

Date: 07/06/2019

To  
Government of India  
Ministry of Environment Forest & Climate Change  
Eastern Regional Office  
A/3, Chandrasekharpur,  
Bhubaneswar – 751 023

Kind Attn.: Mr. P. Suresh Babu, Dy. Director (S)

**Sub.: Submission of Six monthly Compliance Report on EC Ref. No.  
F. No. J-11011/201/2013-IA.II(I) dt.21.12.2016**

Sir,

As per requirement for submission of the six monthly EC compliance report, we are sending herewith the following for your kind consideration.

1. One six monthly compliance report for the period of **April 2018 to September 2018** on the status of implementation of the stipulated conditions and environmental safe guard is submitted herewith.

We hope that you will do the needful in this regard.

Thanking you

Yours truly,  
For Shakambhari Ispat & Power Ltd.

Authorized Signatory



CC to:

- i. The Senior Environmental Engineer, EIM CELL, WBPCB, Paribesh Bhawan, Block –LA, 10A, Sec.-III, Salt Lake City, Kolkata -700098

**COMPLIANCE STATUS ON ENVIRONMENTAL  
CLEARANCE**

**For the Proposed Expansion Project of Integrated Steel**

**Plant with captive power plant**

**Vide letter No. : F. No. J-11011/201/2013-IA.II(I)**

**dt.21.12.2016**

**PROJECT LOCATION:**

Village-Madandih, P.O. – Bartoria, P.S-Neturia, Dist. –  
Purulia, Pin-723121, West Bengal

## Six Monthly Compliance Report | April 18 – Sep18

As per requirement this unit is giving below the compliance report as per conditions of Environmental Clearance for the period of **April 2018 to Sep 2018**.

| Sl. No.                   | Condition   | Compliance   |
|---------------------------|---|--|
| <b>SPECIFIC CONDITION</b> |   |  |
| i.                        | The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office   | The proponent has taken adequate measure to monitor air quality so proper monitoring is done and the reports are sent to the Ministry.   |
| ii.                       | No dumping is permitted in the abandoned coal 2B and 2C in nearby Parbelia Village. The iron ore trailing and excess ash should be stored within the plant premises for the period of 2 years for which land is available. The status of storage of above material shall be periodically reviewed by the regional office for land adequate and environmental management. For future storage of iron ore tailing and excess ash, beyond the period of 2 years, the proponent will submit the land acquisition details to the Ministry. | No dumping is done in in the abandoned coal 2B and 2C nearby Parbelia village. The status of storage material is checked properly.   |
| iii.                      | In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant etc. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening,  | Proper & efficient APC and dust suppression system is installed in the plant to optimize the pollution within the plant. Water sprinkler is provided in the plant to reduce dust within the plant. |

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|-------|---|---|
|       | loading, unloading, handling and storage of raw materials etc.  |   |
| iv.   | The ETP for Mini Blast Furnace effluent should be designed to meet Cyanide standard as notified by the MoEFCC.  | The ETP is designed to meet Cyanide standard as mentioned by MoEF & CC.   |
| v.    | No effluent shall be discharged outside the plant premises and ‘zero’ discharge shall be adopted.   | The proponent has taken “Zero Effluent Discharge” policy and no effluent is discharged outside the plant.                                     |
| vi.   | Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm <sup>3</sup> and installing energy efficient technology.   | The proponent has taken sufficient measures to control pollution generated from stack. Stack monitoring is done to check the pollution level. |
| vii.  | Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely. The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack.  | The proponent is maintaining the condition properly.  |
| viii. | Efforts shall further be made to use maximum water from the rain water harvesting sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. ETP sludge should be disposed off scientifically. | Rain water harvesting plan will be implemented to optimize the use of water in the plant.   |
| ix.   | All the coal fines, char from DRI plant shall be utilized   | All the waste fine particles are  |

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|       |   |   |
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|       | and no char shall be used for briquette making or disposed off anywhere else. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.   | properly disposed without effecting the environment.  |
| x.    | All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the Unit. | This is noted and will be followed.   |
| xi.   | The Standards issued by the Ministry vide G.S.R. No. 277(E) dated 31st March, 2012 regarding integrated iron and steel plant shall be followed.   | It will be followed.  |
| xii.  | The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed   | NAAQ standard is followed.  |
| xiii. | Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.    | All the secondary sources of fugitive emission are monitored properly to control the air pollution.                                 |
| xiv.  | Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent.                      | Water analysis has been done to measure the pollutant level in the water. The pollutant's concentration is within prescribed limit. |
| xv.   | Proper handling, storage, utilization and disposal of all   | Emphasis is given on proper   |

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|        |   |  |
|--------|---|--|
|        | the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.  | handling, storage & utilization of all the solid wastes generated within the plant.  |
| xvi.   | A time bound action plan shall be submitted to reduce solid waste generated due to the project related activity, its proper utilization and disposal.   | An efficient plan making is in process to reduce solid waste generated in the plant. |
| xvii.  | Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office. | Fly ash generated in the plant is distributed to the cement manufacturers.           |
| xviii. | A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.   | Risk & Disaster management plan will be developed and submitted to the ministry.     |
| xix.   | Green belt shall be developed in at least 33% of the project area by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines.  | The total green belt area developed in the plant is 33% of total area of the plant.  |
| xx.    | All the commitments made to the public during Public Hearing/public consultation meeting shall be satisfactorily implemented and adequate budget provision shall be made accordingly.   | It is under implementation stage.  |
| xxi.   | At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-  | Due amount is reserved towards the duty of Enterprise Social Commitment.             |

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|        | <p>wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.</p>   |   |
| xxii.  | <p>The proponent shall prepare a detailed CSR Plan for every year for the next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.</p> | <p>CSR is performed for the development of local area and people. 2% of the total revenues are used to perform the corporate social responsibility.</p> |
| xxiii. | <p>The Company shall submit within three months their</p>  | <p>This condition is noted &amp; will be</p>  |

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|                                   |   |   |
|-----------------------------------|---|---|
|                                   | <p>policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of noncompliance/ violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.</p> | <p>maintained.</p>  |
| xxiv.                             | <p>The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.</p>   | <p>Agreed &amp; will be followed.</p>   |
| xxv.                              | <p>The project proponent shall provide for LED lights in their offices and residential areas.</p>   | <p>The project proponent has taken adequate course of action to comply with this condition.</p> |
| xxvi.                             | <p>Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.</p>  | <p>There is provision for all the basic facilities required for the workers.</p>                |
| <p><b>GENERAL CONDITIONS:</b></p> |   |   |
| i.                                | <p>The project authorities must strictly adhere to the stipulations made by the West Bengal State Pollution</p>   | <p>The proponent strictly adheres to the stipulation made by the West</p>                       |



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|      |   |  |
|------|---|--|
|      | Control Board and the State Government  | Bengal State Pollution Control Board.  |
| ii.  | No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).   | Any further modification or expansion will not be done without the approval of MoEF&CC.  |
| iii. | At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum round level concentration of PM10, PM2.5, SO2 and NOx are anticipated in consultation with the PCB data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the SPCB/CPCB once in six months. | Ambient air quality monitoring is done to determine the concentration level of PM10, PM2.5, SO2, NOx. Monitoring is done on timely basis and the reports are annexed. The pollution level is under measured level. |
| iv.  | Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May, 1993 and 31st December 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.  | Industrial wastewater is collected & treated properly and no waste water is discharged.  |
| v.   | The overall noise levels in and around the plant area shall be kept well within the standards (85 dB(A)) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75dB(A) during day time and 70 dB(A) during night time.                      | Noise level is kept under the mentioned level. The noise level also conforms to the prescribed standard mentioned in the compliance condition.   |
| vi.  | Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per  | Occupational health surveillance is done on a timely basis.  |

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|       | the Factories Act.  |  |
| vii.  | The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.  | It will be complied.   |
| viii. | The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.  | All the recommendation made in the EIA report will be maintained thoroughly. |
| ix.   | Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEF&CC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Bhubaneswar. The funds so provided shall not be diverted for any other purpose. | It will be complied.   |
| x.    | A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.  | This condition is complied.  |
| xi.   | The project proponent shall upload the status of  | The proponent follows this   |

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|       |   |  |
|-------|---|--|
|       | <p>compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF&amp;CC at Bhubaneswar. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10,SO2,NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.</p> | <p>condition strictly.</p>   |
| xii.  | <p>The project proponent shall also submit six monthly report status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&amp;CC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Bhubaneswar/ CPCB/SPCB shall monitor the stipulated conditions.</p>   | <p>Six monthly compliance report is submitted to MoEF&amp;CC regarding the status of compliance.</p> |
| xiii. | <p>The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MoEF&amp;CC at Bhubaneswar by e-mail.</p>  | <p>It is noted and will be followed.</p>   |

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|------|---|--|
| xiv. | The project proponent shall inform the public that the project has been accorded environment clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry of Environment, Forest and Climate Change (MoEF&CC) at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local news paper that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and copy of the same should be forwarded to the Regional Office at Bhubaneswar | The project proponent complies this condition. |
| xv.  | Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.  | It is noted and will be followed.              |

## DETAILS OF ENVIRONMENTAL MONITORING

### 1. AMBIENT AIR QUALITY MONITORING

#### Ambient Air Quality Monitoring Stations

Ambient air quality monitoring has been carried out on 1<sup>st</sup> September in four location to assess the ambient air quality of Project Site. This will enable to have an analytical understanding about air quality and the changes in the air environment in the study area with respect to the condition prevailing. The location of the ambient air quality monitoring station is given in **Table 1.1**.

**Table 1.1 Details of Ambient Air Quality Monitoring Stations**

| Sl. No. | Location Code | Location Name/ Description       | Environmental Setting |
|---------|---------------|----------------------------------|-----------------------|
| 1.      | AAQ-1         | Near Main Gate                   | Steel & Power Unit    |
| 2.      | AAQ-2         | Madandih Village                 | Steel & Power Unit    |
| 3       | AAQ-3         | Roof of Power Plant Control Room | Steel & Power Unit    |
| 4       | AAQ-4         | Roof of Laboratory               | Steel & Power Unit    |

#### Ambient Air Quality Monitoring Methodology

Monitoring was conducted in respect of the following parameters:

- Particulate Matter 2.5 (PM<sub>2.5</sub>)
- Particulate Matter 10 (PM<sub>10</sub>)
- Sulphur Dioxide (SO<sub>2</sub>)
- Oxides of Nitrogen (NO<sub>x</sub>)

The air samples were analyzed as per standard methods specified by Central Pollution Control Board (CPCB) and IS: 5182. The techniques used for ambient air quality monitoring and minimum detectable levels are given in **Table 1.2**.

Fine Particulate Sampler APM 550 instruments have been used for monitoring Particulate Matter 2.5 (PM<sub>2.5</sub> i.e. <2.5 microns), and Respirable Dust Sampler APM 450 was used for sampling Respirable fraction (<10 microns), gaseous pollutants like SO<sub>2</sub>, and NO<sub>x</sub>.

**Table 1.2 Techniques used for Ambient Air Quality Monitoring**

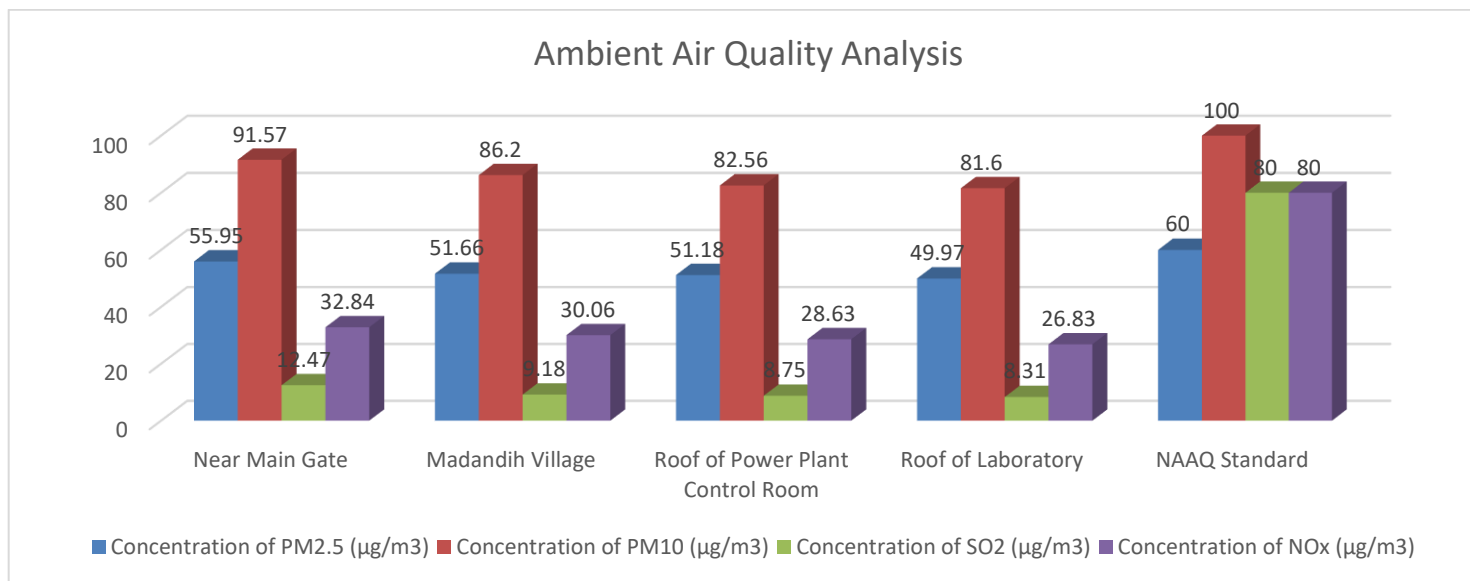
| S. No. | Parameter                                   | Technique   | Technical Protocol |
|--------|---|---|--------------------|
| 1      | Particulate Matter 2.5 (PM <sub>2.5</sub> ) | USEPA 1997a, 40 CFR Part 50, Appendix L   | IS-5182 (Part-IV)  |
| 2      | Particulate Matter 10 (PM <sub>10</sub> )   | IS 5182 (PART 23) : 2006  | IS-5182 (Part-23)  |
| 3      | Sulphur dioxide                             | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007 : Sec 11 (Vol. 11.07) : 2011 | IS-5182 (Part- II) |
| 4      | Nitrogen dioxide                            | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec 11 (Vol. 11.07) : 2011 | IS-5182 (Part-VI)  |

### Ambient Air Quality Monitoring Results

The detailed on-site monitoring results of PM 2.5, PM 10, SO<sub>2</sub> and NO<sub>x</sub> are presented in Table 1.3.

**Table 1.3 Ambient Air Quality Monitoring Results**

|                   | 01.09.2018<br>-02.09.2018                               | Near Main Gate | Madandih Village | Roof of Power Plant<br>Control Room | Roof of Laboratory | NAAQ Standard |
|-------------------|---|----------------|------------------|-------------------------------------|--------------------|---------------|
| April 18 – Sep 18 | Concentration of PM <sub>2.5</sub> (µg/m <sup>3</sup> ) | 55.95          | 51.66            | 51.18                               | 49.97              | 60            |
|                   | Concentration of PM <sub>10</sub> (µg/m <sup>3</sup> )  | 91.57          | 86.20            | 82.56                               | 81.60              | 100           |
|                   | Concentration of SO <sub>2</sub> (µg/m <sup>3</sup> )   | 12.47          | 9.18             | 8.75                                | 8.31               | 80            |
|                   | Concentration of NO <sub>x</sub> (µg/m <sup>3</sup> )   | 32.84          | 30.06            | 28.63                               | 26.83              | 80            |



### Discussion on Ambient Air Quality in the Study Area

The level of PM<sub>10</sub> and PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> near Main Gate is under the permissible limit (for residential, rural and other areas as stipulated in the National Ambient Air Quality Standards).

## 2. STACK GAS MONITORING

Stack gas is generated from many combustion sources, including incinerators, kilns and thermal oxidizers. A thermal oxidizer is a process for the treatment of air exhaust and is commonly used during the incineration of waste. When the stack is mixed with air, the exhausting gas is cool enough to be measured by a thermal mass flow meter, thereby getting the benefit of the fast response and wide turn down of the device. Measuring the flow rate of stack gas is required in order to calculate the overall mass of gas over time. This is a requirement for many environmental regulations.

The stacks are attached to Rotary Kiln and AFBC. The sample was taken on 29<sup>th</sup> August, 2018.

The details of the stack attached to Rotary Kiln No 1 & 2 are given in tabular form in Table 2.1:

| PARAMETERS  | METHOD NO.  | RESULTS  |
|---|---|----------|
| Flue Gas Temperature (0C)   | IS : 11255 (Part 1)   | 123.7    |
| Barometric Pressure (mm of Hg.)   | --  | 754.0    |
| Velocity of Gas flow (m/s)  | IS : 11255 (Part 3)   | 8.33     |
| Quantity of Gas flow (Nm <sup>3</sup> /hr.)   | IS : 11255 (Part III)   | 67917.62 |
| Concentration of SO <sub>2</sub> (mg/Nm <sup>3</sup> )                                  | IS 11255 (Part 2) 1985 RA 2003  | 719.15   |
| Concentration of CO <sub>2</sub> % (v/v)  | IS 13270 1992 RA 2003   | 9.2      |
| Concentration of CO % (v/v)   | IS 13270 1992 RA 2003   | <1.0     |
| a) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 9.2% CO <sub>2</sub> ) | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11(Vol. 3 11.07) : 2011 | 32.66    |
| b) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 12% CO <sub>2</sub> )  |   | 42.60    |

Results of the stack attached to Rotary Kiln (No 3)

| PARAMETERS  | METHOD NO.  | RESULTS  |
|---|---|----------|
| Flue Gas Temperature (0C)   | IS : 11255 (Part 1)   | 130.3    |
| Barometric Pressure (mm of Hg.)   | --  | 754.0    |
| Velocity of Gas flow (m/s)  | IS : 11255 (Part 3)   | 8.39     |
| Quantity of Gas flow (Nm <sup>3</sup> /hr.)   | IS : 11255 (Part III)   | 67488.91 |
| Concentration of SO <sub>2</sub> (mg/Nm <sup>3</sup> )                                  | IS 11255 (Part 2) 1985 RA 2003  | 757.94   |
| Concentration of CO <sub>2</sub> % (v/v)  | IS 13270 1992 RA 2003   | 8.8      |
| Concentration of CO % (v/v)   | IS 13270 1992 RA 2003   | <1.0     |
| a) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 9.0% CO <sub>2</sub> ) | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11(Vol. 3 11.07) : 2011 | 28.24    |
| b) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 12% CO <sub>2</sub> )  |   | 32.50    |

Results of the stack attached to AFBC Boiler-

| PARAMETERS   | METHOD NO.  | RESULTS   |
|--|---|-----------|
| Flue Gas Temperature (0C)  | IS : 11255 (Part 1)   | 121.2     |
| Barometric Pressure (mm of Hg.)  | --  | 754.0     |
| Velocity of Gas flow (m/s)   | IS : 11255 (Part 3)   | 6.65      |
| Quantity of Gas flow (Nm <sup>3</sup> /hr.)  | IS : 11255 (Part III)   | 123832.62 |
| Concentration of SO <sub>2</sub> (mg/Nm <sup>3</sup> )                                   | IS 11255 (Part 2) 1985 RA 2003  | 809.17    |
| Concentration of CO <sub>2</sub> % (v/v)   | IS 13270 1992 RA 2003   | 11.6      |
| Concentration of CO % (v/v)  | IS 13270 1992 RA 2003   | <1.0      |
| a) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 11.4% CO <sub>2</sub> ) | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11(Vol. 3 11.07) : 2011 | 42.29     |
| b) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 12% CO <sub>2</sub> )   |   | 43.74     |

### 3. WORK ZONE AIR QUALITY MONITORING

Fugitive emissions are emissions of gases or vapors from pressurized equipment due to leaks and other unintended or irregular releases of gases, mostly from industrial activities. As well as the economic cost of lost commodities, fugitive emissions contribute to air pollution and climate change.

The sampling was done on 1<sup>st</sup> September, 2018 for fugitive analysis. The results are given in tabular form

Results of Fugitive Air Analysis near raw material stock yard

| PARAMETERS   | METHOD NO.  | RESULTS |
|--|---|---------|
| Concentration of SPM ( $\mu\text{g}/\text{m}^3$ )              | NIOSH 0500 : 1994   | 491.48  |
| Concentration of *RPM ( $\mu\text{g}/\text{m}^3$ )             | IS 5182 (PART 23) : 2006  | 192.58  |
| Concentration of *SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ ) | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007 : Sec 11 (Vol. 11.07) : 2011 | 6.56    |
| Concentration of *NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ ) | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec 11 (Vol. 11.07) : 2011 | 24.80   |

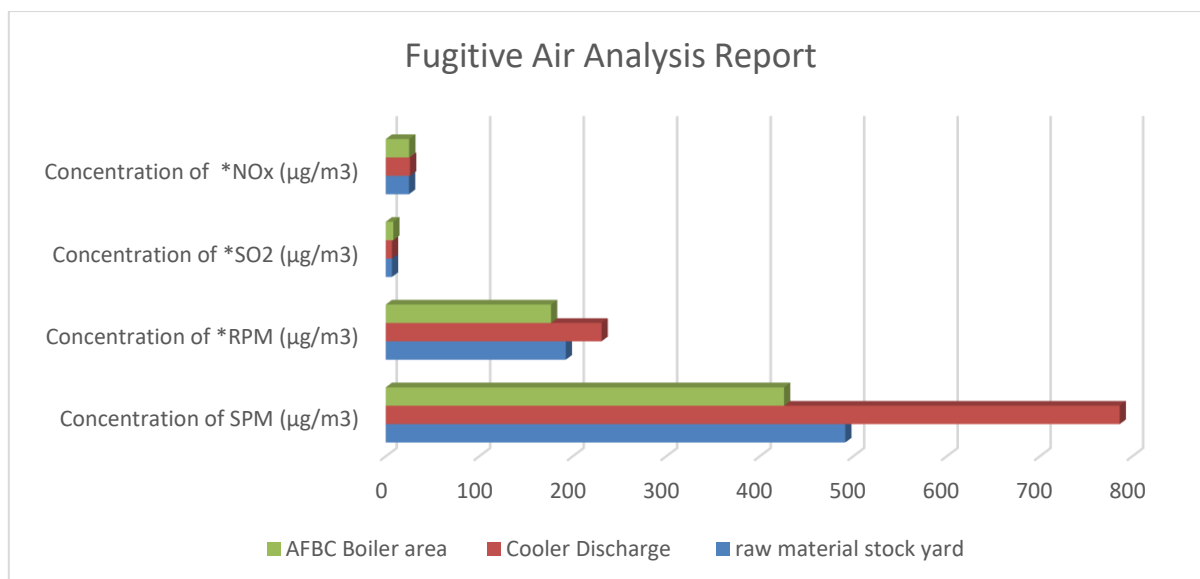
Results of Fugitive Air analysis near Cooler Discharge –

| PARAMETERS   | METHOD NO.  | RESULTS |
|--|---|---------|
| Concentration of SPM ( $\mu\text{g}/\text{m}^3$ )              | NIOSH 0500 : 1994   | 786.41  |
| Concentration of *RPM ( $\mu\text{g}/\text{m}^3$ )             | IS 5182 (PART 23) : 2006  | 230.80  |
| Concentration of *SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ ) | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007 : Sec 11 (Vol. 11.07) : 2011 | 6.56    |
| Concentration of *NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ ) | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec 11 (Vol. 11.07) : 2011 | 25.93   |

Results of Fugitive Air Analysis near AFBC Boiler area-

| PARAMETERS   | METHOD NO.  | RESULTS |
|--|---|---------|
| Concentration of SPM ( $\mu\text{g}/\text{m}^3$ )              | NIOSH 0500 : 1994   | 425.94  |
| Concentration of *RPM ( $\mu\text{g}/\text{m}^3$ )             | IS 5182 (PART 23) : 2006  | 176.73  |
| Concentration of *SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ ) | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved 2007 : Sec 11 (Vol. 11.07) : 2011 | 7.97    |
| Concentration of *NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ ) | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec 11 (Vol. 11.07) : 2011 | 25.03   |

The comparison are given in graphical form





#### 4. Effluent Water Quality Monitoring

Effluent Water sample was collected from waste water storage tank. The sample was analyzed for various parameters. The details of water sampling locations are given in **Table 4.1**.

**Table 4.1 Details of Effluent Water Quality Monitoring Station**

| S. No. | Location Code  | Location Name/ Description     |
|--------|----------------|--------------------------------|
| 1.     | Effluent Water | Domestic Effluent Water (Grab) |

#### Methodology of Effluent Water Quality Monitoring

Sampling of effluent water was carried out on 30<sup>th</sup> August, 2018. Samples were collected as grab sample and sampling forms are filled in as per the sampling plan. The preservative sample were properly added to preserve as per standard operating procedures (SOP) and stored immediately in ice boxes, which were ensured for appropriate temperatures. Sample for chemical analysis was collected in polyethylene carboys.

Proper care was taken during packing and transportation of samples. All the samples reached the laboratory within the holding times for different parameters. After ensuring the same the samples were forwarded immediately for analysis.

The samples were analyzed as per the standard procedures specified in 'Standard Methods for the Examination of Water and Wastewater' published by American Public Health Association (APHA) and CPCB.

#### Effluent Water Quality Monitoring Results

The detailed effluent water quality monitoring results are presented in **Table 4.2**.

| <u>PARAMETERS</u>                 | <u>TEST METHODS</u>                          | <u>RESULTS</u> | <u>LIMIT*</u> |
|-----------------------------------|--|----------------|---------------|
| 1. pH                             | APHA 23 <sup>rd</sup> Ed., 4500-H+B : 2017   | : 6.90         | 5.5-9.0       |
| 2. Total Suspended Solids (mg./l) | APHA 23 <sup>rd</sup> Ed., 2540 D : 2017     | : 26.0         | 100.0         |
| 3. Oil and Grease (mg./l)         | APHA 23 <sup>rd</sup> Ed., 5520 B/D : 2017   | : 4.5          | 10.0          |
| 4. COD (mg./l)                    | APHA 23 <sup>rd</sup> Ed., 5220 B/C/D : 2017 | : 29.04        | 250.0         |
| 5. BOD [3 days, 27°C] (mg./l)     | APHA 23 <sup>rd</sup> Ed., 5210-B : 2017     | : 4.0          | 30.0          |

# ANNEXURE 1



## STACK GAS ANALYSIS REPORT

|    |                       |   |   |
|----|-----------------------|---|---|
| 1. | Name of the Industry  | : | Shakambhari Ispat & Power Ltd.                                      |
| 2. | Address               | : | Vill. – Madandih, P.O. – Bartoria, P.S. – Nituria, Purulia – 723121 |
| 3. | Date of sampling      | : | 29.08.2018  |
| 4. | Report No.            | : | 54/EC/Aug./TR(A)/1/18-19  |
| 5. | Analysis completed on | : | 01.09.2018  |
| 6. | Reporting Date        | : | 06.09.2018  |

### A. GENERAL INFORMATION ABOUT STACK

|                       |   |     |  |
|-----------------------|---|-----|--|
| 1.                    | Stack attached to                         | :   | Rotary Kiln (No.1 & 2) (100 TPD – each)                |
| 2.                    | Shape of Stack                            | :   | Circular   |
| 3.                    | Material of Construction                  | :   | M.S.   |
| 4.                    | Height of Stack from G. L. (mtr.)         | :   | 35.0   |
| 5.                    | Stack I.D. at sampling point (mtr.)       | :   | 2.0  |
| 6.                    | Height of sampling port from G. L. (mtr.) | :   | 15.0   |
| 7.                    | Capacity                                  | :   | 6.42 MT/hr. (Kiln – 1), 6.29 MT/hr. (Kiln – 2)         |
| 8.                    | Emission due to                           | :   | Oxidation of Coal & Reduction of Fe-Ore                |
| (a) Type of Fuel Used |   | :   | Coal   |
| (b) Fuel Consumption  |   | :   | Rated – 5.63 MT/hr./Kiln<br>Working – 5.12 MT/hr./Kiln |
| 9(a)                  | Permanent ladder & platform               | Yes | (b) Pollution Control Device                           |
|                       |   |     | WHRB and E.S.P   |

### B. RESULTS OF SAMPLING

| SL. NO. | PARAMETERS  | METHOD NO.   | RESULTS    |
|---------|---|--|------------|
| 1.      | Flue Gas Temperature (°C)   | IS : 11255 (Part 1)  | : 123.7    |
| 2.      | Barometric Pressure (mm of Hg.)   | --   | : 754.0    |
| 3.      | Velocity of Gas flow (m/s)  | IS : 11255 (Part 3)  | : 8.33     |
| 4.      | Quantity of Gas flow (Nm <sup>3</sup> /hr.)   | IS : 11255 (Part III)  | : 67917.62 |
| 5.      | Concentration of SO <sub>2</sub> (mg/Nm <sup>3</sup> )                                  | IS 11255 (Part 2) 1985 RA 2003   | : 719.15   |
| 6.      | Concentration of CO <sub>2</sub> % (v/v)  | IS 13270 1992 RA 2003  | : 9.2      |
| 7.      | Concentration of CO % (v/v)   | IS 13270 1992 RA 2003  | : <1.0     |
| 8.      | a) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 9.2% CO <sub>2</sub> ) | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11 (Vol. 3 11.07) : 2011 | : 32.66    |
|         | b) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 12% CO <sub>2</sub> )  |  | : 42.60    |

Remarks : All the information under column A are supplied by the respective industry.  
: During monitoring both kilns were in operation.

Date : 06.09.2018

Authorised Signatory :

Dr. AJOY PAUL  
Quality Manager



## STACK GAS ANALYSIS REPORT

|    |                       |   |   |
|----|-----------------------|---|---|
| 1. | Name of the Industry  | : | Shakambhari Ispat & Power Ltd.                                      |
| 2. | Address               | : | Vill. – Madandih, P.O. – Bartoria, P.S. – Nituria, Purulia – 723121 |
| 3. | Date of sampling      | : | 29.08.2018  |
| 4. | Report No.            | : | 54/EC/Aug./TR(A)/II/18-19   |
| 5. | Analysis completed on | : | 01.09.2018  |
| 6. | Reporting Date        | : | 06.09.2018  |

### A. GENERAL INFORMATION ABOUT STACK

|                       |   |     |  |
|-----------------------|---|-----|--|
| 1.                    | Stack attached to                         | :   | Rotary Kiln (No.3) (100 TPD)                 |
| 2.                    | Shape of Stack                            | :   | Circular                                     |
| 3.                    | Material of Construction                  | :   | M.S.   |
| 4.                    | Height of Stack from G. L. (mtr.)         | :   | 32.0   |
| 5.                    | Stack I.D. at sampling point (mtr.)       | :   | 2.0  |
| 6.                    | Height of sampling port from G. L. (mtr.) | :   | 15.0   |
| 7.                    | Capacity                                  | :   | 6.38 MT/hr.                                  |
| 8.                    | Emission due to                           | :   | Oxidation of Coal & Reduction of Fe-Ore      |
| (a) Type of Fuel Used |   | :   | Coal   |
| (b) Fuel Consumption  |   | :   | Rated – 5.63 MT/hr.<br>Working – 5.12 MT/hr. |
| 9.(a)                 | Permanent ladder & platform               | Yes | (b) Pollution Control Device                 |
|                       |   |     | WHRB and E.S.P                               |

### B. RESULTS OF SAMPLING

| SL. NO. | PARAMETERS  | METHOD NO.   | RESULTS  |
|---------|---|--|----------|
| 1.      | Flue Gas Temperature (°C)   | IS : 11255 (Part 1)  | 130.3    |
| 2.      | Barometric Pressure (mm of Hg.)   | --   | 754.0    |
| 3.      | Velocity of Gas flow (m/s)  | IS : 11255 (Part 3)  | 8.39     |
| 4.      | Quantity of Gas flow (Nm <sup>3</sup> /hr.)   | IS : 11255 (Part III)  | 67488.91 |
| 5.      | Concentration of SO <sub>2</sub> (mg/Nm <sup>3</sup> )                                  | IS 11255 (Part 2) 1985 RA 2003   | 757.94   |
| 6.      | Concentration of CO <sub>2</sub> % (v/v)  | IS 13270 1992 RA 2003  | 8.8      |
| 7.      | Concentration of CO % (v/v)   | IS 13270 1992 RA 2003  | <1.0     |
| 8.      | a) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 8.8% CO <sub>2</sub> ) | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11 (Vol. 3 11.07) : 2011 | 28.24    |
|         | b) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 12% CO <sub>2</sub> )  |  | 32.50    |

Remarks : All the information under column A are supplied by the respective industry.

Date : 06.09.2018

Authorised Signatory :

Dr. AJOY PAUL  
Quality Manager



## STACK GAS ANALYSIS REPORT

|    |                       |   |   |
|----|-----------------------|---|---|
| 1. | Name of the Industry  | : | Shakambhari Ispat & Power Ltd.                                      |
| 2. | Address               | : | Vill. – Madandih, P.O. – Bartoria, P.S. – Nituria, Purulia – 723121 |
| 3. | Date of sampling      | : | 29.08.2018  |
| 4. | Report No.            | : | 54/EC/Aug./TR(A)/III/18-19  |
| 5. | Analysis completed on | : | 01.09.2018  |
| 6. | Reporting Date        | : | 06.09.2018  |

### A. GENERAL INFORMATION ABOUT STACK

|                       |   |   |                                      |
|-----------------------|---|---|--------------------------------------|
| 1.                    | Stack attached to                         | : | AFBC Boiler                          |
| 2.                    | Shape of Stack                            | : | Circular                             |
| 3.                    | Material of Construction                  | : | Concrete                             |
| 4.                    | Height of Stack from G. L. (mtr.)         | : | 50.0                                 |
| 5.                    | Stack I.D. at sampling point (mtr.)       | : | 3.0                                  |
| 6.                    | Height of sampling port from G. L. (mtr.) | : | 20.0                                 |
| 7.                    | Capacity                                  | : | 12 MW (Running – 8.0 MW)             |
| 8.                    | Emission due to                           | : | Oxidation of Coal & Dolochar         |
| (a) Type of Fuel Used |   | : | Coal & Dolochar                      |
| (b) Fuel Consumption  |   | : | Coal – 150 TPD<br>Dolochar – 132 TPD |
| 9.(a)                 | Permanent ladder & platform               | : | Yes                                  |
| (b)                   | Pollution Control Device                  | : | E.S.P                                |

### B. RESULTS OF SAMPLING

| SL. NO. | PARAMETERS   | METHOD NO.   | RESULTS     |
|---------|--|--|-------------|
| 1.      | Flue Gas Temperature (°C)  | IS : 11255 (Part 1)  | : 121.2     |
| 2.      | Barometric Pressure (mm of Hg.)  | --   | : 754.0     |
| 3.      | Velocity of Gas flow (m/s)   | IS : 11255 (Part 3)  | : 6.65      |
| 4.      | Quantity of Gas flow (Nm <sup>3</sup> /hr.)  | IS : 11255 (Part III)  | : 123832.62 |
| 5.      | Concentration of SO <sub>2</sub> (mg/Nm <sup>3</sup> )                                   | IS 11255 (Part 2) 1985 RA 2003   | : 809.17    |
| 6.      | Concentration of CO <sub>2</sub> % (v/v)   | IS 13270 1992 RA 2003  | : 11.6      |
| 7.      | Concentration of CO % (v/v)  | IS 13270 1992 RA 2003  | : <1.0      |
| 8.      | a) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 11.6% CO <sub>2</sub> ) | IS 11255 (Part – 1) 1985 RA 2003 & ASTM D 3685/D 3685M-98 (reapproved 2005) : Sec 11 (Vol. 3 11.07) : 2011 | : 42.29     |
|         | b) Concentration of Particulate Matter (mg/Nm <sup>3</sup> ) (at 12% CO <sub>2</sub> )   |  | : 43.74     |

Remarks : All the information under column A are supplied by the respective industry.

Date : 06.09.2018

Authorised Signatory :

Dr. AJOY PAUL  
Quality Manager



## AMBIENT AIR ANALYSIS REPORT

|    |                       |   |
|----|-----------------------|---|
| 1. | Name of the Industry  | : Shakambhari Ispat & Power Ltd.                                      |
| 2. | Address               | : Vill. - Madandih, P.O. - Bartoria, P.S. - Nituria, Purulia - 723121 |
| 3. | Date of sampling      | : 29.08.2018 - 30.08.2018   |
| 4. | Report No.            | : 54/EC/Aug./TR(A)/IV/18-19   |
| 5. | Analysis completed on | : 01.09.2018  |
| 6. | Reporting Date        | : 06.09.2018  |
| 7. | Particular of Plant   | : Steel & Power Unit  |

### A] GENERAL INFORMATION

|    |                      |                                     |
|----|----------------------|-------------------------------------|
| 1. | Location of Sampling | : Near Main Gate (Southern Side)    |
| 2. | Duration of Sampling | : 24 hrs. (08:00 a.m. - 08:00 a.m.) |

### B] METEOROLOGICAL INFORMATION

|    |                                     |                       |
|----|-------------------------------------|-----------------------|
| 1. | Average Temperature ( $^{\circ}$ C) | : 28.0                |
| 2. | Average Relative Humidity (%)       | : 70.0                |
| 3. | Barometric Pressure (mm of Hg)      | : 754.0               |
| 4. | Smell or Odour                      | : No Remarkable Smell |
| 5. | Weather Condition                   | : Partly Cloudy       |

### C] RESULTS

| SL. NO. | PARAMETERS  | METHOD NO.  | RESULTS |
|---------|---|---|---------|
| 1.      | Concentration of PM <sub>2.5</sub> ( $\mu$ g/m <sup>3</sup> )       | USEPA 1997a, 40 CFR Part 50, Appendix L   | : 55.95 |
| 2.      | Concentration of PM <sub>10</sub> ( $\mu$ g/m <sup>3</sup> )        | IS 5182 (PART 23) : 2006  | : 91.57 |
| 3.      | Concentration of SO <sub>2</sub> ( $\mu$ g/m <sup>3</sup> )         | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved : 2007 : Sec 11 (Vol. 11.07) : 2011                 | : 12.47 |
| 4.      | Concentration of NO <sub>x</sub> ( $\mu$ g/m <sup>3</sup> )         | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved 2005 : Sec 11 (Vol. 11.07) : 2011                   | : 32.84 |
| 5.      | Concentration of CO (mg/m <sup>3</sup> )                            | IS 5182 (Part 10): 1999 reaffirmed 2005 & ASTM D 3162-94 reapproved 2005 : Sec 11 (Vol. 11.07) : 2011 | : 0.48  |
| 6.      | Concentration of Pb ( $\mu$ g/m <sup>3</sup> )                      | IS 5182 (Part 22) 2004  | : <0.01 |
| 7.      | Benzo (a) Pyrene (BaP) (ng/m <sup>3</sup> )                         | IS 5182 (Part 12) : 2004 & ASTM D 6209-98 reapproved 2004 : Sec 11 (Vol. 11.07) : 2011                | : <0.36 |
| 8.      | Benzene (C <sub>6</sub> H <sub>6</sub> ) ( $\mu$ g/m <sup>3</sup> ) | IS 5182 (Part 11) 2006 & ASTM D 5466-01 reapproved 2007 : Sec 11 (Vol. 11.07) : 2011                  | : <0.74 |
| 9.      | Ozone (O <sub>3</sub> ) ( $\mu$ g/m <sup>3</sup> )                  | IS 5182 (Part-IX) : 1974  | : <10.0 |
| 10.     | Ammonia (NH <sub>3</sub> ) ( $\mu$ g/m <sup>3</sup> )               | NIOSH Manual of Analytical Method, 4 <sup>th</sup> Edition 1994, Method 6015, issue 2                 | : <4.18 |
| 11.     | Nickel (Ni) (ng/m <sup>3</sup> )                                    | EPA IO 3.2, 1999  | : <0.02 |
| 12.     | Arsenic (As) (ng/m <sup>3</sup> )                                   | EPA IO 3.2, 1999, APHA 23 <sup>rd</sup> Ed 3114C : 2017   | : <0.01 |

Date : 06.09.2018

Authorised Signatory :

Dr. AJOY PAUL  
Quality Manager



## AMBIENT AIR ANALYSIS REPORT

|    |                       |   |   |
|----|-----------------------|---|---|
| 1. | Name of the Industry  | : | Shakambhari Ispat & Power Ltd.                                      |
| 2. | Address               | : | Vill. - Madandih, P.O. - Bartoria, P.S. - Nituria, Purulia - 723121 |
| 3. | Date of sampling      | : | 29.08.2018 - 30.08.2018   |
| 4. | Report No.            | : | 54/EC/Aug./TR(A)/V/18-19  |
| 5. | Analysis completed on | : | 01.09.2018  |
| 6. | Reporting Date        | : | 06.09.2018  |
| 7. | Particular of Plant   | : | Steel & Power Unit  |

### A] GENERAL INFORMATION

|    |                      |   |  |
|----|----------------------|---|--|
| 1. | Location of Sampling | : | Madandih Village (0.5 K.M. from Plant) (East Side) |
| 2. | Duration of Sampling | : | 24 hrs. (08:30 a.m. - 08:30 a.m.)                  |

### B] METEOROLOGICAL INFORMATION

|    |                                |   |                     |
|----|--------------------------------|---|---------------------|
| 1. | Average Temperature (°C)       | : | 28.0                |
| 2. | Average Relative Humidity (%)  | : | 70.0                |
| 3. | Barometric Pressure (mm of Hg) | : | 754.0               |
| 4. | Smell or Odour                 | : | No Remarkable Smell |
| 5. | Weather Condition              | : | Partly Cloudy       |

### C] RESULTS

| SL. NO. | PARAMETERS  | METHOD NO.   | RESULTS |
|---------|---|--|---------|
| 1.      | Concentration of PM <sub>2.5</sub> (µg/m <sup>3</sup> ) | USEPA 1997a, 40 CFR Part 50, Appendix L  | 51.66   |
| 2.      | Concentration of PM <sub>10</sub> (µg/m <sup>3</sup> )  | IS 5182 (PART 23) : 2006   | 86.20   |
| 3.      | Concentration of SO <sub>2</sub> (µg/m <sup>3</sup> )   | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved<br>2007 : Sec 11 (Vol. 11.07) : 2011 | 9.18    |
| 4.      | Concentration of NO <sub>x</sub> (µg/m <sup>3</sup> )   | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved<br>2005 : Sec 11 (Vol. 11.07) : 2011 | 30.06   |

Date : 06.09.2018

Authorised Signatory :

Dr. AJOY PAUL  
Quality Manager



## AMBIENT AIR ANALYSIS REPORT

|    |                       |   |   |
|----|-----------------------|---|---|
| 1. | Name of the Industry  | : | Shakambhari Ispat & Power Ltd.                                      |
| 2. | Address               | : | Vill. - Madandih, P.O. - Bartoria, P.S. - Nituria, Purulia - 723121 |
| 3. | Date of sampling      | : | 29.08.2018 - 30.08.2018   |
| 4. | Report No.            | : | 54/EC/Aug./TR(A)/VI/18-19   |
| 5. | Analysis completed on | : | 01.09.2018  |
| 6. | Reporting Date        | : | 06.09.2018  |
| 7. | Particular of Plant   | : | Steel & Power Unit  |

### A] GENERAL INFORMATION

|    |                      |   |   |
|----|----------------------|---|---|
| 1. | Location of Sampling | : | On the Roof of Power Plant Control Room (West Side) |
| 2. | Duration of Sampling | : | 24 hrs. (09:00 a.m. - 09:00 a.m.)                   |

### B] METEOROLOGICAL INFORMATION

|    |                                |   |                     |
|----|--------------------------------|---|---------------------|
| 1. | Average Temperature (°C)       | : | 28.0                |
| 2. | Average Relative Humidity (%)  | : | 70.0                |
| 3. | Barometric Pressure (mm of Hg) | : | 754.0               |
| 4. | Smell or Odour                 | : | No Remarkable Smell |
| 5. | Weather Condition              | : | Partly Cloudy       |

### C] RESULTS

| SL. NO. | PARAMETERS  | METHOD NO.   | RESULTS |
|---------|---|--|---------|
| 1.      | Concentration of PM <sub>2.5</sub> (µg/m <sup>3</sup> ) | USEPA 1997a, 40 CFR Part 50, Appendix L  | 51.18   |
| 2.      | Concentration of PM <sub>10</sub> (µg/m <sup>3</sup> )  | IS 5182 (PART 23) : 2006   | 82.56   |
| 3.      | Concentration of SO <sub>2</sub> (µg/m <sup>3</sup> )   | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved<br>2007 : Sec 11 (Vol. 11.07) : 2011 | 8.75    |
| 4.      | Concentration of NO <sub>x</sub> (µg/m <sup>3</sup> )   | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved<br>2005 : Sec 11 (Vol. 11.07) : 2011 | 28.63   |

Date : 06.09.2018

Authorised Signatory :

Dr. AJOY PAUL  
Quality Manager





## AMBIENT AIR ANALYSIS REPORT

|    |                       |   |   |
|----|-----------------------|---|---|
| 1. | Name of the Industry  | : | Shakambhari Ispat & Power Ltd.                                      |
| 2. | Address               | : | Vill. - Madandih, P.O. - Bartoria, P.S. - Nituria, Purulia - 723121 |
| 3. | Date of sampling      | : | 29.08.2018 - 30.08.2018   |
| 4. | Report No.            | : | 54/EC/Aug./TR(A)/VII/18-19  |
| 5. | Analysis completed on | : | 01.09.2018  |
| 6. | Reporting Date        | : | 06.09.2018  |
| 7. | Particular of Plant   | : | Steel & Power Unit  |

### A] GENERAL INFORMATION

|    |                      |   |   |
|----|----------------------|---|---|
| 1. | Location of Sampling | : | On the Roof of Laboratory Building (SMS Section) (North Side) |
| 2. | Duration of Sampling | : | 24 hrs. (09:30 a.m. - 09:30 a.m.)                             |

### B] METEOROLOGICAL INFORMATION

|    |                                |   |                     |
|----|--------------------------------|---|---------------------|
| 1. | Average Temperature (°C)       | : | 28.0                |
| 2. | Average Relative Humidity (%)  | : | 70.0                |
| 3. | Barometric Pressure (mm of Hg) | : | 754.0               |
| 4. | Smell or Odour                 | : | No Remarkable Smell |
| 5. | Weather Condition              | : | Partly Cloudy       |

### C] RESULTS

| SL. NO. | PARAMETERS  | METHOD NO.   | RESULTS |
|---------|---|--|---------|
| 1.      | Concentration of PM <sub>2.5</sub> (µg/m <sup>3</sup> ) | USEPA 1997a, 40 CFR Part 50, Appendix L  | 49.97   |
| 2.      | Concentration of PM <sub>10</sub> (µg/m <sup>3</sup> )  | IS 5182 (PART 23) : 2006   | 81.60   |
| 3.      | Concentration of SO <sub>2</sub> (µg/m <sup>3</sup> )   | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved<br>2007 : Sec 11 (Vol. 11.07) : 2011 | 8.31    |
| 4.      | Concentration of NO <sub>x</sub> (µg/m <sup>3</sup> )   | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved<br>2005 : Sec 11 (Vol. 11.07) : 2011 | 26.83   |

Date : 06.09.2018

Authorised Signatory :

Dr. AJOY PAUL  
Quality Manager



## WORK ZONE (FUGITIVE) AIR ANALYSIS REPORT

|    |                       |   |
|----|-----------------------|---|
| 1. | Name of the Industry  | : Shakambhari Ispat & Power Ltd.                                      |
| 2. | Address               | : Vill. - Madandih, P.O. - Bartoria, P.S. - Nituria, Purulia - 723121 |
| 3. | Date of sampling      | : 29.08.2018  |
| 4. | Report No.            | : 54/EC/Aug./TR(A)/VIII/18-19   |
| 5. | Analysis completed on | : 01.09.2018  |
| 6. | Reporting Date        | : 06.09.2018  |
| 7. | Particular of Plant   | : Steel & Power Unit  |

### A] GENERAL INFORMATION

|    |                      |                                     |
|----|----------------------|-------------------------------------|
| 1. | Location of Sampling | : Raw Material Yard (Coal Yard)     |
| 2. | Duration of Sampling | : 08 hrs. (09:00 a.m. - 05:00 p.m.) |

### B] METEOROLOGICAL INFORMATION

|    |                                     |                       |
|----|-------------------------------------|-----------------------|
| 1. | Average Temperature ( $^{\circ}$ C) | : 34.0                |
| 2. | Average Relative Humidity (%)       | : 68.0                |
| 3. | Barometric Pressure (mm of Hg)      | : 754.0               |
| 4. | Smell or Odour                      | : No Remarkable Smell |

### C] RESULTS

| SL. NO. | PARAMETERS   | METHOD NO.   | RESULTS  |
|---------|--|--|----------|
| 1.      | Concentration of SPM ( $\mu$ g/ $m^3$ )              | NIOSH 0500 : 1994  | : 491.48 |
| 2.      | Concentration of *RPM ( $\mu$ g/ $m^3$ )             | IS 5182 (PART 23) : 2006   | : 192.58 |
| 3.      | Concentration of *SO <sub>2</sub> ( $\mu$ g/ $m^3$ ) | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved<br>2007 : Sec 11 (Vol. 11.07) : 2011 | : 6.56   |
| 4.      | Concentration of *NO <sub>x</sub> ( $\mu$ g/ $m^3$ ) | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved<br>2005 : Sec 11 (Vol. 11.07) : 2011 | : 24.80  |

Note : The ( \* ) marked parameters are not in NABL Scope.

Date : 06.09.2018

Authorised Signatory :

Dr. AJOY PAUL  
Quality Manager



## WORK ZONE (FUGITIVE) AIR ANALYSIS REPORT

|    |                       |   |   |
|----|-----------------------|---|---|
| 1. | Name of the Industry  | : | Shakambhari Ispat & Power Ltd.                                      |
| 2. | Address               | : | Vill. - Madandih, P.O. - Bartoria, P.S. - Nituria, Purulia - 723121 |
| 3. | Date of sampling      | : | 29.08.2018  |
| 4. | Report No.            | : | 54/EC/Aug./TR(A)/IX/18-19   |
| 5. | Analysis completed on | : | 01.09.2018  |
| 6. | Reporting Date        | : | 06.09.2018  |
| 7. | Particular of Plant   | : | Steel & Power Unit  |

### A] GENERAL INFORMATION

|    |                      |   |                                     |
|----|----------------------|---|-------------------------------------|
| 1. | Location of Sampling | : | Near Cooler Discharge (DRI Section) |
| 2. | Duration of Sampling | : | 08 hrs. (09:30 a.m. - 05:30 p.m.)   |

### B] METEOROLOGICAL INFORMATION

|    |                                     |   |                     |
|----|-------------------------------------|---|---------------------|
| 1. | Average Temperature ( $^{\circ}$ C) | : | 32.0                |
| 2. | Average Relative Humidity (%)       | : | 68.0                |
| 3. | Barometric Pressure (mm of Hg)      | : | 754.0               |
| 4. | Smell or Odour                      | : | No Remarkable Smell |

### C] RESULTS

| SL. NO. | PARAMETERS   | METHOD NO.   | RESULTS |
|---------|--|--|---------|
| 1.      | Concentration of SPM ( $\mu$ g/ $m^3$ )              | NIOSH 0500 : 1994  | 786.41  |
| 2.      | Concentration of *RPM ( $\mu$ g/ $m^3$ )             | IS 5182 (PART 23) : 2006   | 230.80  |
| 3.      | Concentration of *SO <sub>2</sub> ( $\mu$ g/ $m^3$ ) | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved<br>2007 : Sec 11 (Vol. 11.07) : 2011 | 6.56    |
| 4.      | Concentration of *NO <sub>x</sub> ( $\mu$ g/ $m^3$ ) | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved<br>2005 : Sec 11 (Vol. 11.07) : 2011 | 25.93   |

Note : The ( \* ) marked parameters are not in NABL Scope.

Date : 06.09.2018

Authorised Signatory :

Dr. AJOY PAUL  
Quality Manager



# ENVIROCHECK

Laboratory Recognised by MOEF&CC, MBPCB & OSPCB, Accredited by NABL and ISO 14001:2015 & OHSAS 18001:2007 Certified



## WORK ZONE (FUGITIVE) AIR ANALYSIS REPORT

|    |                       |   |
|----|-----------------------|---|
| 1. | Name of the Industry  | : Shakambhari Ispat & Power Ltd.                                      |
| 2. | Address               | : Vill. - Madandih, P.O. - Bartoria, P.S. - Nituria, Purulia - 723121 |
| 3. | Date of sampling      | : 29.08.2018  |
| 4. | Report No.            | : 54/EC/Aug./TR(A)/X/18-19  |
| 5. | Analysis completed on | : 01.09.2018  |
| 6. | Reporting Date        | : 06.09.2018  |
| 7. | Particular of Plant   | : Steel & Power Unit  |

### A] GENERAL INFORMATION

|    |                      |                                     |
|----|----------------------|-------------------------------------|
| 1. | Location of Sampling | : Near AFBC Boiler (CPP Section)    |
| 2. | Duration of Sampling | : 08 hrs. (10:00 a.m. - 06:00 p.m.) |

### B] METEOROLOGICAL INFORMATION

|    |                                     |                       |
|----|-------------------------------------|-----------------------|
| 1. | Average Temperature ( $^{\circ}$ C) | : 36.0                |
| 2. | Average Relative Humidity (%)       | : 69.0                |
| 3. | Barometric Pressure (mm of Hg)      | : 754.0               |
| 4. | Smell or Odour                      | : No Remarkable Smell |

### C] RESULTS

| SL. NO. | PARAMETERS   | METHOD NO.   | RESULTS  |
|---------|--|--|----------|
| 1.      | Concentration of SPM ( $\mu$ g/m <sup>3</sup> )              | NIOSH 0500 : 1994  | : 425.94 |
| 2.      | Concentration of *RPM ( $\mu$ g/m <sup>3</sup> )             | IS 5182 (PART 23) : 2006   | : 176.73 |
| 3.      | Concentration of *SO <sub>2</sub> ( $\mu$ g/m <sup>3</sup> ) | IS 5182 (Part 2) 2001 & ASTM D 2914-01 reapproved<br>2007 : Sec 11 (Vol. 11.07) : 2011 | : 7.97   |
| 4.      | Concentration of *NO <sub>x</sub> ( $\mu$ g/m <sup>3</sup> ) | IS 5182 (Part 6) 2006 & ASTM D 1607-91 reapproved<br>2005 : Sec 11 (Vol. 11.07) : 2011 | : 25.03  |

Note : The ( \* ) marked parameters are not in NABL Scope.

Date : 06.09.2018

Authorised Signatory :

Dr. AJOY PAUL  
Quality Manager

# ANNEXURE 2



## EFFLUENT WATER ANALYSIS REPORT

1. Name of the Industry : Shakambhari Ispat & Power Ltd.
2. Address : Vill. – Madandih, P.O. – Bartoria, P.S. – Nituria,  
Purulia – 723121
3. Report No. : Env/35/E/Aug./18-19
4. Date of sampling : 30.08.2018
5. Date of analysis : 31.08.2018 – 05.09.2018
6. Reporting date : 06.09.2018
7. Type of sample : Industrial Effluent Water (Grab)
8. Location of sample : Cooling Water Settling Tank
9. Collection & Preservation of sample : APHA 23<sup>rd</sup> Ed., 1060 : 2017
10. Sample collected in presence of : Mr. Krishna Ankure

| PARAMETERS                        | TEST METHODS                                 | RESULTS |
|-----------------------------------|--|---------|
| 1. pH                             | APHA 23 <sup>rd</sup> Ed., 4500-H+B : 2017   | : 6.90  |
| 2. Total Suspended Solids (mg./l) | APHA 23 <sup>rd</sup> Ed., 2540 D : 2017     | : 26.0  |
| 3. Oil and Grease (mg./l)         | APHA 23 <sup>rd</sup> Ed., 5520 B/D : 2017   | : 4.5   |
| 4. COD (mg./l)                    | APHA 23 <sup>rd</sup> Ed., 5220 B/C/D : 2017 | : 29.04 |
| 5. BOD [3 days, 27°C] (mg./l)     | APHA 23 <sup>rd</sup> Ed., 5210-B : 2017     | : 4.0   |

Authorised Signatory :

Dr. AJOY PAUL  
Quality Manager

# ANNEXURE 3

# WEST BENGAL POLLUTION CONTROL BOARD

'Paribesh Bhawan'  
Bldg. No. - 10A, Block - LA, Sector-III  
Salt Lake City, Kolkata-700 098



Consent Letter Number : **CO110135**

apply for renewal of  
consent 60 (Sixty) days  
before expiry

Memo Number : **1767 -WPBA/Red(Prl)/Cont(81)/2002**

Date : **09-08-18**

## Consent to Operate

under

Section 25 & 26 of the **Water (Prevention and Control of Pollution) Act, 1974** and  
Section 21 of the **Air (Prevention and Control of Pollution) Act, 1981**

The West Bengal Pollution Control Board (hereinafter referred to as State Board) under the provisions of Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974, as amended and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981, as amended and Rules and Orders made thereunder, hereby grants its consent to :

**M/S. Shakambhari Ispat & Power Ltd.**

.....(Address of Regd. office/Head/Office/City Office)

(hereinafter referred to as Applicant) for its unit located at **Vill- Madandih, P.O. Barteria,**

**P.S. Neturia, Dist- Purulia, Pin-723121**

.....(Detailed address of the manufacturing unit)

for a period from ..... **upto 31-07-2023** .....

to operate the industrial unit and to discharge liquid effluent and to emit gaseous effluent from the premises/land of the industrial unit, in accordance with the conditions as mentioned in the Annexure to this consent letter provided on any day at any instance the quantity and quality of liquid discharge and gaseous emission shall not exceed the permissible limit as specified in the Table I & II of this consent letter and in the Environmental (Protection) Act, 1986.

Breach of the conditions and / or failure to comply with the directions as set out in the Annexure shall render the applicant liable for prosecution under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981.

The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alter the conditions of this consent letter giving one month's notice to the applicant.



For and on behalf of the State Board

(Member Secretary/Chief Engr./ Sr. Env. Engr. / Env. Engr. / Asst. Env. Engr.)

*[Handwritten signature]*  
09/08/18



## ANNEXURE

Consent to M/S. Shakambhari Ispat & Power Ltd.  
 for its unit at Vill- Madandih, P.O. Barteria, P.S. Neturia, Dist-Purulia  
Pin-723121

**Conditions :**

01. This Consent is valid for the manufacture of :-

| Sl. No. | Name of major products and by-products | Quantity manufactured per month |
|---------|--|---------------------------------|
| 01      | <b>Billets</b>                         | <b>16600 MT</b>                 |
| 02      | <b>Electricity</b>                     | <b>29 MW</b>                    |
| 03      | <b>Sponge Iron</b>                     | <b>9000 MT</b>                  |
| 04      |  |                                 |
| 05      |  |                                 |
| 06      |  |                                 |
| 07      |  |                                 |
| 08      |  |                                 |
| 09      |  |                                 |
| 10      |  |                                 |
| 11      |  |                                 |
| 12      |  |                                 |

02. The *Applicant* shall remain responsible for quantity and quality of liquid effluent and air emissions.
03. **Daily** discharge of industrial liquid effluent shall not exceed NIL ..... KL.
04. **Daily** discharge of domestic liquid effluent shall not exceed 5.0 ..... KL.
05. **Daily** discharge of mixed (industrial & domestic) liquid effluent shall not exceed NIL ..... KL.
06. The *Applicant* shall discharge liquid effluent to Soak Pit .....(place of discharge) through One (01) .....nos. outlets / outfalls.
07. To bring into any altered or new outlet/outfall or to change the place of discharge, the Applicant shall have to inform the Board and obtain prior permission of the Board in this effect.
08. The *Applicant* shall provide comprehensive facility for treatment of industrial liquid waste and domestic liquid waste (sewage, sullage and liquid effluent generated from canteen), and operate and maintain the same continuously so that the quality of final effluent conforms to the *Standard* as given in Table-I in page 03.

(Member Secretary/Chief Engr./ Sr. Env. Engr. / Env. Engr. / Asst. Env. Engr.)

Continued.....



(4)

Consent to M/s. Shakambhari Ispat & Power Ltd.  
for its unit at Vill- Madandih, P.O..Bartoria, P.S..Neturia, Dist- Purulia  
Pim-723121

11. The *Applicant* shall install suitable device for measuring the volume of water consumed for different purposes as mentioned above giving correct result to the satisfaction of the *State Board*.
12. All the stacks connected to various sources of emissions must be designated by numbers such as S-1, S-2, S-3, etc., and this must be painted/displayed to facilitate identification.
13. The *Applicant* shall install comprehensive control system consisting of pollution control equipment as is warranted with reference to generation of air emissions and operate and maintain the same continuously so as to achieve the level of pollutants of the *Standard* as given in Table-II below :

Table-II

| Stack No. | Stack height from G.L. (in mts.) | Stack attached to (sources and control system. if any): | Volume Nm <sup>3</sup> /hr. | Velocity of gas emission m/sec | Concentrations of parameters not to exceed |           |  |  | Frequency of emission sampling |
|-----------|----------------------------------|---|-----------------------------|--------------------------------|--|-----------|--|--|--------------------------------|
|           |                                  |   |                             |                                | SPM (mg/Nm <sup>3</sup> )                  | CO (%v/v) |  |  |                                |
| S-1       |                                  |   |                             |                                |  |           |  |  |                                |
| S-2       |                                  |   | SEE Annexure 'A' attached   |                                |  |           |  |  |                                |
| S-3       |                                  |   |                             |                                |  |           |  |  |                                |
| S-4       |                                  |   |                             |                                |  |           |  |  |                                |
| S-5       |                                  |   |                             |                                |  |           |  |  |                                |
| S-6       |                                  |   |                             |                                |  |           |  |  |                                |
| S-7       |                                  |   |                             |                                |  |           |  |  |                                |
| S-8       |                                  |   |                             |                                |  |           |  |  |                                |
| S-9       |                                  |   |                             |                                |  |           |  |  |                                |
| S-10      |                                  |   |                             |                                |  |           |  |  |                                |

(Member Secretary/Chief Engr./ Sr. Env. Engr. / Env. Engr. / Asst. Env. Engr.)

Continued.....

Consent to M/S. Shakambhari Ispat & Power Ltd.  
 for its unit at Vill- Madandih, P.O. Barteria, P.S. Neturia, Dist-Purulia  
Pin-723121

24. The *Applicant* shall maintain a separate register showing consumption of chemicals used in pollution control systems.
25. The *Applicant* shall get the samples of hazardous wastes/leachates analysed at least once in ..... from the laboratory recognised of the West Bengal Pollution Control Board and ensure that they conform to the limits stipulated. Test reports shall be sent to the Board.
26. The *Applicant* shall provide adequate and safe facility for collection of air, waste water and solid waste samples by the *State Board's* staff as well as *State Board's* authorised agencies.
27. The *Applicant* shall submit to the *State Board* by the 30th September of every year the Environmental Statement Report for the financial year ending 31st March of the current year in the prescribed form (Form -V) as required under the provisions of rule 14 of the Environment (Protection) [Second Amendment] rules, 1992.
28. The *Applicant* shall allow the Officers of the *State Board* to enter into the applicant's premises at any reasonable time to inspect the pollution control systems as well as monitoring and measuring devices in connection with prevention & control of pollution.
29. The *Applicant* shall maintain an Inspection Book in the factory premises which shall be made available to Officers & employees of the *State Board* for inspection, review and to write down any direction or observation as is deemed necessary during the inspection from time to time.
30. The *Application* shall furnish to the *State Board* all information in respect of quality, quantity, rate of discharge, place of discharge of liquid effluent and air emissions.
31. The *Applicant* shall maintain adequate number of qualified and trained personnel among his staff for proper maintenance and operation of the effluent treatment and / or emission control devices and for overall environment management of the industry.
32. The *Applicant* shall have to make registration for the use of groundwater if any, with Central Ground Water Authority.
33. The *Applicant* shall intimate to the *State Board* immediately of any occurrence or apprehension of occurrence of discharge of any poisonous, noxious or pollutants in excess of quality as well as quality as mentioned earlier to any receiving water body/receiving system or to atmosphere owing to accident or other unforeseen incident/event including natural disaster. The *Applicant* Shall (i) take all steps adequate to prevent such accident discharge/release of poisonous, noxious or pollutants and to limit their consequences to persons and the environment, (ii) provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety and mitigate the accidental release of poisonous noxious or pollutants to the environment.
34. The *Applicant* shall make an application to the *State Board* in the prescribed form for renewal of the consent at least 60 (sixty) days before the date of expiry of this Consent.
35. The *Applicant* shall not make any alternation/modification/expansion in the existing manufacturing process and equipment as well as the pollution control system without prior approval of the Board.
36. The *Applicant* shall comply with the conditions as laid down in the Manufacture, Storage and Import of hazardous Chemicals Rules, 1989 and Hazardous Wastes (Management & Handling) Rules, 1989.

Additional Conditions **Please See Annexure 'B' attached.**

(5)

Consent to **M/s. Shakambhari Ispat & Power Ltd.**

for its unit at **Vill- Madandih, P.O. Barteria, P.S. Neturia, Dist- Purulia**

**Pin-723121**

14. The *Applicant* shall provide ports in the stack(s) and other necessary permanent facilities such as ladder, platform, etc. for monitoring/sampling the air emissions and the same shall be made available for inspection and use by the *State Board's* staff as well as *State Board's* authorised agencies.

15. The *Applicant* shall observe the following fuel consumption pattern :-

| Sl. No | Type of fuel    | Quantity consumed per day | Fuel burning operation where the fuel is used |
|--------|-----------------|---------------------------|---|
| 01     | Coal            | 390 MT                    | Rotary Kilns (03 nos.)                        |
| 02     | Coal & Delechar | 180 MT                    | AFBC Boiler                                   |
| 03     | M S D           | -                         | D.G.Sets (03 nos.)                            |
| 04     |                 |                           |   |
| 05     |                 |                           |   |

16. The *Applicant* shall maintain the generation and treatment/disposal of non-hazardous solid waste as specified below :-

| Type of waste | Quantity | Treatment | Disposal     |
|---------------|----------|-----------|--------------|
| Delechar      | 1440 MT  | -         | used in CPP  |
| Mix Dust      | 600 MT   | -         | Land Filling |

17. The *Applicant* shall take adequate measures for control of noise levels from its own sources within the premises within the limit given below :-

| Time                            | 10 | Limit in dB(A) $L_{eq}$ |
|---------------------------------|----|-------------------------|
| Day Time (06 a.m. to 09 p.m.)   |    | 65                      |
| Night Time (09 p.m. to 06 a.m.) |    | 55                      |

18. The *Applicant* shall at all times maintain good house-keeping, proper working order, and operate efficiently for control of pollution from all sources so as not to cause nuisance to surrounding areas/inhabitants and to achieve compliance with the terms and conditions of the consent.

19. The *Applicant* shall bring about at least 33% of the available open land under the green coverage / plantation.

20. The *Applicant* shall provide for an alternate electric power source sufficient to operate all pollution control facilities installed by the *Applicant* to maintain compliance with the terms and conditions of the consent. In absence of such an alternate electric power source, the *Applicant* shall stop, reduce or otherwise control production to abide by the terms and conditions of the Consent regarding pollution level.

21. The *Applicant* shall install a separate energy meter showing the consumption of energy for operation of pollution control devices.

22. The *Applicant* shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.

23. The *Applicant* shall provide drainage system for conveying industrial and domestic liquid waste. Storm-water drain shall be kept separate from the drainage system meant for industrial and domestic liquid waste

(Member Secretary/Chief Engr./ Sr. Env. Engr. / Env. Engr. / Asst. Env. Engr.)

Continued.....

ANNEXURE – 'A'

Consent Letter Sl. No.: collo135.....

WEST BENGAL POLLUTION CONTROL BOARD  
Paribesh Bhawan; Bldg. No.-10A, Block – L.A., Sector – III  
Salt Lake City, Kolkata – 700 106

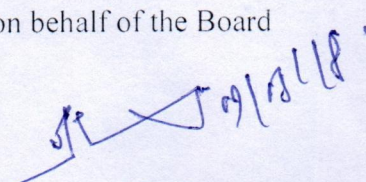
Name of the Unit: **M/s Shakambhari Ispat & Power Ltd.**

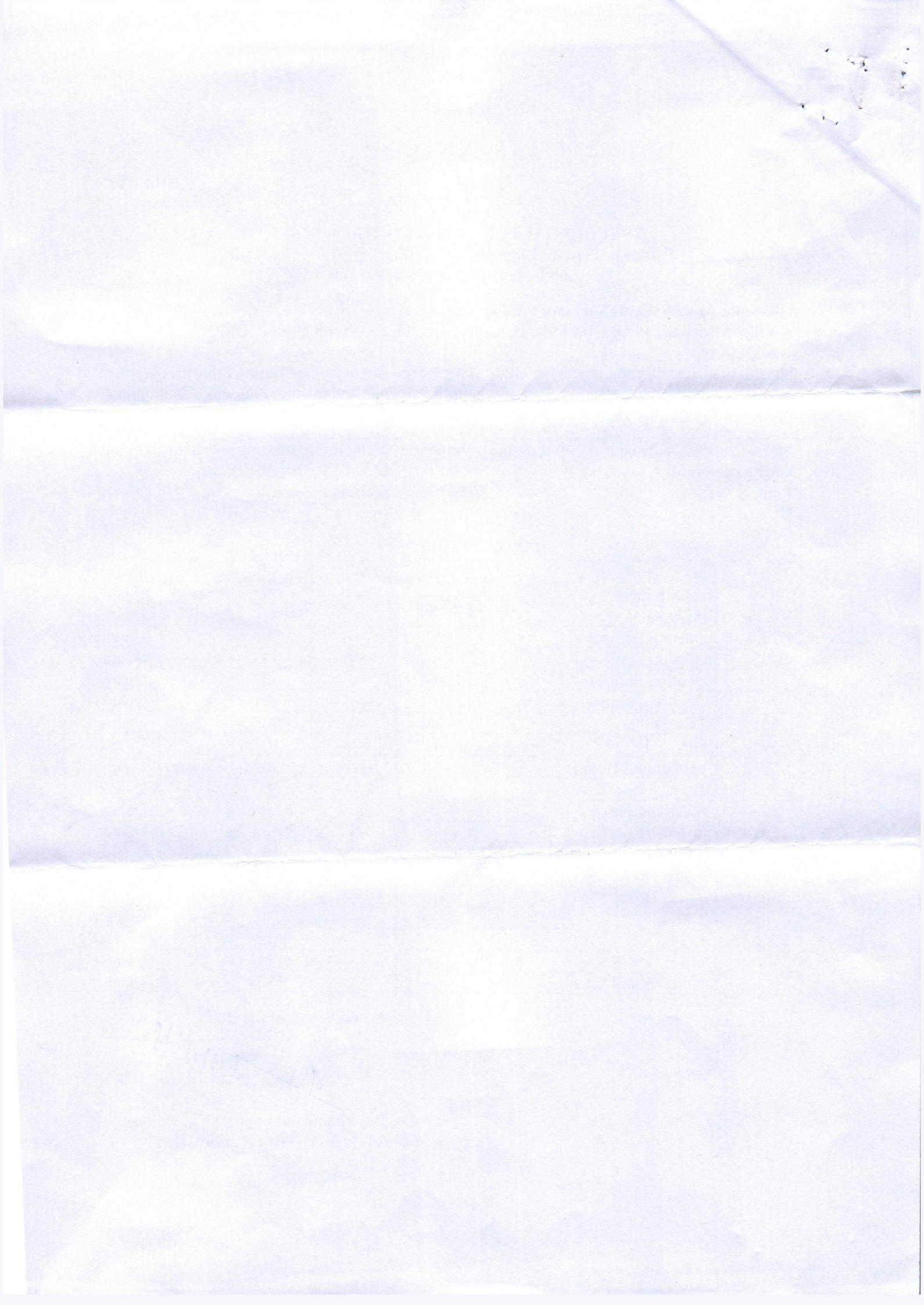
Located at Vill – Madandih, P. O. – Bartoria, P. S. – Neturia, Dist. – Purulia, Pin – 723121

The Applicant shall install comprehensive control system consisting of pollution control equipment as is warranted with reference to generation of air emissions and operate and maintain the same continuously so as to achieve the level of pollutants to the Standard as given in Table – II below:

| Sl. No. | Stack height from GL (Meters) | Stack attached to (sources and control system, if any) | Volume (Nm <sup>3</sup> /hr) | Velocity of gas emission (m / sec) | Concentrations of parameters not to exceed |             | Frequency of emission sampling |
|---------|-------------------------------|--|------------------------------|------------------------------------|--|-------------|--------------------------------|
|         |                               |  |                              |                                    | SPM (mg/ Nm <sup>3</sup> )                 | CO (% v/ v) |                                |
| 1.      | 35.0                          | Rotary Kilns – 1                                       | -----                        | -----                              | 100  | 1           | Quarterly                      |
| 2.      | 35.0                          | Rotary Kilns – 2                                       | -----                        | -----                              | 100  | 1           | Quarterly                      |
| 3.      | 42.0                          | Rotary Kilns – 3                                       | -----                        | -----                              | 100  | 1           | Quarterly                      |
| 4.      | 30.0                          | Induction Furnace – 1                                  | -----                        | -----                              | 50   | ---         | Quarterly                      |
| 5.      | 30.0                          | Induction Furnace – 2                                  | -----                        | -----                              | 50   | -----       | Quarterly                      |
| 6.      | 30.0                          | Induction Furnace – 3                                  | -----                        | -----                              | 50   | ---         | Quarterly                      |
| 7.      | 30.0                          | Induction Furnace – 4                                  | -----                        | -----                              | 50   | -----       | Quarterly                      |
| 8.      | 60.0                          | AFBC Boiler  | -----                        | -----                              | 50   | 1           | Quarterly                      |
| 9.      | 30.0                          | CHP  | -----                        | -----                              | 50   | -----       | Quarterly                      |
| 10.     | 30.0                          | Coal Ground Hopper                                     | -----                        | -----                              | 50   | -----       | Quarterly                      |
| 11.     | 00.0                          | DD Fan   | -----                        | -----                              | 50   | -----       | Quarterly                      |
| 12.     | 30.0                          | Cooler Discharge – 1                                   | -----                        | -----                              | 50   | -----       | Quarterly                      |
| 13.     | 30.0                          | Cooler Discharge – 2                                   | -----                        | -----                              | 50   | -----       | Quarterly                      |
| 14.     | 30.0                          | Cooler Discharge – 3                                   | -----                        | -----                              | 50   | -----       | Quarterly                      |
| 15.     | 30.0                          | Product House – 1                                      | -----                        | -----                              | 50   | -----       | Quarterly                      |
| 16.     | 30.0                          | Product House – 2                                      | -----                        | -----                              | 50   | -----       | Quarterly                      |
| 17.     | 30.0                          | I. Bin   | -----                        | -----                              | 50   | -----       | Quarterly                      |
| 18.     | 8.0                           | DG Set (500 KVA)                                       | -----                        | -----                              | 150  | 1           | Quarterly                      |
| 19.     | 8.0                           | DG Set (750 KVA)                                       | -----                        | -----                              | 150  | 1           | Quarterly                      |
| 20.     | 8.0                           | DG Set (500 KVA)                                       | -----                        | -----                              | 150  | 1           | Quarterly                      |

For and on behalf of the Board

  
Environmental Engineer  
Asansol Regional Office, WBPCB



**ANNEXURE – 'B'**

Consent Letter Sl. No.: ...0110135.....

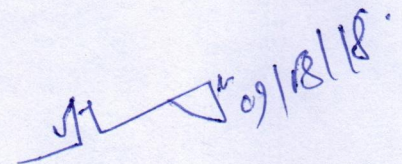
WEST BENGAL POLLUTION CONTROL BOARD  
Paribesh Bhawan; Bldg. No.-10A, Block – L.A., Sector – III  
Salt Lake City, Kolkata – 700 106

Name of the Unit: **M/s Shakambhari Ispat & Power Ltd**  
Located at Vill – Madandih, P. O. – Bartoria, P. S. – Neturia, Dist. – Purulia, Pin – 723121

**ADDITIONAL CONDITIONS**

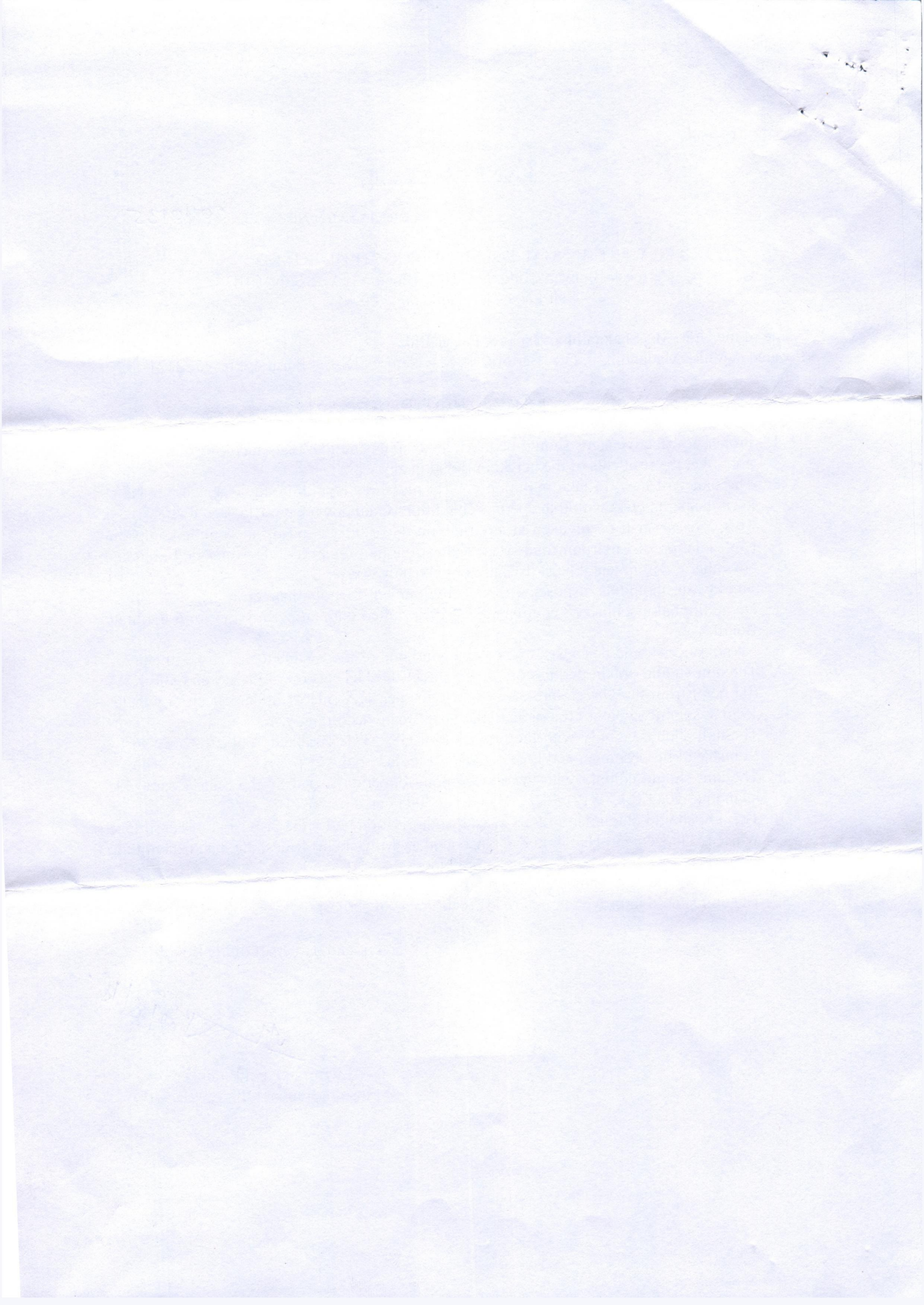
1. Proper & effective steps should be taken so as to ensure that manufacturing activities do not affect the residents of the neighbourhood in any way.
2. The unit will have to take pollution control measures regarding air, water and noise to keep the parameters within the permissible limit as laid down by WBPCB.
3. This consent shall be revoked at any time on the valid ground of any public complaint (for violation of Environmental Acts) against the unit regarding air, water pollution and any other environmental hazards caused by the unit.
4. Solid waste should be disposed off in an environment friendly manner.
5. No additional machinery / equipment can be installed without permission from the State Board.
6. No nuisance should be caused to the neighbourhood residence due to activity of the unit.
7. The unit should obtain permission for the three (03) DG sets of 750 KVA and 500 KVA (02 nos.) from the Directorate of Electricity as per 47A rule of Indian Electricity Rules 1956 & submit a copy of the same to the State Board accordingly.
8. The unit should comply with the provision of GSR 371 (E) dated 17.05.2002 issued by Ministry of Environment and Forest, Govt. of India.
9. The unit should comply with the sixteen-point direction issued by the State Board vide memo no. 1044 – 4 / WPB / CE – II / GEN / 2008 dated 01.06.2012.
10. The unit should obtain Hazardous Waste Authorisation under the provision of Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 and submit the copy of same to the State Board accordingly.
11. The unit should take immediate action to repair Cap leakage in the DRI Kiln-I.
12. The unit should improve internal road condition at an earliest.

For and on behalf of the Board



Environmental Engineer  
Asansol Regional Office, WBPCB





# ANNEXURE 4



पश्चिम बंगाल पश्चिम बंगाल WEST BENGAL

R 039356

FORMING PART OF ORIGINAL AGREEMENT FOR SUPPLY OF RAW WATER DATED 9<sup>TH</sup> APRIL, 2015

AGREEMENT EXECUTED ON \_\_\_\_\_

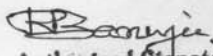
BETWEEN  
DAMODAR VALLEY CORPORATION  
AND  
SHAKAMBHARI ISPAT AND POWER LIMITED

Government of India, Central Water Commission, DVRR Unit, Member Secretary, DVRR, vide its letter No.MD/DVRR/WA-6(PART-VII)/2017/831-37 dated 01-09-2017 has reduced allocation of water to M/s Shakambhari Ispat and power Limited, Purulia from 0.55 MGD to 0.40 MGD for allocation of reduced amount to its sister concern M/s.Bravo Sponge Iron Private Limited, Rukni, District-Purulia, West Bengal.

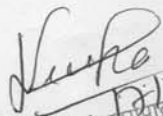
That M/s. Shakambhari Ispat & Power Limited vide its letter dated 04-09-2017 has accepted the reduction of drawl of water from 0.55 MGD to 0.40 MGD and shall have no right to claim the enhancement of reduced allocation, citing any reason in future.

This Agreement would come into effect from the date \_\_\_\_\_ and will be the part of the original agreement.

**Shakambhari Ispat & Power Ltd.**


  
Authorized Signatory

Signed, Sealed and Delivered  
For and on behalf of  
**SHAKAMBHARI ISPAT & POWER LIMITED**  
"DIAMOND PRESTIGE BUILDING",  
41A, A/C BOSE ROAD, 8<sup>TH</sup> FLOOR, ROOM NO.801,  
KOLKATA - 700017, WEST BENGAL

  
Dated 12/09/2017  
Executive Director (Civil)  
दा.घा.नि.वैथन, नबाद  
Maithon, Dnanbad

Signed, Sealed and Delivered  
For and on behalf of  
**DAMODAR VALLEY CORPORATION**

Witness

1)   
(S.K. MAJUMDAR)  
Manager Reservoir Operation  
D.V.C., Maithon

# DAMODAR VALLEY CORPORATION



## AGREEMENT

EXECUTED ON..... 21<sup>st</sup> April ..... 2015

BETWEEN

DAMODAR VALLEY CORPORATION

AND

SHAKAMBHARI ISPAT & POWER LTD.

For Supply of RAW WATER

FOR

STEEL PLANT COMPLEX

AT

P.O. BARTORIA, DIST. PURULIA (WB)

FROM

RIVER DAMODAR

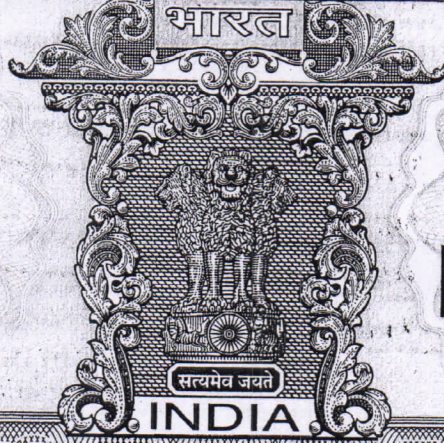
FOR

INDUSTRIAL USE

भारतीय गैर न्यायिक

पचास  
रुपये

रु.50



FIFTY  
RUPEES

Rs.50

INDIA NON JUDICIAL

पश्चिम बंगाल WEST BENGAL

M 931763

AGREEMENT

Supply of Raw Water

For

Industrial Use

This Agreement is made on this ..... 5<sup>th</sup> .....  
Day of ..... April ..... 20.15.....

BETWEEN

**DAMODAR VALLEY CORPORATION**, a Corporation constituted under the Damodar Valley Corporation Act being Act No. XIV of 1948 (hereinafter referred to as "the said Act") and having its Headquarters of DVC Towers, VIP Road, Kolkata -700 054 in the state of West Bengal (hereinafter to as "**the First Party**", which term shall unless excluded by or repugnant to the subject or context include its successors-in-interest and assigns) of the ONE PART

AND

**M/S. SHAKAMBHARI ISPAT & POWER LTD.**, a Limited Company having their registered office at Diamond Prestige Building, 41A, A. J. C. Bose Road, Room no. 801, 8<sup>th</sup> Floor, Kolkata 700017 in the state of West Bengal (Hereinafter referred to as "**the Second Party**" which term shall unless excluded by or repugnant to the subject or context include its successors-in-interest and/or permitted assigns) of OTHER PART.

WHEREAS one of the functions of the First party under Section 12(a) of the said Act is the promotion and operation of the schemes inter-alia for the supply of water in the Damodar Valley.

AND WHEREAS under the provisions of Section 15 of the said Act the First Party is vested with power to determine and levy rates for bulk supply and retail distribution of water for industrial and domestic purposes and specify the manner of recovery of such rates.

AND WHEREAS under the provisions of section 17 of the said Act construction, operation or maintenance in the Damodar Valley of any dam or other work of any installation for extraction of water shall not be effected by any person without the consent of the First Party.

AND WHEREAS the Second Party has requested the First Party under cover of its letter No. 204 dated 21.7.2007 & SIPL/DVC/Water/14-15/002 dt. 19.12.2014 annexed hereto, to allow it to construct, operate and/or maintain the water supply scheme and to allow it to have a supply of water from Damodar River through Intake Point of DVC at the Integrated Steel Plant Complex at Village-Madandih, P.O. Bartoria, Dist. Purulia.

AND WHEREAS the First Party has agreed to such construction, operation and/or maintenance of the water supply scheme and has further agreed to such supply of water to the Second Party for an initial period of five years as referred to in Clause- 16 here-in-under on the terms and conditions as hereinafter appearing.

NOW THIS AGREEMENT WITNESSTH AND IT IS HEREBY DECLARED AND AGREED AS FOLLOWS:-

01. (a) PERMISSION :

(i) The "First Party" hereby grants to the "Second Party" the permission to construct, operate and/or maintain the said water supply scheme in accordance with the Plan and Drawing annexed hereto and to extract such quantities of water from Damodar River for the purpose of their Integrated Steel Plant Complex as the "Second Party" may require upto **0.55 (Zero point Fifty Five MGD)** at the point in the Damodar Valley indicated in the said plan and Drawing annexed hereto and in the manner hereinafter mentioned provided the "Second Party" desiring to increase or decrease the quantity of water to be extracted as permitted aforesaid the "First Party" may require the "Second Party" to give the "First Party" **THREE(03) MONTHS'** notice in writing and approach DVRRRC stating the quantity of water required and the "First Party" after receipt of approval of DVRRRC will permit the additional drawl of water depending on the condition prevailing at that time provided further that failure on the part of 'the First Party' will not be construed as breach of this Agreement. The sourcing point and allocation of water by DVRRRC is function-specific. The allocation shall, in no way, be utilized /misused by 'the Second Party' by sale of water to any other consumer or its sister concern (or any agency on its behalf) for any purpose whatsoever. In the event of any such act, the same will be construed as breach of the terms and conditions of this agreement on the part of 'the Second Party' as specified in clause-17.

(b) PERMISSION :

i) The "First Party" who is seized and possessed of and is otherwise well and sufficiently entitled to the plots of land measuring **7785 sq ft.** of DVC land, more particularly described in the drawing hereto annexed, hereby grants to the "Second Party" the right to use/build at his own cost, the intake works comprising the pump house supporting structures and approaches and also lay down pipes and other works on the above mentioned piece and parcel of land.

These structures and pumping installations shall be the property of the "Second party" and shall be maintained by them.

The "Second Party" shall apply to the "First Party" for extension of the license-period of the temporarily allotted piece of land for permissive possession/occupation for the specific use as mentioned hereinabove in Cl. 01.(b).(i) before expiry of every license-period/term of 11 (eleven) months as per the subsisting rules & regulations for temporary use/permissive possession/occupation. The "Second Party" hereby agrees to comply with all the existing terms and conditions as may be decided by the Corporation from time to time and agrees to pay the license fee as may be revised time to time without raising any dispute in this regard.

For the temporary use/occupation of the said **7785 Sq. ft. of DVC land**, the second party shall pay the "First party" a license fee of **Rs. 31,140.00 @ 1.0 per sq. ft.** for the period of **01.08.2008 to 31.08.2012** and **Rs. 1,40,130/- @ 6.0 per sq. ft.** for the period from **01.09.2012 to 31.05.2015** from the date of permissive possession/occupation of the said land is made over to the 'Second Party'. The amount of **Rs. 1,71,270/- (Rupees One Lakh Seventy One Thousand Two Hundred Seventy only)** for the term is to be paid in advance from the date of occupation of the said land by the 'Second Party'.

The aforesaid license-period and the rate of license fee may be altered and /or revised and/or enhanced as per discretion of 'the FIRST party' and 'the SECOND PARTY' agrees to make the payments as per the revised rate as and when made applicable.

- (v) The "Second Party" shall not be entitled to transfer or let out the said land to others without the consent of the "First Party".
- (vi) The "First Party" shall not put up any structure of its own on the aforesaid piece of land without the consent of the "Second Party" which shall not be unnecessarily withheld.
- (vii) On the termination of the tenure of the temporary use and occupation period, the "Second Party" shall quit, vacate and deliver peaceful possession of the said land by removing the intake works built thereon and restoring it to its original condition at his own cost.
- (viii) Neatness and cleanliness of the area occupied should be observed by the "Second Party"

02. **APPROVAL OF PLAN & DRAWING INSPECTION:**

The installation of the "Second Party" required for extraction of water at the point on the Damodar River of DVC indicated in the said plan and Drawing shall be duly approved by the "First Party" before erection provided the "First Party" or its representatives duly authorized in that behalf shall, from time to time, and at all times be entitled to enter such installations of the "Second Party" for inspection.

03. (a) **EXCESS DRAWAL :**

No drawl in excess of the water, as permitted shall be made by "the second party" without obtaining the specific prior written permission/approval of DVRRC and subject to such terms and conditions as "the First Party" may like to impose. Notwithstanding, whatever is mentioned in this agreement regarding excess drawl, it is hereby agreed and accepted by the second party that, for the quantities of water consumed in excess of the approved monthly drawl and for any other unauthorized drawl of water, sanctioned quantum will be charged @ normal rate plus overdraw /unauthorized drawl in excess of sanctioned drawl on monthly basis will be charged @ 2 (Two) times the normal rate.

(b) **LESS DRAWAL:**

The less drawal of water by 10% or more of the agreement quantity during any 5 (five) consecutive years will automatically call for revision of the agreement quantity. The revised agreement quantity will be reduced to average of preceding 5 yrs' actual drawl, without making any further reference to the consumer incorporating the actual average drawl. However, the consumer may opt to apply to DVRRC for increase the quantity as per provision under Clause -1(a) hereinabove.

4. **MODE OF MEASUREMENT & METERS :**

For the purpose of measurement of the quantity of water extracted, the "Second Party" shall under this Agreement, with the prior Approval of the First Party, install at such points as may be indicated by 'the First Party', as many meters or as equal to the different type or types of uses of water so as to register the quantity of water for the purpose of determining the water drawl pattern (excess/less drawl) of the Second Party in such units of measurement as may be adopted by "the First Party"



from time to time provided that for the purpose of checking the accuracy of the meter/meters installed by "the Second Party", "the First Party" may install check meters or other mutually agreed upon check measures and "the Second Party" shall provide all facilities such as log book etc. required by "the First Party" for such installation or such check.

It shall be responsibility of the 'Second Party' to repair/rectify/replacement of meter/meters within a period of 30 days from the date of detection of the fault by either party. And that 'the second party' has to submit a report certified by the representative of the first party every year regarding their compliance with proper and satisfactory functioning of meter with proper logging of meter readings which will be given due importance during periodic review of water utilization by DVRRC. Non-compliance of above may tantamount to cancellation of water allotment.

The reading of the meters referred to above shall be jointly taken by the accredited representative of the consumer and Corporation on/or as near as practicable to the last day of each English calendar month or as decided by the corporation and the reading so taken shall be binding, final and conclusive between the consumer and the Corporation as to the quantity of water drawn by the consumer, provided that in the event of any meter being found defective and the quantity of drawl of water during the period when the meter was defective shall be determined, unless otherwise mutually agreed as detailed in clause - 6 & 10 here-in-under.

**05. SEALING OF METERS :**

All meters referred to in the above mentioned Clause - 04 excepting the ones with automatic recorder on charts if any, shall be properly sealed on behalf of both the parties hereto and shall not be interfered with by either party except in the presence of the other party or its representatives duly authorized in that behalf.

**06. METER READING, INSPECTION & BASIS OF PAYMENT :**

The Control Valve House housing the meter/meters of 'the Second Party' shall remain in the custody of 'the second Party' and 'the First Party' through its representative duly authorized in that behalf shall at all times be entitled to enter the said Control Valve House and inspect the meter/meters. The meter reading shall be entered up daily at 9.00 hours in a register by the second Party or its representatives duly authorized in that behalf. The readings may be checked and attested by 'the First Party' or its representative duly authorized in that behalf, at convenient intervals

Provided that where it is not possible to record the quantity of water extracted for a particular use directly owing to the absence of a meter directly recording such quantity, the quantity extracted for such use shall be determined by taking the difference between the quantity recorded in the main meter, recording the total quantity extracted for all uses under this Agreement, and the quantity recorded for the other uses for which there may be direct meter/meters.

Provided further that if this meter/meters installed by 'the second party' for recording the quantity of water is/are out of order, the quantity of water extracted may be assessed by taking the average of the quantity extracted during the preceding 3 (three) months as per the reading of the meter/meters, provided further that nothing as aforesaid shall prevent the respective parties from arriving at a mutual settlement as regard the quantity of water extracted during the above period for the purpose of ascertaining excess/less drawl by the second party.

The basis of payment shall be the extracted quantity. In other words, bills shall be raised monthly or quarterly or as decided by the corporation, based on the extracted quantity.

**QUANTITY OF WATER CONSUMED OR EXTRACTED :**

The Registers of meter reading referred to in the above mentioned Clause- 06 or the assessed quantity of water mutually agreed upon by and between both the parties hereto or the average of the quantity of water extracted during the three months as aforesaid or computed by taking the difference between the direct recording and main meter shall be the prima facie evidence of the quantity of water extracted by 'the second Party'.

**07. PROPRIETARY RIGHT OF METERS AND UPKEEPMENT:**

Meters as mentioned in the above mentioned Clause -04 shall be the property of 'the Second Party' and 'the Second Party' shall be liable for the upkeepment of the meter and for carrying out test once a year or more to the satisfaction of the First Party about the accuracy of such meter/meters.

**8. ACCURACY OF METERS :**

In the event of any dispute or difference between 'the First Party' and the Second Party as to the sufficiency or accuracy or state of repair or condition of the said meter or as to the quantity of water extracted through such meter, such difference or dispute shall be referred to and determined by an Engineer to be appointed by both the parties hereto.

**09. BASIS OF ASSESSMENT IN ABSENCE OF METER :**

(a) It is accepted and agreed by the 'Second Party' that the total quantity of consumption of water for the month shall be computed by the first party on the basis of allocation of water by DVRRC and the bills shall be raised on such quantity as referred to in Schedule-I & II. However, the Second Party is required to install and commission the meter(s) upto the satisfaction of the First Party for ascertaining excess/less drawal as referred to in clause 3.(a) & 3.(b) hereinabove.

(b) If at any time the meters installed for measurement of water extracted shall at any time, cease to register correctly or be removed for repair, calibration etc., then for the period until the said meters shall have been repaired replaced or otherwise adjusted as to register the quantity of water passing through it correctly, the quantity shall be computed as per proviso of clause 06 hereinabove. The First Party, however, shall be entitled to charge and 'the Second Party' shall be liable to pay for such quantity of water as mentioned in Schedule-II and the bills shall be continued to be raised by first party based on the permitted quantity as mentioned hereinabove.

Notwithstanding the bills shall be raised as per provisions contained in preceding cl. 10.(a). The Second Party shall make every endeavor to get the meter repaired and installed to the satisfaction of the First Party within a period of 1(one) months.

**BILLS & PAYMENTS:**

**(a) Bills & Tariff:**

The price for supply of water shall be charged to the 'Second Party' in accordance with Schedule-I & the First Party's 'Schedule of Rates' as given in Schedule-II and other conditions in force from time to time, provided that any levy such as any Surcharge, Sales

Tax, Octroi or any another amount by whatever other name called known or made by the Corporation, the state Government or any other competent authorities on quantity of water allocated to the 'the second Party' under this agreement, shall be paid by 'the second Party'.

**(b) Security Deposit:**

The First Party may require the Second Party to deposit a Security Amount equivalent to water charges for three calendar months, considering quantity allocated in MGD as specified in Clause- 1(a) and given in the schedule -I annexed hereto and or as modified as per clause-13 here-in-under and as per the prevailing water rate mentioned in schedule of rates in Schedule-II. The Second Party shall have to pay altered security amount if the quantity of allocation is changed by DVRRRC as per the terms of this agreement and as and when the water rates are revised and notified to the second party from time to time during the tenure of this agreement. In the event of termination of this agreement such security deposit shall be refunded after adjustment of dues, if any, to the Second Party without any interest thereon.

**(c) Periodicity of Billing:**

Bills will be raised to the Second Party monthly/quarterly based on extracted quantity in MGD or as decided by the Corporation as the case may be. It will be the responsibility of second party to make the aforesaid payment within the due date without raising any dispute in this regard.

**(d) Mode of payment:**

The 'second party' shall pay the bill amount to the first party's office at Kolkata by RTGS/Cheque/Demand Draft drawn on Kolkata Branch of any Nationalized Bank, payable to Chief Accounts Officer, DVC, Kolkata within within 30 days from the date of issue of the bill. The license fee, however, is to be paid by the second party as per terms mentioned in Clause- 1 (b).

**(e) Provisional Billing for disputed bills:**

In the case of any disputed bill(s) and or non-receipt/delayed receipt of bill, the second party shall collect the duplicate bill from the office of first party and make the payment immediately. However Delay Payment Surcharge, if applicable, as mentioned here-in-under in clause 11.(f) shall have to be borne by the second party. In case of disputed bills, the second party shall continue to pay full amount as per the bill raised by the first party. The necessary adjustment shall be done by the first party on resolution of dispute and/or differences.

**(f) Delay Payment Surcharge:**

If 'the second party' fails to make the payment of any bill amount within the due date, the second party shall pay the surcharge of 2.0 % per month on the amount of the bill from the due date of payment to the date of receipt of such amount in first party's office at Kolkata/in Corporation's Account which shall be treated as date of payment. The rate of Delay Payment Surcharge is however liable to revision from such date as the Corporation may decide with prior notice of one month in writing to the consumer.

(g) Default in payment:

In the event any bill remaining unpaid for 60 days from the date of issue of the bill, the first party shall give the second party **7(Seven)** days' clear notice in writing of its intention to discontinue the supply of water and on the expiry of such period if the payment has not been received, 'the first party' may forthwith discontinue supply of water to the second party till the period the default continues. Such discontinuance of supply shall not be deemed as breach on the part of the Corporation to comply with any of the terms of this Agreement and shall not relieve the consumer of its obligations and liabilities under the Agreement.

(h) Resolution of Dispute on Bill Amount:

In the event of any dispute on the amount of the bill the consumer shall submit the in details indicating the reason/reasons for such dispute and the aforesaid dispute/disputes normally shall be resolved by mutual discussion and/or mutual exchange of written documents between the consumer and the Corporation through authorized representative within **30 (thirty) days** from the date of receipt of such reference made by the second party to 'the First Party'.

12. MODE OF SUPPLY UNDER NORMAL & ABNORMAL CONDITION:

Save as provided herein 0.55 (Zero Decimal Five Five) MGD which, however, need not be continuous, throughout 24 hours, shall be available to 'the Second Party' provided that in case of draught or other unforeseen circumstances, force majeure or any other cause over which the First Party has no control, the First Party shall not be responsible for any diminution or discontinuance of supply on such occasions, but it shall restore the normal conditions of supply as soon as it reasonably can be done to the extent possible.

"The First Party" shall not be considered to be in default or in breach in supplying agreed quantity of raw water due to causes beyond the control of the "The First Party" such as acts of God, Natural Calamities, Civil Wars, Fire, Draught, Riot and acts of unsurpassed power, etc.

VALIDITY PERIOD OF QUANTUM OF WATER ALLOCATION:

Notwithstanding whatever is stated herein above, the allocated quantum of water for drawl by 'the Second Party' i.e. initial allocation of quantity (in MGD/Cusec) by DVC/DVRRRC shall remain valid for INITIAL AGREEMENT period of **5 (five)** years.

In case the average drawl by the second party during the initial agreement period of five years is not below 90% of allocated quantity, then the allocated quantity as specified in Clause- 1(a) shall be treated as the 'allocated quantum' of water for drawl by 'the second party' during the forthcoming period provided that the average drawl during last consecutive **5 (five)** years is not less by more than 10% of allocated quantity at the time of review by DVRRRC.

In case the drawl is found less by more than 10%, the first party may reduce the quantum of allocation accordingly based on the average drawl. However, the second party shall have the liberty to apply for increasing the **re-allocated quantity** as per provision of Clause- 1(a).

Any change in the allocated quantity after review by DVRRC shall deem to replace the quantity of drawl specified in Clause- 1(a) and Schedule- I annexed hereto.

Fresh application for re-allotment of the earlier quantity of water for drawl by the second party, shall be required to be submitted by 'the Second Party' **twelve(12)** months prior to expiry of the initial agreement block of 5(five) years.

If the fresh application as above, is not submitted by 'the second party' in due time to the review committee of DVRRC, 'The first party' shall have the right to reduce ex-parte the re-allocation of water as decided by the committee as deemed fit for equitable distribution taking into consideration the average drawl by the second party during the preceding 5(five) years.

'The second party' hereby accepts and agrees to the aforesaid re-allocation of water without any dispute and the bills shall be raised on the basis of the re-allocated quantity in MGD.

#### 14. **RULES & REGULATION:**

'The Second Party' agrees to conform to and abide by all rules and regulations made by the First Party including guidelines for water allocation set by DVRRC now in force and/or which may from time to time be made by the First Party consistent with this agreement relating to the extraction of water from the First Party's sources within the statutory limit of the said Act.

'The second party' shall ensure the optimal use of allotted quantum for the specific purpose and surrender the wasteful usage from the allotted quota. 'The second party' shall take all cares to avoid any untoward hydraulic conditions and undesirable changes in the river/supply channel.

'The second party' shall also ensure that the minimum flow in the river channel required for ecological balance is not interfered with. The Second Party shall take care that the intake structure and drawl of water, under no circumstance be detrimental to the safety and operation procedures of adjoining intakes/reservoir bridges both upstream & downstream of the intake point and also that the proposed intake is strong enough to be able to withstand floods in the river.

Notwithstanding whatever is stated in Clause-13 above, the review committee for allocation of water shall have prerogative to review periodically to reflect and incorporate the changes which take place in the realm of Water Resource Management.

"The Second Party" will ensure that the effluent water discharging out of the plant/industry will conform to the latest rules/bye laws/ regulations/prescribed water quality parameters by pollution control board of respective State Governments and/or Central Government.

Notwithstanding that the Corporation may not have acted on some previous breach, defaults or event of like nature on the part of the second party, it shall be lawful for the Corporation to enforce the terms and conditions of these presents in the event of a subsequent breach, default or event of like nature in all matters related to withdrawal of raw water by 'the Second Party'.

Any waiver by 'the First Party' of any breach of the terms and conditions of this agreement by the Second Party shall not constitute waiver of any subsequent breach of any other terms or conditions of this agreement.

15. **DISPUTE OR DIFFERENCE & ARBITRATION:**

Any dispute(s) or difference(s) arising out of or in connection with the agreement at any time between the 'First Party' and the 'Second Party' shall to the extent possible be settled amicably between the parties.

In the event of any dispute(s) or difference(s) whatsoever arising under the agreement or in connection therewith including any question relating to existence, meaning and interpretation of the agreement or any alleged breach thereof, the same shall be referred to the Secretary/CEO of Damodar Valley Corporation, Kolkata-700 054, to nominate Sole Arbitrator for settlement of disputes.

The Arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 or any statutory modification thereof or for the time being in force or the latest. The decision/judgment of the Sole Arbitrator shall be final and binding on both the parties. The cost of Arbitration shall equally be borne by both the parties. The venue of Arbitration shall be at Kolkata.

However, in case the 'Second Party' is a Central Public Sector Enterprise/Govt. Department, the dispute arising between the parties shall be settled through **Permanent Arbitration Machinery (PAM)** of the Department of Public Enterprise, Govt. of India as per prevailing rules.

All suits arising out of dispute(s) or difference(s) between the 'First Party' and the 'Second Party' are subject to jurisdiction of Court in the City of Kolkata.

16. **TENNURE OF AGREEMENT OR VALIDITY :**

This agreement shall subject as hereinbefore provided be and remain in force for a period of **5 (five)** years initially from the date of commencement of supply under this Agreement and thereafter shall continue uninterruptedly under the existing terms and conditions until determined by either party after the expiration of the fifth or any subsequent year on giving **3 (Three) months'** prior notice in writing of such intention and at the expiration of such notice this Agreement shall absolutely cease and determine but without prejudice to the rights and remedies, if any, of either party which may have accrued or arisen hereunder in the meantime and provided that the Second Party shall on giving the First Party **3 (three) months'** prior notice in writing of such intention be at liberty at anytime after the expiration of the fifth or any subsequent year to terminate this Agreement by making payment of the charges equal to water charges for one year as per Schedule of Rates (Annexed as Schedule-II) in force at that time.


17. **TERMINATION :**

If 'the 'Second Party' commits any breach of the terms and conditions of this agreement or if there is any default on the part of 'the second Party', 'the First party' will be at liberty to terminate this agreement upon one months' notice to 'the second party' without prejudice to the rights and remedies, if any, which may have accrued or arisen there under.

IN WITNESS WHEREOF THE PARTIES TO THESE PRESENTS HAVE HERE UNTO PUT THEIR REPECTIVE HANDS AND SEALS EACH THE DAY AND YEAR FIRST ABOVE WRITTEN.

The Agreement along with Schedule of rates would come into effect from date ...5th April 2015

SHAKAMBHARI ISPAT & POWER LTD

  
Authorised Signatory

SIGNED, SEALED AND DELIVERED

FOR AND ON BEHALF OF

SHAKAMBHARI ISPAT & POWER LTD.

Registered Office:

Diamond Prestige Building, 41A, A J C Bose Road, 8<sup>th</sup> Floor,

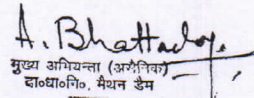
Room No. 801, Kolkata – 700017, WB

(Name & Address).....



WITNESS

1. Vasanthi Kumar


  
मुख्य अभियन्ता (अभियंता)  
दांधांनि, मैथन डैम  
धनबाद  
Chief Engineer (Civil)  
D.V.C., Maithon Dam  
Dhanbad

SIGNED AND DELIVERED

FOR AND ON BEHALF OF

WITNESS

DAMODAR VALLEY CORPORATION

  
S.K. MAJI  
MRO, DVC Maithon



D.N. Panu

EBCC, Water tariff cell.

**SCHEDULE- I**

[Referred to in Clause-1(a)]

Quantity of Water allocated by DVRRC for drawl by M/s SHAKAMBHARI ISPAT & POWER LTD. at Diamond Prestige Building, 41A, A. J. C. Bose Road, Room no. 801, 8<sup>th</sup> Floor, Kolkata 700017 (WB) : 0.55 MGD

From ~~.....~~ 15 April day of two thousand and ~~.....~~ thirteen the date of commencement of water drawl: 0.55 MGD.

[N.B.: The quantity of raw water allocation as revised by DVRRC from time to time as per the proviso of the agreement shall from the integral part of this agreement]

**SCHEDULE- II**

[Referred to in Clause-11]

**SCHEDULE OF RATES**

(Effective from 1<sup>st</sup> October 2012)

FOR

**INDUSTRIAL WATER SUPPLY**

| Source Of Drawal   | TIERS (Based on allocation by DVRRC) |                |                 |                |
|--------------------|--------------------------------------|----------------|-----------------|----------------|
|                    | T-I                                  | T-II           | T-III           | T-IV           |
|                    | (Up to 5 MGD)                        | (5+ to 10 MGD) | (10+ to 20 MGD) | (Above 20 MGD) |
|                    | Rate per KL                          | Rate per KL    | Rate per KL     | Rate per KL    |
| Reservoirs /Rivers | Rs. 5.40                             | Rs. 5.50       | Rs. 5.60        | Rs. 5.70       |
| Canals / Ponds     | Rs. 5.95                             | Rs. 6.05       | Rs. 6.15        | Rs. 6.25       |

- Note:** 1) The Water Supply Bills shall be raised on the basis of permitted quantity as sanctioned by DVRRC for all the consumers with the above tariff.  
 2) An incentive of 20% on the monthly billed amount will be allowed to those Industries who have taken appropriate measures for 'Zero Effluent Discharge'. The said incentive will be applicable only if the payments are made within due date and on production of requisite certificate from State Pollution Control Authority.

**N.B. : Revised rate will be applicable as and when notified by the Corporation.**

SHAKAMBHARI ISPAT & POWER LTD

*[Signature]*  
Authorized Signatory

For and on behalf of  
SHAKAMBHARI ISPAT & POWER LTD.  
41A, AJC Bose Rd. Kolkata 700017

*[Signature]*  
मुख्य अभियन्ता (अभियंता)  
दांघावाडी, मैथन डैम  
धनबाद  
Chief Engineer (Civil)  
D.V.C., Maithon Dam  
Dhanbad

CHIEF ENGINEER(CIVIL)  
DVC,MAITHON  
For and on behalf of  
DAMODAR VALLEY CORPORATION  
Kolkata-700054



C. DETAILS OF PROJECT/UNIT/PUMP LOCATION ETC.:


|     |   |   |
|-----|---|---|
| 01. | Name of the Village/Place   | : Madandih  |
| 02. | Plot no.  | : 2,86  |
| 03. | Dag No.   | :   |
| 04. | Mouza Name & No.  | : Madandih  |
| 05. | J.L. No.  | : 120   |
| 06. | Police Station Name & No.   | : Neturia P.S.  |
| 07. | Name of Post Office with PIN  | : Bartoria – 723121   |
| 08. | District  | : Purulia   |
| 09. | Postal Address of the Plant/ Unit site  | : Village – Madandih, P.O. Bartoria, Dist. – Purulia , Pin 723121, WB |
| 10. | Point of Water Withdrawal/  | : ¾ Km upstream of Panchet Dam  |
|     | Telephone No.   | : 0343-2543986/7  |
|     | FAX No.   | : 0343-2543986/7  |
|     | E.Mail Address  | : indrajitghosh@gagansteel.com, gcpl_sponge@yahoo.co.in               |
| 11. | Location of Water Treatment Plant   | : Inside Plant  |
| 12. | Location of Pumping Station   | : Rangadahar Village  |
| 13. | Number of pumps installed   | : 2   |
| 14. | Capacity of pumps   | : 37 KW & 55 KW (One Stand by)  |
| 15. | Location of water meter   | : Intake Point  |
| 16. | Location of Intake point  | : ¾ km upstream of Panchet Dam  |
| 17. | Quantum of water withdrawal in MGD (approved by DVRRC)                                | : 0.55 MGD  |
| 18. | Date of Commencement of water withdrawal from pumping station (to be filled up later) |   |

D. DETAILS OF RAW WATER USAGE:

(Attach Separate sheet, if necessary, giving details):

- (1) .....  
(2) .....  
(3) .....

SHAKAMBHARI ISPAT & POWER LTD

  
Authorised Signatory

.....  
Signature with full name of person  
signing the Agreement & Stamp/  
Seal of Company



DAMODAR VALLEY CORPORATION  
DVC TOWERS, VIP ROAD,  
KOLKATA-700 054

COMMERCIAL DEPARTMENT

Tel No. 91 33 2355 7931/6041 ;Fax No. 91 33 2355 2129


ANNEXURES

ENCLOSURES FORMING THE PART OF THE AGREEMENT:-

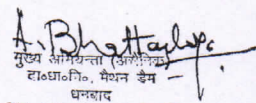
Annexure (1) to (4) mentioned below and annexed hereto shall form the integral part of this Agreement:-

- (1) ANNEXURE-'A' : Schedule -I & Schedule -II
- (2) ANNEXURE-'B' : Detail of the Company
- (3) ANNEXURE-'C' : 1) Letter No. 204 dated 21.07.2007 of Sr. Chief Engineer(G.M),  
DVC, Maithan.  
2) Letter No. SIPL/DVC/Water/14-15/002 dated 19.12.2014 of  
MRO, DVC, Maithan.

SHAKAMBHARI ISPAT & POWER LTD

  
Authorised Signatory

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