NTPC Limited
(A Government of India Enterprise)

ISO 14001 DNV REGISTERED FIRM

रामगुण्डम
Ramagundam

सं/Ref: 09:EMG/पप्रस/A/ए-13/2018/1387 दिनांक Date: 28.09.2018

To :

The Member Secretary
T.S. Pollution Control Board,
Paryavaran Bhawan,
A-3, Industrial Estate,Sanathnagar,
HYDERABHAD- 500 018

सेवा में :

सदस्य सचिव
ते स प्रदूषण नियंत्रण बोर्ड
पर्यावरण भवन
उद्योग संपदा
सनत नगर
हैदराबाद 500 018

Dear Sir,

प्रिय महोदय,

Sub: Environmental Statement for the Financial year **2017 – 18** -Reg.

विषय :वित्तीय वर्ष 2017 – 18 के लिए पर्यावरण संबंधी विवरण के संबंध में

Enclosed please find here-with the Environmental Statement for the financial year **2017 – 18** for NTPC-Ramagundam prepared in Form V as per the Government of India Gazette Notification dated 13th March 1992.

भारत सरकार के राजपत्र में प्रकाशित अधिसूचना 13 मार्च 1992 के अनुसार वित्तीय वर्ष **2017 – 18** के लिये एन टी पी सी लिमि रामगंण्डम का पर्यावरण संबंधी विवरण फार्म-V में इसके साथ संलग्न पायें.

Thanking you,

सधन्यवाद

Yours faithfully/ भवदीय,
कृते एन. टी. पी. सी. लिमिटेड.

(YS GUPTA) / (वाई. एस. गुप्ता)
(ADDL GENERAL MANAGER){EMG} / अपर महाप्रबंधक [पर्या.प्र.समूह]

Office of the Environmental Engineer
Telangana State Pollution Control Board
Regional Office, Ramagundam,
H. No. Special C-3, NTPC, TTS,
Near Zilla Parishad High School
JYOTHINAGAR - 505 215,
Dist. Peddapalli (T.S.)
29/9/18

The Environmental Engineer/पर्यावरण अभियंता
TS Pollution Control Board /ते स प्रदूषण नियंत्रण बोर्ड
Regional Office: Ramagundam
NTPC - TTS, Jyothinagar 505 215,
District, PEDDAPALLI.

RAMAGUNDAM SUPER THERMAL POWER STATION
NATIONAL THERMAL POWER CORPORATION LIMITED
P.O. JYOTHI NAGAR DIST: PEDDAPALLI

ENVIRONMENTAL STATEMENT FOR THE YEAR 2017-18

Submission

The Environmental Statement of NTPC- Ramagundam for the financial year 2017-2018 has been prepared in-house by the available in-company professional after audit of the system/schedules of monitoring and the reports generated during the year. The methodology adopted involved a survey of the monitoring program and procedures and critical evaluation and analysis of the data.

The Environmental statement for the year 2017-18 highlights the major Environmental Conservation and operation measures adopted at NTPC- Ramagundam during the period under reference as well as the improvements or change in the performance in these areas compared to the previous years.

Furnished herewith please

Date

EXECUTIVE DIRECTOR(R)
NTPC- RAMAGUNDAM
रवीन्द्र RAVINDRA
कार्यकारी निदेशक Executive Director
एनटीपीसी लिमिटेड NTPC Limited, Ramagundam
ज्योतिनगर JYOTHINAGAR-505215

FORM-V

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING 31st MARCH 2018

PART-A

I	Name and address of the Owner/Occupier of the industry operation or process	**RAVINDRA** **EXECUTIVE DIRECTOR (R)** NTPC-RAMAGUNDAM, P.O.:JYOTHINAGAR, RAMAGUNDAM , DIST: PEDDAPALLI (TS)-505215
II	Industry Category (STC/SIC Code)	N/A
III	Production Capacity	2600 MW
IV	Year of Establishment	UNIT- I 200 MW - 1983 October UNIT- II 200 MW - 1984 May UNIT- III 200 MW - 1984 December UNIT- IV 500 MW - 1988 June UNIT- V 500 MW - 1989 March UNIT- VI 500 MW - 1989 October UNIT- VII 500 MW - 2004 September
V	Date of last Environmental Statement submitted	25.09.2017

PART – B

WATER AND RAW MATERIAL CONSUMPTION

(i). Water Consumption (m^3/day)

a	**For Process**	i) DM Water for boiler feed = 2586 ii)Ash water + DM water used for regeneration 4034 + 388 = 4422	Total 7008	Total effluent recirculated **=1,20,310 m^3/day**
b	**For Cooling**	i) Condenser cooling water = 102059 ii)Clarified water for auxiliary cooling = 72501	Total 1,74,560	
c	**For Domestic**		11,520	
	Total		**1,93,088**	

Process (Plant) Water Drawn Per Product Output (Liter/Kilo Watt Hour):

Name of Products	Process water consumption per unit of product output	
	2016-17	**2017-18**
Electricity generation 18867.627 MU	0.19 Lit/ Kwh	0.1355 Lit/Kwh

ii. Raw material consumption

Name of raw materials	Name of products	Consumption of raw material per unit of output	
		2016-17	2017-18
a. Coal (kg/kwh)	Electricity generation	0.642	0.631
b. Fuel Oil (ml/kwh)		0.257	0.282

PART – C

POLLUTION DISCHARGE TO ENVIRONMENT/UNIT OF OUTPUT

I. Wastewater Discharged (2017-18)

Plant Effluent: 2,450 m^3/day, Sewage Effluent: 2,800 m^3/day

Pollutants	Quantity of Pollutant (kg/day)	Concentration of Pollutant (mg/l)	% of variation from prescribed standard with reasons
i. Process Effluent			
TSS	160	65.3	Nil
ii. Domestic Effluent			
BOD	90.16	32.2	Nil
TSS	108.64	38.8	Nil

II. Stack Emissions:

Flue Gas Flow Rate	
Stage – I (3 units of 200 MW)	924426 Nm^3/Hr/Unit
Stage – II (3 units of 500 MW)	2882381 Nm^3/Hr/Unit
Stage – III (1 unit of 500 MW)	2425148 Nm^3/Hr/Unit

Pollutant	Quantity of Pollutant Discharged (kg/day)	Concentration of Pollutant Discharged (mg/Nm^3)	% of Variation from Prescribed Standard with Reasons.
Stage – I : SPM	6064	91.1	Nil
Stage – II : SPM	21698	104.55	Nil
Stage – III : SPM	4287	73.65	Nil

PART – D

HAZARDOUS WASTES

(as specified under Hazardous waste/Management and handling Rules 1989)

Hazardous Wastes	Total Quantity	
	During the previous financial year	During the current financial year
a. From Process	No hazardous waste is generated in the process of electricity generation. However, hazardous waste generated during maintenance activities are given as per the following statement	
b. From Pollution Control facilities		

STATEMENT OF HAZARDOUS WASTE INVENTORY

S. No	Physical Form with Description	Total Quantity stock (Approx. Volume/ Weight)	
		as on 31.03.2017	as on 31.03.2018
1	Used oil	28.4 MT (44.97 MT of used oil has been disposed during the year 2016-17)	19.855 MT (86.97 MT of used oil has been disposed during the year 2017-18)
2	Used oil & grease drums	631 no's	631 no's
3	Used lead acid batteries	296 no's (630 disposed during 2016-17)	Nil. (279 nos and 3.357 MT disposed during 2017-18)
4	Detoxified containers and container liners of Hazardous waste and chemicals	Nil (1200 nos. disposed during 2016-17)	Nil
5	Used resins	790 lit.	Nil. (790 lit. disposed in 2017-18)
6	Used torch cells	Nil	Nil
7	Oil soaked cotton	1140 Kg	665 kg (1140 Kg disposed in the year 2017-18)
8	Oil soaked fuller earth	1630 Kg (11.17 MT disposed in 2016-17)	1920 Kg (2470 Kg disposed in the year 2017-18)

9	E waste	2.68 MT (9.8 MT disposed in 2016-17)	0.271 MT (7.5 MT disposed in 2017-18)

PART-E

SOLID WASTES

Sl. No.	Description	Total Quantity	
		During the previous financial year 2016-17	During the Current financial year 2017-18
A	**Quantity generated from Process**		
	i. Mill Rejects	36,114.56 MT	27,077 MT
	ii. Clarifier sludge	Negligible	Negligible
B.	**Quantity generated From Pollution Control Facility**		
	i. Ash collected from ESP & Boiler furnace bottom	47,11,031 MT	45,46,704 MT
	ii. Sewage sludge	NIL	NIL
C.	**(1) Quantity recycled or re-utilized within the unit**		
	i. Ash (For Dyke raising, low lying area fill, Own Brick manufacturing units, etc)	4,08,781 MT	10,52,510 MT
	Ii. Mill Rejects (for ash dyke raising and temporary approach works)	NIL	NIL
	(2) Sold		
	i. Fly ash sold to Cement/RMC Manufacturing industries	8,11,827 MT	4,25,982 MT
	ii. Mill Rejects	34942.03 MT	NIL
	(3) Disposed		
	i. Ash (disposed to ash pond)	3,22,440 MT	(-) 43, 311 MT
	ii. Ash (issued to brick & cement, Brick kilns, road and mines backfilling at free of cost)	31,67,983 MT	31,11,523 MT
	iii. Sewage Sludge (Taken by near-by villagers for manure at free of cost)	NIL	Nil
	iv.Mill Rejects	Nil	Nil

PART – F

CHARACTERISATION OF HAZARDOUS AS WELL AS SOLID WASTES

S. No.	Component	Composition (%)	Quantum (MT)	Disposal Practice
I	ASH			
1	Sodium oxide	1.86	84568.6944	Dry ash issue to Cement, RMC and other industries; use in own unit for ash dyke raising, Mine stowing, agriculture and balance to ash pond by wet disposal.
2	Magnesium oxide	1.04	47285.7216	
3	Alumina	23.92	1087571.6	
4	Silica	58.87	2676644.64	
5	Phosphorous Pentoxide	0.66	30008.2464	
6	Sulphur trioxide	0.5	22733.52	
7	Potassium oxide	1.78	80931.3312	
8	Calcium oxide	4.94	224607.178	
9	Titanium dioxide	1.45	65927.208	
10	Manganese oxide	0.1	4546.704	

PART-G

IMPACT OF POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION

ASH: Providing of dry fly ash to Cement, Ready Mix Concrete (RMC) and Fly Ash Brick Manufacturing industries and Pond Ash to Clay Brick Manufacturing industries, and ash dyke rising helped in conservation of natural top soil.

Also Pond ash taken by SCCL for ash stowing in their operating underground mines of RG1 and Srirampur. Pond ash also supplied to farmers for use of ash in agriculture.

WATER: Through various modifications and conservation programmes, about 65 Million KL of water conserved during the year.

PART – H

ADDITIONAL MEASURES/INVESTMENT PROPOSAL FOR ENVIRONMENT PROTECTION INCLUDING ABATEMENT OF POLLUTION PREVENTION OF POLLUTION DURING 2017-18

- Dry ash extraction system for Unit#1 is being set up and work is in progress.
- Ash water recirculating system is being augmented and work is in progress to maximize the quantity of recycled ash pond decant water.
- ESP stage-I renovation work contract awarded for improving the efficiency of ESPs.

PART – I

ANY OTHER MEASURES FOR IMPROVING THE QUALITY OF THE ENVIRONMENT

- All the Stage-I, II and III units are provided with high efficient Electro-static Precipitators (ESP) of more than 99.5% efficiency and are in operation.
- The ash pond water generated is brought back to the Ash Water Recirculation System (AWRS), treated, mixed with other plant effluents and is reused for ash handling.
- Liquid Waste Treatment Plant (LWTP) to conserve water by increasing Cycle of Concentration (COC) of cooling water has been in operation.
- Dry Ash Extraction and Transportation Plant (DAETP) are in operation enabling issue of Ash to Cement, RMC and brick manufacturing industries.
- Rail loading facility is set up for bulk transportation of fly ash to cement industries.

Date:

Signature

Name रवीन्द्र RAVINDRA

Design कार्यकारी निदेशक Executive Director
एनटीपीसी लिमिटेड NTPC Limited, Ramagundam
ज्योतिनगर JYOTHINAGAR-505215

Address