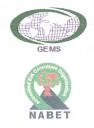
Analysed By Priyanka B M Jr.Chemist

nt & HOSPE Authorised Signatory K. Ramakrishna Reddy **Technical Manager**

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

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

Analysis Report of Water Quality Data

: GEMS-LD/SOP/32

: Pollution & Environment

Chemical

: Ground Water

3818

: 11.11.2023

: 11.11.2023

: 11.11.2023

: 18.11.2023

: 06.12.2023

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- 1 Name of the Industry
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. :
- **Customer Reference** 2
- WO/ADMIN/FY24/RO18 : : GLOBAL Environment & Mining Services
- Sample collected by : Grab Sampling
- Particulars of sample collected 4 Sampling Procedure 5
- 6 Discipline
- 7 Group

3

- Sample Type 8
- 9 Sample Code
- 10 Date of Sampling
- 11 Sample Received
- 12
 - Date of Analysis
- Date of Analysis Completion 13
- **Report Issue Date** 14

Results

SI.	Parameters Protocol Unit	Protocol	Unit	Gunda Thanda	Standards as per IS: 10500:2012	
No		Unit	(GW5)	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	<0.001	0.003	NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By Priyanka B M Jr.Chemist

Authorised Sig K. Ramakrishna Redd **Technical Manager**

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



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

Analysis Report of Water Quality Data

- Name of the Industry 1 2
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. :
- WO/ADMIN/FY24/R018 5

GEMS-LD/SOP/32

Ground Water

Pollution & Environment

Chemical

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- **Customer Reference**
- **GLOBAL Environment & Mining Services**
- Sample collected by ÷ **Grab Sampling** ţ
- Particulars of sample collected 4
- Sampling Procedure 5 Discipline
- 6 Group

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- 7 Sample Type 8
- 9 Sample Code
- 10
- Date of Sampling Sample Received 11
- 12 Date of Analysis
- Date of Analysis Completion 13
 - : 18.11.2023 5
- **Report Issue Date** 14 15 **Report Number**
- 06.12.2023 ULR-TC532323000001395F
 - **Results**

Sl.		Ductocal		Gunda Village	Standards as per IS: 10500:2012		
No	Parameters	Protocol	Unit	(GW6)	Desirable Limits	Permissible Limits	
1.	рН	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.23	6.5 to 8.5	NR	
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	1830	-	-	
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	1098	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 SO4	APHA 23 rd Edition 2017 4500 -SO4 ²⁻ E (Page No. 4-199 to 4-200)	mg/L	107.34	200	400	
7.	Phosphorusas 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	97.0	-	-	
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	104.20	75	200	
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	60.75	30	100	
12.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	510.0	200	600	
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	359.88	250	1000	
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.64	1	1.5	
15.	Nitrate Nitrogen as NO3	APHA 23 rd Edition 2017 4500 NO ₃ E (Pg. No.4-131 to 4-132)	mg/L	10.32	45	NR	
16.	Total Alkalinity as CaCO ₃	APHA 22nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L	mg/L 350.0		ment	
2. V 3. T 4. T 5. F	Water Samples will be destroyed after 15Days, I	es & applicable parameters. Endorsement of products is neither in dinerals 3 Months, Filter papers & Thimbles After analysis Discar part & cannot be used as evidence in the Court of law & should n invoice amount. Any dispute arising out of this report is subject is and Climate Change for Laboratory rashtra, Goa for DGPS survey	°d. ot use any adverti	sing media without special peri	nission in writing,		



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GLOBALENVIRONMENT & MINING SERVICES

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					A	NNEXURE-46
17.	Acidity as CaCO3 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 0.04 0.30			
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 0.162		0.05	1.50
22.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.085	5	15
23.	Lead as Pb	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	mg/L <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 23rd Edition 2017 3500 Cr-B. (Pg. No.3-71 to 3-72)	mg/L < 0.05 0.05		NR	

Note: GW6: Gunda Village. NR-No relaxation. Ab-Absent.

As per Standards IS: 10500:2012 **INFERENCE** Report Status: - Measured Values for the above parameters are within the limit.

Analysed By Priyanka B M

Ir.Chemist

HOSPE Authorised Signatory

K. Ramakrishna Reddy **Technical Manager**

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Note:



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

Analysis Report of Water Quality Data

: Pollution & Environment

BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. Name of the Industry : 1 WO/ADMIN/FY24/RO18 **Customer Reference** : 2 : GLOBAL Environment & Mining Services Sample collected by 3 : Grab Sampling Particulars of sample collected 4 : GEMS-LD/SOP/32 **Sampling Procedure** 5

Ground Water

3819

: 11.11.2023

: 11.11.2023

: 11.11.2023

: 06.12.2023

: Chemical

:

:

- 6 Discipline
- 7 Group
- 8 Sample Type
- 9 Sample Code
- 10 Date of Sampling
- 11 Sample Received
- 12 Date of Analysis
- 13 Date of Analysis Completion : 18.11.2023
- 14 Report Issue Date

Results

SI.	Parameters	Protocol	Unit	Gunda Village	Standards as per IS: 10500:2012	
No			Unit	(GW6)	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	mg/L <0.001		NR
3.	Total Coli form count	IS : 1622 : 1981	1 CFU/ 100 ml	An An		-
4.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml	Ab	Shall not be detectable in any 100ml sample	-

Note: Ab: Absent, NR: No Relaxation

Analysed By Priyanka B M Jr.Chemist

Authorised Signator

K. Ramakrishna Reddy Technical Manager

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

HOSPE

Analysis Report of Water Quality Data

- Name of the Industry 1 2
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. :
- WO/ADMIN/FY24/R018 1

GEMS-LD/SOP/32

RO Drinking Water

Pollution & Environment

Chemical

3820

11.11.2023

11.11.2023

: 11.11.2023

: 18.11.2023

- **Customer Reference** Sample collected by
- **GLOBAL Environment & Mining Services**
- 5 5 **Grab Sampling**
- Particulars of sample collected 4
- 5 Sampling Procedure
- Discipline 6
- 7 Group 8
- Sample Type 9
- Sample Code
- Date of Sampling 10
- Sample Received 11
- 12 Date of Analysis
- 13 Date of Analysis Completion **Report Issue Date** 14
- 06.12.2023 :

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Report Number 15

ULR-TC532323000001396F

Results

SI.		Protocol	Init	RO Drinking	Standards as per IS: 10500:2012		
No	Parameters	Protocol	Unit	Water	Desirable Limits	Permissible Limits	
1.	рН	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	8.06	6.5 to 8.5	NR	
2.	Conductivity	APHA 23 rd Edition 2017 2510 A (Pg. No.2-56 to 2-58)	μS/cm	330	-	-	
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-69 to 2-70)	mg/L	198	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 SO4	APHA 23 rd Edition 2017 4500 -SO ₄ ²⁻ E (Page No. 4-199 to 4-200)	mg/L	13.42	200	400	
7.	Phosphorusas 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	0.0	-	-	
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	16.03	75	200	
11.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation (Pg. No.3-86)	mg/L	4.86	30	100	
12.	Total Hardness as CaCO3	APHA 23 rd Edition 2017 2340 C (Page No. 2-48 to 2-50)	mg/L	60.0	200	600	
13.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-75 to 4-76)	mg/L	44.98	250	1000	
14.	Fluoride as F	APHA 23 rd Edition 2017 4500 F- D (Page No. 4-90 to 4-91)	mg/L	0.35	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	0.82	45	NR	
16.	Total Alkalinity as CaCO ₃	APHA 22nd Edition 2017 2320 B (Pg. No.2-37 to 2-39)	mg/L 60.0		200	600	

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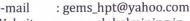
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ANNEXURE-47 APHA 22nd Edition 2017 2320 B Nil mg/L 17. Acidity as CaCO₃ (Pg. No.2-34 to 2-36) APHA 23rd Edition 2017 3500 Fe-B. 0.04 0.30 NR mg/L 18. Total Iron as Fe (Pg. No.3-80 to 3-82) APHA 23rd Edition 3111 B. Direct Air NR 0.02 < 0.02 19. Nickel as Ni mg/L Acetylene Flame Method APHA 23rd Edition 3111 B. Direct Air 0.30 <0.1 0.10 mg/L Manganese as Mn 20. Acetylene Flame Method APHA 23rd Edition 3111 B. Direct Air 0.05 1.50 mg/L < 0.01 21. Copper as Cu Acetylene Flame Method APHA 23rd Edition 3111 B. Direct Air 15 mg/L < 0.01 5 22. Zinc as Zn Acetylene Flame Method APHA 23rd Edition 3111 B. Direct Air <0.01 0.01 NR mg/L Lead as Pb 23. Acetylene Flame Method APHA 23rd Edition 2017 3114 B. 0.05 < 0.01 0.01 mg/L 24 Arsenic as As (Pg. No.3-36 to 3-40) APHA 23rd Edition 2017 3500 Cr-B. 0.05 NR mg/L < 0.05 Chromium as Cr 25 (Pg. No.3-71 to 3-72) APHA 23rd Edition 2017 3114 B. 0.001 NR Nil mg/L 26. Mercury as Hg (Pg. No.3-36 to 3-40)

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

As per Standards IS: 10500:2012 **INFERENCE** Report Status: - Measured Values for the above parameters are within the limit.

Analysed By

Priyanka B M Jr.Chemist

Authori K. Ramakrishna Reddy **Technical Manager**

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

Analysis Report of Water Quality Data

Pollution & Environment

- 1 Name of the Industry
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
 WO/ADMIN/FY24/R018
- Customer Reference : Sample collected by :
 - : GLOBAL Environment & Mining Services
 - Grab Sampling

3820

: 11.11.2023

: 11.11.2023

: 11.11.2023

: 18.11.2023

Chemical

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: GEMS-LD/SOP/32

: RO Drinking Water

- 4 Particulars of sample collected5 Sampling Procedure
- 6 Discipline
- 7 Group
- 7 Group 8 Sample Ty
 - Sample Type
- 9 Sample Code10 Date of Sampling
- 11 Sample Received
- 12 Data of Analysis
- 12 Date of Analysis
- 13 Date of Analysis Completion
- 14 Report Issue Date
- 06.12.2023 Results

SI.		Protocol	Unit	RO Drinking	Standards as per IS: 10500:2012		
No	Parameters	Protocol	Unit	Water	Desirable Limits	Permissible Limits	
1.	colour	IS: 3025 (PART 4)- 1984, RA-2012 Platinum cobalt Method	Hazen	Hazen <5		15	
2.	0dour	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.	0il & 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	<0.001	0.003	NR	
6.	Selenium as Se	APHA 23 rd Edition 3114 B. Direct Air Acetylene Flame Method	mg/L	<0.05	0.01	No Relaxation	
7.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN (Pg. No.4-45 to 4-46)	mg/L	NA	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 23rd Edition 2017 4500 B-B (p.no.4-25 to 4-26)	mg/L	<0.5	0.5	1.0	
11.	Escherichia coli count	IS : 1622 : 1981	1 CFU/ 100 ml Ab		Shall not be detectable in any 100ml sample_	-	

Note: Ab: Absent, NR: No Relaxation,

Analysed By Priyanka B M Ir.Chemist



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

Analysis Report of Water Quality Data

: BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.

: WO/ADMIN/FY24/R018 2 **Customer Reference** : GLOBAL Environment & Mining Services Sample collected by 3 : Composite Sampling Particulars of sample collected 4 : GEMS-LD/SOP/32 5 Sampling Procedure : Chemical Discipline 6 7 : Pollution & Environment Group : Sewage Treatment Plant (Outlet) 8 Sample Type : 09.11.2023 9 Date of Sampling : 09.11.2023 10 Sample Received : 09.11.2023 11 Date of Analysis 12 Date of Analysis Completion : 16.11.2023 : 06.12.2023 13 **Report Issue Date Report Number** : ULR-TC532323000001374F 14

SI.					Results		
51. No.	Parameters	Protocol	Unit	STP 45 KLD	STP-1 90 KLD	STP-2 90 KLD	As per KSPCB Std
		Sample code	-	3766	3767	3768	
1.	рН	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.40	7.13	7.59	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	14.0	18.0	10.0	<20
3.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	6.0	8.0	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	40.0	40.0	20.0	<50
5.	Oil & Grease	APHA 23rd Edition 2017 5520 B (Pg. No.5-41 to 5-42)	mg/L	2.0	4.0	2.0	10

Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit. STP 45 KLD - Near Fortivia

STP-1 90 KLD -Near ISP Area

STP-2 90 KLD - Near Gunda Guest House

Name of the Industry

Analysed By Privanka B M

Ir. Chemist

Authorised Signatory 9 K. Ramakrishna Reddy **Technical Manager**

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

Analysis Report of Water Quality Data

- Name of the Industry 1
- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. ÷ WO/ADMIN/FY24/RO18 :
- 2 **Customer Reference** Sample collected by 3
- **GLOBAL Environment & Mining Services** :

Pollution & Environment

: Composite Sampling

: GEMS-LD/SOP/32

- Particulars of sample collected 4
 - Sampling Procedure
- 5 6 Discipline
- 7 Group

9

Sample Type 8

: Sewage Treatment Plant (Outlet) 09.11.2023

Chemical

: 09.11.2023

: 16.11.2023

: 06.12.2023

:

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- Date of Sampling : : 09.11.2023
- Sample Received 10
- 11 Date of Analysis
- 12 Date of Analysis Completion
- **Report Issue Date** 13

					Results		- As per
SI. No.	Parameters		Unit	STP 45 KLD	STP-1 90 KLD	STP-2 90 KLD	KSPCB
	Sample code			3766	3767	3768	Std
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	-	Agree able	Agree able	Agree able	-
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-2014, Nesslerization method	mg/L	1.32	0.74	1.12	-

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

STP 45 KLD – Near Fortivia

STP-190 KLD - Near ISP Area

STP-2 90 KLD - Near Gunda Guest House

Analysed By Priyanka B M Jr.Chemist

Authorised Sig K. Ramakrishna Redev **Technical Manager**

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

Analysis Report of Water Quality Data

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.			
2	Customer Reference	:	WO/ADMIN/FY24/R018			
3	Sample collected by	:	GLOBAL Environment & Mining Services			
4	Particulars of sample collected	:	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	:	11.11.2023			
10	Sample Received	:	11.11.2023			
11	Date of Analysis	:	11.11.2023			
12	Date of Analysis Completion	:	18.11.2023			
13	Report Issue Date	:	06.12.2023			
14	Report Number	:	ULR-TC532323000001397F			
Results						

Results

				Res		
SI. No.	Parameters Protocol		Unit	Neutralization Pit 70 MW Power Plant	PitPit1W Power2x70 MW	
		Sa	mple Code	3821	3822	
1.	рН	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	6.88	8.83	6.5 to 9.0
2.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-70 to 2-71)	mg/L	2.0	4.0	100
3.	Chemical Oxygen Demand as COD	APHA 23 rd Edition 2017 5220 C (Pg. No.5-18 to 5-19)	mg/L	24.0	22.0	250
4.	Oil & Grease	APHA 23rd Edition 2017 5520 B (Pg. No.5-41 to 5-42)	mg/L	2.0	1.0	10

Note: BDL-Below detectable Limit.

Note 1.

6

INFERENCE: The Measured values are within the Limit.

Analysed By Priyanka B M Jr.Chemist

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

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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/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	:	11.11.2023
10	Sample Received	:	11.11.2023
11	Date of Analysis	:	11.11.2023
12	Date of Analysis Completion	:	18.11.2023
13	Report Issue Date	:	06.12.2023

				Res	IS 2296 -		
SI. No.	Parameters	Protocol	Unit	Danayakanakere Upstream	Danayakanakere Downstream	1982	
		Sa	mple code	3823	3824	CLASS -B	
1.	рН	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.98	7.99	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	0.0	3.0	
3.	Fluorides as F	APHA 23 RD Edition 4500F ⁻ D (Pg. No.4-90 to 4-91)	mg/L	BDL	1.02	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	6.0	6.1	>5.0	
6.	Color	APHA 23 RD Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	6	5	300	
7.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN ⁻ (Pg. No.4-45 to 4-46)	mg/L	BDL	BDL BDL		
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 Coli forms	IS : 15185 : 2016	MPN/ 100 ml	Absent	Absent	500	
	Escherichia coli or E. coli	IS : 15185 : 2016	MPN/ 100 ml	Absent	Absent	-	

Note: BDL-Below detectable Limit.

INFERENCE: The Measured values are within the Limit.

Analysed By Priyanka B M Jr.Chemist

Authorised S K. Ramakrishna Roddy **Technical Manager**

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



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

Analysis Report of Surface Water Quality Data

- BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District. Name of the Industry : 1 WO/ADMIN/FY24/R018 2 **Customer Reference GLOBAL Environment & Mining Services** 3 Sample collected by : Particulars of sample collected : Composite Sampling 4 Sampling Procedure GEMS-LD/SOP/32 5 : Chemical 6 Discipline 5 **Pollution & Environment** 7 Group 5 **Surface Water** 8 Sample Type : Date of Sampling 9 : 11.11.2023 : 11.11.2023 10 Sample Received 11 Date of Analysis : 11.11.2023 12 Date of Analysis Completion : 18.11.2023
- 13
 Report Issue Date
 : 06.12.2023

01				Res	10.0007		
Sl. No.	Parameters	Protocol	Unit	KempuHalla Upstream	KempuHalla Downstream	IS 2296 - 1982	
			Sample code	3825	3826	CLASS -B	
1.	рН	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	8.19	8.18	6.5-8.5	
2.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	0.0	2.0	3.0	
3.	Fluorides as F	APHA 23 RD Edition 4500F ⁻ D (Pg. No.4-90 to 4-91)	mg/L	0.84	0.01	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	4.8	5.0	>5.0	
6.	Color	APHA 23 RD Edition 2120 B (Pg. No.2-6 to 2-7)	Hazen	5	6	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.	1. 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	-	

Note: BDL-Below detectable Limit

INFERENCE: The measured values are within the Limit.

Analysed By Priyanka B M Ir.Chemist

Authorised Signator

K. Ramakrishna Reddy Technical Manager

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



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

Analysis Report of Surface Water Quality Data

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Composite Sampling
5	Sampling Procedure	:	GEMS-LD/SOP/32
6	Discipline	:	Chemical
7	Group	:	Pollution & Environment
8	Sample Type	:	Surface Water
9	Date of Sampling	:	11.11.2023
10	Sample Received	:	11.11.2023
11	Date of Analysis	:	11.11.2023
12	Date of Analysis Completion	:	18.11.2023
13	Report Issue Date	:	06.12.2023

13	Report	Issue	Date	
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Sl.	Parameters	Protocol		Results	IS 2296 -1982 CLASS -B
No.			Unit	Tungabhadra dam	
			Sample Code	3827	CLASS -D
1.	рН	APHA 23rd Edition 2017 4500 H+ B (Pg. No.4-95 to 4-99)	-	7.96	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	BDL	1.5
4.	Arsenic as As	APHA-23 RD Edition-3114 –B (Pg. No.3 -36 to 3-40)	mg/L	<0.1	0.2
5.	Dissolved Oxygen	APHA 23 RD Edition 4500 C (Pg. No.4-146)	mg/L	6.0	>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	<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	1.0
11.	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.

Analysed By Priyanka B M Jr.Chemist

HOSPE Authorised Signatory K. Ramakrishna Reddy 1015 **Technical Manager**

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