# ADHUNIK POWER AND NATURAL RESOURCES LIMITED

WORKS : Village – Padampur, Behind P.G.C.I.L Substation,
Adityapur Kandra Road, Saraikela – Kharswan : 832402, Jharkhand
Phone: + 91-657-6628400, Fax: + 91-657-6688440


Ref No APNRL/JSPCB/ES/2014-15/02 Date: 15th Sep 2015

The Member Secretary
Jharkhand Pollution Control Board
Jharkhand

Sub- Submission of Environmental Statement (Form V) for Unit II (1 x 270 MW) of M/s Adhunik Power & Natural Resources Limited, Village- Padampur, Dist- Saraikela-Kharswan,Jharkhand.

Ref: Environmental Clearance letter No J-13012/8/2009-IA.II(T), Dated 09th May 2011.

Dear Sir,

In line with compliance of above referred EC letter point No XIII of general condition, Please find attached herewith Environmental statement (Form V) for the financial year 2014-15.

This is for your kind information & record please.

Thanking You

Your's faithfully

Kamlesh Kumar
Deputy Manager ( Environment)

Encl: As mentioned above

CC: 1. The Regional Office(Eastern-Central Zone)
Ministry of Environment, Forest & Climate Change
Bunglow No A-2,Shyamali Colony, Ranchi, Jharkhand
2. The Regional Officer
Jharkhand Pollution Control Board
Jamshedpur


CORPORATE OFFICE : "CRESCENT TOWER", 3rd Floor, 229 A.J.C. Bose Road, Kolkata-700020
Phone : +91-33-30915300 *,Fax : +91-33-30915344

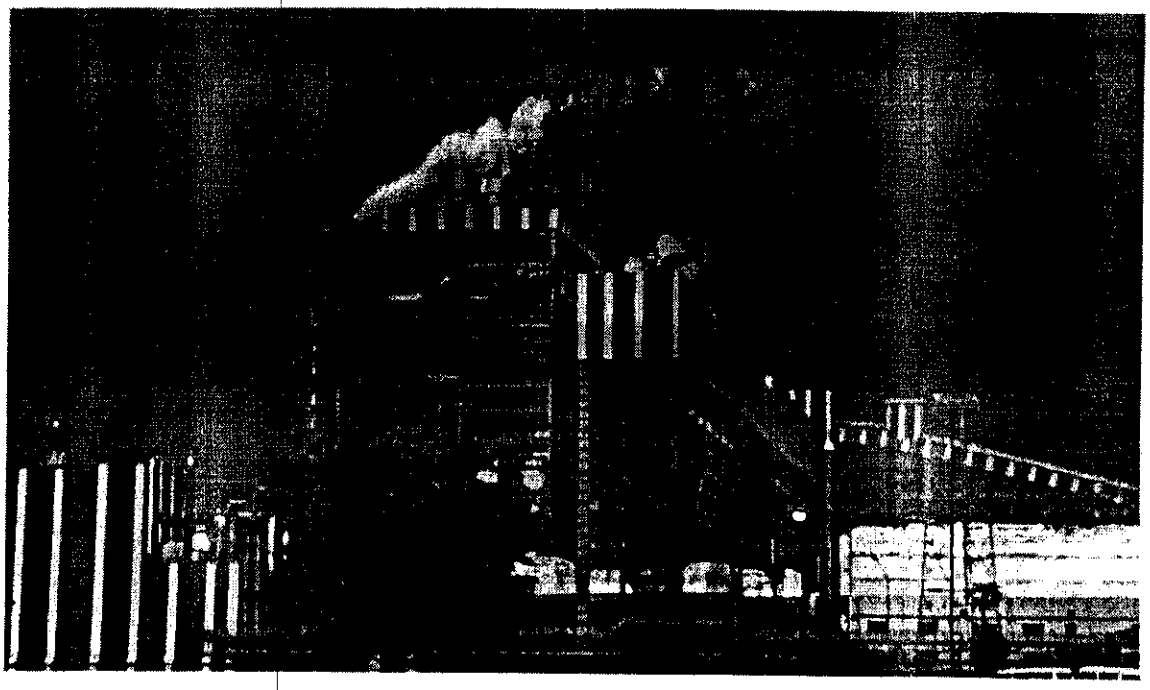
# ENVIRONMENTAL STATEMENT

## For

## 1 X 270 MW COAL BASED THERMAL POWER PLANT

## (UNIT II)

## FINANCIAL YEAR 2014-15



**September 2015**

Adhunik Power & Natural Resources Ltd
Village-Padampur, District-Saraikela-Kharsawan
Jharkhand-832105

# FORM-V

**From:**
**Adhunik Power & Natural Resources Limited**
**Village: Padampur**
**Dist: Saraikela-Kharsawan – 832 402**
**Jharkhand.**

**To,**
**Member Secretary**
**Jharkhand State Pollution Control Board,**
**HEC Campus, Dhurva,**
**Ranchi , Jharkhand.**

**Environmental Audit Statement for the financial year ending on the 31st March-2015 for Unit-II (1 x 270 MW)**

## PART – A

| | | | |
|---|---|---|---|
| (i) | Name & Address of the owner/occupier of the Industry operation or process | : | Sh. Nirmal Agarwal<br>BA.209,Salt Lake city<br>Kolkata -64 |
| (ii) | Industry Category | : | Red Category |
| (iii) | Production Capacity – (Units-MW) | : | Power<br>270 MW Per Hour |
| (iv) | Year of Establishment<br>(COMMERCIAL PRODUCTION DECLARED) | : | 19th May 2013 |
| (v) | Date of Last Environmental Statement Submitted | : | 24th September 2014 |

## PART-B

### Water and Raw Material Consumption

(i) **Water Consumption KL/Day**

| | | |
|---|---|---|
| Process | : | 225.20 |
| Cooling | : | 5906.46 |
| Domestic | : | 23.49 |

| Name of product | Process water consumption per unit of product output | |
|---|---|---|
| | During the previous financial year 2013-14 | During the current financial year 2014-15 |
| Electricity 270 MW Per Hour | 0.066 KL | 0.045 KL |

(ii) **Raw Material Consumption**

| Name of Raw Materials | Name of product | Consumption of raw material per unit of output (Total Production) | |
|---|---|---|---|
| | | During the previous financial year 2013-2014 | During the current financial year 2014-15 |
| Coal | Power | 0.676 MT | 0.709280495 MT |
| LDO | | 0.00256 KL | 0.001763572 KL |

## PART – C

**Pollution Discharged to environment / unit of output.**

**(Parameter as specified in the consent issued)**

| **Pollutants** | **Qty. Of pollutants discharged (Mass / Day)** | **Concentration of Pollutants in discharges (Mass / Day)** | **Percentage of variation from prescribed standards with reasons** |
|---|---|---|---|
| (i) Water | 1) Effluent generated from Cooling tower, DM plant, IBD tank, CPI separator is being utilized in HCDC system.<br>2) Effluent generated from CBD is being reutilized in quenching & dust suppression system.<br>3) Effluent generated from STP is being utilized for gardening | | Concentration are below the prescribed limits |
| (ii) Air | | | Concentration are below the prescribed limits |
| SPM | 199.36 Kg/Day | 31 mg/Nm3 | |
| SO2 | 675.25 Kg/day | 105 mg/Nm3 | |
| NOx | 1041.82 kg/day | 162 mg/Nm3 | |

## PART - D

## HAZARDOUS WASTES

**(As specified under Hazardous Wastes Management and Handling & Transboundary Movement Rules, 2008)**

| Hazardous Wastes | Total Quantity (KL). | |
|---|---|---|
| | During the previous financial Year 2013-2014 | During the current financial Year 2014-2015 |
| 1 From Process | Nil | Nil |
| 2 From Pollution Control Facilities | Nil | Nil |

## PART -E

**Solid Wastes**

| | Total Quantity (MT) | |
|---|---|---|
| | **During the previous financial Year 2013-2014** | **During the current financial Year 2014-2015** |
| (a) From Process<br>• Bottom Ash | 61246.63726 MT | 52419.375 |
| (b) From Pollution Control Facility<br>• Fly ash | 244986.549 MT | 209677.5 |
| (c) (1) Quantity recycled or re-utilized within the unit | Nil | |
| (2) Sold | | |
| (3) Disposed | Nil | 209677.5 |
| • Fly Ash | 244986.549 MT | 52419.37 |
| • Bottom Ash | 61246.63726 MT | |

## PART – F

**Please specify the characterization (In terms of composition and quantum) of hazardous as well as solid and indicate disposal practice adopted for both these categories of wastes.**

**Characterization of Fly ash:**

| Sl No | Parameter | Result Obtained | Unit |
|---|---|---|---|
| 1 | Arsenic (as As) | <0.01 | PPM |
| 2 | Mercury (as Hg) | <0.01 | PPM |
| 3 | Chromium (as Cr) | 0.0112 | PPM |
| 4 | Lead (as Pb) | 0.0264 | PPM |
| 5 | Antimony (as Sb) | <0.01 | PPM |
| 6 | Berelliyum (as Be) | <0.01 | PPM |
| 7 | Cadmium (as Cd) | 0.0176 | PPM |
| 8 | Copper (as Cu) | 0.0338 | PPM |
| 9 | Nickel (as Ni) | 0.0345 | PPM |
| 10 | Selenium (as Se) | 0.0241 | PPM |
| 11 | Silver (as Ag) | <0.01 | PPM |
| 12 | Tin (as Sn) | <0.01 | PPM |
| 13 | Zinc (as Zn) | 0.251 | PPM |
| 14 | Unburnt Carbon | 0.17 | % |

**Characterization of Bottom ash:**

| Sl No | Parameter | Result Obtained | Unit |
|---|---|---|---|
| 1 | Arsenic (as As) | <0.01 | PPM |
| 2 | Mercury (as Hg) | <0.01 | PPM |
| 3 | Chromium (as Cr) | 0.0431 | PPM |
| 4 | Lead (as Pb) | 0.0694 | PPM |
| 5 | Antimony (as Sb) | <0.01 | PPM |
| 6 | Berelliyum (as Be) | <0.01 | PPM |
| 7 | Cadmium (as Cd) | 0.0541 | PPM |
| 8 | Copper (as Cu) | 0.0643 | PPM |
| 9 | Nickel (as Ni) | 0.0567 | PPM |
| 10 | Selenium (as Se) | 0.0296 | PPM |
| 11 | Silver (as Ag) | <0.01 | PPM |
| 12 | Tin (as Sn) | <0.01 | PPM |
| 13 | Zinc (as Zn) | 0.6846 | PPM |
| 14 | Unburnt Carbon | 1.2 | % |

## PART - G

**Impact of the pollution abatement measures taken on conservation of natural resources and on the production.**

- Fly ash bricks has been used for construction of buildings, Drains, rain water harvesting pit, Bachelor Hostel, Residential Colony for employees.
- We are using effluent water generated from Cooling tower, DM plant, IBD tank for HCDS system for bottom ash disposal instead of fresh water from River Subernrekha.
- Extensive tree plantation is under progress as a part of green belt development, which will control the impact of Air pollution and optimize the ambient temperature of surrounding area

## PART - H

**Additional measures / investment proposals for environmental protection including abatement of prevention of pollution.**

- For better control on fugitive emission, Water spraying is being done on unpaved internal and external roads except during rainy season.
- Extensive tree plantation and development of landscape around plant premises is under progess . Total plantation till 31st March 2014 is 35600 saplings with 86 % survival rate.
- Adoption of good house keeping practices through manual and mechanical system.
- Rain water harvesting drawing has been approved by CGWA, copy of approval letter has already been submitted to MoEF, JSPCB. As per approved drawing, 13 No rain water harvesting pit has constructed inside the plant premises.
- Black topped tar road with drain constructed inside the plant premises.
- 01 No Online Ambient air installed near DM plant for continuous analysis of PM10,PM2.5, SO2, NO,NO2 & CO.
- Online opacity meter for SPM analysis and SO2 & NOx analyzer installed at stack.
- 03 No Sewage treatment plant installed for treatment of sewage generated from Bachelor hostel, Security barrack and staff colony.
- We have adopted roof top water harvesting system at Admin building, Bachelor hostel and other buildings.
- Closed type conveying system with dust extraction and dust suppression arrangements installed for mitigate fugitive emission during conveying of raw materials.
- Implemented recommendations of CREP .
- Installed fixed type water sprinkling system at dust prone areas such as Coal handling plant, near ash pond area.
- Integral acoustic enclosures installed for DG sets for controlling noise.

**It is proposed that during the next financial year (2015-16), the following measures will be undertaken for environmental improvement:**

- 10000 trees will be planted during year 2015-2016

**PART – I**

**Any other particulars for improving the quality of the environment:**

1. Received certification for ISO 9001:2008, ISO 14001: 2004 & ISO 18001:2007 from Bureau Veritas.
2. Training on EMS to all employees and contract labors to create Environment awareness.
3. Green Belt development is under progress.
4. Only PUC certified vehicles are engaged.
5. Monitoring of Ambient air quality , Surface and ground water quality, stack monitoring, soil, Noise level , solid waste ( Hazardous & non-hazardous) is being done through MoEF & NABL accredited laboratory.
6. Full-fledged Environmental laboratory has installed.
7. Installation of Online Effluent monitoring system is in progess.
8. Webhosting of online environment data on CPCB/SPCB website is in progress.
9. Audit by site team to improve Environmental Management system (EMS).
10. Celebration of Environmental promotional activities ( Environment day, Earth Day, Water day, Ozone day)

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Date: 01/09/2015

Signature :
Name : **Kamlesh Kumar**
Designation : **Deputy Manager (Environment)**
Address : **Adhunik Power & Natural Resources Limited, Village : Padampur**
**Dist: Saraikela-Kharsawan – 832 105**
**Jharkhand.**