एनटीपीसी
NTPC

ISO 14001
DNV
REGISTERED FIRM

रामगुण्डम
RAMAGUNDAM

Ref.No:09/EMG/D -07/2018/ Date: 30.05.2018

To

THE DIRECTOR
Regional Office (SEZ)
Ministry of Environment, Forest & Climate Change,
1st and 2nd Floors, Handloom Export Promotional Council,
4 Cathedral Garden Road,
Nungambakkam, Chennai – 560 034.

Dear Sir

Sub: Six Monthly Compliance report of EC issued to NTPC Ramagundam -reg

We are herewith submitting the six monthly compliance report for EC given to our station pertaining to the period October-2017 to March-2018 along with the stack data, ambient air quality data and dust concentration data for the period. Also, please find enclosed the Soft copy of the report in CD.

Thanking you

Yours faithfully
For NTPC Ltd

(Y S GUPTA)
Addl. General Manager (EMG)

E/a

The Environmental Engineer
T.S. Pollution Control Board
Regional Office: Ramagundam
Jyothinagar 505 -215, District, Karimnagar

STATUS OF IMPLEMENTATION OF CONDITIONS STIPULATED IN ENVIRONMENTAL CLEARANCE

NAME OF THE PROJECT: RAMAGUNDAM STPP STAGE-III (1X500MW)

LETTER NO: OMNOJ-1301/20/94-IA-II DATED 25/09/1995.

S. No.	STIPULATIONS	STATUS as on 31.03.2018
1.	All the conditions stipulated by the State Pollution Control Board shall be implemented effectively.	All the conditions stipulated by the State Pollution Control Board are being implemented effectively.
2.	A stack of height not less than 275 meters shall be provided along with stack monitoring devices.	Stack height of 275 meter with stack monitoring facilities have been provided.
3.	The Electrostatic Precipitators having efficiency of not less than 99.8 percent shall be installed.	ESP having more than 99.8% efficiency have been provided.
4.	The particulate emission shall not exceed the prescribed limit of 150 mg/Nm^3 at any time.	Particulate Emissions are being maintained within the prescribed limit of 115 mg/Nm^3 by Telangana SPCB.
5.	Space provision shall be made for installation of FGD plant, if felt necessary, at future time.	Adequate Space has been provided in the layout for installation of FGD plant in future. Preliminary engineering activities are being taken up for provision of FGD in satge-III as per the directions given by CPCB vide letter dated December 11, 2017
6.	Regular monitoring of air quality (at least two days a week) in and around the power plant shall be carried out and records maintained. Periodic report (on six monthly basis) on air quality shall be submitted to this Ministry.	Ambient Air Quality monitoring for the station for PM_{10}, $PM_{2.5}$, SO_2 and NO_x is being carried out twice a week at 3 locations identified with SPCB through MOEF&CC recognized laboratory and record maintained. Other parameters as per NAAQ standards are being monitored and submitted along with this report.
7.	Recycling and reuse of ash pond effluents shall be undertaken to the extent possible. There shall be no direct discharge into the river Godavari.	The station has AWRS along with treatment system and the ash pond water is treated and reused to the maximum extent. The existing AWRS is being augmented with additional pipeline and pumping system (already contract awarded) for complete reuse of ash pond water.
8.	The proposed study on leaching of heavy metals from the ash pond to ground water will be undertaken early and report furnished to this Ministry. Based on the results of the study, corrective measures if any felt necessary shall be	A geo-hydrological study under the Indo-Dutch collaboration has been completed. The report was submitted to MOEF&CC on 02.06.1997.

	implemented.	
9.	NOC from State Pollution Control Board shall be obtained and furnished.	No Objection Certificate (NOC) was obtained and submitted to MoEF&CC on 23.08.1999.
10.	Dust suppression and dust extraction devices shall be installed in the coal handling areas to ensure that the level of dust is well within the prescribed limits.	Dust Suppression and Extraction System in coal handling areas are provided to ensure that the level of dust is well within the prescribed limits.
11.	Closed circuit cooling with induced draft cooling tower shall be provided.	Closed cycle cooling system with induced draft cooling towers has been provided.
12.	The workers in the high noise areas will be provided with ear protection devices.	The workers in the high noise area are provided with appropriate ear protection devices.
13.	A workable plan for ash Utilization starting with at least 20% in the first year and gradually increasing by 10 during subsequent years so as to achieve 100% Utilization by the end of the ninth year shall be prepared and submitted to this Ministry within six months.	The stage III has been provided with 100% Dry ash extraction system since the inception stage itself. The dry ash is being issued to manufacturers of cement, RMC and brick/blocks. Balance ash of Stage III is being issued to mine stowing and clay brick manufacturers. Revised Ash Utilization Plan submitted to MoEF&CC on 03.08.2000 and the same is being implemented. In compliance to the latest fly ash notification dated 03.11.2009, revised action plan has also been submitted. In FY 2017-18, the station has achieved ash utilization of 100.95. For 100% ash utilization, station has created following facilities. 1. Station has installed Dry Ash Extraction System. Also Rail loading facilities commissioned in unit 4&5 to meet the distance customer's demand. 2. Pond ash is utilized in Mine stowing purpose, ash dyke raising, clay brick units, etc.
14.	In order to conserve water at thermal power station, efforts should be made to utilize the treated water to the maximum extent possible.	1. The treated DM effluent, Coal settling ponds effluent and plant effluent are reused for ash handling. The cooling tower blow down is reused in dust suppression system and as service water. 2. To conserve precious water a closed circuit cooling water system with induced draft cooling towers has been adopted. For further reducing water consumption, cooling water treatment is being carried out by chemical dosing to operate the cooling water system at increased COC.
15.	Liquid effluents shall be treated to conform to the standards prescribed by State/Central Pollution Control Board.	An integrated Effluent Treatment Plant (ETP) cum Ash Water Recirculation System (AWRS) has been provided at the station. All

		effluents from plant area are finally treated and effluent confirming to the standards by SPCB/CPCB are discharged from the plant.
16.	Adequate measures for protection against various hazards such as fire, shall be taken to the satisfaction of the respective authorities concerned.	Extensive Fire detection and protection system are provided to the satisfaction of the respective authorities concerned.
17.	Green belt of adequate width shall be developed all around the power plant by selecting suitable species in consultation with the authorities of State Forest Department.	Green belt in and around the plant and township has been developed.
18.	As the liquid effluents are finally being discharged into river Godavari, a study on bio-magnification of heavy metals in the aquatic life may be taken up and the report submitted to this Ministry.	The study was undertaken through M/s. Shriram Institute of Industrial Research, Delhi and the report has been forwarded to MoEF&CC vide letter dated 16.08.2004.
19.	During ash pond reclamation, the selection of species to be planted may be made very carefully taking into consideration the nature of the soil and the total climatic conditions in consultation with the authorities of the State Forest Department.	A pioneering attempt of growing selected species like *Casuarinas Equisetifolia, Acacia Auriculiformis, Cassia Siamea, Eucalyptus Globules* on the ash directly has already been successfully implemented in the abandoned temporary ash pond of RSTPS (before 1990). In the present ash pond reclamation has not yet started. Shall be complied as and when the ash pond is reclaimed.
20.	Stack data to be furnished within three months.	Data is regularly being furnished through six monthly compliance reports. Continuous emission monitoring system (CEMS) for gaseous emissions also has been installed and being monitored continuously.
21.	Information on change of emission load with ESP field failures may be furnished.	Adequate care has been taken in the ESP design and function to ensure emission within stipulated standards all the times.
22.	Copy of the confirmation regarding coal linkage to be provided.	Coal linkage had been accorded vide letter dated 02.09.1999. A copy of this letter is submitted to MoEF&CC on 03.08.2000.
23.	Only washed coal shall be used for the project. Fuel; analysis of the washed coal so used shall be carried out every month and records maintained. The analysis report shall form part of the six monthly report to be submitted to this Ministry.	Permission has been granted for uses of raw coal vide MoEF&CC letter dated 14.12.1998.
24.	Reduction in fresh water requirement may be examined taking into account the plant as a combined unit by adopting suitable size of the condenser, flow rate and drift.	The closed cooling water system along with dedicated treatment system for CW water enabled the COC increase from 2.0 to 3.5, which has reduced the water requirement. Blow down of CW system is used for

		equipment cooling and service water purpose before joining plant effluent.
25.	Separate funds should be allocated for implementation of environment protection measures along with item wise breakup. These costs should be included as part of the project cost. The funds earmarked for the environmental protection measures should not be diverted for other purposes and year wise expenditure should be reported to this Ministry.	The funds on environmental protection measures along with item – wise break-up is provided in the project cost. The total funds earmarked for environmental protection has not been diverted for other purposes.
26.	Regional office of this Ministry at Bangalore will monitor the implementation of above conditions.	Noted.
27.	The project authorities shall submit to this Ministry a half yearly report on the implementation of the stipulated conditions and environmental safeguards.	Six monthly EC Compliance report for the period October'2017 to March'2018 is submitted herewith.

STATUS OF IMPLEMENTATION OF CONDITIONS STIPULATED IN ENVIRONMENTAL CLEARANCE

NAME OF THE PROJECT: RAMAGUNDAM STPP STAGE-III (1X500MW)
LETTER NO.J.13011/20/94-I AII (T) DT.NOVEMBER 8, 2000

S. NO.	STIPULATIONS	STATUS as on 31.03.2018
1.	All the stipulations made in our environmental clearance letter dated 25th September, 1995 referred to above should be strictly implemented	Status is enclosed separately.
2.	100% fly ash utilization should be ensured by 9th year as per the broad utilization Plan submitted along with NTPC's communication no. CC: ESE: 3100:2000: GEN: 4B dated 3rd August 2000.	The stage III has been provided with 100% Dry ash extraction system since the inception stage itself. The dry ash is being issued to manufacturers of cement, RMC and brick/blocks. Balance ash of Stage III is being issued to mine stowing and clay brick manufacturers. Revised Ash Utilization Plan submitted to MoEF&CC on 03.08.2000 and the same is being implemented. In compliance to latest fly ash notification dated 03.11.2009, revised action plan has also been submitted. In FY 2017-18, the station has achieved ash utilization of 100.95%. For 100% ash utilization, station has created following facilities. Station has installed Dry Ash Extraction System. Rail loading facilities commissioned in unit 4&5 to meet the

		distance customer's demand. Pond ash is utilized for Mine stowing purpose, ash dyke raising, clay brick units, etc.
3.	The findings of the study on Bio-magnification of heavy metals in the aquatic life due to discharge of liquid effluents into Godavari river should be submitted along with the Management Plan within one year.	The study was undertaken through M/s. Shriram Institute of Industrial Research, Delhi and the report has been forwarded to MoEF&CC vide letter dated 16.08.2004.
4.	A copy of the Geo-hydrological study under Indo-Dutch collaboration should be submitted along with the plans for necessary corrective measures to avoid leaching of heavy metals from ash pond area to ground water.	A Geo-hydrological study under the Indo-Dutch collaboration has been completed. The report was submitted to MOEF&CC on 2nd June, 1997. (A detailed study to understand Geology of N2 Ash Pond as recommended in the Indo-Dutch Report has been completed.)
5.	Rs.162.38 crores earmarked for environmental measures should not be diverted for any other activity and provision should be made for additional funds, if required.	The earmarked amount of environmental measures was not diverted for any other activity. Any additional funds required for environmental mitigation measures would be met from miscellaneous fund kept in the Operation & Maintenance fund of the project.

RECOMMENDATIONS GIVEN BY MOEF FOR IMMEDIATE CORRECTIVE ACTIONS

S. No.	RECOMMENDATIONS OF RO, MoEF&CC	COMPLIANCE STATUS AND ACTION PLAN
i.	Condition in EC: Regular monitoring of air quality (at least two days a week) in and around the power plant shall be carried out and records maintained. Periodic report (on six monthly basis) on air quality shall be submitted to this ministry. Certified compliance: Ambient air quality monitoring is being carried out twice in a week by third party at 3 locations identified with SPCB and records are being maintained. However, third party monitored AAQ parameters are not confirmed to the latest NAAQ standards. Further the unit has installed 3 online continuous AAQ monitoring stations which are connected to the server of state PCB. The monitored AAQ data is well within prescribed limits. The monitored data is being submitted along with six monthly compliance report to the MoEF&CC.	Third party AAQ monitoring for the parameters of PM_{10}, $PM_{2.5}$, SO_2, and NOx are being carried out through MOEF&CC recognized labs on weekly twice basis, and data is submitted to MOEF&CC and state PCB. The parameters are conforming to latest NAAQ standards.
ii.	Condition in EC: Recycling and Re-use	Station has installed AWRS for all its units

	of ash pond effluents shall be undertaken to the extent possible. There shall be no direct discharge into river Godavari. Certified compliance: It appears that 70% of ash pond water is being treated and reused for ash handling. However part of ash pond water is being discharged without treatment to the nearby agricultural fields.	where in ash water to the maximum extent is brought back, treated and reused. Also contract awarded for additional line with pumping system for maximizing ash water re-use and work is in progress and expected to be completed by December 2018.
iii.	Certified compliance: Reportedly Ash utilization plan submitted. However PA has not achieved 100% ash utilization. As informed by PA in the year 2014-15 the unit has achieved 64.4% of ash utilization.	During 2017-18, station has utilised 100.95% of ash. For 100% ash utilisation, station is putting all efforts, which has resulted in several new areas for ash utilisation like mine stowing, pond ash use in clay bricks, agriculture, Rajiv Rahadari expansion works, etc. • Dry fly ash from ESP/ Silo to cement and RMC industries • Station is issuing dry fly ash to fly ash brick and block units free of cost in line with MOEF&CC notification. • Ash is issued from ash pond free of cost in line with MOEF&CC notification to SCCL for mine stowing, clay brick units and state Road expansion works. • For 100%AU, rail Loading facility with closed wagons installed and commissioned, in unit 4 and 5 (2x 500MW). Separate Parking yard for ash vehicles & Separate entry gate for ash vehicles facilitated to reduce the cycle time. Customer interaction meetings are being conducted for all existing and potential future customers sector–wise from time to time. Regular meetings are being held with the brick plants (both fly ash and clay bricks) and they are being motivated to use fly ash for brick manufacturing. 5 number of ash brick plants are being operated by us for in-house consumption and requirement from outside. • Also SCCL has agreed to give their Medipalli OCP for ash filling after abandoning the same. Studies are in progress w.r.t hydrogeology and Biotic.
iv.	Certified compliance: An integrated effluent treatment cum ash water recirculation system (AWRS) has been provided. All effluents from plant area are finally treated and treated effluent confirmed to the discharge standards.	Sufficient care is taken during design and O&M that effluent parameters are well within limits during the maintenance of clarifier as two clarifiers are available. The effluent parameters are monitored daily basis. Started monitoring of ETP inlet and

	However, during the visit inadequate treatment of effluent was observed due to maintenance of clarifier. Further the parameters monitored for the inlet and outlet of the ETP are not in uniform manner and it needs to be analysed on daily basis. Domestic effluents are being treated in the STP.	outlet parameters also on daily basis.
v.	Certified compliance: Presently ash pond reclamation has not yet started, since it is under use. PA assured to comply with the condition.	Shall be complied.
vi.	Certified compliance: Stack emissions are being monitored by MoEF&CC approved third party and data is being furnished along with six monthly compliance reports. Further continuous on-line stack monitoring has been installed and connected to the server of state PCB. However in the continuous stack monitoring system, project authority needs to monitor gaseous emission also apart from SPM	Continuous Emission Monitoring System for gases also installed in all the units for SPM, SO_2 and NOx and data connected to SPCB and CPCB.
vii.	Certified compliance: PA informed they have spent more than the earmarked amount. However no separate account is being maintained under environmental protection measures.	Capital nature expenditure of environment is already captured separately.
viii.	Certified compliance: PA submitted hard copy of six monthly compliance report to the MoEF&CC. Soft copy of the six monthly compliance report has not been submitted to RO of the MoEF &CC regularly. Six monthly compliance report needs to be submitted by Project Authority both in hard and soft copies along with monitored data to the Regional office of MoEF&CC. The same needs to be uploaded on the website of the company and periodically	Soft copy and hard copy both are being submitted
ix.	Certified compliance: Treated water is partly utilized for ash handling/ash slurry pumping and partly discharged in to River Goadavari. It appears that unit do not have dedicated pipeline till the discharge point of the river rather the treated water of the unit getting mixed up with domestic waste water drainages before confluence into the river Godavari. Necessary corrective action needs to be taken to avoid conflict in near future regarding treatment of effluents by M/s.NTPC.	Technical and logistical feasibility under examination.

TABLE-1: AMBIENT AIR QUALITY MONITORING DATA FOR OCTOBER '2017 TO MARCH '2018

Month/Date	Location	Concentration (µg/m^3)			
		PM-10	PM-2.5	SO2	NO_x
OCTOBER '2017					
02.10.2017	Balancing Reservoir	**62**	**24**	**14**	**15**
	Ramagundam Pump House	71	28	15	13
	Guest House	61	27	12	14
03.10.2017	Balancing Reservoir	75	32	**16**	**14**
	Ramagundam Pump House	73	24	13	12
	Guest House	58	23	14	16
09.10.2017	Balancing Reservoir	66	26	15	13
	Ramagundam Pump House	75	25	17	15
	Guest House	56	24	15	14
10.10.2017	Balancing Reservoir	73	33	17	16
	Ramagundam Pump House	69	23	16	14
	Guest House	63	29	17	19
16.10.2017	Balancing Reservoir	70	29	15	14
	Ramagundam Pump House	76	16	15	12
	Guest House	59	25	15	17
17.10.2017	Balancing Reservoir	72	27	16	15
	Ramagundam Pump House	72	29	18	16
	Guest House	57	20	13	15
23.10.2017	Balancing Reservoir	67	28	14	12
	Ramagundam Pump House	67	27	16	14
	Guest House	62	26	14	18
24.10.2017	Balancing Reservoir	74	30	19	17
	Ramagundam Pump House	74	22	19	15
	Guest House	60	23	12	13
30.10.2017	Balancing Reservoir	71	32	18	14
	Ramagundam Pump House	66	21	17	16
	Guest House	54	21	14	16
31.10.2017	Balancing Reservoir	69	34	17	15
	Ramagundam Pump House	68	24	16	13
	Guest House	57	24	13	15
NOVEMBER '17					
06.11.2017	Balancing Reservoir	64	26	15	17
	Ramagundam Pump House	69	27	14	12
	Guest House	59	24	13	16
07.11.2017	Balancing Reservoir	73	31	17	15
	Ramagundam Pump House	70	22	12	11
	Guest House	56	22	12	14
13.11.2017	Balancing Reservoir	68	24	14	12
	Ramagundam Pump House	73	26	16	14
	Guest House	59	25	14	15
14.11.2017	Balancing Reservoir	70	32	16	14
	Ramagundam Pump House	67	24	17	15
	Guest House	60	27	16	18
20.11.2017	Balancing Reservoir	72	27	13	11
	Ramagundam Pump House	74	28	14	13
	Guest House	58	23	14	16
21.11.2017	Balancing Reservoir	76	25	15	14
	Ramagundam Pump House	70	31	19	17
	Guest House	55	19	15	17
27.11.2017	Balancing Reservoir	64	26	12	10
	Ramagundam Pump House	69	29	17	15
	Guest House	65	28	13	15
28.11.2017	Balancing Reservoir	71	29	17	15
	Ramagundam Pump House	71	24	18	16
	Guest House	63	26	12	14

TABLE-1: AMBIENT AIR QUALITY MONITORING DATA FOR OCTOBER ' 2017 TO MARCH '2018

Month/Date	Location	Concentration (µg/m^3)			
		PM-10	PM-2.5	SO2	NO_X
DECEMBER '2017					
04.12.2017	Balancing Reservoir	61	24	16	18
	Ramagundam Pump House	65	26	15	13
	Guest House	57	21	12	14
05.12.2017	Balancing Reservoir	70	28	15	17
	Ramagundam Pump House	72	24	13	12
	Guest House	52	24	13	15
11.12.2017	Balancing Reservoir	65	22	13	15
	Ramagundam Pump House	70	27	14	11
	Guest House	56	26	15	17
12.12.2017	Balancing Reservoir	72	30	14	16
	Ramagundam Pump House	69	25	16	14
	Guest House	62	24	17	19
18.12.2017	Balancing Reservoir	69	25	12	14
	Ramagundam Pump House	71	26	13	12
	Guest House	57	25	16	17
19.12.2017	Balancing Reservoir	73	27	13	15
	Ramagundam Pump House	68	29	17	15
	Guest House	58	18	17	16
25.12.2017	Balancing Reservoir	66	29	11	13
	Ramagundam Pump House	67	27	16	14
	Guest House	63	26	14	17
26.12.2017	Balancing Reservoir	67	27	15	17
	Ramagundam Pump House	69	26	17	15
	Guest House	66	27	15	16
JANUARY '2018					
01.01.2018	Balancing Reservoir	62	23	14	16
	Ramagundam Pump House	62	24	14	12
	Guest House	58	23	13	15
02.01.2018	Balancing Reservoir	68	26	16	18
	Ramagundam Pump House	66	23	15	13
	Guest House	55	26	14	17
08.01.2018	Balancing Reservoir	61	25	15	17
	Ramagundam Pump House	78	25	13	12
	Guest House	57	27	13	16
09.01.2018	Balancing Reservoir	69	27	15	18
	Ramagundam Pump House	67	21	17	15
	Guest House	61	22	15	18
15.01.2018	Balancing Reservoir	63	22	13	15
	Ramagundam Pump House	69	24	14	11
	Guest House	59	23	14	16
16.01.2018	Balancing Reservoir	71	26	14	18
	Ramagundam Pump House	72	28	16	12
	Guest House	57	25	15	18
22.01.2018	Balancing Reservoir	68	28	12	16
	Ramagundam Pump House	66	24	15	11
	Guest House	56	24	13	15
23.01.2018	Balancing Reservoir	65	24	13	15
	Ramagundam Pump House	71	22	16	13
	Guest House	62	22	14	17
29.01.2018	Balancing Reservoir	67	23	15	17
	Ramagundam Pump House	63	24	15	12
	Guest House	55	21	13	16
30.01.2018	Balancing Reservoir	69	25	14	18
	Ramagundam Pump House	74	26	17	15
	Guest House	53	20	13	14

TABLE-1: AMBIENT AIR QUALITY MONITORING DATA FOR OCTOBER ' 2017 TO MARCH '2018

Month/Date	Location	Concentration ($\mu g/m^3$)			
		PM-10	PM-2.5	SO2	NO_x
FEBRUARY '2018					
05.02.2018	Balancing Reservoir	64	25	15	17
	Ramagundam Pump House	65	26	16	14
	Guest House	62	25	14	16
06.02.2018	Balancing Reservoir	71	27	18	19
	Ramagundam Pump House	68	25	17	15
	Guest House	57	27	15	18
12.02.2018	Balancing Reservoir	63	27	17	20
	Ramagundam Pump House	81	27	15	14
	Guest House	59	28	14	17
13.02.2018	Balancing Reservoir	72	28	16	20
	Ramagundam Pump House	69	23	19	16
	Guest House	64	23	16	19
19.02.2018	Balancing Reservoir	65	24	15	17
	Ramagundam Pump House	71	26	16	13
	Guest House	61	24	15	17
20.02.2018	Balancing Reservoir	75	28	16	19
	Ramagundam Pump House	74	30	18	14
	Guest House	59	27	17	20
24.02.2018	Balancing Reservoir	70	29	14	17
	Ramagundam Pump House	68	25	16	13
	Guest House	58	25	14	16
27.02.2017	Balancing Reservoir	67	26	15	16
	Ramagundam Pump House	75	24	18	15
	Guest House	65	24	15	19
MARCH '2018					
05.03.2018	Balancing Reservoir	67	27	17	19
	Ramagundam Pump House	69	28	18	16
	Guest House	66	27	16	18
06.03.2018	Balancing Reservoir	76	29	20	21
	Ramagundam Pump House	72	27	19	17
	Guest House	61	29	17	19
12.03.2018	Balancing Reservoir	68	28	18	21
	Ramagundam Pump House	84	29	17	16
	Guest House	63	30	16	18
13.03.2018	Balancing Reservoir	75	30	19	23
	Ramagundam Pump House	71	25	21	18
	Guest House	67	24	18	21
19.03.2018	Balancing Reservoir	67	26	17	19
	Ramagundam Pump House	74	28	18	16
	Guest House	64	25	17	19
20.03.2018	Balancing Reservoir	79	31	18	21
	Ramagundam Pump House	77	33	20	16
	Guest House	68	29	18	22
24.03.2018	Balancing Reservoir	74	32	16	19
	Ramagundam Pump House	70	27	18	15
	Guest House	62	28	16	18
27.03.2018	Balancing Reservoir	70	28	17	19
	Ramagundam Pump House	78	26	20	17
	Guest House	67	26	17	21

TABLE-2: OTHER PARAMETERS
FROM OCTOBER ' 2017 TO MARCH '2018

	O3	Pb	CO	NH3	AS	Ni	C6H6	B(a)P
	ng/m3	(µg/m3)	ng/m3	(µg/m3	ng/m3	ng/m3	(µg/m3)	ng/m3
Oct-17								
Balancing Reservoir	11.9	<0.01	0.37	<20	<1	<1	<0.01	<0.01
Ramagundam Pump House	12.8	<0.01	0.42	<20	<1	<1	<0.01	<0.01
Guest House	15.4	<0.01	0.39	<20	<1	<1	<0.01	<0.01
Nov-17								
Balancing Reservoir	12.6	<0.01	0.41	<20	<1	<1	<0.01	<0.01
Ramagundam Pump House	14.1	<0.01	0.46	<20	<1	<1	<0.01	<0.01
Guest House	13.9	<0.01	0.36	<20	<1	<1	<0.01	<0.01
Dec-17								
Balancing Reservoir	13.9	<0.01	0.37	<20	<1	<1	<0.01	<0.01
Ramagundam Pump House	15.7	<0.01	0.49	<20	<1	<1	<0.01	<0.01
Guest House	12.4	<0.01	0.33	<20	<1	<1	<0.01	<0.01
Jan-18								
Balancing Reservoir	13.9	<0.01	0.37	<20	<1	<1	<0.01	<0.01
Ramagundam Pump House	15.7	<0.01	0.49	<20	<1	<1	<0.01	<0.01
Guest House	12.4	<0.01	0.33	<20	<1	<1	<0.01	<0.01
Feb-18								
Balancing Reservoir	13.6	<0.01	0.31	<20	<1	<1	<0.01	<0.01
Ramagundam Pump House	14.1	<0.01	0.38	<20	<1	<1	<0.01	<0.01
Guest House	15.1	<0.01	0.39	<20	<1	<1	<0.01	<0.01
Mar-18								
Balancing Reservoir	14.4	<0.01	0.38	<20	<1	<1	<0.01	<0.01
Ramagundam Pump House	16.2	<0.001	0.44	<20	<1	<1	<0.01	<0.01
Guest House	14.09	<0.01	0.42	<20	<1	<1	<0.01	<0.01

TABLE-3: DUST MONITORING (PM- 10) DATA FOR OCTOBER ' 2017 TO MARCH '2018

DATE	LOCATION	Dust Concentration (PM 10) in $\mu g/m^3$
OCTOBER '2017		
10.10.2017	ESP Stage - I Area	93
11.10.2017	DAETP Stage -I Area	90
12.10.2017	BURNER FLOOR Stage - I	92
13.10.2017	BRICK PLANT	75
16.10.2017	ASH POND AREA	70
17.10.2017	MILL AREA STAGE - I	90
NOVEMBER '2017		
07.11.2017	ESP Stage - I Area	92
08.11.2017	DAETP Stage -I Area	86
09.11.2017	BURNER FLOOR Stage - I	88
10.11.2017	BRICK PLANT	70
16.11.2017	ASH POND AREA	76
17.11.2017	MILL AREA STAGE - I	90
DECEMBER'2017		
07.12.2017	ESP Stage - I Area	94
08.12.2017	DAETP Stage -I	90
09.12.2017	BURNER FLOOR Stage - II	92
11.12.2017	BRICK PLANT	68
12.12.2017	ASH POND AREA	72
13.12.2017	MILL AREA STAGE - I	88
JANUARY'2018		
04.01.2018	ESP Stage –II area	95
05.01.2018	DAETP Stage-II	91
06.01.2018	BURNER FLOOR Stage-I	93
10.01.2018	Bricks Plant	70
11.01.2018	Ash Pond Area	70
12.01.2018	Mill Area Stage. II	92
FEBRUARY'2018		
05.02.2017	ESP Stage –I area	96
06.02.2017	DAETP Stage-I	92
07.02.2017	BURNER FLOOR Stage-II	94
08.02.2017	Bricks Plant	68
10.02.2017	Ash Pond Area	72
12.02.2017	Mill Area Stage-I	93
MARCH '2018		
05.03.2018	ESP Stage –II area	94
06.03.2018	DAETP Stage-II	93
07.03.2018	BURNER FLOOR Stage-I	95
10.03.2018	Bricks Plant	72
12.03.2018	Ash Pond Area	65
13.03.2018	Mill Area Stage-II	92

TABLE-4: 3rd PARTY STACK MONITORING DATA FOR OCTOBER - 2017 TO MARCH - 2018

DATE	SPM (mg/Nm^3)						
	Unit -1	Unit -2	Unit -3	Unit -4	Unit -5	Unit -6	Unit -7
OCTOBER' 17							
21.10.2017	76	70	74				
23.10.2017				86	83	88	62
NOVEMBER'17							
23.11.2017	74	72	78				
24.11.2017				84	80	90	65
DECEMBER'17							
27.12.2017				SHUT DOWN	79	92	67
28.12.2017	75	70	76				
JANUARY'18							
30.01.2018	85	78	82	SHUT DOWN			
31.01.2018					78	94	71
FEBRUARY'18							
27.02.2018	87	81	85	SHUT DOWN			
28.02.2018					80	96	74
MARCH'18							
26.03.2018	92	86	90	SHUT DOWN			
27.03.2018					84	102	78