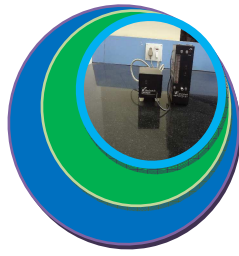


# BMM Ispat Ltd.,



**Danapur Village, Hospet Taluk,  
Bellary District, PIN-583222, Karnataka**



## **ENVIRONMENT MONITORING REPORT**

**Stage 2 Units**

*For*

**NOVEMBER-2015**

**Prepared By**



**GLOBAL ENVIRONMENT & MINING SERVICES**

**NABL Accredited Laboratory**

(Consulting Engineers, Mine Designers, Geologists & Surveyors)

3<sup>rd</sup> main road, Basaveswara badavane

**HOSPET - 583201, Dist., Bellary (Karnataka)**

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Website : [globalmining.in](http://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 Fugitive monitoring within the plant, Stack monitoring and Noise 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 Fugitive monitoring within the plant, Stack monitoring for all chimneys, and Noise monitoring as per the CFO. These monitoring has been carried out in a frequency as mentioned in the CFO and the same report is being submitted to the Board.

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

**for GLOBAL Environment & Mining Services**

**Place: Hospet**  
Date: 05.12.2015

**S. Kameswara Rao**  
**(Managing partner)**

## **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 ShriUdaichandSinghi.

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 5000 CroresCompany 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. It is this human potential that 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 Endeavours'.

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, Cement & Mining companies in India that has achieved the present level under the leadership and guidance of Sri Dinesh Kumar Singh, the Founder & Director 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 to set up new Rolling Mill. The corporate office of the project is located as follows:

### **BMM ISPAT LIMITED**

(Registered Office & Works)

#114, Danapura

**Hospet - 583 222**

Bellary Dist., Karnataka

Phone +91 83942 44681/82/83/9972309417

Fax +91 080-30723604.

### 1.3 Site Location

BMM ISPAT LIMITED is located at Danapur about 15 Kms away from Hospet 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 Danapura 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 (Vidyanagar).

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 Structurals/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 and 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, other plants are under construction. Hence environmental monitoring has been 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, EAF, SMS, CCM, and RML every Month.

**1.4** The report includes environmental monitoring data collected at above site for the month of **NOVEMBER-2015**. The Parameters monitored are:

- ❖ Fugitive Dust Level
- ❖ Stack Emission

**Important Note:** *Ambient Air Quality & Water Quality data are common for both Stage-I & Stage-II. Hence, Please refers Stage-I report for the same.*

### 1.5 Study:

The data collection programme is given below:

### 1.6 Fugitive Emission Monitoring

Ambient 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 air quality status given in *Annexure – 1/A (1<sup>st</sup> Fort night) & Annexure – 1/B (2<sup>nd</sup> Fort night)* .

### 1.7 Stack Monitoring

Vayubhodhan Stack sampler VSS1 stack monitoring was used for drawing the flue gas. Sulphur dioxide and oxides of Nitrogen in the flue gas were sampled by bubbling flue gas 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 – 2/A (1<sup>st</sup> Fort night) & Annexure – 2/B (2<sup>nd</sup> Fort night)*

### 1.8 Stack Emissions Monitoring Methodology

#### 1.9 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 iskinetic Sampling.

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

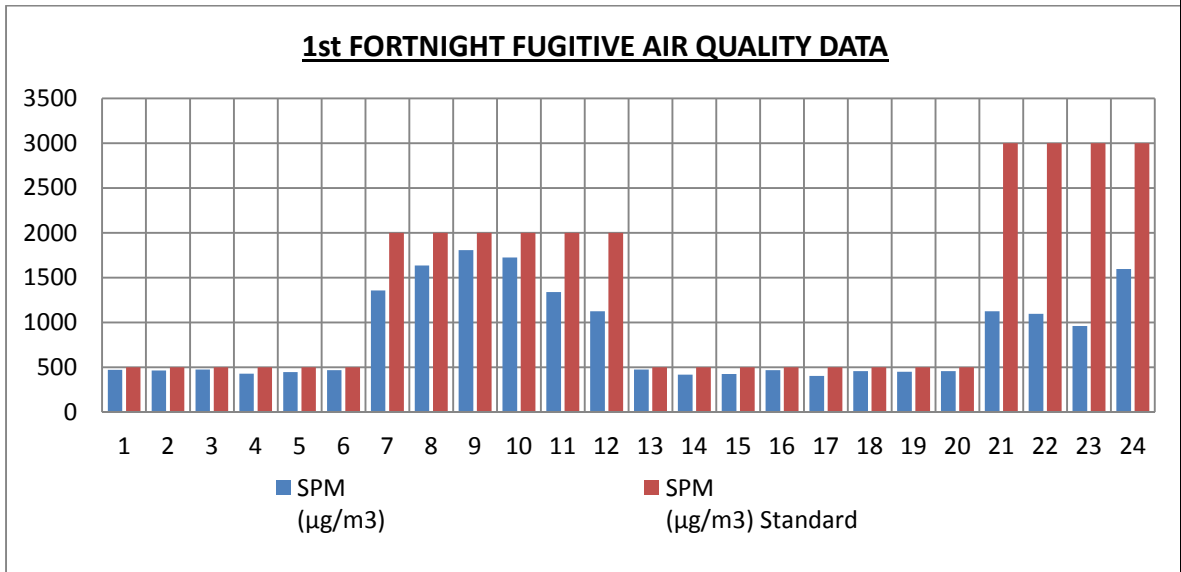
### 1.10 Traverse Point Calculation

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 iskinetic sampling.

**1.11 Determination of Dust Concentration**

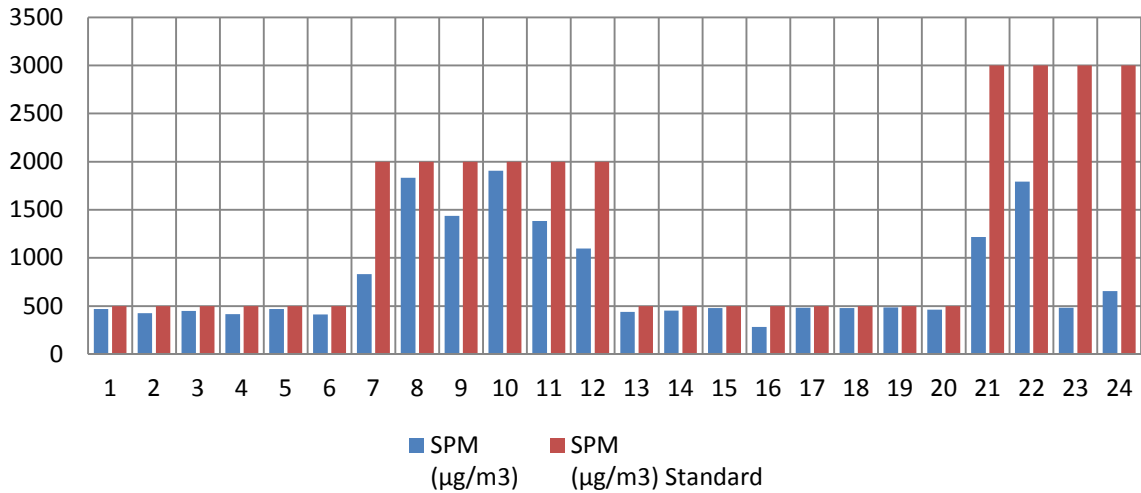
Determine the mass of dust collected in the thimble by difference i.e. weighing the thimble before and after the run. Dry the thimble in an oven for about 2 hours at 120° C prior to sampling. After sampling, cool, dry and again weigh the thimble along with dust maintaining the same condition as prior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

**1.12** Fortnightly fugitive air quality was monitored all plant area SPM value minimum **283.9 µg/m<sup>3</sup>**, maximum value **1906.5 µg/m<sup>3</sup>**,and average value **811.2 µg/m<sup>3</sup>**. The Fugitive Monitoring results of . 1<sup>st</sup> Fortnight & 2<sup>nd</sup> Fortnight is mentioned in graph.



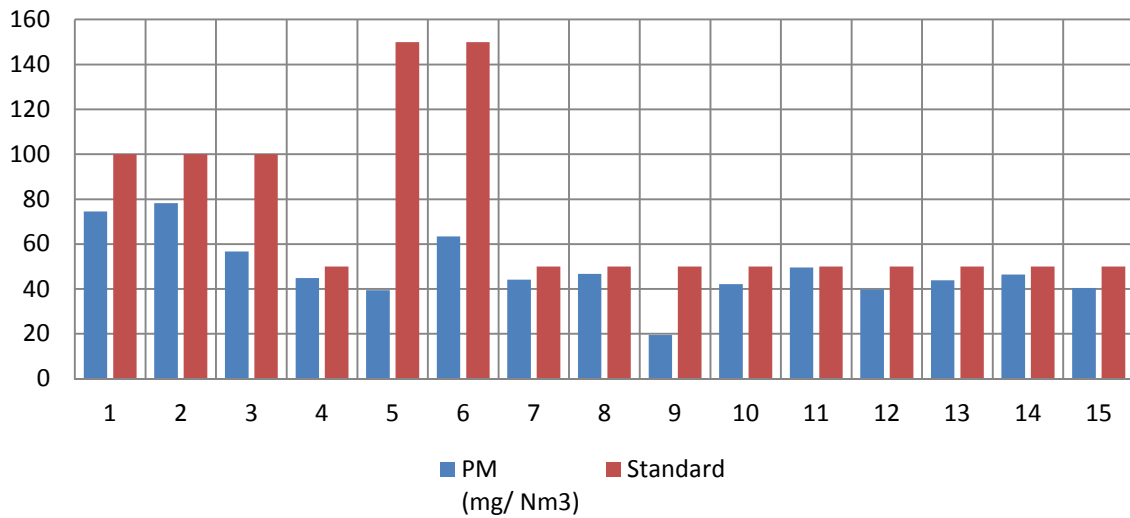


**2nd FORTNIGHT FUGITIVE AIR QUALITY DATA**

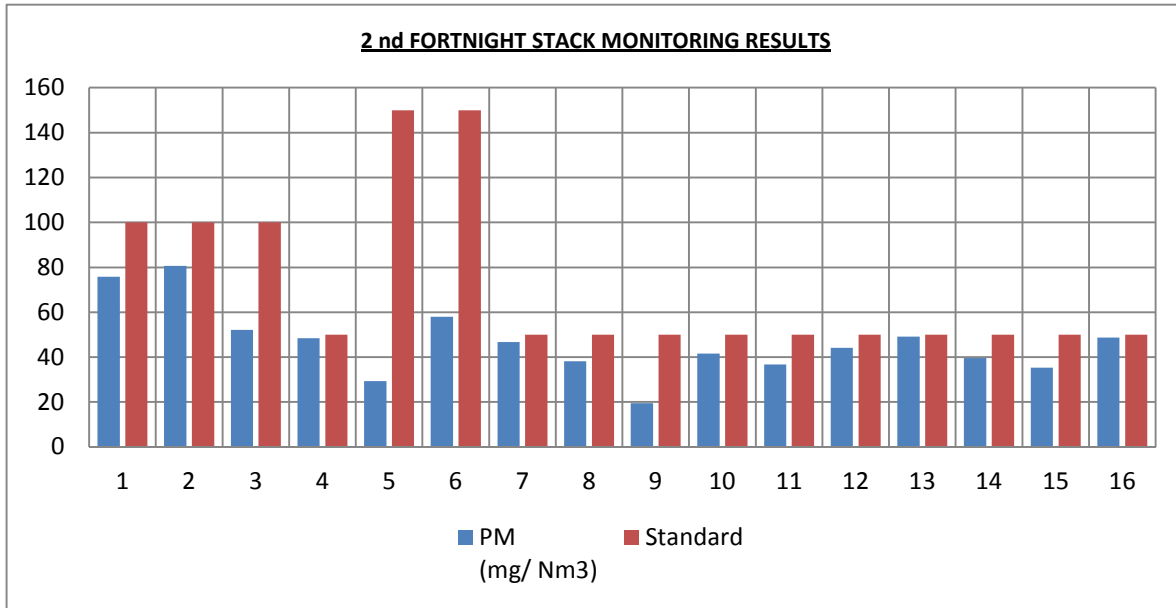


**1.13** Stack emission level was monitored all chimneys’ PM values ( $\text{mg}/\text{Nm}^3$ ) 1<sup>st</sup> and 2<sup>nd</sup> Fort Night Minimum Value **19.4  $\text{mg}/\text{Nm}^3$** , Maximum Value **80.6  $\text{mg}/\text{Nm}^3$**  & Average Value **47.52  $\text{mg}/\text{Nm}^3$** . The Stack Monitoring results of . 1<sup>st</sup> Fortnight & 2<sup>nd</sup> Fortnight is mentioned in graph.

**1 st FORTNIGHT STACK MONITORING RESULTS**







**1.15 Conclusion**

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



**Annexure-1/A (1 st Fort Night)**

**FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING NOVEMBER-2015**

1. Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Bellary District.
2. Sample collected by : GLOBAL Environment & Mining Services, Hospet.
3. Particulars of sample collected : RDS Sampler (AAS 217 BL)
4. Report to sent : **05.12.2015**
5. Method adopted : IS 5182 (Part 23 ) : 2006

Sl.NO.	Location / Plant	Date Of Monitoring	Date Of Sample Receipt	SPM ( $\mu\text{g}/\text{m}^3$ )	Standard
<b>I. Beneficiation Plant-II</b>					
1.	Ball Mill Area	04.11.2015	05.11.2015	472.3	<b>500</b>
2.	Iron Ore Hopper (Near monsoon shed)	04.11.2015	05.11.2015	466.2	<b>500</b>
3.	Concentrate Thickener	04.11.2015	05.11.2015	474.7	<b>500</b>
<b>II. Pellet Plant-II</b>					
4.	PR-6	05.11.2015	06.11.2015	430.3	<b>500</b>
5.	Annual Cooler	05.11.2015	06.11.2015	448.4	<b>500</b>
6.	CGB Building	05.11.2015	06.11.2015	468.2	<b>500</b>
<b>III. Sponge Iron Division -2 (Kiln 1 &amp; 2)</b>					
7.	Control room	06.11.2015	07.11.2015	1357.3	<b>2000</b>
8.	Near Weigh bridge (dispatch)	06.11.2015	07.11.2015	1634.6	<b>2000</b>
9.	Pellet Storage bin	06.11.2015	07.11.2015	1807.6	<b>2000</b>
<b>IV. Sponge Iron Division -2 (Kiln 3 &amp; 4)</b>					
10.	Near Control room	07.11.2015	09.11.2015	1724.1	<b>2000</b>
11.	Near Coal crusher	07.11.2015	09.11.2015	1340.3	<b>2000</b>
12.	Near Product bin	07.11.2015	09.11.2015	1124.7	<b>2000</b>
<b>V. Wagon Tipper/RMHS</b>					
13.	Near Tipping point	09.11.2015	10.11.2015	475.9	<b>500</b>
14.	Monsoon Shed	09.11.2015	10.11.2015	418.4	<b>500</b>
15.	MCC room (2 <sup>nd</sup> Gate)	09.11.2015	10.11.2015	426.0	<b>500</b>
<b>VI. Power Plant-70 MW</b>					
16.	70MW-DM Plant (Near R.O. Plant)	10.11.2015	11.11.2015	469.1	<b>500</b>
17.	Coal Screen (near gate weigh bridge)	10.11.2015	11.11.2015	403.4	<b>500</b>
18.	CFBC boiler	10.11.2015	11.11.2015	457.2	<b>500</b>
<b>VII. 2X70MW Power Plant</b>					
19.	Near Boiler	11.11.2015	13.11.2015	450.6	<b>500</b>
20.	Near Coal storage Shed	11.11.2015	13.11.2015	458.2	<b>500</b>
<b>VIII . SMS Area</b>					
21	Stock House/Vibro feeders	11.11.2015	13.11.2015	1125.0	3000
22	Laddle Tapping	13.11.2015	14.11.2015	1096.0	3000
23	Slag Pouring Area	13.11.2015	14.11.2015	961.7	3000
<b>IX. BAR MILL</b>					
24	Near Reheating Furnace	13.11.2015	14.11.2015	1595.3	3000

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

**Analyzed By**  
Environmental Engineer  
(G.Aarathi)

**Authorised signatory**  
**Technical Manager**  
(K.Ramakrishna Reddy )

**Note:**

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4. Total liability of our laboratory is limited amount. Any dispute arising out of this report is subject to Hospet jurisdiction only.



**FORTNIGHTLY FUGITIVE AIR QUALITY DATA MONITORING NOVEMBER-2015**

1. Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Bellary District
2. Sample collected by : GLOBAL Environment & Mining Services
3. Particulars of sample collected : RDS Sampler (AAS 217 BL)
4. Report to be sent : **05.12.2015**
5. Method adopted : IS 5182 (Part 23) : 2006

Sl.NO.	Location / Plant	Date Of Monitoring	Date Of Sample Receipt	SPM ( $\mu\text{g}/\text{m}^3$ )	Standard
<b>I. Beneficiation Plant-II</b>					
1.	Ball Mill Area	17.11.2015	18.11.2015	468.5	500
2.	Iron Ore Hopper (Near monsoon shed)	17.11.2015	18.11.2015	426.9	500
3.	Concentrate Thickener	17.11.2015	18.11.2015	449.8	500
<b>II. Pellet Plant-II</b>					
4.	PR-6	18.11.2015	19.11.2015	416.8	500
5.	Annual Cooler	18.11.2015	19.11.2015	470.4	500
6.	CG Building	18.11.2015	19.11.2015	412.4	500
<b>III. Sponge Iron Division -2 (Kiln 1 &amp; 2)</b>					
7.	Control room	19.11.2015	20.11.2015	833.2	2000
8.	Near Weigh bridge (dispatch)	19.11.2015	20.11.2015	1831.4	2000
9.	Pellet Storage bin	19.11.2015	20.11.2015	1436.2	2000
<b>IV. Sponge Iron Division -2 (Kiln 3 &amp; 4)</b>					
10.	Near Control room	20.11.2015	21.11.2015	1906.5	2000
11.	Near Coal crusher	20.11.2015	21.11.2015	1384.8	2000
12.	Near Product bin	20.11.2015	21.11.2015	1098.1	2000
<b>V. Wagon Tipper/RMHS</b>					
13.	Near Tipping point	21.11.2015	23.11.2015	439.1	500
14.	Monsoon Shed	21.11.2015	23.11.2015	454.4	500
15.	MCC room (2 <sup>nd</sup> Gate)	21.11.2015	23.11.2015	480.2	500
<b>VI. Power Plant-70 MW</b>					
16.	70MW-DM Plant (Near R.O. Plant)	23.11.2015	24.11.2015	283.9	500
17.	Coal Screen (near gate weigh bridge)	24.11.2015	25.11.2015	482.1	500
18.	CFBC boiler	23.11.2015	24.11.2015	480.7	500
<b>VII. 2X70MW Power Plant</b>					
19.	Near Boiler	24.11.2015	25.11.2015	485.7	500
20.	Near Coal storage Shed	24.11.2015	25.11.2015	462.5	500
<b>VIII . SMS Area</b>					
21	Stock House/Vibrofeeders	25.11.2015	26.11.2015	1217.9	3000
22	Ladle Tapping	25.11.2015	26.11.2015	1791.6	3000
23	Slag Pouring Area	25.11.2015	26.11.2015	483.1	3000
<b>IX BAR MILL</b>					
24	Near Reheating Furnace	23.11.2015	24.11.2015	655.9	3000

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

**Analyzed By**  
Environmental Engineer  
G.Aarathi

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

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**STACK MONITORING RESULTS**

*Annexure - 2/A*

1. Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Bellary district.  
 2. Sample collected by : GLOBAL Environment & Mining Services  
 3. Particulars of sample collected : Vayubodhan Stack sampler VSS 1 **Month: NOVEMBER - 2015 (1<sup>st</sup> Fort Night)**

Si. No	Stack Attached to	Date of Monitoring	Fuel Used	Ta °C	TS °C	V m/Sec	HEIGHT (m)	Diameter (m)	Results			Standards PM (mg/ Nm <sup>3</sup> )	
									PM	SO <sub>2</sub> mg/Nm <sup>3</sup>	NO <sub>2</sub> mg/ Nm <sup>3</sup>		
1	Pellet Plant-2 ESP	04.11.2015	Coal	Shutdown									50
2	2X500TPD Sponge iron kiln1&2 ESP	06.11.2015	Coal	30	144	5.98	70	3.00	74.5	66.8	4.26	100	
3	2X500TPD Sponge iron kiln3&4 ESP	07.11.2015	Coal	31	149	5.96	70	3.00	78.2	52.06	7.12	100	
4	1 X 70MW-CFBC Boiler ESP	08.11.2015	Coal	30	152	5.86	70	3.00	56.7	64.18	8.28	100	
5	2X70MW -CFBC Boiler ESP	09.11.2015	Coal	31	162	6.16	110	8.00	44.9	58.24	12.26	50	
6	SMS	10.11.2015	Coal	30	110	13.45	86	2.40	39.5	-	-	150	
7	Barmill	12.11.2015	--	30	262	8.24	87	3.00	63.4	-	-	150	
<b>Chimneys attached to Bag Filter (De dusting Units)</b>													
<b>Beneficiation Plant-2</b>													
1	Iron Ore Cone Crusher	NOT IN OPERATION										50	
2	Iron Ore Screening	NOT IN OPERATION										50	
<b>Pellet Plant-2</b>													
3	Additive grinding mill	SHUTDOWN										50	
4	Mixer building	SHUTDOWN										50	
5	Pellet discharge point	SHUTDOWN										50	
<b>2 X 500 TPD Sponge Iron Kiln 1 &amp; 2</b>													
6	Cooler Discharge -1	05.11.2015	---	---	---	---	30	1.20	44.1	----	----	50	
7	Cooler Discharge -2	05.11.2015	---	---	---	---	30	1.20	46.7	----	----	50	
8	Coal stock house	05.11.2015	---	---	---	---	30	1.20	19.4	----	----	50	
9	Production Separation bin-1	06.11.2015	---	---	---	---	30	1.20	42.2	----	----	50	
10	Production Separation bin-2	06.11.2015	---	---	---	---	30	1.20	49.6	----	----	50	
11	Transfer House	06.11.2015	---	---	---	---	30	1.20	39.7	----	----	50	

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS : 11255 (Part 1) - 1985 (reaffirmed 2009)
SO <sub>2</sub> (mg/Nm <sup>3</sup> )	IS 11255 (Part 2) : 1985 (reaffirmed 2014)
NO <sub>2</sub> (mg/Nm <sup>3</sup> )	IS 11255 (Part 7) : 2005 (reaffirmed 2005)

**Note :**  
 SO<sub>2</sub> - Sulphur dioxide  
 NO<sub>2</sub> - Nitrogen dioxide  
 PM - Particulate matter

**Analyzed By**  
 Environmental Engineer.  
 G.Aarathi

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

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**STACK MONITORING RESULTS**

**Annexure - 2/A**

1. Name of the Industry : BMM Ispat Ltd., Danapur , Hospet Taluk, Bellary district.
2. Sample collected by : GLOBAL Environment & Mining Services
3. Particulars of sample collected : Vayubodhan Stack sampler VSS 1
4. Month : November – 2015 (**1<sup>st</sup> Fort Night**)

Sl. No	Stack Attached to	Date of Monitoring	Fuel Used	Ta °C	TS °C	V m/Sec	HEIGHT (m)	Diameter (m)	Results			Standards PM (mg/ Nm <sup>3</sup> )
									PM	SO <sub>2</sub> mg/Nm <sup>3</sup>	NO <sub>2</sub> mg/ Nm <sup>3</sup>	
<b>Chimneys attached to Bag Filter (De dusting Units)</b>												
<b>2X500 TPD Sponge Iron Kiln 3&amp;4</b>												
12	Coal Primary Screen		---	---			30	1.20	Not in Operation			50
13	Coal Stock House -1 & coal stock house-2		---	---			30	1.20	Not in Operation			50
14	Cooler Discharge -1	07.11.2015	---	---			30	1.20	43.8	----	----	50
15	Cooler Discharge -2 & PSB transfer tower	07.11.2015	---	---			30	1.20	46.4	----	----	50
16	Production Bunker & Intermediate bin		---	---			30	1.20	Not in Operation			50
17	Production Separation bin	07.11.2015	---	---			30	1.20	40.5	----	---	50
18	Pellet Stock house		---	---			30	1.20	Not in Operation			50
19	Dolochar Stock House 1 & 2		---	---			30	1.20	Not in Operation			50
20	CPU Building		---	---			30	1.20	Not in Operation			50

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS : 11255 (Part 1) - 1985 (reaffirmed 2009)
SO <sub>2</sub> (mg/Nm <sup>3</sup> )	IS 11255 (Part 2) : 1985 (reaffirmed 2014)
NO <sub>2</sub> (mg/Nm <sup>3</sup> )	IS 11255 (Part 7) : 2005 (reaffirmed 2005)

**Note :**  
 SO<sub>2</sub> - Sulphur dioxide  
 NO<sub>2</sub> - Nitrogen dioxide  
 PM - Particulate matter

**Analyzed By**  
 Environmental Engineer.  
 G.Aarathi

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

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**STACK MONITORING RESULTS**

Annexure - 2/B

1. Name of the Industry : BMM Ispat Ltd., Danapur, Hospet Taluk, Bellary district.
2. Sample collected by : GLOBAL Environment & Mining Services
3. Particulars of sample collected : Vayubodhan Stack sampler VSS 1 **Month : November - 2015 (2nd Fort Night)**

Si. No	Stack Attached to	Date of Monitoring	Fuel Used	Ta °C	TS °C	V m/Sec	HEIGHT (m)	Diameter (m)	Results			Standards PM (mg/ Nm <sup>3</sup> )
									PM mg/Nm <sup>3</sup>	SO <sub>2</sub> mg/Nm <sup>3</sup>	NO <sub>2</sub> mg/Nm <sup>3</sup>	
1	Pellet Plant-2 ESP	17.11.2015	Coal	29	153	5.96	100	7.00	48.7	52.34	2.24	50
2	2X500TPD Sponge iron kiln1&2 ESP	18.11.2015	Coal	29	150	6.09	70	3.00	75.8	62.86	4.88	100
3	2X500TPD Sponge iron kiln3&4 ESP	19.11.2015	Coal	29	155	5.92	70	3.00	80.6	54.22	6.74	100
4	1 X 70MW-CFBC Boiler ESP	20.11.2015	Coal	30	158	6.07	70	3.00	52.1	62.43	7.08	100
5	2X70MW -CFBC Boiler ESP	21.11.2015	Coal	29	164	6.34	110	8.00	48.4	54.33	11.74	50
6	SMS	23.11.2015	Coal	30	110	13.52	86	2.40	29.3	-	-	150
7	Barmill	24.11.2015	-	30	268	8.37	87	3.00	57.9	-	-	150
<b>Chimneys attached to Bag Filter (De dusting Units)</b>												
<b>Beneficiation Plant-2</b>												
1	Iron Ore Cone Crusher	Not in Operation										50
2	Iron Ore Screening											50
<b>Pellet Plant-2</b>												
3	Additive grinding mill	Not in Operation										50
4	Mixer building											50
5	Pellet discharge point											50
<b>2 X 500 TPD Sponge Iron Kiln 1 &amp; 2</b>												
6	Cooler Discharge -1	18.11.2015	---	---	---	---	30	1.20	46.7	----	----	50
7	Cooler Discharge -2	18.11.2015	---	---	---	---	30	1.20	38.2	----	----	50
8	Coal stock house	18.11.2015	---	---	---	---	30	1.20	19.4	----	----	50
9	Production Separation bin-1	19.11.2015	---	---	---	---	30	1.20	41.5	----	----	50
10	Production Separation bin-2	19.11.2015	---	---	---	---	30	1.20	36.7	----	----	50
11	Transfer House	19.11.2015	---	---	---	---	30	1.20	44.2	----	----	50

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS : 11255 (Part 1) - 1985 (reaffirmed 2009)
SO <sub>2</sub> (mg/Nm <sup>3</sup> )	IS 11255 (Part 2) : 1985 (reaffirmed 2014)
NO <sub>2</sub> (mg/Nm <sup>3</sup> )	IS 11255 (Part 7) : 2005 (reaffirmed 2005)

**Note :**  
 SO<sub>2</sub> - Sulphur dioxide  
 NO<sub>2</sub> - Nitrogen dioxide  
 PM - Particulate matter

**Analyzed By**  
 Environmental Engineer  
 G.Aarathi

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

**Note:**

1. The results listed refer only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Samples will be destroyed after one month from the date of issue of test certificate unless otherwise specified.
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**STACK MONITORING RESULTS**

*Annexure - 2/B*

1. Name of the Industry : BMM Ispat Ltd., Danapur , Hospet Taluk, Bellary district.
2. Sample collected by : GLOBAL Environment & Mining Services
3. Particulars of sample collected : Vayubodhan Stack sampler VSS 1
4. Month : November - 2015 (2<sup>nd</sup> Fort Night)

Sl. No	Stack Attached to	Date of Monitoring	Fuel Used	Ta °C	TS °C	V m/Sec	HEIGHT (m)	Diameter (m)	Results			Standards PM (mg/ Nm3)
									PM mg/Nm <sup>3</sup>	SO <sub>2</sub> mg/Nm <sup>3</sup>	NO <sub>2</sub> mg/Nm <sup>3</sup>	
<b>Chimneys attached to Bag Filter (De dusting Units)</b>												
<b>2X500 TPD Sponge Iron Kiln 3&amp;4</b>												
12	Coal Primary Screen		---	---			30	1.20	Not in Operation			50
13	Coal Stock House -1 & coal stock house-2		---	---			30	1.20	Not in Operation			50
14	Cooler Discharge -1	20.11.2015	---	---			30	1.20	49.1	----	----	50
15	Cooler Discharge -2 & PSB transfer tower	20.11.2015	---	---			30	1.20	39.6	----	----	50
16	Production Bunker & Intermediate bin		---	---			30	1.20	Not in Operation			50
17	Production Separation bin	20.11.2015	---	---			30	1.20	35.3	----	---	50
18	Pellet Stock house		---	---			30	1.20	Not in Operation			50
19	Dolochar Stock House 1 & 2		---	---			30	1.20	Not in Operation			50
20	CPU Building		---	---			30	1.20	Not in Operation			50

Parameter	Protocol
Particulate Matter (mg/Nm <sup>3</sup> )	IS : 11255 (Part 1) - 1985 (reaffirmed 2009)
SO <sub>2</sub> (mg/Nm <sup>3</sup> )	IS 11255 (Part 2) : 1985 (reaffirmed 2014)
NO <sub>2</sub> (mg/Nm <sup>3</sup> )	IS 11255 (Part 7) : 2005 (reaffirmed 2005)

**Note:**

- SO<sub>2</sub> - Sulphur dioxide
- NO<sub>2</sub> - Nitrogen dioxide
- PM - Particulate matter

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