BMM Ispat Ltd.,

ENVIRONMENTAL MONITORING REPORT

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

STAGE-II

April - 2023

Prepared by

GEMS

GLOBAL ENVIRONMENT & MINING SERVICES
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STAGE-2

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 within the plant, 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 within the plant, Stack monitoring & Personal Dust Sampling as per the CFO. These monitoring has been carried out in a frequency as mentioned in the CFO and the same report is being submitted to the Board.

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

for GLOBAL Environment & Mining Services

Place: Hosapete
Date: 05.05.2023

K. Ramakrishna Reddy
(Technical Manager)

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

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

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

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

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

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

1.2 PROMOTERS OF THE PROJECT

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

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

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

1.3 Site Location

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

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

S.N.	Items	Capacity
1	Iron ore beneficiation plant	3.40 MTPA
2	Palletizing Plant	1.20 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

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 **APRIL-2023**. The Parameters monitored are:

- Ambient Air Quality
- Fugitive Dust Level
- Stack Emission

2.0 SCOPE AND METHODOLOGY

2.1 PREAMBLE

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

2.2 AMBIENT AIR QUALITY

To assess the ambient air quality status, monitoring stations were identified 6 Location plant site. Work zone air monitoring stations were identified in the major work spots. Based on the production activities the parameters chosen for ambient air quality. Were Particulate Matter PM10, Particulate Matter (size less than 2.5µm) PM2.5.

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

Purpose

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

Reference Method: IS 5182 Part 23 Method of Measurement of Air Pollution: Respirable Suspended Particulate Matter (PM10) cyclonic flow technique.

Principle of the method

Air is drawn through a size-selective inlet and through a 20.3 X 25.4 cm (8 X 10 in) filter at a flow rate, which is typically 1132 L/min. Particles with aerodynamic diameter less than the cut-point of the inlet are collected, by the filter. The mass of these particles is determined by the difference in filter weights prior to and after sampling. The concentration of PM10 in the designated size range is calculated by dividing the weight gain of the filter by the volume of air sampled.

Sampling

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

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

Analysis

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

2.2.2 Particulate Matter (PM2.5) (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.

Reference Method: 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 µg/m3. The microprocessor reads averages and stores five-minute averages of ambient temperature, ambient pressure, filter temperature and volumetric flow rate. In

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

2.2.3 Sulphur Dioxide (SO2)

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

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

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

Sampling

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

Analysis

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

2.2.4 Nitrogen Di Oxide (NO_2):

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 Ozone (Chemical method)

Purpose

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

Principle of the method

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

Sampling

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

Analysis

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

2.2.6 Ammonia (NH_3)

Purpose

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

Principle of the method

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

Sampling

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

Analysis

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

2.2.7 Benzo(a)Pyrene

Purpose

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

Principle of the Method

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

(1.2m3/min) sampling method capable of detecting sub.ng/m3 concentration of PAH in 24 hours sample (i.e., collected in 3 shifts of 8 hour each with 480 m3 sampling volume of air).

Sampling

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

Sample Processing

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

Filtration

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

Sample injection

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

2.2.8 Benzene

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

Principle of the Method

IS 5182 (Part 11): 2006, the charcoal tubes are available in different sizes and contain varying amount of activated charcoal. The ambient air is sucked through the tube using a low flow sampler used for collection of BTX sample in a way that results in an enrichment of the relevant substances in the activated charcoal. Desorption of the adsorbed benzene is done using carbon disulphide (CS2). The substances desorbed in the CS2 are analyzed by capillary gas chromatography. A flame ionization detector (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 Carbon Monoxide (CO)

Principle:

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

Non dispersive Infrared (NDIR) Gas Analyser

The apparatus shall be constructed so as to be suitable for operating within the temperature range of 15°C to 40°C and in a relative humidity range of 0 to 90 percent. The apparatus shall embody facilities for the analysis of continuously applied sample or a discrete sample of volume of 2.0 litres. In the later case the purification train shall be of such a design and dead volume that 2.0 litres 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)

Purpose

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

Principle of the method

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

Sampling procedure

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

3.0 Fugitive Emission Monitoring

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

4.0 Stack Monitoring

Stack Monitoring was Collected 60 Sample from Vayubodhan Stack sampler VSS1 stack monitoring was used for drawing the flue gas. Sulphur dioxide and oxides of Nitrogen in the flue gas was sampled by bubbling flue gas solution respectively and the analyses of the pollutants were done as per the Indian Standard procedures prescribed by CPCB/BIS. Stack Emission level was monitored as per the statutory requirement on twice in a month.

4.1 Stack Emissions Monitoring Methodology

Sampling Procedure

Pre-SamplingActivities

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

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

4.2 Traverse Point Calculation

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

4.3 Determination of Dust Concentration

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

DATA ANALYSIS

4.4 BUFFERZONE AMBIENT AIR QUALITY STATUS

Danapur Village (A1)

At this location, average of PM10, PM2.5, SO2, NO2 values Average 75.19, 23.28, 10.94 &12.56 µg/m³respectively. 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, NO2values Average 74.22, 21.45, 9.59& 11.56 µg/m³respectively. 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 71.29, 19.75, 10.21& 10.98 µg/m³respectively. 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 65.68, 17.25, 8.26 & 9.50 µg/m³respectively. 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 62.54, 16.27, 7.63 & 9.79 µg/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 62.18, 17.34, 7.07 & 10.28 µg/m³respectively. All above the values were found within the Limits. Results given in **Annexure-6.**

5.1 FUGITIVE DUST CONCENTRATION

Fortnightly fugitive air quality was monitored all plant area SPM value minimum 416.67µg/m^3, maximum value 1789.81µg/m^3 and average value 1207.21µg/m^3. The Fugitive air quality 1st& 2nd Fortnight Results given in **Annexure-7 & Annexure-8.**

5.2 STACK MONITORING

Stack emission level was monitored all chimneys' PM values (mg/Nm^3) 1st and 2ndFortnight Minimum Value 12.71mg/Nm^3, Maximum Value 41.02mg/Nm^3& Average Value 31.00mg/Nm^3. 1st& 2nd Fortnight Results are given in **Annexure-9 to Annexure-21.**

5.3 CONCLUSION

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

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Ph : +918394 355369
e-mail : gems_hpt@yahoo.com
Website : www.globalmining.in
TC-5323

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	:	WO/ADMIN/FY24/R018
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	:	**APRIL- 2023**
Location	:	**A1-Danapur Village**
Duration of Monitoring	:	24 Hour
Report Issued Date	:	**05.05.2023**
Report Number	:	**ULR-TC532323000000008F**

RESULTS

Parameters			PM_{10} [µg/m³]		$PM_{2.5}$ [µg/m³]		SO_2 [µg/m³]		NO_2 [µg/m³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
04.04.2023	05.04.2023	11	77.61		22.68		10.21		12.81	
05.04.2023	06.04.2023	32	59.86		17.58		8.42		9.33	
10.04.2023	11.04.2023	107	74.33		21.09		11.89		14.17	
11.04.2023	12.04.2023	132	78.56		25.25		11.00		10.69	
17.04.2023	18.04.2023	223	76.26	**100**	31.13	**60**	9.65	**80**	15.05	**80**
18.04.2023	19.04.2023	254	79.64		23.20		10.10		10.20	
24.04.2023	25.04.2023	352	67.30		18.27		12.23		16.29	
25.04.2023	26.04.2023	386	77.95		27.06		14.03		11.94	
Average			**75.19**		**23.28**		**10.94**		**12.56**	

SL NO	INSTRUMENT DETAILS		
1	**Instrument Name**	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	**Make & Model**	Enviro instruments / AAS-217 BL	Enviro instruments / EI-133
3	**Serial No**	R.D.S. / 14-A-142	PM2.5/PM10 Sampler / 158-K-20
4	**Calibration Date**	01.04.2023	06.03.2023
5	**Calibration Due Date**	31.03.2024	05.03.2024

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

Analysed By
B P Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

Note:
1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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6. Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	:	WO/ADMIN/FY24/R018
Sample collected by	:	Global Environment & Mining Services
Discipline	:	Chemical
Group	:	Atmospheric Pollution
Sample Type	:	Ambient Air Quality Monitoring
Particulars of Sample Collected	:	CO Analyser
Month	:	**APRIL- 2023**
Location	:	**A1-Danapur Village**
Duration of Monitoring	:	1 Hour
Report Issued Date	:	**05.05.2023**

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m³]	Standard
1	04.04.2023	11	0.17	4.0
2	05.04.2023	32	0.12	
3	10.04.2023	107	0.11	
4	11.04.2023	132	0.13	
5	17.04.2023	223	0.11	
6	18.04.2023	254	0.15	
7	24.04.2023	352	0.10	
8	25.04.2023	386	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	09.07.2022
5	Calibration Due Date	08.07.2023

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

Analysed By
B P Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services * HOSPET

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	:	WO/ADMIN/FY24/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	:	**APRIL- 2023**
Location	:	**A2-Mariyammanahalli Village**
Duration of Monitoring	:	24 Hour
Report Issued Date	:	**05.05.2023**
Report Number	:	**ULR-TC532323000000009F**

RESULTS

Parameters			PM_{10} [µg/m³]		$PM_{2.5}$ [µg/m³]		SO_2 [µg/m³]		NO_2 [µg/m³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
04.04.2023	05.04.2023	12	79.25		23.18		10.32		11.56	
05.04.2023	06.04.2023	33	68.35		18.12		6.73		8.83	
10.04.2023	11.04.2023	108	77.65		25.75		11.22		11.44	
11.04.2023	12.04.2023	133	70.26		20.81		8.53		13.06	
17.04.2023	18.04.2023	224	78.96	**100**	16.07	**60**	11.11	**80**	10.69	**80**
18.04.2023	19.04.2023	255	63.25		20.22		7.63		12.93	
24.04.2023	25.04.2023	353	68.87		22.00		11.89		14.17	
25.04.2023	26.04.2023	387	77.22		25.48		9.31		9.82	
Average			**74.22**		**21.45**		**9.59**		**11.56**	

SL NO	INSTRUMENT DETAILS		
1	**Instrument Name**	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	**Make & Model**	Enviro instruments / APM -460BL	Enviro instruments / EI-133
3	**Serial No**	R.D.S./330-DTF-2005	PM2.5 /PM10 Sampler / 159-K-20
4	**Calibration Date**	01.04.2023	06.03.2023
5	**Calibration Due Date**	31.03.2024	05.03.2024

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

Analysed By
B P Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	:	WO/ADMIN/FY24/R018
Sample collected by	:	Global Environment & Mining Services
Discipline	:	Chemical
Group	:	Atmospheric Pollution
Sample Type	:	Ambient Air Quality Monitoring
Particulars of Sample Collected	:	CO Analyser
Month	:	**APRIL- 2023**
Location	:	**A2-Mariyammanahalli Village**
Duration of Monitoring	:	1 Hour
Report Issued Date	:	**05.05.2023**

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m³]	Standard
1	04.04.2023	12	0.22	4.0
2	05.04.2023	33	0.14	
3	10.04.2023	108	0.10	
4	11.04.2023	133	0.09	
5	17.04.2023	224	0.11	
6	18.04.2023	255	0.13	
7	24.04.2023	353	0.18	
8	25.04.2023	387	0.20	

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	09.07.2022
5	Calibration Due Date	08.07.2023

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

Analysed By
B P Lingaraja
Chemist

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	:	WO/ADMIN/FY24/R018
Sample collected by	:	Global Environment & Mining Services
Discipline	:	Chemical
Group	:	Atmospheric Pollution
Sample Type	:	Ambient Air Quality Monitoring
Particulars of Sample Collected	:	Respirable Dust Sampler, FPS Sampler
Month	:	**APRIL- 2023**
Location	:	**A3-Hanumanahalli Village**
Duration of Monitoring	:	24 Hour
Report Issued Date	:	**05.05.2023**
Report Number	:	**ULR-TC532323000000010F**

RESULTS

Parameters			PM_{10} [µg/m³]		$PM_{2.5}$ [µg/m³]		SO_2 [µg/m³]		NO_2 [µg/m³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
04.04.2023	05.04.2023	13	70.86		22.99		9.31		12.31	
05.04.2023	06.04.2023	34	79.63		20.04		7.63		9.08	
10.04.2023	11.04.2023	109	68.48		22.51		12.01		13.18	
11.04.2023	12.04.2023	134	72.28		19.70		9.65		11.94	
17.04.2023	18.04.2023	225	78.33	**100**	16.50	**60**	6.84	**80**	9.20	**80**
18.04.2023	19.04.2023	256	69.64		20.99		9.09		10.32	
24.04.2023	25.04.2023	354	72.02		19.36		8.42		10.38	
25.04.2023	26.04.2023	388	59.10		15.89		10.21		11.44	
Average			**71.29**		**19.75**		**10.21**		**10.98**	

SL NO	INSTRUMENT DETAILS		
1	**Instrument Name**	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	**Make & Model**	Greentech instruments / GTI -151	Enviro instruments / EI-133
3	**Serial No**	R.D.S./242-DTC-2020	PM2.5 /PM10 Sampler / 160-K-20
4	**Calibration Date**	01.04.2023	06.03.2023
5	**Calibration Due Date**	31.03.2024	05.03.2024

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

Analysed By
B P Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	:	WO/ADMIN/FY24/R018
Sample collected by	:	Global Environment & Mining Services
Discipline	:	Chemical
Group	:	Atmospheric Pollution
Sample Type	:	Ambient Air Quality Monitoring
Particulars of Sample Collected	:	CO Analyser
Month	:	**APRIL- 2023**
Location	:	**A3-Hanumanahalli Village**
Duration of Monitoring	:	1 Hour
Report Issued Date	:	**05.05.2023**

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m³]	Standard
1	04.04.2023	13	0.21	4.0
2	05.04.2023	34	0.18	
3	10.04.2023	109	0.23	
4	11.04.2023	134	0.16	
5	17.04.2023	225	0.13	
6	18.04.2023	256	0.14	
7	24.04.2023	354	0.11	
8	25.04.2023	388	0.16	

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	09.07.2022
5	Calibration Due Date	08.07.2023

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

Analysed By
B P Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

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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	:	**APRIL- 2023**
Location	:	**A4-Galemmanagudi Village**
Duration of Monitoring	:	24 Hour
Report Issue Date	:	**05.05.2023**
Report Number	:	**ULR-TC532323000000024F**

RESULTS

Parameters			PM_{10} [µg/m³]		$PM_{2.5}$ [µg/m³]		SO_2 [µg/m³]		NO_2 [µg/m³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Sample Received	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
06.04.2023	07.04.2023	50	65.06		17.55		8.42		11.31	
07.04.2023	08.04.2023	69	70.11		12.15		10.21		9.08	
12.04.2023	13.04.2023	151	56.27		14.75		8.53		10.20	
13.04.2023	14.04.2023	174	69.00		18.32		7.52		7.96	
19.04.2023	20.04.2023	274	59.03	**100**	16.56	**60**	6.62	**80**	9.20	**80**
20.04.2023	21.04.2023	294	65.75		19.66		9.43		8.83	
26.04.2023	27.04.2023	408	73.66		18.93		8.75		8.33	
27.04.2023	28.04.2023	423	66.60		20.06		6.62		11.13	
Average			**65.68**		**17.25**		**8.26**		**9.50**	

SL NO	INSTRUMENT DETAILS		
1	**Instrument Name**	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	**Make & Model**	Enviro instruments / AAS-217 BL	Enviro instruments / EI-133
3	**Serial No**	R.D.S. / 14-A-142	PM2.5 /PM10 Sampler / 158-K-20
4	**Calibration Date**	01.04.2023	06.03.2023
5	**Calibration Due Date**	31.03.2024	05.03.2024

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

Analysed By
B P Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:
1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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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	:	CO Analyser
Month	:	**APRIL- 2023**
Location	:	**A4-Galemmanagudi Village**
Duration of Monitoring	:	1 Hour
Report Issued Date	:	**05.05.2023**

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m³]	Standard
1	06.04.2023	50	0.11	4.0
2	07.04.2023	69	0.16	
3	12.04.2023	151	0.09	
4	13.04.2023	174	0.20	
5	19.04.2023	274	0.22	
6	20.04.2023	294	0.10	
7	26.04.2023	408	0.18	
8	27.04.2023	423	0.23	

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	09.07.2022
5	Calibration Due Date	08.07.2023

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

Analysed By
B P Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

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TC-5323

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	:	WO/ADMIN/FY24/R018
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	:	**APRIL- 2023**
Location	:	**A5-Gunda Village**
Duration of Monitoring	:	24 Hour
Report Issue Date	:	**05.05.2023**
Report Number	:	**ULR-TC532323000000025F**

RESULTS

Parameters			PM10 [µg/m3]		PM2.5 [µg/m3]		SO2 [µg/m3]		NO2 [µg/m3]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
06.04.2023	07.04.2023	51	52.20		17.34		10.55		10.82	
07.04.2023	08.04.2023	70	68.69		13.50		6.73		9.33	
12.04.2023	13.04.2023	152	49.77		16.68		7.97		11.56	
13.04.2023	14.04.2023	175	77.02		15.32		5.72		8.46	
19.04.2023	20.04.2023	275	49.87	100	12.92	60	6.96	80	10.07	80
20.04.2023	21.04.2023	295	73.99		16.27		6.28		9.20	
26.04.2023	27.04.2023	409	67.31		18.78		5.73		8.21	
27.04.2023	28.04.2023	424	61.48		19.33		11.11		10.69	
Average			62.54		16.27		7.63		9.79	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Enviro instruments / APM -460 BL	Enviro instruments / EI-133
3	Serial No	R.D.S./330-DTF-2005	PM2.5 /PM10 Sampler / 159-K-20
4	Calibration Date	01.04.2023	06.03.2023
5	Calibration Due Date	31.03.2024	05.03.2024

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

Analysed By
B P Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	:	WO/ADMIN/FY24/R018
Sample collected by	:	Global Environment & Mining Services
Discipline	:	Chemical
Group	:	Atmospheric Pollution
Sample Type	:	Ambient Air Quality Monitoring
Particulars of Sample Collected	:	CO Analyser
Month	:	**APRIL- 2023**
Location	:	**A5-Gunda Village**
Duration of Monitoring	:	1 Hour
Report Issued Date	:	**05.05.2023**

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m³]	Standard
1	06.04.2023	51	<0.01	4.0
2	07.04.2023	70	<0.01	
3	12.04.2023	152	<0.01	
4	13.04.2023	175	<0.01	
5	19.04.2023	275	<0.01	
6	20.04.2023	295	<0.01	
7	26.04.2023	409	<0.01	
8	27.04.2023	424	0.11	

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	09.07.2022
5	Calibration Due Date	08.07.2023

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

Analysed By
B P Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services * HOSPET

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

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	:	WO/ADMIN/FY24/R018
Sample collected by	:	Global Environment & Mining Services
Discipline	:	Chemical
Group	:	Atmospheric Pollution
Sample Type	:	Ambient Air Quality Monitoring
Particulars of Sample Collected	:	Respirable Dust Sampler, FPS Sampler
Month	:	**APRIL- 2023**
Location	:	**A6-Gunda Tanda Village**
Duration of Monitoring	:	24 Hour
Report Issue Date	:	**05.05.2023**
Report Number	:	**ULR-TC532323000000026F**

RESULTS

Parameters			PM_{10} [µg/m³]		$PM_{2.5}$ [µg/m³]		SO_2 [µg/m³]		NO_2 [µg/m³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
06.04.2023	07.04.2023	52	61.63		14.35		7.85		10.69	
07.04.2023	08.04.2023	71	51.88		20.42		7.04		9.70	
12.04.2023	13.04.2023	153	68.05		14.09		8.46		12.06	
13.04.2023	14.04.2023	176	63.58		20.33		4.79		8.08	
19.04.2023	20.04.2023	276	54.32	100	14.15	60	7.95	80	11.31	80
20.04.2023	21.04.2023	296	60.10		20.10		5.10		8.33	
26.04.2023	27.04.2023	410	66.27		18.19		7.04		10.20	
27.04.2023	28.04.2023	425	71.62		17.12		8.36		11.86	
Average			62.18		17.34		7.07		10.28	

SL NO	INSTRUMENT DETAILS		
1	Instrument Name	Respirable Dust Sampler (RDS)	Fine Particulate Sampler (FPS)
2	Make & Model	Greentech instruments / GTI -151	Enviro instruments / EI-133
3	Serial No	R.D.S./242-DTC-2020	PM2.5 /PM10 Sampler / 160-K-20
4	Calibration Date	01.04.2023	06.03.2023
5	Calibration Due Date	31.03.2024	05.03.2024

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

Analysed By
B P Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Note:
1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles After analysis Discard.
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ANNEXURE-06
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
Customer Reference	:	WO/ADMIN/FY24/R018
Sample collected by	:	Global Environment & Mining Services
Discipline	:	Chemical
Group	:	Atmospheric Pollution
Sample Type	:	Ambient Air Quality Monitoring
Particulars of Sample Collected	:	CO Analyser
Month	:	**APRIL- 2023**
Location	:	**A6-Gunda Tanda Village**
Duration of Monitoring	:	1 Hour
Report Issued Date	:	**05.05.2023**

RESULTS

Sl. No.	Date of Sampling	Sample Code	CO (1 Hour) [mg/m³]	Standard
1	06.04.2023	52	<0.01	4.0
2	07.04.2023	71	<0.01	
3	12.04.2023	153	0.09	
4	13.04.2023	176	<0.01	
5	19.04.2023	276	<0.01	
6	20.04.2023	296	<0.01	
7	26.04.2023	410	0.10	
8	27.04.2023	425	<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	09.07.2022
5	Calibration Due Date	08.07.2023

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

Analysed By
B P Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

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

FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
5	Month	:	**APRIL-2023(1st Fort Night)**
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	**05.05.2023**
10	Report Number	:	**GEMS/BMM/FM/2023-24/13**

RESULTS

Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM (µg/m³)	Standard
I. Beneficiation Plant-II						
1.	Ball Mill Area (Zero Meter)	17	04.04.2023	05.04.2023	967.54	2000
2.	Iron Ore Hopper (Near Monsoon Shed)	18	04.04.2023	05.04.2023	876.60	2000
3.	Concentrate Thickner	19	04.04.2023	05.04.2023	773.27	2000
II. Pellet Plant-I						
4.	PR-6	20	04.04.2023	05.04.2023	815.70	2000
5.	Annual Cooler	21	04.04.2023	05.04.2023	833.81	2000
6.	Additive Grinding Building	38	05.04.2023	06.04.2023	1708.85	2000
III. Sponge Iron Division -2 (Kiln 1 & 2)						
7.	Control room	39	05.04.2023	06.04.2023	1096.91	2000
8.	Near Weigh bridge (dispatch)	40	05.04.2023	06.04.2023	1777.28	2000
9.	Pellet Storage bin	56	06.04.2023	07.04.2023	1685.50	2000
10.	Transfer House area	41	05.04.2023	06.04.2023	1284.63	2000
11.	Production Separation Bin-PSB	42	05.04.2023	06.04.2023	1275.85	2000
IV. Sponge Iron Division -2 (Kiln 3 & 4)						
12.	Near Control room	57	06.04.2023	07.04.2023	1773.11	2000
13.	Near Coal Crusher	59	06.04.2023	07.04.2023	1669.33	2000
14.	Near Product bin	58	06.04.2023	07.04.2023	1599.20	2000
15.	Coal Drier	60	06.04.2023	07.04.2023	1165.79	2000
V. Wagon Tipper/RMHS						
16.	Near Tipping point	75	07.04.2023	08.04.2023	1336.14	2000
17.	Monsoon Shed (CPU)	76	07.04.2023	08.04.2023	1584.22	2000
18.	MCC Room (2nd Gate)	77	07.04.2023	08.04.2023	1209.81	2000
VI. Power Plant-70 MW						
19.	70MW-DM Plant (Near R.O. Plant)	78	07.04.2023	08.04.2023	416.67	2000
20.	2nd gateweigh bridge Near Coal Screen	91	08.04.2023	09.04.2023	1501.44	2000
21.	CFBC boiler	79	07.04.2023	08.04.2023	1254.69	2000
VII. 2X70MW Power Plant						
22.	Near Boiler	92	08.04.2023	09.04.2023	610.88	2000
23.	Near Coal storage Shed	93	08.04.2023	09.04.2023	425.03	2000
24.	CPP Dolocher Process Area	94	08.04.2023	09.04.2023	995.89	2000

Note: SPM -Suspended Particulate matter (µg/m³), **INFERENCE:** The Measured Values are within the limits.

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

Analysed By
B.P. Lingaraja
Chemist

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

FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
5	Month	:	**APRIL-2023(2nd Fort Night)**
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Method adopted	:	IS 5182 (Part 4): 1999 RA 2014
9	Report Issued Date	:	**05.05.2023**
10	Report Number	:	**GEMS/BMM/FM/2023-24/85**

RESULTS

Sl. No.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM (µg/m³)	Standard
I. Beneficiation Plant-II						
1.	Ball Mill Area (Zero Meter)	229	17.04.2023	18.04.2023	889.40	2000
2.	Iron Ore Hopper (Near Monsoon Shed)	231	17.04.2023	18.04.2023	897.29	2000
3.	Concentrate Thickner	230	17.04.2023	18.04.2023	1602.10	2000
II. Pellet Plant-I						
4.	PR-6	232	17.04.2023	18.04.2023	1305.18	2000
5.	Annual Cooler Pellet Discharge bin	233	17.04.2023	18.04.2023	1231.94	2000
6.	Additive Grinding Building	260	18.04.2023	19.04.2023	1620.71	2000
III. Sponge Iron Division -2 (Kiln 1 & 2)						
7.	Control room	261	18.04.2023	19.04.2023	1766.61	2000
8.	Near Weigh bridge (dispatch)	262	18.04.2023	19.04.2023	1109.14	2000
9.	Pellet Storage bin	280	19.04.2023	20.04.2023	1716.43	2000
10.	Transfer House area	263	18.04.2023	19.04.2023	651.67	2000
11.	Production Separation Bin-PSB	264	18.04.2023	19.04.2023	1483.31	2000
IV. Sponge Iron Division -2 (Kiln 3 & 4)						
12.	Near Control room	281	19.04.2023	20.04.2023	1704.20	2000
13.	Near Coal Crusher	283	19.04.2023	20.04.2023	1789.81	2000
14.	Near Product bin	282	19.04.2023	20.04.2023	1680.38	2000
15.	Coal Dryer	284	19.04.2023	20.04.2023	546.51	2000
V. Wagon Tipper/RMHS						
16.	Near Tipping point	300	20.04.2023	21.04.2023	780.77	2000
17.	Monsoon Shed (CPU)	302	20.04.2023	21.04.2023	1387.30	2000
18.	MCC Room (2nd Gate)	301	20.04.2023	21.04.2023	1144.07	2000
VI. Power Plant-70 MW						
19.	70MW-DM Plant (Near R.O. Plant)	303	20.04.2023	21.04.2023	694.88	2000
20.	2nd gateweigh bridge Near Coal Screen	312	21.04.2023	22.04.2023	1116.01	2000
21.	CFBC boiler	304	20.04.2023	21.04.2023	1666.35	2000
VII. 2X70MW Power Plant						
22.	Near Boiler	313	21.04.2023	22.04.2023	483.91	2000
23.	Near Coal storage Shed	314	21.04.2023	22.04.2023	420.01	2000
24.	Dolochar Processing Area	315	21.04.2023	22.04.2023	610.05	2000

Note: SPM -Suspended Particulate matter (µg/m³), **INFERENCE:** The Measured Values are within the limits.

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

Analysed By
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Authorised Signatory
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TC-5323

ANNEXURE-09
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/ **VSS-1& VBSS2** Sl.No:Stack Monitoring Kit/ **304-DTB-2007& 032308**
5	Instrument Details	:	Calibration Date: 03.03.2023 & 28.03.2023 Calibration Due Date: 03.03.2024 & 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	:	**APRIL-2023**
11	Date of Sample Received	:	05.04.2023& 18.04.2023
12	Date of Sample Analysis	:	06.04.2023 & 19.04.2023
13	Date Sample Analysis Completion	:	07.04.2023 & 20.04.2023
14	Report Issued Date	:	**05.05.2023**
15	Report Number	:	**ULR-TC532323000000011F**

Stack Details

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

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2ndFort Night	
	Date of Monitoring			04.04.2023	17.04.2023	
	Sample Code			14	226	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	^{0}C	33	34	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	^{0}C	76	79	-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec	5.21	5.28	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m^3/hr	285228	289060	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm^3/hr	243931	244619	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm^3	40.35	40.90	100
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm^3	96.0	92.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm^3	179.0	178.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.008	0.012	-

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

Analysed By
B.P. Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Services HOSPET

Note:
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ANNEXURE-10
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/ **VSS-1& VBSS2** Sl.No:Stack Monitoring Kit/ **304-DTB-2007& 032308**
5	Instrument Details	:	Calibration Date: 03.03.2023 & 28.03.2023 Calibration Due Date: 03.03.2024 & 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	:	**APRIL-2023**
11	Date of Sample Received	:	07.04.2023 & 21.04.2023
12	Date of Sample Analysis	:	08.04.2023& 21.04.2023
13	Date Sample Analysis Completion	:	10.04.2023 & 22.04.2023
14	Report Issued Date	:	**05.05.2023**
15	Report Number	:	**ULR-TC532323000000027F**

Stack Details

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

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
	Date of Monitoring			06.04.2023	20.04.2023	
	Sample Code			53	297	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	^{0}C	34	36	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	^{0}C	128	129	-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec	6.71	6.44	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m^3/hr	170771	163899	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm^3/hr	126857	121098	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm^3	41.02	36.46	100
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm^3	1045.0	878.0	NS
8	Nitrogen Dioxide	IS:11255 (Part7): 2005(RA 2017)	mg/Nm^3	69.00	53.0	NS
9	Carbon Monoxide	GEMS/SOP/69	%	0.049	0.037	1%

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

Analysed By
B.P. Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

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

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ **VSS-1& VBSS2** Sl.No:Stack Monitoring Kit/ **304-DTB-2007& 032308**
5	Instrument Details	:	Calibration Date: 03.03.2023 & 28.03.2023 Calibration Due Date: 03.03.2024 & 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	:	**APRIL-2023**
11	Date of Sample Received	:	08.04.2023 & 20.04.2023
12	Date of Sample Analysis	:	10.04.2023 & 21.04.2023
13	Date Sample Analysis Completion	:	11.04.2023 & 22.04.2023
14	Report Issued Date	:	**05.05.2023**
15	Report Number	:	**ULR-TC532323000000037F**

Stack Details

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

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
	Date of Monitoring			07.04.2023	19.04.2023	
	Sample Code			72	277	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	^{0}C	**34**	**37**	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	^{0}C	**132**	**134**	-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec	**6.99**	**7.08**	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m^3/hr	**177897**	**180187**	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm^3/hr	**131104**	**131879**	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm^3	**39.73**	**39.56**	**100**
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm^3	**1201.0**	**1298.0**	**NS**
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm^3	**69.0**	**84.0**	**NS**
9	Carbon Monoxide	GEMS/SOP/69	%	**0.024**	**0.027**	**1%**

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

Analysed By
B.P. Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

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TC-5323

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

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
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	:	**APRIL-2023**
11	Date of Sample Received	:	27.04.2023
12	Date of Sample Analysis	:	28.04.2023
13	Date Sample Analysis Completion	:	29.04.2023
14	Report Issued Date	:	**05.05.2023**
15	Report Number	:	**ULR-TC532323000000116F**

Stack Details

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

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
	Date of Monitoring			-	26.04.2023	
	Sample Code			-	411	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	Shutdown	38	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C		122	-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec		5.44	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m^3/hr		138449	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm^3/hr		104423	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm^3		34.00	50
7	Sulphur Dioxide	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm^3		228.80	600
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm^3		28.0	300
9	Carbon Monoxide	GEMS/SOP/69	%		1.236	-

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

Analysed By
B.P. Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

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

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ **VSS-1& VBSS2** Sl.No:Stack Monitoring Kit/ **304-DTB-2007& 032308**
5	Instrument Details	:	Calibration Date: 03.03.2023 & 28.03.2023 Calibration Due Date: 03.03.2024 & 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	:	**APRIL-2023**
11	Date of Sample Received	:	-
12	Date of Sample Analysis	:	-
13	Date Sample Analysis Completion	:	-
14	Report Issued Date	:	**05.05.2023**
15	Report Number	:	-

Stack Details

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

Emission Details

Sl. No.	Parameters	Method	Unit	Result		Permissible Limit
				1st Fort Night	2nd Fort Night	
	Date of Monitoring			-	-	
	Sample Code			-	-	
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	^0C	**Shutdown**	**Shutdown**	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	^0C			-
3	Velocity of Fuel Gas	IS: 11255 (Part 1) - 1985 (RA 2014)	m/sec			-
4	Gas flow rate at Stack Condition	IS-11255(Part 03)1985(RA 2014)	m^3/hr			-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm^3/hr			-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm^3			**100**
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	%			-

Note: NS- Not Specified. RA: Reaffirmed

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services ★ HOSPET

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

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
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	:	**APRIL-2023(1st Fort Night)**
10	Date of Sample Received	:	15.04.2023
11	Date of Sample Analysis	:	17.04.2023
12	Date Sample Analysis Completion	:	17.04.2023
13	Report Issued Date	:	**05.05.2023**
14	Report Number	:	**ULR-TC532323000000071F**

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm³	KSPCB Std mg/Nm³
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant-2											
1	Iron Ore Cone Crusher	-	-	---	-	-	-	30	1.20	-	**50**
2	Iron Ore Screening	**15.04.2023**	**199**	---	**25**	**34**	**4.66**	30	0.90	**19.28**	**50**

Sl. 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	10651	10200	-

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 By
B.P. Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

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

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ **VSS-1** Sl.No:Stack Monitoring Kit/ **304-DTB-2007**
5	Instrument Details	:	Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Month of Sampling	:	**APRIL-2023(1st Fort Night)**
10	Date of Sample Received	:	05.04.2023 & 06.04.2023
11	Date of Sample Analysis	:	06.04.2023 & 07.04.2023
12	Date Sample Analysis Completion	:	07.04.2023 & 08.04.2023
13	Report Issued Date	:	**05.05.2023**
14	Report Number	:	**ULR-TC532323000000012F**

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm³	KSPCB Std mg/Nm³
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant											
3	Additive grinding mill	**04.04.2023**	**16**	---	**35**	**41**	**4.78**	6.0	0.50	**27.36**	**50**
4	Mixer building	**04.04.2023**	**15**	---	**36**	**43**	**4.89**	6.0	0.35	**27.47**	**50**
5	Pellet discharge point	**05.04.2023**	**36**	---	**36**	**42**	**5.10**	20	0.50	**32.79**	**50**

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
3	Additive grinding mill	4866	4611	-
4	Mixer building	1245	1171	-
5	Pellet discharge point	3605	3396	-

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 By
B.P. Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

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

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/R018
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ **VSS-1** Sl.No:Stack Monitoring Kit/ **304-DTB-2007**
5	Instrument Details	:	Calibration Date: 03.03.2023 Calibration Due Date: 03.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Month of Sampling	:	**APRIL-2023(1st Fort Night)**
10	Date of Sample Received	:	08.04.2023, 08.04.2023 & 11.04.2023
11	Date of Sample Analysis	:	08.04.2023, 10.04.2023 & 12.04.2023
12	Date Sample Analysis Completion	:	10.04.2023, 11.04.2023 & 13.04.2023
13	Report Issued Date	:	**05.05.2023**
14	Report Number	:	**ULR-TC532323000000038F**

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm³	KSPCB Std mg/Nm³
Chimneys attached to Bag Filter (De dusting Units)											
2 X 500 TPD Sponge Iron Kiln 1 & 2											
6	Cooler Discharge -1	**07.04.2023**	**73**	---	**35**	**39**	**4.52**	30	1.20	**32.15**	**50**
7	Cooler Discharge -2	**07.04.2023**	**74**	---	**35**	**40**	**4.72**	30	1.20	**25.70**	**50**
8	Coal stock house	**08.04.2023**	**88**	---	**33**	**38**	**4.34**	30	1.20	**13.13**	**50**
9	Production Separation bin1&2	**08.04.2023**	**89**	---	**35**	**41**	**4.92**	30	1.20	**35.94**	**50**
10	Production Separation bin3&4	**10.04.2023**	**111**	---	**37**	**44**	**5.07**	30	1.20	**33.30**	**50**
11	Transfer House	**08.04.2023**	**90**	---	**34**	**40**	**4.72**	30	1.20	**33.76**	**50**

Sl. 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
6	Cooler Discharge -1	18406	17559	-
7	Cooler Discharge -2	19220	18265	-
8	Coal stock house	17673	16961	-
9	Production Separation bin-1&2	20034	18981	-
10	Production Separation bin-3&4	20645	19398	-
11	Transfer House	19179	18272	-

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 By
B.P. Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

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

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Vayubodhan Stack sampler/ **VSS-1& VBSS2** Sl.No:Stack Monitoring Kit/ **304-DTB-2007& 032308**
5	Instrument Details	:	Calibration Date: 03.03.2023 & 28.03.2023 Calibration Due Date: 03.03.2024 & 27.03.2024
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Month of Sampling	:	**APRIL-2023(1st Fort Night)**
10	Date of Sample Received	:	11.04.2023, 12.04.2023&13.04.2023
11	Date of Sample Analysis	:	12.04.2023, 13.04.2023&14.04.2023
12	Date Sample Analysis Completion	:	13.04.2023, 14.04.2023&15.04.2023
13	Report Issued Date	:	**05.05.2023**
14	Report Number	:	**ULR-TC532323000000044F**

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/s	Height (m)	Diameter (m)	PM mg/Nm³	KSPCB Std mg/Nm³
Chimneys attached to Bag Filter (De dusting Units)											
2X500 TPD Sponge Iron Kiln 3&4											
12	Coal Primary Screen	---	---	---	-	-	-	30	1.20	-	50
13	Coal Stock House -1 & coal stock house-2	----	---	---	-	-	-	30	1.20	-	50
14	Cooler Discharge -1	**10.04.2023**	**112**	---	**36**	**41**	**4.61**	30	1.30	**35.10**	50
15	Cooler Discharge -2 & PSB transfer tower	**11.04.2023**	**136**	---	**37**	**43**	**5.15**	30	1.4	**33.47**	50
16	Production Bunker & Intermediate bin	**11.04.2023**	**137**	---	**37**	**44**	**4.95**	35	1.90	**35.29**	50
17	Production Separation bin	**12.04.2023**	**156**	---	**38**	**43**	**5.26**	35	1.90	**32.27**	50
18	Pellet Stock house	---	---	---	-	-	-	30	1.20	-	50
19	Dolochar Stock House 1 & 2	---	---	---	-	-	-	30	1.20	-	50
20	CPU Building	**12.04.2023**	**155**	---	**38**	**44**	**5.11**	35	1.50	**30.49**	50

Sl. 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
12	Coal Primary Screen	-	-	-
13	Coal Stock House -1 & coal stock house-2	-	-	-
14	Cooler Discharge -1	18772	17785	-
15	Cooler Discharge -2 & PSB transfer tower	20971	19724	-
16	Production Bunker & Intermediate bin	50429	49316	-
17	Production Separation bin	53594	52746	-
18	Pellet Stock house	-	-	-
19	Dolochar Stock House 1 & 2	-	-	-
20	CPU Building	32513	30504	-

INFERENCE: The Measured Values are within the limits.

Analysed By
B.P. Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

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

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
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	:	**APRIL-2023(2nd Fort Night)**
10	Date of Sample Received	:	22.04.2023
11	Date of Sample Analysis	:	24.04.2023
12	Date Sample Analysis Completion	:	25.04.2023
13	Report Issued Date	:	**05.05.2023**
14	Report Number	:	**ULR-TC532323000000101F**

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm³	KSPCB Std mg/Nm³
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant-2											
1	Iron Ore Cone Crusher	-	-	---	-	-	-	30	1.20	-	**50**
2	Iron Ore Screening	**22.04.2023**	**323**	---	**38**	**42**	**4.66**	30	0.90	**25.23**	**50**

Sl. 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	10674	10069	-

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 By
B.P. Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

Note:
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TC-5323

ANNEXURE-19
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
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	:	**APRIL-2023(2ndFort Night)**
10	Date of Sample Received	:	18.04.2023 & 19.04.2023
11	Date of Sample Analysis	:	19.04.2023 & 20.04.2023
12	Date Sample Analysis Completion	:	20.04.2023 & 21.04.2023
13	Report Issued Date	:	**05.05.2023**
14	Report Number	:	**ULR-TC532323000000084F**

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm³	KSPCB Std mg/Nm³
Chimneys attached to Bag Filter (De dusting Units)											
Pellet Plant											
3	Additive grinding mill	**17.04.2023**	**227**	---	**37**	**41**	**4.75**	6.0	0.50	**22.83**	**50**
4	Mixer building	**17.04.2023**	**228**	---	**38**	**42**	**4.92**	6.0	0.35	**27.04**	**50**
5	Pellet discharge point	**18.04.2023**	**258**	---	**38**	**46**	**5.03**	20	0.50	**28.81**	**50**

Sl. No	Pellet Plant	Gas flow rate at Stack Condition m³/hr	Gas flow rate at NTP Nm³/hr	KSPCB Std
3	Additive grinding mill	3358	3315	-
4	Mixer building	1704	1683	-
5	Pellet discharge point	3549	3460	-

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 By
B.P. Lingaraja
Chemist

Authorised Signatory
K. Ramakrishna Reddy
Technical Manager

Global Environment & Mining Services HOSPET

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TC-5323

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

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/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	:	**APRIL-2023(2nd Fort Night)**
10	Date of Sample Received	:	22.04.2023, 25.04.2023 & 28.04.2023
11	Date of Sample Analysis	:	24.04.2023, 26.04.2023 & 28.04.2023
12	Date Sample Analysis Completion	:	25.04.2023, 27.04.2023 & 29.04.2023
13	Report Issued Date	:	**05.05.2023**
14	Report Number	:	**ULR-TC532323000000100F**

RESULTS

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm³	KSPCB Std mg/Nm³
Chimneys attached to Bag Filter (De dusting Units)											
2 X 500 TPD Sponge Iron Kiln 1 & 2											
6	Cooler Discharge -1	**22.04.2023**	**320**	---	**38**	**40**	**4.55**	30	1.20	**29.80**	**50**
7	Cooler Discharge -2	**24.04.2023**	**356**	---	**36**	**40**	**4.61**	30	1.20	**31.07**	**50**
8	Coal stock house	**22.04.2023**	**321**	---	**39**	**41**	**4.41**	30	1.20	**12.71**	**50**
9	Production Separation bin-1&2	**24.04.2023**	**357**	---	**37**	**42**	**4.88**	30	1.20	**34.82**	**50**
10	Production Separation bin-3&4	**27.04.2023**	**429**	---	**36**	**45**	**5.26**	30	1.20	**35.94**	**50**
11	Transfer House	**22.04.2023**	**322**	---	**36**	**39**	**4.64**	30	1.20	**35.35**	**50**

Sl. 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
6	Cooler Discharge -1	18528	17644	-
7	Cooler Discharge -2	18772	17807	-
8	Coal stock house	17998	17088	-
9	Production Separation bin-1&2	19872	18700	-
10	Production Separation bin-3&4	21378	19950	-
11	Transfer House	18854	17967	-

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 By
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Chemist

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Technical Manager

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

Analysis Report of Stack Emission

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hosapete Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY24/RO18
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	:	**APRIL-2023(2nd Fort Night)**
10	Date of Sample Received	:	21.04.2023,22.04.2023 &28.04.2023
11	Date of Sample Analysis	:	21.04.2023,22.04.2023 &28.04.2023
12	Date Sample Analysis Completion	:	22.04.2023,24.04.2023 &29.04.2023
13	Report Issued Date	:	**05.05.2023**
14	Report Number	:	**ULR-TC532323000000096F**

RESULTS

Sl. NO	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/s	Height (m)	Diameter (m)	PM mg/Nm³	KSPCB Std mg/Nm³
Chimneys attached to Bag Filter (De dusting Units)											
2X500 TPD Sponge Iron Kiln 3&4											
12	Coal Primary Screen	---	---	---	-	-	-	30	1.20	-	50
13	Coal Stock House -1 & coal stock house-2	---	---	---	-	-	-	30	1.20	-	50
14	Cooler Discharge -1	**20.04.2023**	**298**	---	**38**	**42**	**4.70**	30	1.30	**31.22**	50
15	Cooler Discharge -2 & PSB transfer tower	**20.04.2023**	**299**	---	**38**	**43**	**5.07**	30	1.4	**34.32**	50
16	Production Bunker & Intermediate bin	**21.04.2023**	**310**	---	**38**	**44**	**4.87**	35	1.90	**36.59**	50
17	Production Separation bin	**21.04.2023**	**311**	---	**37**	**41**	**5.17**	35	1.90	**33.46**	50
18	Pellet Stock house	---	---	---	-	-	-	30	1.20	-	50
19	Dolochar Stock House 1 & 2	---	---	---	-	-	-	30	1.20	-	50
20	CPU Building	**28.04.2023**	**434**	---	**35**	**40**	**5.02**	35	1.50	**31.21**	50
21	Coal Drier	**28.04.2023**	**435**		**34**	**39**	**5.81**	35	1.50	**38.30**	50

Sl. 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
12	Coal Primary Screen	-	-	-
13	Coal Stock House -1 & coal stock house-2	-	-	-
14	Cooler Discharge -1	23608	22442	-
15	Cooler Discharge -2 & PSB transfer tower	31370	29749	-
16	Production Bunker & Intermediate bin	54206	52458	-
17	Production Separation bin	56758	55121	-
18	Pellet Stock house	-	-	-
19	Dolochar Stock House 1 & 2	-	-	-
20	CPU Building	34294	33412	-

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