

No. BMM/ENV/2021-22/018

To.

Date: 12.07.2021

Environmental Officer
KSPCB Regional Office,
Sy No.597P, Ward No.15,
4th Main, Near Dr.Vishnuvardhana Park,
Kuvempunagara,
Ballari-583104

Dear Sir,

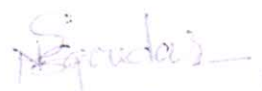
Sub: Submission of Monthly Environmental monitoring report of M/s. BMM Ispat Ltd,
Danapura Village, Hospet Taluk, Bellary District-reg.

With respect to the above subject, we here by submitting the **Stage-I** Monthly Environmental monitoring report for the month of **June-2021**.The monitoring was carried out as per the CFO issued from your kind office.

Combined Consent Order No. AW-303323 dated: 08.08.2017. (Renewed & Valid up to 30.06.2022)

Thanking You.

Yours faithfully,
for M/s. BMM Ispat Ltd.


Authorized Signatory



Enclosure: Monitoring report for BMM Stage-I for the month of June-2021.



ISO 9001 2015



ISO 14001 2015



ISO 45001 2018

ENVIRONMENTAL MONITORING REPORT



at

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

Stage - I

June-2021

Prepared by



GEMS

GLOBAL ENVIRONMENT & MINING SERVICES
NABL & MOEF RECOGNIZED LABORATORY

(Consulting Engineers, Mine Designers, Geologists & Surveyors)
3rd main road, Basaveswara badavane

HOSAPETE - 583201, Dist., Ballari (Karnataka)

Tel : 08394 229433 & 295018

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Website : www.globalmining.in

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, HOSPET*, to carry out the environmental pollution monitoring on AAQ Monitoring, Fugitive monitoring, Noise Monitoring, Water Analysis & Stack monitoring pollution and submit the same to the Pollution Control Board.

Accordingly, *M/s. Global Environment & Mining Services, HOSPET*, 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: 05.07.2021

S. KAMESHWARA RAO
(Managing Partner)



1.0 INTRODUCTION

M/s. BMM Ispat Ltd, (BMMIL) is a 2.0 million tons integrated steel plant, manufacturing steel with its state of art in advanced technology and protecting environment. It is committed produce quality product, in environmentally friendly technology. Adopting sufficient air pollution control equipment's, recycling and reusing all the water with 'Zero' discharge facility, generating valuable electric power with waste heat recovery boilers (WHRB) and resource optimizing and minimizing the energy needs through re-utilizing char for CFBC boilers.

M/s. BMM ISPAT Ltd., Presently operating the following units under Stage-I units (Manufacturing units coming under 2.0 MTPA integrated steel plant is monitored and are reported separately);

Sl.No.	Units	Capacity
1	Beneficiation Plant	1.3 MTPA
2	Pellet Plant	1.2 MTPA
3	Sponge Iron Division -1	2 x 100 TPD
4	Induction furnace (billets)	9000 tons/month
5	Rolling Mill (TMT rods)	9000 tons/month
6	Captive Power Plant	25 MW

The report includes environmental monitoring data collected at above site and its surrounding areas, for the month of **JUNE-2021**. The Parameters monitored are:

- ❖ Ambient air quality
- ❖ Fugitive dust level
- ❖ Stack emission
- ❖ Ambient Noise Level
- ❖ Water quality

2.0 SCOPE AND METHODOLOGY

2.1 PREAMBLE

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

2.2 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 air quality were Fine Particulate Matter (size less than 10µm) PM10, Particulate Matter (size less than 2.5µm) PM2.5, Combined Sampler GTI-241, Sulphur dioxide (SO₂), Oxides of Nitrogen (NO_x. Calibrated Fine Particulate Sampler (Envirotech APM 550 mini) with air flow rate of 1m³/hr or 16.7 LPM. & Respirable Dust Samplers (Envirotech 460 BL) with air flow rate of 1.2 - 1.4 m³/min were used for air monitoring and a tapping provided in the hopper of the same sampler was utilized for sampling of SO₂ and NO_x with proper flow controller (0.3 to 3.0 LPM).

2.2.1 PM₁₀ & PM_{2.5}

Calibrated Respirable Dust Sampler/Fine Particulate matter with Poly Tetra Fluoro Ethylene (PTFE) Whatman GF/A micro fiber filter paper was used for the determination of RPM, PM_{2.5}& PM₁₀. RSPM is a measure of particulate matter having size <10 & 2.5 microns. The dust particles having size >10 microns are being collected in the cyclone and measured.

2.2.2 SO₂: MODIFIED WEST-GAEKE SPECTROPHOTOMETRIC METHOD

Sulphur dioxide was collected in a scrubbing solution of sodium tetrachloro-mercurate and was allowed to react with HCHO and then with para-rosaniline and hydrochloric acid. The absorbency of the product red-violet dye was measured using digital spectrophotometer at a wavelength of 560nm.

2.2.3 **NO_x: JACOB AND HOCHSEISER MODIFIED METHOD**

Nitrogen oxides as nitrogen dioxide were collected by bubbling air through sodium hydroxide solution to form a stable solution of sodium nitrite. The nitrite ion produced during sampling was determined using digital spectrophotometer at a wavelength of 540nm by reacting the exposed absorbing reagent with phosphoric acid, sulfanilamide and N (1-naphthyl) ethylamine hydrochloride.

2.3 **NOISE LEVELS**

Ambient and work zone Noise level measurement was carried out using a sound level meter (Equinox-107) during day and night times. Noise measurements were taken at 1.5 m above ground and 3 m away from walls, buildings or other sound reflecting sources. The measurements were carried out 1 m away from the source and 1 m away from the edge of the roads. In order to reduce the disturbances from standing waves, the noise levels measured were averaged over + 0.5 m each of at least three positions. The mean values were taken for reporting.

2.4 **WATER QUALITY**

Water samples were collected and analyzed as per procedures outlined in IS-2488/IS-3025/AWWA/APHA. Sterilized bottles were used for collection of water sample for bacteriological analysis, stored in icebox and transported to the laboratory for the analysis. Parameters like pH, Temperature, Conductivity, Total Dissolved Solids, Total Alkalinity, Total Hardness, Calcium Hardness and Magnesium Hardness were measured in the field while collecting the samples.

Waste water from Neutralization pit (DM reject) is reused for dust suppression, green belt development, kiln cooling in sponge iron plant and STPs treated water is being used for green belt as per Standards.

2.5 **FUGITIVE EMISSION MONITORING**

Fugitive air quality was monitored 36 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 air quality status given in.....,

Annexure-1 (1st Fort night) & Annexure-2(2ndFort night).

2.6 STACK MONITORING

Vayubodhan Stack sampler VSS 1 stack monitoring kit was used for drawing the flue gas. Sulphur dioxide and oxides of nitrogen in the flue gas were sampled by bubbling flue gas in 3% H₂O₂ and 0.1N NaOH solution respectively and the analysis 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, and the results given in **Annexure – 3 to Annexure-9.**

2.6.1 Stack Emissions Monitoring Methodology Sampling Procedure

Pre-Sampling Activities

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

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

1.1 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.

1.2 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 PRESENTATION

The ambient air quality data in terms of PM10, PM2.5, SO2, & NOX, are given.

2.7 DATA ANALYSIS

2.7.1 BUFFERZONE AIR QUALITY STATUS

Danapur Village (A1)

At this location, average of PM10, PM2.5, SO2, NOX values were 63.94, 18.09, 8.55 & 10.19 µg/m³ respectively. All above the values were found within the Limits. And the results given in **Annexure-10**.

Mariyammanahalli Village (A2)

At this location, average of PM10, PM2.5, SO2, NOX values were 61.91, 17.79, 7.54 & 9.92 µg/m³ respectively. All above the values were found within the Limits. And the results given in **Annexure-11**.

Hanumanahalli Village (A3)

At this location, average of PM10, PM2.5, SO2, NOX values were 62.96, 17.33, 8.47 & 10.42 µg/m³ respectively. All above the values were found within the Limits. And the results given in **Annexure-12**.

Galemmanagudi Village (A4)

At this location, average of PM10, PM2.5, SO2, NOX values were 57.61, 15.93, 8.88 & 10.60 µg/m³ respectively. All above the values were found within the Limits. And the results given in **Annexure-13**.

Gunda Village (A5)

At this location, average of PM10, PM2.5, SO2, NOX values were 56.86, 15.92, 8.13 & 9.24 µg/m³ respectively. All above the values were found within the Limits. And the results given in **Annexure-14**.



Gunda Tanda Village (A6)

At this location, average of PM₁₀, PM_{2.5}, SO₂, NO_x values were 55.61, 15.31, 7.30 & 8.89 µg/m³ respectively. All above the values were found within the Limits. And the results given in **Annexure-15**.

2.8 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-4001) and the results given in **Annexure-16 & Annexure-17**.

2.9 STACK MONITORING

Stack emission level was monitored as per the statutory requirement on twice in month.

3.0 AMBIENT & WORK ZONE NOISE LEVEL

The Day & Night time noise level values were ranging between 72.5 dB (A) and 46.1 dB (A). The noise level status is given in **Annexure-16 & Annexure-17**.

3.1 DETERMINATION OF DUST CONCENTRATION

Fortnightly fugitive air quality was monitored all plant area SPM value minimum 164.16 µg/m³, maximum value 1177.29 µg/m³, and average value 536.55 µg/m³.

Stack emission level was monitored all chimneys' PM values (mg/Nm³) 1st and 2nd Fort Night Minimum Value 38.80 mg/Nm³, Maximum Value 67.20 mg/Nm³ & Average Value 45.80 mg/Nm³.

3.2 CONCLUSION

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



GEMS



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BMM STAGE-I

Annexure-1
GEMS-LD/TF/11/01**FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING**

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
- 2 Customer Reference : WO/ADMIN/FY22/R038
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
- 5 Month : **June-2021 (1st Fort Night)**
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Method adopted : IS 5182 (Part 4): 1999 RA 2014
- 9 Report Issued Date : **05.07.2021**
- 10 Report Number : **ULR-TC532321000000356F**

Sl. NO.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ($\mu\text{g}/\text{m}^3$)	Standard
I. Beneficiation Plant-1						
1.	Main Canteen	1131	02.06.2021	03.06.2021	891.36	2000
2.	Main Crusher	1101	01.06.2021	02.06.2021	400.62	2000
3.	Iron Ore Screen	1102	01.06.2021	02.06.2021	448.30	2000
II. Pellet Plant-I						
4.	Pellet Stock Yard	1132	02.06.2021	03.06.2021	538.45	2000
5.	Near Pellet Plant	1150	03.06.2021	04.06.2021	369.93	2000
6.	TG Zero Meter	1151	03.06.2021	04.06.2021	761.55	2000
III. Sponge Iron Division-1						
7.	Near Product Bin	1221	08.06.2021	09.06.2021	390.43	2000
8.	Coal Feeding Area	1222	08.06.2021	09.06.2021	1014.02	2000
9.	Control Room SID-1	1223	08.06.2021	09.06.2021	563.14	2000
IV. Induction Furnace & Rolling Mill						
10.	IF Office	1162	04.06.2021	05.06.2021	471.96	2000
11.	RML Office	1163	04.06.2021	05.06.2021	400.54	2000
12.	TMT Stock Yard	1199	07.06.2021	08.06.2021	738.95	2000
V. Power Plant 25 MW						
13.	25 MW ESP	1200	07.06.2021	08.06.2021	1123.90	2000
14.	25 MW ACC	1224	08.06.2021	09.06.2021	375.50	2000
VI. Site Services						
15.	Main Stores	1258	10.06.2021	11.06.2021	403.82	2000
16.	Old Admin Building	1259	10.06.2021	11.06.2021	283.64	2000
17.	Labour Gate	1260	10.06.2021	11.06.2021	206.55	2000
18.	Safety Office	1225	08.06.2021	09.06.2021	164.16	2000

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

J.M.Tg
Analysed By
J.M.Thippeswamy
Chemist

G.N. Mukunda Reddy
Verified By
G.N. Mukunda Reddy
Senior chemist

Note:

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BMM STAGE-I

Annexure-2
GEMS-LD/TF/11/01**FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING**

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
- 2 Customer Reference : WO/ADMIN/FY22/R038
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : RDS Sampler (GEMS-01, GEMS-02, GEMS-03, GEMS-04, GEMS-05)
- 5 Month : **June-2021 (2nd Fort Night)**
- 6 Discipline : Chemical
- 7 Group : Atmospheric Pollution
- 8 Method adopted : IS 5182 (Part 4): 1999 RA 2014
- 9 Report Issued Date : **05.07.2021**
- 10 Report Number : **ULR-TC532321000000464F**

Sl. NO.	Location / Plant	Sample Code	Date Of Monitoring	Date Of Sample Receipt	SPM ($\mu\text{g}/\text{m}^3$)	Standard
I. Beneficiation Plant-1						
1.	Main Canteen	1470	17.06.2021	18.06.2021	856.58	2000
2.	Main Crusher	1416	16.06.2021	17.06.2021	506.10	2000
3.	Iron Ore Screen	1417	16.06.2021	17.06.2021	573.33	2000
II. Pellet Plant-I						
4.	Pellet Stock Yard	1471	17.06.2021	18.06.2021	817.18	2000
5.	Near Pellet Plant	1489	18.06.2021	19.06.2021	534.97	2000
6.	TG Zero Meter	1490	18.06.2021	19.06.2021	1177.29	2000
III. Sponge Iron Division-1						
7.	Near Product Bin	1562	24.06.2021	25.06.2021	524.97	2000
8.	Coal Feeding Area	1563	24.06.2021	25.06.2021	827.69	2000
9.	Control Room SID-1	1564	24.06.2021	25.06.2021	348.17	2000
IV. Induction Furnace & Rolling Mill						
10.	IF Office	1528	22.06.2021	23.06.2021	1045.24	2000
11.	RML Office	1516	21.06.2021	22.06.2021	328.87	2000
12.	TMT Stock Yard	1529	22.06.2021	23.06.2021	395.07	2000
V. Power Plant 25 MW						
13.	25 MW ESP	1549	23.06.2021	22.06.2021	288.89	2000
14.	25 MW ACC	1550	23.06.2021	24.06.2021	226.02	2000
VI. Site Services						
15.	Main Stores	1585	25.06.2021	26.06.2021	625.49	2000
16.	Old Admin Building	1586	25.06.2021	26.06.2021	228.41	2000
17.	Labour Gate	1565	24.06.2021	25.06.2021	201.39	2000
18.	Safety Office (OHC)	1587	25.06.2021	26.06.2021	263.37	2000

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

J.M.T.S.
Analysed By
J.M.Thippeswamy
Chemist

G.N. Mukunda Reddy
Verified By
G.N. Mukunda Reddy
Senior chemist

GLOBAL ENVIRONMENT & MINING SERVICES
HOSPET

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Website : www.globalmining.in

BMM STAGE-I

Annexure-3
GEMS-LD/TF/10/01**Analysis Report of Stack Emission**

- | | | |
|----|---------------------------------|--|
| 1 | Name of the Industry | : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District |
| 2 | Customer Reference | : WO/ADMIN/FY22/RO38 |
| 3 | Sample collected by | : GLOBAL Environment & Mining Services, Hosapete |
| 4 | Particulars of sample collected | : Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07 |
| 5 | Discipline | : Chemical |
| 6 | Group | : Atmospheric Pollution |
| 7 | Sample Type | : Stack Monitoring |
| 8 | Sampling Location | : Pellet Plant-1 ESP |
| 9 | Month of Sampling | : June-2021 |
| 10 | Report Number | : ULR-TC532321000000496F |


Stack Details

- | | | |
|---|----------------------|--------------------|
| 1 | Flue Used | Coal & furnace oil |
| 2 | Stack Height (mtr) | 100.0 |
| 3 | Stack Diameter (mtr) | 7.0 |

Emission Details

Sl. No.	Parameters	Result		Unit	Method	Permissible Limit
		1 st Fort Night	2 nd Fort Night			
	Date	01.06.2021	21.06.2021			
	Sample Code	1109	1521			
1	Ambient Temperature	30	30	°C	Instrument Method	-
2	Stack Temperature	66	68	°C	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	-
3	Velocity of Flue Gas	5.21	5.49	m/sec	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	-
4	Particulate Matter	67.20	63.40	mg/Nm ³	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	100
5	Sulphur Dioxide	14.30	11.44	mg/Nm ³	IS: 11255 (Part 2): 1985 (Reaffirmed 2014)	NS
6	Nitrogen Dioxide	0.00	4.10	mg/Nm ³	IS: 11255 (Part 7): 2005 (Reaffirmed 2017)	NS
7	Carbon Monoxide	0.00	0.00	%	GEMS/SOP/69 (Flue Gas Analyser Manual)	-

Note: NS- Not Specified****End of Report****


Analysed By
J.M.Thippeswamy
Chemist


Verified By
G.N. Mukunda Reddy
Senior chemist

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BMM STAGE-I

Annexure-4
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
- 2 Customer Reference : WO/ADMIN/FY22/RO38
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
- 5 Discipline : Chemical
- 6 Group : Atmospheric Pollution
- 7 Sample Type : Stack Monitoring
- 8 Sampling Location : 2X100TPD Sponge iron plant ESP
- 9 Month of Sampling : June-2021
- 10 Report Number : ULR-TC532321000000502F

Stack Details

- 1 Flue Used : Coal
- 2 Stack Height (mtr) : 60.0
- 3 Stack Diameter (mtr) : 2.00

Emission Details

Sl. No.	Parameters	Result		Unit	Method	Permissible Limit
		1st Fort Night	2nd Fort Night			
	Date	10.06.2021	28.06.2021			
	Sample Code	1264	1611			
1	Ambient Temperature	30	31	°C	Instrument Method	-
2	Stack Temperature	140	158	°C	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	-
3	Velocity of Flue Gas	6.82	5.74	m/sec	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	-
4	Particulate Matter	50.50	50.70	mg/Nm ³	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	100
5	Sulphur Dioxide	27.36	23.20	mg/Nm ³	IS 11255 (Part 2): 1985 (Reaffirmed 2014)	NS
6	Nitrogen Dioxide	10.25	16.40	mg/Nm ³	IS 11255 (Part 7): 2005 (Reaffirmed 2017)	NS
7	Carbon Monoxide	0.00	0.040	%	GEMS/SOP/69 (Flue Gas Analyser Manual)	-

Note: NS- Not Specified

End of Report

Analysed By
J.M.Thippeswamy
Chemist

Verified By
G.N. Mukunda Reddy
Senior chemist

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Website : www.globalmining.in

BMM STAGE-I

Annexure-5
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
- 2 Customer Reference : WO/ADMIN/FY22/RO38
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
- 5 Discipline : Chemical
- 6 Group : Atmospheric Pollution
- 7 Sample Type : Stack Monitoring
- 8 Sampling Location : Induction Furnace-1& 2
- 9 Month of Sampling : June2021
- 10 Report Number : -

Stack Details

- 1 Flue Used : Electric Power
- 2 Stack Height (mtr) : 30.0
- 3 Stack Diameter (mtr) : 1.0

Emission Details

Sl. No.	Parameters	Result		Unit	Method	Permissible Limit
		1st Fort Night	2nd Fort Night			
		Date				
	Sample Code	-	-			
1	Ambient Temperature	Under Maintenance		°C	Instrument Method	-
2	Stack Temperature			°C	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	-
3	Velocity of Flue Gas			m/sec	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	-
4	Particulate Matter			mg/Nm ³	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	100
5	Sulphur Dioxide			mg/Nm ³	IS 11255 (Part 2): 1985 (Reaffirmed 2014)	NS
6	Nitrogen Dioxide			mg/Nm ³	IS 11255 (Part7): 2005 (Reaffirmed 2017)	NS
7	Carbon Monoxide			%	GEMS/SOP/69 (Flue Gas Analyser Manual)	-

Note: NS- Not Specified

End of Report

Verified By
G.N. Mukunda Reddy
Senior chemist

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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Website : www.globalmining.in

BMM STAGE-I

Annexure-6
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
- 2 Customer Reference : WO/ADMIN/FY22/R038
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
- 5 Discipline : Chemical
- 6 Group : Atmospheric Pollution
- 7 Sample Type : Stack Monitoring
- 8 Sampling Location : Rolling mill reheating furnace
- 9 Month of Sampling : June-2021
- 10 Report Number : ULR-TC532321000000503F

Stack Details


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

Emission Details

Sl. No.	Parameters	Result		Unit	Method	Permissible Limit
		1 st Fort Night	2 nd Fort Night			
	Date	09.06.2021	29.06.2021			
	Sample Code	1245	1616			
1	Ambient Temperature	29	30	°C	Instrument Method	-
2	Stack Temperature	75	78	°C	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	-
3	Velocity of Flue Gas	6.09	5.37	m/sec	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	-
4	Particulate Matter	60.50	52.40	mg/Nm ³	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	100
5	Sulphur Dioxide	24.36	37.20	mg/Nm ³	IS 11255 (Part 2): 1985 (Reaffirmed 2014)	NS
6	Nitrogen Dioxide	26.65	14.35	mg/Nm ³	IS 11255 (Part 7): 2005 (Reaffirmed 2017)	NS
7	Carbon Monoxide	0.020	0.016	%	GEMS/SOP/69 (Flue Gas Analyser Manual)	-

Note: NS- Not Specified

****End of Report****


Analysed By
J.M.Thippeswamy
Chemist


Verified By
G.N. Mukunda Reddy
Senior chemist



Note:

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Website : www.globalmining.in

BMM STAGE-I

Annexure-7
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
- 2 Customer Reference : WO/ADMIN/FY22/RO38
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhan Stack sampler VSS 1 Sl.No. 304 DTB 07
- 5 Discipline : Chemical
- 6 Group : Atmospheric Pollution
- 7 Sample Type : Stack Monitoring
- 8 Sampling Location : AFBC Boiler ESP (25 MW Power Plant)
- 9 Month of Sampling : June-2021
- 10 Report Number : -

Stack Details

- 1 Flue Used : Coal
- 2 Stack Height (mtr) : 65.0
- 3 Stack Diameter (mtr) : 2.5

Emission Details

Sl. No.	Parameters	Result		Unit	Method	Permissible Limit
		1st Fort Night	2nd Fort Night			
	Date	-	-			
	Sample Code	-	-			
1	Ambient Temperature	Shut Down	Shut Down	°C	Instrument Method	-
2	Stack Temperature			°C	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	-
3	Velocity of Flue Gas			m/sec	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	-
4	Particulate Matter			mg/Nm ³	IS: 11255 (Part 1) - 1985 (Reaffirmed 2014)	100
5	Sulphur Dioxide			mg/Nm ³	IS 11255 (Part 2): 1985 (Reaffirmed 2014)	600
6	Nitrogen Dioxide			mg/Nm ³	IS 11255 (Part 7): 2005 (Reaffirmed 2017)	300
7	Carbon Monoxide			%	GEMS/SOP/69 (Flue Gas Analyser Manual)	-

Note: NS- Not Specified

****End of Report****

[Signature]

Verified By
G.N. Mukunda Reddy
Senior chemist



Note:

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Website : www.globalmining.in

BMM STAGE-I

Annexure-8
GEMS-LD/TF/10/01**Analysis Report of Stack Emission**

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY22/RO38
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhan Stack sampler **VSS 1 Sl.No. 304 DTB 07**
- 5 Discipline : Chemical
- 6 Group : Atmospheric Pollution
- 7 Sample Type : Stack Monitoring
- 8 Date of Analysis Completion : **June-2021 (1st Fort Night)**
- 9 Report Number : **ULR-TC532321000000413F**

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant											
1	Ore Crushing & Screening	09.06.2021	1246	---	29	40	5.26	30	1.20	39.9	50
2	Ore Fines Hopper Bottom	09.06.2021	1247	---	31	43	5.72	30	1.20	44.5	50
3	Main Crusher (RMHS)	09.06.2021	1248	---	30	48	5.69	30	1.20	40.9	50
Pellet Plant											
4	Mixed Area	01.06.2021	1110	---	28	38	4.84	30	1.20	41.7	50
5	Pellet Discharge Point	01.06.2021	1111	---	29	43	6.12	30	1.20	39.5	50
6	Product Transfer Point	01.06.2021	1112	---	30	44	5.97	30	1.20	48.2	50
2 X 500 TPD Sponge Iron Kiln 1 & 2											
7	Cooler Discharge -1	10.06.2021	1265	---	29	43	6.07	30	1.20	42.6	50
8	Cooler Discharge -2	10.06.2021	1266	---	28	45	5.87	30	1.20	40.5	50
9	Coal Crusher	10.06.2021	1267	---	30	42	5.75	30	1.20	38.8	50
10	Transfer House	02.06.2021	1139	---	29	46	5.07	30	1.20	45.1	50
11	Intermediate Bin	02.06.2021	1140	---	29	43	5.10	30	1.20	47.3	50

Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS: 11255 (Part 1) - 1985 (reaffirmed 2014)

****End of Report****

J.M.TS
Analysed By
J.M.Thippeswamy
Chemist

G.N.M.R.
Verified By
G.N. Mukunda Reddy
Senior chemist

**Note:**

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Website : www.globalmining.in

BMM STAGE-I

Annexure-9
GEMS-LD/TF/10/01**Analysis Report of Stack Emission**

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
- 2 Customer Reference : WO/ADMIN/FY22/RO38
- 3 Sample collected by : GLOBAL Environment & Mining Services, Hosapete
- 4 Particulars of sample collected : Vayubodhan Stack sampler **VSS 1 Sl.No. 304 DTB 07**
- 5 Discipline : Chemical
- 6 Group : Atmospheric Pollution
- 7 Sample Type : Stack Monitoring
- 8 Date of Analysis Completion : **June-2021 (2nd Fort Night)**
- 9 Report Number : **ULR-TC532321000000497F**

Sl. No	Stack Attached to	Date of Monitoring	Sample Code	Fuel Used	Ta °C	TS °C	V m/Sec	Height (m)	Diameter (m)	PM mg/Nm ³	KSPCB Std mg/Nm ³
Chimneys attached to Bag Filter (De dusting Units)											
Beneficiation Plant											
1	Ore Crushing & Screening	29.06.2021	1617	---	29	42	5.04	30	1.20	45.3	50
2	Ore Fines Hopper Bottom	29.06.2021	1618	---	30	43	5.26	30	1.20	39.2	50
3	Main Crusher (RMHS)	29.06.2021	1619	---	28	40	5.00	30	1.20	42.8	50
Pellet Plant											
4	Mixed Area	21.06.2021	1522	---	30	44	5.61	30	1.20	41.7	50
5	Pellet Discharge Point	21.06.2021	1523	---	28	46	5.54	30	1.20	49.8	50
6	Product Transfer Point	21.06.2021	1524	---	28	48	5.28	30	1.20	44.2	50
2 X 500 TPD Sponge Iron Kiln 1 & 2											
7	Cooler Discharge -1	28.06.2021	1612	---	29	43	5.40	30	1.20	42.6	50
8	Cooler Discharge -2	28.06.2021	1613	---	30	46	5.12	30	1.20	39.5	50
9	Coal Crusher	28.06.2021	1614	---	28	44	5.36	30	1.20	43.0	50
10	Transfer House	28.06.2021	1615	---	30	42	5.07	30	1.20	39.2	50
11	Intermediate Bin	29.06.2021	1620	---	29	47	5.53	30	1.20	41.5	50

Parameter	Protocol
Particulate Matter (mg/Nm ³)	IS : 11255 (Part 1) - 1985 (reaffirmed 2014)

****End of Report****

J.M.T.
Analysed By
J.M.Thippeswamy
Chemist

G.N.M.
Verified By
G.N. Mukunda Reddy
Senior chemist

Note:

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BMM STAGE-I

Annexure-10
GEMS-LD/TF/11/01**ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA**

Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
 Customer Reference : WO/ADMIN/FY22/RO38
 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 : June-2021
 Location : A1-Danapur Village
 Duration of Monitoring : 24 Hour
 Report Number : ULR-TC532321000000358F

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
01.06.2021	02.06.2021	1106	64.28	100	17.05	60	9.02	80	10.30	80
03.06.2021	04.06.2021	1155	59.61		15.26		7.73		9.46	
08.06.2021	09.06.2021	1226	67.19		17.92		8.69		10.15	
10.06.2021	11.06.2021	1261	71.22		21.47		9.11		11.07	
15.06.2021	16.06.2021	1386	65.07		19.56		9.72		10.88	
17.06.2021	18.06.2021	1475	58.91		16.11		7.20		9.04	
22.06.2021	23.06.2021	1534	64.18		18.95		9.27		10.95	
24.06.2021	25.06.2021	1566	61.06		18.36		7.63		9.69	
Average			63.94		18.09		8.55		10.19	

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

J.M.T

Analysed By
J.M.Thippeswamy
 Chemist

J.M.T



Verified By
G.N. Mukunda Reddy
 Senior chemist

Note:

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BMM STAGE-I

Annexure-11
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
Customer Reference : WO/ADMIN/FY22/R038
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 : June-2021
Location : A2 -Mariyammana halli Village
Duration of Monitoring : 24 Hour
Report Number : ULR-TC532321000000359F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
01.06.2021	02.06.2021	1107	60.46	100	17.51	60	7.47	80	9.75	80
03.06.2021	04.06.2021	1156	54.32		15.32		8.77		9.99	
08.06.2021	09.06.2021	1227	63.22		19.27		8.23		10.93	
10.06.2021	11.06.2021	1262	59.75		16.13		7.04		11.28	
15.06.2021	16.06.2021	1387	62.64		17.72		8.45		9.16	
17.06.2021	18.06.2021	1476	68.17		21.08		7.56		10.93	
22.06.2021	23.06.2021	1535	65.03		18.60		6.82		9.40	
24.06.2021	25.06.2021	1567	61.69		16.65		8.34		10.34	
Average			61.91		17.79		7.54		9.92	

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

J.M.TS
Analysed By
J.M.Thippeswamy
Chemist

G.N. Mukunda Reddy
Verified By
G.N. Mukunda Reddy
Senior chemist

Note:

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NABL Certificate No.: TC-5323

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BMM STAGE-I

Annexure-12
GEMS-LD/TF/11/01**ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA**

Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
 Customer Reference : WO/ADMIN/FY22/R038
 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 : **June-2021**
 Location : **A3 -Hanumanahalli Village**
 Duration of Monitoring : 24 Hour
 Report Number : **ULR-TC532321000000360F**

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
01.06.2021	02.06.2021	1108	57.52	100	15.77	60	8.58	80	10.23	80
03.06.2021	04.06.2021	1157	69.26		19.64		9.32		11.92	
08.06.2021	09.06.2021	1228	62.75		16.68		7.42		9.16	
10.06.2021	11.06.2021	1263	58.37		14.84		6.99		9.69	
15.06.2021	16.06.2021	1388	64.17		18.35		8.74		10.46	
17.06.2021	18.06.2021	1477	71.20		20.47		10.05		12.42	
22.06.2021	23.06.2021	1536	61.12		17.14		8.67		10.18	
24.06.2021	25.06.2021	1568	59.31		15.76		7.95		9.30	
Average			62.96		17.33		8.47		10.42	

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

J.M.T.
 Analysed By
J.M.Thippeswamy
 Chemist

G.N.M.
 Verified By
G.N. Mukunda Reddy
 Senior chemist

**Note:**

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Website : www.globalmining.in

BMM STAGE-I

Annexure-13
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
Customer Reference : WO/ADMIN/FY22/R038
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 : June-2021
Location : A4-Galemmanagudi Village
Duration of Monitoring : 24 Hour
Report Number : ULR-TC532321000000375F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
02.06.2021	03.06.2021	1136	56.71	100	16.14	60	7.79	80	11.42	80
04.06.2021	05.06.2021	1167	45.11		13.77		6.91		8.95	
09.06.2021	10.06.2021	1242	59.70		17.10		9.16		10.65	
11.06.2021	12.06.2021	1288	63.97		18.47		10.47		11.04	
16.06.2021	17.06.2021	1421	57.06		15.89		8.36		9.46	
18.06.2021	19.06.2021	1493	53.40		12.94		8.02		9.71	
23.06.2021	24.06.2021	1554	60.18		15.76		9.27		10.39	
25.06.2021	26.06.2021	1588	64.75		17.38		11.02		13.18	
Average			57.61		15.93		8.88		10.60	

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

J.M.TS
Analysed By
J.M.Thippeswamy
Chemist

G.N.M.R.
Verified By
G.N. Mukunda Reddy
Senior chemist



Note:

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

Annexure-14
GEMS-LD/TF/11/01**ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA**

Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
 Customer Reference : WO/ADMIN/FY22/RO38
 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 : **June-2021**
 Location : **A5-Gunda Village**
 Duration of Monitoring : 24 Hour
 Report Number : **ULR-TC532321000000376F**

RESULTS

Parameters			PM10 [µg/m ³]		PM2.5 [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS:5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
02.06.2021	03.06.2021	1137	62.75	100	16.07	60	9.27	80	10.42	80
04.06.2021	05.06.2021	1168	54.99		14.24		7.53		8.23	
09.06.2021	10.06.2021	1243	51.15		15.11		6.82		8.09	
11.06.2021	12.06.2021	1289	48.75		13.56		6.36		7.86	
16.06.2021	17.06.2021	1422	56.72		16.65		7.41		8.65	
18.06.2021	19.06.2021	1494	60.81		18.99		9.76		10.88	
23.06.2021	24.06.2021	1555	57.41		15.63		8.69		9.53	
25.06.2021	26.06.2021	1589	62.26		17.07		9.21		10.28	
Average			56.86		15.92		8.13		9.24	

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

J.M.T
 Analysed By
J.M.Thippeswamy
 Chemist

G.N.M
 Verified By
G.N. Mukunda Reddy
 Senior chemist

Note:

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Website : www.globalmining.in

BMM STAGE-I

Annexure-15
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
Customer Reference : WO/ADMIN/FY22/RO38
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 : June-2021
Location : A6-Gunda Tanda Village
Duration of Monitoring : 24 Hour
Report Number : ULR-TC532321000000377F

RESULTS

Parameters			PM ₁₀ [µg/m ³]		PM _{2.5} [µg/m ³]		SO ₂ [µg/m ³]		NO ₂ [µg/m ³]	
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)		USEPA 2001 Gravimetric Method		IS:5182: 2001 (Part-2) (RF-2017)		IS :5182: (Part-6) 2006 (RF-2017)	
Date of Sampling	Date of Received Sample	Sample Code	Result	STD	Result	STD	Result	STD	Result	STD
02.06.2021	03.06.2021	1138	55.91	100	15.18	60	6.95	80	7.69	80
04.06.2021	05.06.2021	1169	61.12		17.61		7.12		9.07	
09.06.2021	10.06.2021	1244	49.96		12.73		6.53		8.11	
11.06.2021	12.06.2021	1290	54.24		15.42		7.79		9.58	
16.06.2021	17.06.2021	1423	51.71		13.25		7.14		9.04	
18.06.2021	19.06.2021	1495	60.96		17.99		8.58		10.88	
23.06.2021	24.06.2021	1556	57.13		15.76		7.63		9.3	
25.06.2021	26.06.2021	1590	53.88		14.54		6.69		7.46	
Average			55.61		15.31		7.30		8.89	

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

J.M.T.
Analysed By
J.M.Thippeswamy
Chemist

G.N.M.
Verified By
G.N. Mukunda Reddy
Senior chemist

Note:

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BMM STAGE-I

ANNEXURE-16
GEMS-LD/TF/08/01

AMBIENT NOISE LEVEL MONITORING REPORT

Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District.
Customer Reference : WO/ADMIN/FY22/R038
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Noise Level Monitoring
Particulars of Sample Collected : Equinox-107
Month : June-2021
Method Adopted : IS 9989-1981 Reaffirmed 2014
Report No : ULR-TC532321000000449F

Sl. No	Location	Date of Monitoring	Noise Level dB (A)					
			Day Time		Standard	Night Time		Standard
			Min	Max		Min	Max	
1	Main Gate	01.06.2021	51.3	67.1	75	49.5	66.2	70
2	Near ATM	02.06.2021	52.1	68.2	75	50.2	64.5	70
3	Transit House	03.06.2021	50.6	63.5	75	49.7	57.2	70
4	CAAQMS Station	07.06.2021	51.1	67.3	75	48.4	65.1	70
5	Gunda Road	08.06.2021	47.0	58.6	75	46.1	54.3	70
6	Gunda Railway Station	09.06.2021	53.3	65.0	75	50.4	60.4	70
7	Bagging Shed	14.06.2021	54.0	67.6	75	48.6	55.7	70
8	Railway Siding	15.06.2021	56.1	68.5	75	53.4	59.8	70
9	4th Gate	16.06.2021	57.8	72.5	75	48.2	60.6	70
10	Bricks Plant	21.06.2021	53.1	68.4	75	52.8	65.7	70
11	Kempuhalla (Wagon Tippler)	22.06.2021	57.4	69.7	75	47.2	57.1	70
12	Danapura Bridge	23.06.2021	58.6	66.0	75	54.4	61.8	70
13	2nd Gate	24.06.2021	63.2	71.8	75	52.5	60.3	70
14	Project Store	28.06.2021	52.1	60.8	75	49.4	57.9	70
15	Dispatch (Truck Parking Area)	29.06.2021	58.3	66.2	75	55.9	59.6	70

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

Verified By
G.N. Mukunda Reddy
Senior chemist

Note:

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BMM STAGE-I

ANNEXURE-17
GEMS-LD/TF/08/01

AMBIENT NOISE LEVEL MONITORING REPORT

Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District
Customer Reference : WO/ADMIN/FY22/R038
Sample collected by : Global Environment & Mining Services
Discipline : Chemical
Group : Atmospheric Pollution
Sample Type : Noise Level Monitoring
Particulars of Sample Collected : Equinox-107
Month : June-2021
Method Adopted : IS 9989-1981 Reaffirmed 2014
Report No : ULR-TC532321000000500F

Sl. No	Location	Date of Monitoring	Noise Level dB (A)					
			Day Time		Standard	Night Time		Standard
			Min	Max		Min	Max	
1	Main Gate	03.06.2021	54.8	66.3	75	51.6	62.5	70
2	Near ATM	04.06.2021	55.2	67.2	75	51.4	64.1	70
3	Transit House	07.06.2021	52.6	63.1	75	50.9	56.9	70
4	CAAQMS Station	08.06.2021	50.4	64.5	75	47.6	63.4	70
5	Gunda Road	09.06.2021	53.3	60.8	75	48.2	56.7	70
6	Gunda Railway Station	10.06.2021	54.2	64.9	75	52.1	62.1	70
7	Bagging Shed	11.06.2021	57.7	66.7	75	47.9	58.4	70
8	Railway Siding	16.06.2021	58.1	65.1	75	54.5	61.2	70
9	4th Gate	17.06.2021	55.9	69.5	75	50.8	59.3	70
10	Bricks Plant	18.06.2021	57.5	65.2	75	53.7	63.6	70
11	Kempuhalla (Wagon Tippler)	21.06.2021	56.3	68.8	75	46.9	58.4	70
12	Danapura Bridge	22.06.2021	60.4	67.3	75	55.5	64.7	70
13	2nd Gate	23.06.2021	62.9	69.4	75	54.2	62.5	70
14	Project Store	25.06.2021	55.2	63.2	75	52.8	60.9	70
15	Dispatch (Truck Parking Area)	28.06.2021	60.2	70.5	75	56.3	62.1	70

INFERENCE

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



Verified By
G.N. Mukunda Reddy
Senior chemist

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BMM STAGE-I

ANNEXURE-18
GEMS-LD/TF/23/01**Analysis Report of Water Quality Data**

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY22/RO38
- 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 Date of Sampling : 14.06.2021
- 10 Sample Received : 14.06.2021
- 11 Date of Analysis : 14.06.2021
- 12 Date of Analysis Completion : 21.06.2021
- 13 Report Number : **ULR-TC532321000000441F**

Sl. No	Parameters	Protocol	Unit	Results			Standards as per IS: 10500:2012	
				Sample Code				
				1339 GW1 (Danapur Village)	1340 GW2 (Hanumana halli)	1341 GW3 (Gelemmana Gudi)	Desirable Limits	Permissible Limits
1.	Colour	IS: 3025 (PART 4)- 1984, RA-2002 Platinum cobalt Method	Hazen	<5	<5	<5	5	15
2.	Conductivity	APHA 23 rd Edition 2017 2510 B (Pg. No.2-54)	µS/cm	2600	3200	2800	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-65)	mg/L	1710	1900	1670	500	2000
4.	pH	APHA 23 rd Edition 2017 4500 B (Pg. No.4-92 to 4-96)	-	7.32	7.44	7.4	6.5 to 8.5	NR
5.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-14)	NTU	0.2	0.1	0.3	1	5
6.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-66 to 2-67)	mg/L	Nil	Nil	Nil	-	-
7.	Sulphate as SO ₄	APHA 23 rd Edition 2012 4500 SO ₄ ²⁻ E (Page No. 4-190)	mg/L	217.5	198.8	156.6	200	400
8.	phosphorus as P	APHA 23 RD EDITION -4500-P D (Pg No. 4-163 to 4-164)	mg/L	Nil	Nil	Nil	-	-
9.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg No.3-97to 3-98)	mg/L	585	807	358	-	-
10.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-87 to 3-88)	mg/L	0.00	0.00	0.00	-	-
11.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg No.3-84)	mg/L	124	136	144	75	200
12.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation	mg/L	53.46	55.40	40.82	30	100
13.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-46)	mg/L	530	568	528	200	600
14.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-72)	mg/L	352.37	524.88	463.12	250	1000
15.	Fluoride as F	APHA 23 rd Edition 2012 4500 F- D (Page No. 4-87 to 4-88)	mg/L	0.95	1.4	1.21	1	1.5
16.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2012 4500 NO ₃ E (Pg No.4-125 to 4-127)	mg/L	33.78	37.5	39.06	45	NR

Note:

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ANNEXURE-18

17.	Total Alkalinity as CaCO ₃	APHA 23 rd Edition 2320 B (Pg No.2-35)	mg/L	446	552	474	200	600
18.	Acidity as CaCO ₃	IS:3025 (part 22)-1986, RA-2014 Indicator method	mg/L	Nil	Nil	Nil	-	-
19.	Total Iron as Fe	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.04	0.27	0.11	0.30	NR
20.	Nickel as Ni	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	<0.01	<0.01	0.02	NR
21.	Manganese as Mn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.041	0.073	0.070	0.10	0.30
22.	Copper as Cu	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.283	0.303	0.315	0.05	1.50
23.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	<0.1	<0.1	5	15
24.	Lead as Pb	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	<0.01	<0.01	0.01	NR
25.	Total Coli form count	APHA 23 rd Edition 9222-B (p.no.9-66) Membrane filter technique	MPN/ 100 ml	Ab	Ab	Ab	Shall not be detectable in any 100 ml sample	-
26.	Escherichia coli count	APHA 23 rd Edition 9222 (p.no.9-76) Membrane filter technique	MPN/ 100 ml	Ab	Ab	Ab	Shall not be detectable in any 100 ml sample	-

Note: NR-No relaxation, Ab-Absent, BDL-Below detectable Limit.


Analysed By
J.M.Thippeswamy
Chemist


Verified By
G.N. Mukunda Reddy
Senior chemist

**Note:**

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BMM STAGE-I

ANNEXURE-19
GEMS-LD/TF/23/01**Analysis Report of Water Quality Data**

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY22/RO38
- 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 Date of Sampling : 14.06.2021
- 10 Sample Received : 14.06.2021
- 11 Date of Analysis : 14.06.2021
- 12 Date of Analysis Completion : 21.06.2021
- 13 Report Number : **ULR-TC532321000000442F**

Sl. No	Parameters	Protocol	Unit	Results			Standards as per IS: 10500:2012	
				Sample Code				
				1342 GW4 (Mariyammana Halli)	1343 GW5 (Transit House BW)	1344 GW6 (RO Drinking Water)	Desirable Limits	Permissible Limits
1.	Colour	IS: 3025 (PART 4)- 1984, RA-2002 Platinum cobalt Method	Hazen	<5	<5	<5	5	15
2.	Conductivity	APHA 23 rd Edition 2017 2510 B (Pg. No.2-54)	µS/cm	3700	1330	80	-	-
3.	Total Dissolved Solids	APHA 23 rd Edition 2017 2540 C (Pg. No.2-65)	mg/L	1880	860	54	500	2000
4.	pH	APHA 23 rd Edition 2017 4500 B (Pg. No.4-92 to 4-96)	-	7.08	7.85	7.3	6.5 to 8.5	NR
5.	Turbidity (NTU)	APHA 23 rd Edition 2017 2130 B (Pg. No.2-14)	NTU	0.1	0.5	0.0	1	5
6.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg. No.2-66 to 2-67)	mg/L	Nil	Nil	Nil	-	-
7.	Sulphate as SO ₄	APHA 23 rd Edition 2012 4500 SO ₄ ²⁻ E (Page No. 4-190)	mg/L	218	201.1	7.83	200	400
8.	phosphorus as P	APHA 23 RD EDITION -4500-P D (Pg No. 4-163 to 4-164)	mg/L	Nil	Nil	Nil	-	-
9.	Sodium as Na	APHA 23 rd Edition 2017 Na 3500 B (Pg No.3-97 to 3-98)	mg/L	529.5	142.5	10.9	-	-
10.	Potassium as K	APHA 23 rd Edition 2017 K 3500 B (Pg. No.3-87 to 3-88)	mg/L	0.0	0.0	0.0	-	-
11.	Calcium as Ca	APHA 23 rd Edition 2017 3500 Ca B (Pg No.3-84)	mg/L	180	68	5.6	75	200
12.	Magnesium as Mg	APHA 23 rd Edition 2017 3500-B Mg By calculation	mg/L	26.73	55.89	2.92	30	100
13.	Total Hardness as CaCO ₃	APHA 23 rd Edition 2017 2340 C (Page No. 2-46)	mg/L	560	400	26	200	600
14.	Chloride as Cl	APHA 23 rd Edition 2017 4500 Cl- (Page No. 4-72)	mg/L	594	70.47	10.07	250	1000
15.	Fluoride as F	APHA 23 rd Edition 2012 4500 F- D (Page No. 4-87 to 4-88)	mg/L	0.84	1.08	0.13	1	1.5
16.	Nitrate Nitrogen as NO ₃	APHA 23 rd Edition 2012 4500 NO ₃ E (Pg No.4-125 to 4-127)	mg/L	39.75	38.77	0.92	45	NR

Note:

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BMM STAGE-I

ANNEXURE-19

17.	Total Alkalinity as CaCO ₃	APHA 23 rd Edition 2320 B (Pg No.2-35)	mg/L	526	360	24	200	600
18.	Acidity as CaCO ₃	IS:3025 (part 22)-1986, RA-2014 Indicator method	mg/L	0.0	0.0	0.0	-	-
19.	Total Iron as Fe	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.07	0.02	0.08	0.30	NR
20.	Nickel as Ni	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	<0.01	<0.01	0.02	NR
21.	Manganese as Mn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.165	0.149	0.066	0.10	0.30
22.	Copper as Cu	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	0.337	0.348	0.349	0.05	1.50
23.	Zinc as Zn	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.1	<0.1	<0.1	5	15
24.	Lead as Pb	APHA 23 rd Edition 3111 B. Direct Air Acetylene Flame Method	mg/L	<0.01	<0.01	<0.01	0.01	NR
25.	Total Coli form count	APHA 23 rd Edition 9222-B (p.no.9-66) Membrane filter technique	MPN/100 ml	Ab	Ab	Ab	Shall not be detectable in any 100 ml sample	-
26.	Escherichia coli count	APHA 23 rd Edition 9222 (p.no.9-76) Membrane filter technique	MPN/100 ml	Ab	Ab	Ab	Shall not be detectable in any 100 ml sample	-

Note: NR-No relaxation, Ab-Absent, BDL-Below detectable Limit.Analysed By
J.M.Thippeswamy
ChemistVerified By
G.N. Mukunda Reddy
Senior chemist**Note:**

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BMM STAGE-I

ANNEXURE-20
GEMS-LD/TF/23/01**Analysis Report of Water Quality Data**

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY22/RO38
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Pollution & Environment
- 8 Sample Type : **Sewage Treatment Plant**
- 9 Date of Sampling : 14.06.2021
- 10 Sample Received : 14.06.2021
- 11 Date of Analysis : 14.06.2021
- 12 Date of Analysis Completion : 21.06.2021
- 13 Report Number : **ULR-TC532321000000448F**

Sl. No.	Parameters	Protocol	Unit	Results			As per KSPCB Std
				STP 45 KLD	STP-1 90 KLD	STP-2 90 KLD	
		Sample code	-	1353	1354	1355	
1.	pH	APHA 23 rd Edition 2017 4500 B (Pg No.4-92 to 4-96)	-	7.60	7.67	7.27	6.5 to 9.0
2.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg No.2-66 to 2-67)	mg/L	9.68	5.69	8.62	<100
3.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS:3025 (part 44)-1993, Reaffirmed -2019	mg/L	16	8	10	30
4.	Chemical Oxygen Demand as COD	APHA 23 rd Edition 2017 5220 C (Pg No.5-19 to 5-20)	mg/L	38	36	42	50

Note: BDL-Below detectable Limit**INFERENCE:** The Measured values are within the LimitAnalysed By
J.M.Thippeswamy
ChemistVerified By
G.N. Mukunda Reddy
Senior chemist**Note:**

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BMM STAGE-I

ANNEXURE-21
GEMS-LD/TF/23/01**Analysis Report of Water Quality Data**

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY22/RO38
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Composite Sampling
5	Sampling Procedure	:	GEMS-LD/SOP/32
6	Discipline	:	Chemical
7	Group	:	Pollution & Environment
8	Sample Type	:	Waste Water
9	Date of Sampling	:	14.06.2021
10	Sample Received	:	14.06.2021
11	Date of Analysis	:	14.06.2021
12	Date of Analysis Completion	:	21.06.2021
13	Report Number	:	ULR-TC532321000000447F

Sl. No.	Parameters	Protocol	Unit	Results		As per KSPCB Std
				Neutralization Pit 70 MW Power Plant	Neutralization Pit 2x70 MW Power Plant	
Sample Code				1351	1352	
1.	pH	APHA 23 rd Edition 2017 4500 B (Pg No.4-92 to 4-96)	-	8.29	8.94	6.5 to 9.0
2.	Total Suspended Solids	APHA 23 rd Edition 2017 2540 D (Pg No.2-66 to 2-67)	mg/L	19.26	23.57	100
3.	Chemical Oxygen Demand as COD	APHA 23 rd Edition 2017 5220 C (Pg No.5-19 to 5-20)	mg/L	91.52	105.60	250
4.	Oil & Grease	APHA 23 rd Edition 2017 5520 B (Pg No.5-40 to 5-41)	mg/L	4.0	8.0	10

Note: BDL-Below detectable Limit

INFERENCE: The Measured values are within the Limit

Analysed By
J.M.Thippeswamy
ChemistVerified By
G.N. Mukunda Reddy
Senior chemist**Note:**

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Website : www.globalmining.in

BMM STAGE-I

ANNEXURE-22
GEMS-LD/TF/23/01**Analysis Report of Surface Water Quality Data**

- 1 Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District.
- 2 Customer Reference : WO/ADMIN/FY22/RO38
- 3 Sample collected by : GLOBAL Environment & Mining Services
- 4 Particulars of sample collected : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Pollution & Environment
- 8 Sample Type : Surface Water
- 9 Date of Sampling : 14.06.2021
- 10 Sample Received : 14.06.2021
- 11 Date of Analysis : 14.06.2021
- 12 Date of Analysis Completion : 21.06.2021
- 13 Report Number : **ULR-TC532321000000445F**

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				Danayakanakere Upstream	Danayakanakere Downstream	
Sample code				1347	1348	
1.	pH	APHA 23 RD Edition 4500 H+B (Pg No.4-95 to 4-99)	-	7.31	7.55	
2.	Dissolved Oxygen	APHA 23 RD Edition 4500 C (Pg No.4-146)	mg/L	4.8	4.0	5.0
3.	Biochemical Oxygen Demand as BOD (5 days at 20°C)	APHA 23 RD Edition 5210 B (Pg No.5-6 to 5-10)	mg/L	2.0	3.0	3.0
4.	Fluorides (as F)	APHA 23 RD Edition 4500F- D (Pg No.4-90 to 4-91)	mg/L	0.66	0.84	1.5
5.	Color	APHA 23 RD Edition 2120 B (Pg No.2-6 to 2-7)	Hazen	10	12	300
6.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN- (Pg No.4-45 to 4-46)	mg/L	BDL	BDL	0.05
7.	Arsenic (as As)	APHA-23 RD Edition-3114 -B (Pg No.3 -36 to 3-40)	mg/L	<0.01	<0.01	0.2
8.	Phenolic Compounds (as C ₆ H ₅ OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	0.005
9.	Chromium (as Cr ⁶⁺)	APHA-23 RD Edition-3500 Cr B (Pg No.3-71 to 3-72)	mg/L	<0.001	<0.001	1.0
10.	Anionic detergents (as MBAS)	APHA 23 RD Edition 5540 C (Pg No.5-55 to 5-57)	mg/L	BDL	BDL	1.0
11.	Total Coliform Organisms					
	Total Coli forms	APHA 23 RD Edition 9221-C (Pg No.9-72 to 9-74)	MPN/100 ml,	Absent	Absent	500
	Escherichia coli or E. coli	APHA 23 RD Edition 9221-F (Pg No.9-78 to 9-79)	MPN/100 ml,	Absent	Absent	-

Note: BDL-Below detectable Limit

INFERENCE: The Measured values are within the Limit

J.M.T.S.
Analysed By
J.M.Thippeswamy
Chemist

G.N.M.R.
Verified By
G.N. Mukunda Reddy
Senior chemist

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BMM STAGE-I

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

1	Name of the Industry	:	BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District.
2	Customer Reference	:	WO/ADMIN/FY22/RO38
3	Sample collected by	:	GLOBAL Environment & Mining Services
4	Particulars of sample collected	:	Composite Sampling
5	Sampling Procedure	:	GEMS-LD/SOP/32
6	Discipline	:	Chemical
7	Group	:	Pollution & Environment
8	Sample Type	:	Surface Water
9	Date of Sampling	:	14.06.2021
10	Sample Received	:	14.06.2021
11	Date of Analysis	:	14.06.2021
12	Date of Analysis Completion	:	21.06.2021
13	Report Number	:	ULR-TC532321000000444F

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS -B
				Tunga Bhadra dam Upstream	Tunga Bhadra dam Downstream	
Sample Code				1345	1346	
1.	pH	APHA 23 RD Edition 4500 H+ B (Pg No.4-95 to 4-99)	-	7.56	7.73	
2.	Dissolved Oxygen	APHA 23 RD Edition 4500 C (Pg No.4-146)	mg/L	4.0	3.6	5.0
3.	Biochemical Oxygen Demand as BOD (5 days at 20°C)	APHA 23 RD Edition 5210 B (Pg No.5-6 to 5-10)	mg/L	Nil	Nil	3.0
4.	Fluorides (as F)	APHA 23 RD Edition 4500F- D (Pg No.4-90 to 4-91)	mg/L	0.59	0.77	1.5
5.	Color	APHA 23 RD Edition 2120 B (Pg No.2-6 to 2-7)	Hazen	BDL	BDL	300
6.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN- (Pg No.4-45 to 4-46)	mg/L	BDL	BDL	0.05
7.	Arsenic (as As)	APHA-23 RD Edition-3114 -B (Pg No.3 -36 to 3-40)	mg/L	<0.01	<0.01	0.2
8.	Phenolic Compounds (as C ₆ H ₅ OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	BDL	BDL	0.005
9.	Chromium (as Cr ⁶⁺)	APHA-23 RD Edition-3500 Cr B (Pg No.3-71 to 3-72)	mg/L	<0.001	<0.001	1.0
10.	Anionic detergents (as MBAS)	APHA 23 RD Edition 5540 C (Pg No.5-55 to 5-57)	mg/L	BDL	BDL	1.0
11.	Total Coliform Organisms,					
	Total Coli forms	APHA 23RD Edition 9221-C (Pg No.9-72 to 9-74)	MPN/100 ml,	Absent	Absent	500
	Escherichia coli or E. coli	APHA 23RD Edition 9221-F (Pg No.9-78 to 9-79)	MPN/100 ml,	Absent	Absent	-

Note: BDL-Below detectable Limit

INFERENCE: the measured values are within the Limit

J.M.Thippeswamy
Analysed By
J.M.Thippeswamy
Chemist

G.N. Mukunda Reddy
Verified By
G.N. Mukunda Reddy
Senior chemist

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Analysis Report of Surface Water Quality Data

1	Name of the Industry	: BMM Ispat Ltd., Danapur, Hospet Taluk, Vijayanagara District.
2	Customer Reference	: WO/ADMIN/FY22/RO38
3	Sample collected by	: GLOBAL Environment & Mining Services
4	Particulars of sample collected	: Composite Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Pollution & Environment
8	Sample Type	: Surface Water
9	Date of Sampling	: 14.06.2021
10	Sample Received	: 14.06.2021
11	Date of Analysis	: 14.06.2021
12	Date of Analysis Completion	: 21.06.2021
13	Report Number	: ULR-TC532321000000446F

Sl. No.	Parameters	Protocol	Unit	Results		IS 2296 - 1982 CLASS - B
				Kempu Halla Upstream	Kempu Halla Downstream	
			Sample code	1349	1350	
1.	pH	APHA 23 RD Edition 4500 H+ B (Pg No.4-95 to 4-99)	-	7.74	7.69	
2.	Dissolved Oxygen	APHA 23 RD Edition 4500 C (Pg No.4-146)	mg/L	4.2	4.8	5.0
3.	Biochemical Oxygen Demand as BOD (5 days at 20°C)	APHA 23 RD Edition 5210 B (Pg No.5-6 to 5-10)	mg/L	2.5	2.0	3.0
4.	Fluorides (as F)	APHA 23 RD Edition 4500F- D (Pg No.4-90 to 4-91)	mg/L	0.83	1.09	1.5
5.	Color	APHA 23 RD Edition 2120 B (Pg No.2-6 to 2-7)	Hazen	BDL	BDL	300
6.	Cyanides (as CN)	APHA 23 RD Edition 4500 CN- (Pg No.4-45 to 4-46)	mg/L	<0.01	<0.01	0.05
7.	Arsenic (as As)	APHA-23 RD Edition-3114 -B (Pg No.3 -36 to 3-40)	mg/L	BDL	BDL	0.2
8.	Phenolic Compounds (as C ₆ H ₅ OH)	IS:3025 (part 43)-1992, RA-2014, Chloroform extraction method	mg/L	<0.001	<0.001	0.005
9.	Chromium (as Cr ⁶⁺)	APHA-23 RD Edition-3500 Cr B (Pg No.3-71 to 3-72)	mg/L	BDL	BDL	1.0
10.	Anionic detergents (as MBAS)	APHA 23 RD Edition 5540 C (Pg No.5-55 to 5-57)	mg/L	BDL	BDL	1.0
11.	Total Coliform Organisms,					
	Total Coli forms	APHA 23RD Edition 9221-C (Pg No.9-72 to 9-74)	MPN/100 ml,	Absent	Absent	500
	Escherichia coli or E. coli	APHA 23RD Edition 9221-F (Pg No.9-78 to 9-79)	MPN/100 ml,	Absent	Absent	-

Note: BDL-Below detectable Limit

INFERENCE: The Measured values are within the Limit


Analysed By
J.M.Thippeswamy
Chemist


Verified By
G.N. Mukunda Reddy
Senior chemist



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