SIX-MONTHLY
ENVIRONMENTAL COMPLIANCE REPORT

OCTOBER-2016 to MARCH-2017

Environmental Clearance No.: J–13011/1/2006.IA–II (T) dated: 22.06.2006

KSK
Power from knowledge

SITAPURAM POWER LIMITED

Dondapadu (V), Mallareddygudem (M), Suryapet (Dist.), TELANGANA - 508246

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Point wise compliance for the conditions specified in Schedule – B & C of the Consent Order No. TSPCB/RCP/NLG/11941/HO/CFO/2014-299 dated 03.12.2014

SCHEDULE-B

S.No.	Conditions	Compliance
1.	The industry shall not increase the capacity beyond the permitted capacity mentioned in this order without obtaining CFE & CFO of the Board.	Agreed
2.	The industry shall treat the trade effluents in the ETP so as to conform to the limiting standards stipulated under Environment (Protection) Rules, 1986 for Thermal Power Plants.	Complied
3.	The industry shall take steps to reduce water consumption to the extent possible and consumption shall NOT exceed 6000 KLD.	Complying
4.	The industry shall file the Water Cess returns in Form-I as required under section(5) of Water (Prevention and Control of Pollution) Cess Act,1977 on or before the 5^{th} of every calendar month, showing the quantity of water consumed in the previous month along with water meter readings. The industry shall remit water cess as per the assessment orders as and when issued by Board. The industry shall provide separate water meters with necessary pipeline for assessing the quantity of water used for each purposes as per Cess Form-I.	Complying
5.	The emissions shall not contain constituents in excess of the prescribed limits of 100 mg/Nm^3 for Particulate Matter.	Complying
6.	The industry shall use coal with sulfur content 0.5% or less as stipulated in the CFE. The industry shall regularly monitor the sulfur concentration in the feed coal and the records maintained shall be kept assessable to for the inspecting officials of the Board.	Noted and Complying
7.	The industry shall ensure control of fugitive emissions by water sprinkling and black topping of internal roads.	Water sprinkling system is installed at areas like Coal Handling plant, Coal Storage yard and planning near ash handling area also.
8.	The industry shall install and operate online emission monitoring system to the power plant in compliance with the directions issued by CPCB vide Lr. No. B-29016/04/06/PCI-1/5401, dt:05.02.2014 for monitoring PM, NO_x, and SO_2 and connect the same to the websites of State PCB & CPCB by 31.03.2015	Online emission monitoring system is connected to State PCB from 26.06.2017 and connectivity to CPCB is underway.
9.	The industry shall install and operate online effluent monitoring system to the power plant in compliance with the directions issued by CPCB vide Lr. No. B-29016/04/06/PCI-1/5401, dt:05.02.2014 for monitoring pH, BOD,COD, & TSS and connect the same to the websites of State PCB & CPCB by 31.03.2015	Online effluent monitoring system is connected to CPCB from July.2015 and connectivity to State PCB is from 26.06.2017.
10.	The industry shall comply with ambient air quality standards of 1. PM_{10} (Particulate Matter size < 10 µm) – 100 µg/m^3; 2. $PM_{2.5}$ (Particulate Matter size < 2.5 µm) – 60 µg/m^3; 3. SO_2 – 80 µg/m^3; 4. NO_x – 80 µg/m^3 outside the factory premises at the periphery of the industry.	Complying

	Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB notification No. B-29016/20/90/PCI-I, dated 18.11.2009. ***Noise Level*** Day Time: (6AM to 10 PM) – 75 dB(A) Night Time: (10 PM to 6 AM) – 70 dB(A)	
11.	The industry shall comply with emission limits for DG sets upto 800KW as per the Notification G.S.R. 520 (E), dated 01.07.2003 under the Environment (Protection) Amendment Rules, 2003 and G.S.R. 448 (E), dated 12.07.2004 under the Environment (Protection) Second Amendment Rules, 2004. In case of DG sets more than 800 KW shall comply with emission limits as per the Notification G.S.R. 489 (E), dated 09.07.2002 at serial no. 96, under the Environment (Protection) Act, 1986.	Complied
12.	The industry shall store fly ash in closed silos only. The industry shall dispose the fly ash for manufacture of PPC cement and shall comply with the fly ash notification.	Complying
13.	The industry shall store the coal in the closed shed only.	Complying
14.	The industry shall continuously operate the water sprinkling system in the coal storage and handling areas.	Complying
15.	The industry shall continuously operate the mechanical water sprinklers to control the fugitive dust emissions.	Complying
16.	The industry shall install and maintain water meters for assessing the water consumption and digital flow meters for quantifying wastewater generation and report the compliance to RO Nalgonda.	Complying
17.	The sludge from the clarifier after dewatering shall be disposed off in landfill in environmentally safe manner.	Noted and Complying
18.	The industry shall operate the interlocking system provided between air pollution control equipment and boilers.	Complied
19.	The industry shall provide green belt as per the stipulations in EC and CFE. The industry shall develop thick green belt in the periphery of the compound wall and in the vacant spaces of the unit.	Complied and whereever vacant land is there, plantation is done.
20.	Under no circumstances, the hazardous waste shall be burnt in the boiler.	Noted. All hazardous waste is stored in drums and disposed to authorized recyclers.
21.	The industry shall maintain the following records and the same shall be made available to the Board officials during the inspection. a) Quantity of effluents generated b) Log books for pollution control systems c) Daily solid waste generated and disposed	Noted and being maintained.
22.	The industry shall maintain the compliance of CFE order dt: 27.11.2005 and EC order dt. 22.06.2006.	Complied
23.	The applicant shall submit Environmental statement in Form V before 30th September every year as per Rule No. 14 of Environment (Protection) Rules, 1986 & amendments.	Noted and complied. Environmental Statement for the FY 2015-16 submitted vide letter No: TSPCB,NLGD /MVKR/ 1030122/ 404 dated: 13.10.2016.
24.	The industry shall comply with the task force directions issued by the Board from time to time.	Noted and agreed

25.	All the rules and regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991, shall be followed.	
26.	The conditions stipulated in this order are without prejudice to rights and contentions of this Board in the Hon'ble court of Law.	

SCHEDULE-C

S.No.	Conditions	Compliance
1.	The industry shall give top priority for waste minimization and cleaner production practices.	Noted & Agreed
2.	The industry shall not store hazardous waste for more than 90 days as per the Hazardous Wastes (Management, Handling and Transboundry Movement) Rules, 2008 and amendments thereof.	Noted & Agreed
3.	The industry shall store used/waste oil and used lead acid batteries in a secured way in their premises till its disposal.	Noted & Agreed
4.	The industry shall not dispose waste oils to the traders and the same shall be disposed to the authorized re-processors / recyclers.	Disposed to the authorized re-processors / recyclers only.
5.	The industry shall dispose used lead acid batteries to the manufacturers / dealers.	Sealed maintenance-free batteries are used and the discarded/aged batteries are returned to dealer.
6.	The industry shall take necessary practical steps for prevention of oil spillages and carryover of oil from the premises.	All steps are taken to prevent carryover of oil spill.
7.	The industry shall maintain 6 copy manifest system for transportation of waste generated and a copy shall be submitted to Board Office and concerned Regional Office.	Maintaining6 copy manifest for transportation of waste generated.
8.	The industry shall maintain good housekeeping & maintain proper house records for Hazardous Wastes stated in Authorisation.	Noted
9.	The industry shall maintain proper records for Hazardous Wastes stated in Authorisation in FORM-3 i.e., quantity of incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in FORM-4 as per 22 (2) of the Hazardous Wastes (Management, Handling and Transboundry Movement) Rules, 2008 and amendments thereof.	Noted
10.	The industry shall submit the condition wise compliance report of the conditions stipulated in Schedule B & C of this Order on half yearly basis to Board Office, Hyderabad and concerned Regional Office.	Agreed
11.	The industry shall dispose-off e-waste to the authorized recyclers only.	Noted.

Point wise compliance for the conditions specified in Environmental Clearance issued by MoEF - Letter No.: J–13011/1/2006.IA–II(T) dated: 22.06.2006

S. No.	Condition	Compliance
1.	The conditions stipulated by Andhra Pradesh Pollution Control Board vide their letter no.: 182/PCB/CFE/HO/RO-NLG/2005 Dated: 27.11.2005 shall be implemented.	Implemented
2.	Land required for the project shall be restricted to 12.00 Ha, which is in possession of project authorities. No additional land shall be acquired for the project.	Complied. No additional land will be acquired for the project. The total plant area is only 10.52 Ha which is less than the approved land.
3.	A bi-flue stack of 80 m height with exit velocity of not less than 15 m/sec shall be provided with continuous online monitoring system. The data collected shall be analyzed and submitted regularly to the Ministry.	A combined stack of 96m height exist and emission monitoring is carried out monthly once to check notified emission levels by MoEF approved and NABL accreditation Environmental Laboratory.
4.	Electrostatic Precipitator (ESP's) with 99.9% efficiency shall be installed to limit particulate emission to 100 mg/Nm^3. The stack shall be fitted with inter locking system to shut down the plant in the event of non-functioning of ESP's.	Complied. ESPs are working with 99.9% efficiency and the particulate emission from the stack is attained <100 mg/Nm^3 as specified in CFO. Each ESP has 4 fields and out of 4 field, one is redundant. If any of the field trips, the redundant field is actuated.
5.	Dust extraction and suppression system and water sprinkling shall be provided for controlling fugitive dust during transportation, in coal storage area and other vulnerable areas of the plant.	Complied. Dust Extraction system for belt conveyors of coal and ash handling silos are provided with bag filters for control of dust emissions during conveying. Water sprinkling arrangement is provided to suppress the fly ash emissions during ash loading into vehicles and on road tops. Refer **Annexure-I**
6.	Water requirement of 6000 m^3/day shall be met from the Krishna river. No ground water shall be extracted for the power plant at any stage.	Complied. Total water requirement is met from Krishna river and ground water is not extracted for the plant.
7.	Closed cycle system of cooling with cooling towers shall be provided. COC of at least 5 shall be adopted.	Closed cycle system of cooling with cooling towers is present. COC of nearing 5 is maintained.
8.	The treated effluents having TDS within 1950 mg/L shall be used for dust suppression and greenbelt development by the cement plant of M/s. Shri Vishnu Cement Ltd. There shall be no wastewater discharge outside the plant boundary.	The RO reject, back wash UF, blow down water from cooling tower and boiler collects in guard pond meeting the permissible limits as per CFO. The wastewater is pumped to M/s. ZCL and part of it is used for greenbelt development in our plant premises also.

S. No.	Condition	Compliance
9.	Rainwater harvesting shall be adopted in consultation with Central Ground Water Authority/Board and details furnished to this ministry within a period of three months from the date of clearance.	One RWH system is established of size 8m×3m×3m near the main gate connected to storm water drain. Refer Annexure-I.
10.	Noise levels shall be limited to 75 dB(A) and regular monitoring of equipments shall be undertaken. For people working in the high noise area, protective devices such as earplugs etc. shall be provided.	High noise generating area is TG area which is provided with acoustic enclosure Also DG set of 380 KVA is provided with acoustic enclosure All necessary measures have been taken to limit the noise levels to 75 dB(A). However, people working in high noise areas are provided with ear plugs. It is monitored by the safety and Env. Dept. to implement the same.
11.	Dry ash collection system and pneumatic conveying system of dry ash through closed pipeline shall be provided. Transportation of ash to cement plants and coal also, if by road shall be in covered trucks/ bulkers. 100% ash utilization shall be ensured.	Complied. The fly ash and bottom ash generated is pneumatically conveyed in silos and transported in bulkers to M/s. Zuari Cements Limited for 100% utilization.
12.	On site Disaster management plan shall be prepared and implemented. Regular mock drill shall be conducted and training programmes for the employees to handle hazardous chemicals and waste and to deal with the emergency shall be conducted. Safety alarms shall be installed at strategic points including main gate, assembly points, first aid centre, etc.	On-site Emergency Plan is prepared and implemented at plant.
13.	A greenbelt of 25 m width shall be developed around the plant boundary with tree density of around 2500 trees per ha. The area under green belt shall be one-third of the total area.	Green belt is developed in and around the plant boundary as per norms of MoEF, CPCB/TSPCB. The total area covered under greenbelt is around 9 acres (3.50 ha) and further greenbelt development is planned.
14.	First Aid and sanitation arrangements shall be made available for the truck drivers and temporary staff engaged in the plant.	First aid & Sanitation arrangements provided. Refer Annexure-I
15.	Copies of the coal linkage and stack height clearance from Airport Authority of India shall be submitted within 30 days from the issue of this letter.	Coal linkage agreement .i.e, Fuel Supply agreement is upto 31st March 2017 Stack height clearance from Airport Authority of India obtained vide letter No.: AAI/20012/1165/2005-ARI (NOC) dated 30.12.2005. Refer Annexure – II
16.	Regular monitoring of Air and water quality shall be carried out in and around the power plant and records shall be maintained. The monitoring stations shall be decided with State Pollution Control Board. Six monthly monitoring reports shall be submitted to this Ministry and its Regional Office at Bangalore.	Regular monitoring of Air & Water Quality is monitored at 3 locations i.e., 2 nearby villages and one in plant by authorized laboratory and records maintained. Six monthly reports are submitted to authorities on regular basis and records maintained.

17.	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	A separate Environmental Dept. is in place towards implementation of environmental safe guards and comply the stipulations of MoE&F and TSPCB.
18.	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry, its Regional Office, CPCB and SPCB.	Being complied. Previous 6-Monthly Compliance Report April, 2016 – September, 2016 was submitted with Ref No. MOEF, CHN/ MVKR/1030122/417 dated 23.10.2016
19.	Regional Office of the Ministry of Environment & Forests located at Bangalore will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report, Environment Management Plan and other information submitted to MoEF shallbe forwarded to the Regional Office for their use during monitoring.	A copy of Environmental Impact Assessment / Environment Management Plan including Risk Assessment Report along with Environmental application and Environmental appraisal form sent to Regional Office, Bangalore vide ref. no.: MoEF, BANG/DVBR/490 Dated: 04.10.2006. Refer Annexure – III
20.	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure shall be reported to the Ministry.	Separate budget is allocated for environmental protection and the amount spent is shown in environmental Statement.
21.	Full cooperation shall be extended to the Scientists/Officers from the Ministry/Regional Office of the Ministry at Bangalore/the CPCB/the SPCB who would be monitoring the compliance of Environmental status.	Noted and agreed
22.	The project proponent shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned, informing that the project has been accorded environmental clearance and copies of the clearance letter are available with the State Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forest at http://envfor.nic.in	The accorded environmental clearance was published in 2 local newspaper and copies of the clearance letter are available with SPCB and in the website of the MoE&F. Refer Annexure - IV

ENVIRONMENTAL DATA ANALYSIS

Ambient Air Quality parameters

The ambient air quality with respect to the study zone of 10 km radius around the existing Power plant forms the baseline information. All the sampling locations fall within 10 km radial distance from the existing Power plant.

To assess the effect of power plant activities on the air, the following 12 parameters are considered for analysis

1. Particulate Matter (PM_{10}) – size <10 µm or PM_{10} µg/m^3
2. Particulate Matter ($PM_{2.5}$) – size <2.5 µm or $PM_{2.5}$ µg/m^3
3. Sulfur Dioxide (SO_2)
4. Oxides of Nitrogen (NO_x)
5. Ozone (O_3)
6. Ammonia (NH_3)
7. Lead (Pb)
8. Arsenic (As)
9. Nickel (Ni)
10. Carbon Monoxide (CO)
11. Benzene (C_6H_6)
12. Benzo(α)Pyrene (BαP)

The results of monitoring carried out for study period **(OCTOBER, 2016 – MARCH, 2017)** are presented. The details of the sampling locations with respect to the Power Plant are given below in the table.

AMBIENT AIR QUALITY SAMPLING LOCATIONS

S Code	Station	Height (m)	Zone
AAQ-1	Onsite	4.0	Industrial
AAQ-2	Dondapadu Village	4.0	Residential
AAQ-3	Ramapuram Village	4.0	

SUMMARY OF AMBIENT AIR QUALITY DURING OCTOBER-2016 TO MARCH-2017

TWA concentration in Ambient Air	PM_{10}		$PM_{2.5}$		SO_2		NO_2		O_3		CO		Ni		Pb	
	100 µg/m³		*60 µg/m³*		*80 µg/m³*		*80 µg/m³*		*100 µg/m³*		*2000 µg/m³*		*20 ng/m³*		*0.5 µg/m³*	
Location	*Max.*	*Min.*	*Max.*	*Min.*	*Max.*	*Min.*	*Max.*	*Min.*	*Max.*	*Min.*	*Max.*	*Min.*	*Max.*	*Min.*	*Max.*	*Min.*
In plant	66.30	59.60	26.70	21.60	20.20	14.60	23.20	16.60	10.60	6.90	361	309	0.90	0.20	0.009	0.004
Dondapadu (V)	62.40	54.30	23.20	18.20	15.10	11.50	15.90	13.20	9.60	7.60	331	288	BDL	BDL	BDL	BDL
Ramapuram (V)	61.20	50.90	22.10	17.50	14.60	12.20	15.60	12.40	10.10	7.20	339	289	BDL	BDL	BDL	BDL

All parameters are taken on Time Weighted Average for 24 hours except O_3 and CO which are for 8 hours (As per NAAQS - No.B-29016/20/90/PCI-L dated 18.11.2009.)

	PM_{10}	$PM_{2.5}$	SO_2	NO_2	O_3	CO	Ni	Pb	As	C_6H_6	BaP	NH_3
ONSITE												
Ar. Mean	63.87	24.14	17.57	19.69	8.98	334.17	0.62	0.006	BDL	BDL	BDL	BDL
50th Percentile	62.65	23.15	18.75	20.45	9.40	333.00	0.65	0.006	BDL	BDL	BDL	BDL
98th Percentile	66.30	25.98	19.75	22.48	10.24	358.30	0.90	0.009	BDL	BDL	BDL	BDL
DONDAPADU VILLAGE												
Ar. Mean	60.01	20.53	13.59	14.78	8.65	317.23	BDL	BDL	BDL	BDL	BDL	BDL
50th Percentile	58.85	18.80	13.15	14.15	8.20	314.50	BDL	BDL	BDL	BDL	BDL	BDL
98th Percentile	62.29	23.19	15.10	15.90	9.30	328.00	BDL	BDL	BDL	BDL	BDL	BDL
RAMAPURAM VILLAGE												
Ar. Mean	57.04	18.95	13.31	14.07	8.33	312.42	BDL	BDL	BDL	BDL	BDL	BDL
50th Percentile	54.95	17.80	12.80	13.15	8.00	308.50	BDL	BDL	BDL	BDL	BDL	BDL
98th Percentile	60.50	21.19	14.59	15.60	9.40	331.92	BDL	BDL	BDL	BDL	BDL	BDL

AMBIENT AIR QUALITY (ONSITE)

Date of Monitoring	PM_{10}	$PM_{2.5}$	SO_2	NO_2	O_3*	CO*	Ni	Pb	C_6H_6	B(α)P	As	NH_3
TWA concentration in Ambient Air	*100 µg/m³*	*60 µg/m³*	*80 µg/m³*	*80 µg/m³*	*100 µg/m³*	*2000 µg/m³*	*20 ng/m³*	*1 µg/m³*	*5 µg/m³*	*1 µg/m³*	*6 ng/m³*	*400 µg/m³*
October-2016												
03.10.2016	**Plant under shutdown from 21.09.2016 to 22.10.2016**								<0.001	<1.0	<0.001	<20
07.10.2016									<0.001	<1.0	<0.001	<20
10.10.2016									<0.001	<1.0	<0.001	<20
14.10.2016									<0.001	<1.0	<0.001	<20
17.10.2016									<0.001	<1.0	<0.001	<20
21.10.2016									<0.001	<1.0	<0.001	<20
24.10.2016	65.8	25.2	20.2	23.2	9.4	342	0.8	0.009	<0.001	<1.0	<0.001	<20
28.10.2016	63.4	24.3	19.6	21.3	9.2	338	0.9	0.008	<0.001	<1.0	<0.001	<20
31.10.2016	62.6	23.8	18.5	20.4	9.3	332	0.7	0.007	<0.001	<1.0	<0.001	<20
November-2016												
04.11.2016	62.8	23.2	18.7	20.5	9.1	335	0.6	0.006	<0.001	<1.0	<0.001	<20
07.11.2016	62.5	23.8	18.8	20.8	9.3	338	0.7	0.005	<0.001	<1.0	<0.001	<20
11.11.2016	63.2	24.2	18.6	20.4	9.5	342	0.8	0.006	<0.001	<1.0	<0.001	<20
14.11.2016	63.8	22.5	18.2	20.2	9.4	336	0.6	0.004	<0.001	<1.0	<0.001	<20
18.11.2016	62.1	22.9	19.2	21.5	9.3	331	0.5	0.005	<0.001	<1.0	<0.001	<20
21.11.2016	62.4	23.1	19.3	21.3	9.5	328	0.6	0.007	<0.001	<1.0	<0.001	<20
25.11.2016	62.5	23.8	18.8	20.4	9.6	325	0.7	0.006	<0.001	<1.0	<0.001	<20
28.11.2016	63.3	22.7	18.5	20.2	9.4	331	0.8	0.007	<0.001	<1.0	<0.001	<20
December-2016												
02.12.2016	64.1	24.5	17.5	19.5	8.7	315	0.4	0.005	<0.001	<1.0	<0.001	<20
05.12.2016	61.3	22.9	16.9	21.1	10.2	341	0.5	0.005	<0.001	<1.0	<0.001	<20
09.12.2016	62.3	23.7	16.8	19.8	6.9	338	0.6	0.007	<0.001	<1.0	<0.001	<20
12.12.2016	63.0	23.1	17.4	21.1	7.1	319	0.5	0.005	<0.001	<1.0	<0.001	<20
16.12.2016	63.8	24.2	19.4	20.9	8.4	328	0.8	0.006	<0.001	<1.0	<0.001	<20
19.12.2016	65.2	24.6	19.2	20.5	6.9	322	0.7	0.008	<0.001	<1.0	<0.001	<20
23.12.2016	60.2	22.7	17.5	21.3	7.8	316	0.6	0.004	<0.001	<1.0	<0.001	<20
27.12.2016	59.6	21.6	18.1	22.4	8.9	309	0.4	0.005	<0.001	<1.0	<0.001	<20
29.12.2016	61.2	23.4	16.9	20.6	10.6	314	0.6	0.004	<0.001	<1.0	<0.001	<20

Date of Monitoring	PM_{10}	$PM_{2.5}$	SO_2	NO_2	O_3^*	CO^*	Ni	Pb	C_6H_6	B(α)P	As	NH_3
TWA concentration in Ambient Air	*100 µg/m³*	*60 µg/m³*	*80 µg/m³*	*80 µg/m³*	*100 µg/m³*	*2000 µg/m³*	*20 ng/m³*	*1 µg/m³*	*5 µg/m³*	*1 µg/m³*	*6 ng/m³*	*400 µg/m³*
January-2017												
02.01.2017	65.6	24.2	19.2	21.5	9.5	353	0.9	0.008	<0.001	<1.0	<0.001	<20
06.01.2017	65.3	24.8	19.7	21.9	9.4	358	0.8	0.006	<0.001	<1.0	<0.001	<20
09.01.2017	65.9	24.2	19.2	21.7	9.8	348	0.7	0.007	<0.001	<1.0	<0.001	<20
13.01.2017	66.2	25.2	18.3	21.1	9.1	345	0.2	0.006	<0.001	<1.0	<0.001	<20
16.01.2017	66.3	25.9	18.7	20.9	8.9	351	0.4	0.005	<0.001	<1.0	<0.001	<20
20.01.2017	65.4	24.3	18.2	20.8	8.8	355	0.7	0.007	<0.001	<1.0	<0.001	<20
23.01.2017	65.7	24.6	19.1	21.4	9.2	358	0.7	0.008	<0.001	<1.0	<0.001	<20
27.01.2017	66.2	24.1	19.3	21.5	9.4	349	0.5	0.005	<0.001	<1.0	<0.001	<20
30.01.2017	65.7	25.1	19.5	21.8	9.1	348	0.7	0.008	<0.001	<1.0	<0.001	<20
February-2017												
03.02.2017	64.2	26.7	16.2	18.5	9.2	316	0.5	0.008	<0.001	<1.0	<0.001	<20
06.02.2017	59.6	25.1	15.9	17.4	9.3	325	0.6	0.007	<0.001	<1.0	<0.001	<20
10.02.2017	66.3	23.6	14.6	16.9	8.9	319	0.8	0.009	<0.001	<1.0	<0.001	<20
14.02.2017	64.7	24.8	15.9	17.1	9.3	341	0.3	0.005	<0.001	<1.0	<0.001	<20
17.02.2017	62.3	23.6	16.1	18.2	8.7	352	0.7	0.006	<0.001	<1.0	<0.001	<20
20.02.2017	66.1	22.7	14.9	16.9	8.9	334	0.6	0.008	<0.001	<1.0	<0.001	<20
24.02.2017	63.4	21.9	15.8	18.1	9.1	361	0.5	0.004	<0.001	<1.0	<0.001	<20
27.02.2017	64.7	25.7	17.4	19.6	9.4	319	0.8	0.004	<0.001	<1.0	<0.001	<20
March-2017												
03.03.2017	64.2	24.4	15.3	17.3	8.9	322	0.4	0.008	<0.001	<1.0	<0.001	<20
06.03.2017	64.8	24.8	15.2	17.1	8.5	326	0.5	0.006	<0.001	<1.0	<0.001	<20
10.03.2017	63.9	25.5	15.8	16.8	8.2	332	0.8	0.007	<0.001	<1.0	<0.001	<20
13.03.2017	63.4	25.2	16.2	16.6	8.8	328	0.5	0.006	<0.001	<1.0	<0.001	<20
17.03.2017	64.2	25.2	16.5	17.4	9.3	325	0.3	0.005	<0.001	<1.0	<0.001	<20
20.03.2017	64.9	24.7	15.5	17.1	9.1	331	0.7	0.006	<0.001	<1.0	<0.001	<20
24.03.2017	65.2	24.4	15.3	16.9	8.8	336	0.6	0.006	<0.001	<1.0	<0.001	<20
27.03.2017	64.6	24.6	16.3	16.6	8.5	332	0.8	0.005	<0.001	<1.0	<0.001	<20
31.03.2017	64.2	25.1	16.2	17.2	8.7	328	0.5	0.006	<0.001	<1.0	<0.001	<20

Time Weighted Average (TWA) for PM_{10}, $PM_{2.5}$, SO_2 & NO_x is for 24-h and O_3 & CO are for 8 hours (As per NAAQS - No.B-29016/20/90/PCI-L dated 18.11.2009.)
Ammonia, Arsenic, Benzene (C_6H_6) and Benzo (Alpha) Pyrene (BαP) concentration found to be BDL.

AMBIENT AIR QUALITY - Dondapadu Village

Date of Monitoring	PM_{10}	$PM_{2.5}$	SO_2	NO_2	O_3*	CO*	Ni	Pb	C_6H_6	B(α)P	As	NH_3
TWA concentration in Ambient Air	*100 µg/m³*	*60 µg/m³*	*80 µg/m³*	*80 µg/m³*	*100 µg/m³*	*2000µg/m³*	*20 ng/m³*	*1 µg/m³*	*5 µg/m³*	*1 µg/m³*	*6 ng/m³*	*400 µg/m³*
October-2016												
03.10.2016	60.2	19.6	14.5	15.2	8.9	318	<1.0	<0.001	<0.001	<1.0	<0.001	<20
07.10.2016	60.5	19.2	14.9	15.6	8.8	321	<1.0	<0.001	<0.001	<1.0	<0.001	<20
10.10.2016	59.3	20.4	13.5	14.8	8.5	325	<1.0	<0.001	<0.001	<1.0	<0.001	<20
14.10.2016	59.8	20.8	13.8	14.5	8.2	315	<1.0	<0.001	<0.001	<1.0	<0.001	<20
17.10.2016	60.5	19.6	14.2	15.5	8.9	311	<1.0	<0.001	<0.001	<1.0	<0.001	<20
21.10.2016	60.1	19.2	14.5	15.9	9.1	319	<1.0	<0.001	<0.001	<1.0	<0.001	<20
24.10.2016	58.8	20.2	13.8	15.2	8.3	320	<1.0	<0.001	<0.001	<1.0	<0.001	<20
28.10.2016	59.6	20.6	13.6	14.8	8.6	324	<1.0	<0.001	<0.001	<1.0	<0.001	<20
31.10.2016	60.2	19.4	14.2	15.4	8.2	325	<1.0	<0.001	<0.001	<1.0	<0.001	<20
November-2016												
04.11.2016	58.8	18.8	13.2	14.6	8.5	311	<1.0	<0.001	<0.001	<1.0	<0.001	<20
07.11.2016	58.2	18.5	13.3	14.2	8.6	315	<1.0	<0.001	<0.001	<1.0	<0.001	<20
11.11.2016	58.9	18.2	13.8	14.1	8.2	311	<1.0	<0.001	<0.001	<1.0	<0.001	<20
14.11.2016	59.5	18.6	12.9	13.8	8.9	312	<1.0	<0.001	<0.001	<1.0	<0.001	<20
18.11.2016	58.6	18.8	12.8	13.6	7.9	314	<1.0	<0.001	<0.001	<1.0	<0.001	<20
21.11.2016	59.1	19.2	12.6	13.2	8.2	322	<1.0	<0.001	<0.001	<1.0	<0.001	<20
25.11.2016	58.8	19.4	13.4	14.8	7.8	324	<1.0	<0.001	<0.001	<1.0	<0.001	<20
28.11.2016	59.2	19.2	13.1	14.6	8.1	318	<1.0	<0.001	<0.001	<1.0	<0.001	<20
December-2016												
02.12.2016	58.6	18.6	13.4	15.6	8.1	288	<1.0	<0.001	<0.001	<1.0	<0.001	<20
05.12.2016	59.2	20.1	12.9	13.9	8.4	302	<1.0	<0.001	<0.001	<1.0	<0.001	<20
09.12.2016	54.3	19.8	11.8	13.8	8.3	316	<1.0	<0.001	<0.001	<1.0	<0.001	<20
12.12.2016	59.6	21.3	13.1	14.8	8.6	319	<1.0	<0.001	<0.001	<1.0	<0.001	<20
16.12.2016	60.1	20.7	12.5	13.5	7.9	322	<1.0	<0.001	<0.001	<1.0	<0.001	<20
19.12.2016	59.4	21.3	13.6	15.3	8.3	328	<1.0	<0.001	<0.001	<1.0	<0.001	<20
23.12.2016	60.3	20.8	12.9	14.8	8.9	316	<1.0	<0.001	<0.001	<1.0	<0.001	<20
27.12.2016	61.4	21.4	13.2	15.4	9.2	315	<1.0	<0.001	<0.001	<1.0	<0.001	<20
29.12.2016	58.6	22.1	12.9	14.3	8.6	321	<1.0	<0.001	<0.001	<1.0	<0.001	<20

Date of Monitoring	PM_{10}	$PM_{2.5}$	SO_2	NO_2	O_3^*	CO^*	Ni	Pb	C_6H_6	B(α)P	As	NH_3
TWA concentration in Ambient Air	*100 µg/m³*	*60 µg/m³*	*80 µg/m³*	*80 µg/m³*	*100 µg/m³*	*2000µg/m³*	*20 ng/m³*	*1 µg/m³*	*5 µg/m³*	*1 µg/m³*	*6 ng/m³*	*400 µg/m³*
January-2017												
02.01.2017	60.2	20.2	19.2	21.5	9.1	322	<1.0	<0.001	<0.001	<1.0	<0.001	<20
06.01.2017	60.9	20.8	19.7	21.9	9.3	328	<1.0	<0.001	<0.001	<1.0	<0.001	<20
09.01.2017	61.2	21.2	19.2	21.7	8.9	321	<1.0	<0.001	<0.001	<1.0	<0.001	<20
13.01.2017	61.8	21.6	18.3	21.1	8.6	317	<1.0	<0.001	<0.001	<1.0	<0.001	<20
16.01.2017	60.4	20.8	18.7	20.9	9.2	315	<1.0	<0.001	<0.001	<1.0	<0.001	<20
20.01.2017	60.8	20.2	18.2	20.8	9.6	331	<1.0	<0.001	<0.001	<1.0	<0.001	<20
23.01.2017	61.2	21.3	19.1	21.4	8.8	327	<1.0	<0.001	<0.001	<1.0	<0.001	<20
27.01.2017	61.6	21.8	19.3	21.5	8.4	322	<1.0	<0.001	<0.001	<1.0	<0.001	<20
30.01.2017	60.8	20.9	19.5	21.8	9.2	328	<1.0	<0.001	<0.001	<1.0	<0.001	<20
February-2017												
03.02.2017	56.3	21.2	11.9	14.2	9.1	302	<1.0	<0.001	<0.001	<1.0	<0.001	<20
06.02.2017	57.4	21.3	12.3	14.1	8.5	326	<1.0	<0.001	<0.001	<1.0	<0.001	<20
10.02.2017	62.3	23.2	13.1	14.6	9.1	309	<1.0	<0.001	<0.001	<1.0	<0.001	<20
14.02.2017	60.2	19.6	11.5	14.1	8.6	298	<1.0	<0.001	<0.001	<1.0	<0.001	<20
17.02.2017	61.3	22.5	12.9	14.5	8.7	301	<1.0	<0.001	<0.001	<1.0	<0.001	<20
20.02.2017	62.4	22.1	13.6	14.9	9.1	309	<1.0	<0.001	<0.001	<1.0	<0.001	<20
24.02.2017	60.7	23.2	12.5	14.4	7.6	322	<1.0	<0.001	<0.001	<1.0	<0.001	<20
27.02.2017	59.6	20.8	12.3	14.2	8.8	328	<1.0	<0.001	<0.001	<1.0	<0.001	<20
March-2017												
03.03.2017	61.2	21.3	14.2	14.8	8.7	312	<1.0	<0.001	<0.001	<1.0	<0.001	<20
06.03.2017	61.6	20.5	14.8	15.2	8.9	315	<1.0	<0.001	<0.001	<1.0	<0.001	<20
10.03.2017	60.8	20.8	14.5	15.5	9.1	321	<1.0	<0.001	<0.001	<1.0	<0.001	<20
13.03.2017	61.8	21.6	13.6	14.8	8.2	317	<1.0	<0.001	<0.001	<1.0	<0.001	<20
17.03.2017	60.4	20.8	14.2	14.5	8.5	315	<1.0	<0.001	<0.001	<1.0	<0.001	<20
20.03.2017	60.8	20.2	15.1	15.4	9.2	321	<1.0	<0.001	<0.001	<1.0	<0.001	<20
24.03.2017	60.5	20.5	14.3	15.1	8.8	310	<1.0	<0.001	<0.001	<1.0	<0.001	<20
27.03.2017	61.2	21.8	14.5	15.2	8.4	325	<1.0	<0.001	<0.001	<1.0	<0.001	<20
31.03.2017	61.5	21.3	13.5	14.6	9.2	322	<1.0	<0.001	<0.001	<1.0	<0.001	<20

*TWA: * Time Weighted Average for 24 hours except O_3 and CO which are for 8 hours (As per NAAQS - No.B-29016/20/90/PCI-L dated 18.11.2009.)*
Ammonia, Arsenic, Benzene (C_6H_6) and Benzo (Alpha) Pyrene (BaP) concentration found to be BDL.

AMBIENT AIR QUALITY: Ramapuram Village

Date of Monitoring	PM_{10}	$PM_{2.5}$	SO_2	NO_2	O_3^*	CO^*	Ni	Pb	C_6H_6	B(α)P	As	NH_3
TWA concentration in Ambient Air	*100 µg/m³*	*60 µg/m³*	*80 µg/m³*	*80 µg/m³*	*100 µg/m³*	*2000µg/m³*	*20 ng/m³*	*1 µg/m³*	*5 µg/m³*	*1 µg/m³*	*6 ng/m³*	*400 µg/m³*
October-2016												
03.10.2016	55.6	18.3	13.2	14.5	8.4	312	<1.0	<0.001	<0.001	<1.0	<0.001	<20
07.10.2016	58.3	18.5	13.5	14.8	8.7	315	<1.0	<0.001	<0.001	<1.0	<0.001	<20
10.10.2016	56.4	17.9	12.8	13.4	7.8	308	<1.0	<0.001	<0.001	<1.0	<0.001	<20
14.10.2016	56.8	18.2	12.2	13.2	7.9	305	<1.0	<0.001	<0.001	<1.0	<0.001	<20
17.10.2016	57.2	18.6	13.1	14.1	8.2	311	<1.0	<0.001	<0.001	<1.0	<0.001	<20
21.10.2016	57.9	17.9	12.9	13.4	8.4	316	<1.0	<0.001	<0.001	<1.0	<0.001	<20
24.10.2016	56.8	17.5	13.7	14.4	7.3	310	<1.0	<0.001	<0.001	<1.0	<0.001	<20
28.10.2016	56.3	18.2	14.2	15.6	7.9	306	<1.0	<0.001	<0.001	<1.0	<0.001	<20
31.10.2016	54.3	18.8	13.4	14.3	8.2	304	<1.0	<0.001	<0.001	<1.0	<0.001	<20
November-2016												
04.11.2016	54.5	17.5	12.4	13.5	8.2	308	<1.0	<0.001	<0.001	<1.0	<0.001	<20
07.11.2016	54.8	17.8	12.6	13.8	8.1	305	<1.0	<0.001	<0.001	<1.0	<0.001	<20
11.11.2016	54.6	18.2	12.9	13.2	7.8	309	<1.0	<0.001	<0.001	<1.0	<0.001	<20
14.11.2016	55.2	18.3	13.1	13.1	7.7	311	<1.0	<0.001	<0.001	<1.0	<0.001	<20
18.11.2016	55.5	18.6	13.5	12.9	7.9	310	<1.0	<0.001	<0.001	<1.0	<0.001	<20
21.11.2016	55.8	17.8	12.9	12.4	8.1	306	<1.0	<0.001	<0.001	<1.0	<0.001	<20
25.11.2016	54.6	17.5	12.7	12.6	8.2	308	<1.0	<0.001	<0.001	<1.0	<0.001	<20
28.11.2016	55.1	17.7	12.2	13.2	7.8	312	<1.0	<0.001	<0.001	<1.0	<0.001	<20
December-2016												
02.12.2016	55.4	18.4	13.1	14.5	10.1	339	<1.0	<0.001	<0.001	<1.0	<0.001	<20
05.12.2016	53.2	18.1	12.9	14.4	9.4	289	<1.0	<0.001	<0.001	<1.0	<0.001	<20
09.12.2016	51.4	17.9	13.5	15.1	9.1	316	<1.0	<0.001	<0.001	<1.0	<0.001	<20
12.12.2016	55.4	19.2	14.1	15.6	8.7	309	<1.0	<0.001	<0.001	<1.0	<0.001	<20
16.12.2016	53.6	20.1	13.6	15.6	8.1	316	<1.0	<0.001	<0.001	<1.0	<0.001	<20
19.12.2016	54.1	19.6	13.7	14.9	7.9	332	<1.0	<0.001	<0.001	<1.0	<0.001	<20
23.12.2016	50.9	18.5	13.1	14.6	7.8	328	<1.0	<0.001	<0.001	<1.0	<0.001	<20
27.12.2016	52.3	19.4	13.2	15.1	8.3	319	<1.0	<0.001	<0.001	<1.0	<0.001	<20
29.12.2016	53.7	18.3	12.9	14.3	8.5	322	<1.0	<0.001	<0.001	<1.0	<0.001	<20

Date of Monitoring	PM_{10}	$PM_{2.5}$	SO_2	NO_2	O_3^*	CO^*	Ni	Pb	C_6H_6	B(α)P	As	NH_3
TWA concentration in Ambient Air	*100 µg/m³*	*60 µg/m³*	*80 µg/m³*	*80 µg/m³*	*100 µg/m³*	*2000µg/m³*	*20 ng/m³*	*1 µg/m³*	*5 µg/m³*	*1 µg/m³*	*6 ng/m³*	*400 µg/m³*
January-2017												
02.01.2017	58.9	19.2	13.2	14.3	8.9	318	<1.0	<0.001	<0.001	<1.0	<0.001	<20
06.01.2017	59.2	19.8	13.5	14.9	8.8	315	<1.0	<0.001	<0.001	<1.0	<0.001	<20
09.01.2017	59.5	18.2	13.8	14.2	8.9	322	<1.0	<0.001	<0.001	<1.0	<0.001	<20
13.01.2017	60.4	18.8	14.2	13.8	8.4	325	<1.0	<0.001	<0.001	<1.0	<0.001	<20
16.01.2017	60.2	19.2	14.6	13.9	8.2	321	<1.0	<0.001	<0.001	<1.0	<0.001	<20
20.01.2017	59.4	19.7	13.4	14.2	8.1	317	<1.0	<0.001	<0.001	<1.0	<0.001	<20
23.01.2017	59.8	20.2	13.8	14.5	8.8	314	<1.0	<0.001	<0.001	<1.0	<0.001	<20
27.01.2017	58.4	18.8	12.9	13.2	9.1	318	<1.0	<0.001	<0.001	<1.0	<0.001	<20
30.01.2017	58.1	18.5	12.8	13.8	8.7	322	<1.0	<0.001	<0.001	<1.0	<0.001	<20
February-2017												
03.02.2017	56.6	20.1	12.3	13.6	9.3	312	<1.0	<0.001	<0.001	<1.0	<0.001	<20
06.02.2017	57.8	21.2	13.2	14.5	9.1	305	<1.0	<0.001	<0.001	<1.0	<0.001	<20
10.02.2017	56.6	19.6	12.8	14.3	7.6	296	<1.0	<0.001	<0.001	<1.0	<0.001	<20
14.02.2017	58.4	20.6	13.6	14.1	8.2	312	<1.0	<0.001	<0.001	<1.0	<0.001	<20
17.02.2017	56.3	22.1	13.8	14.2	8.3	311	<1.0	<0.001	<0.001	<1.0	<0.001	<20
20.02.2017	58.9	20.4	12.9	13.8	8.0	306	<1.0	<0.001	<0.001	<1.0	<0.001	<20
24.02.2017	61.2	19.6	13.5	14.1	8.4	314	<1.0	<0.001	<0.001	<1.0	<0.001	<20
27.02.2017	59.6	19.8	13.2	13.5	8.6	310	<1.0	<0.001	<0.001	<1.0	<0.001	<20
March-2017												
03.03.2017	60.2	19.5	13.2	14.2	8.5	302	<1.0	<0.001	<0.001	<1.0	<0.001	<20
06.03.2017	60.5	19.8	13.5	14.7	8.2	305	<1.0	<0.001	<0.001	<1.0	<0.001	<20
10.03.2017	59.5	18.2	14.1	14.2	8.8	312	<1.0	<0.001	<0.001	<1.0	<0.001	<20
13.03.2017	60.4	18.8	14.2	13.8	7.6	315	<1.0	<0.001	<0.001	<1.0	<0.001	<20
17.03.2017	60.2	19.2	14.6	13.5	7.9	318	<1.0	<0.001	<0.001	<1.0	<0.001	<20
20.03.2017	59.7	19.7	13.5	14.2	7.2	309	<1.0	<0.001	<0.001	<1.0	<0.001	<20
24.03.2017	59.8	19.4	13.8	14.7	8.1	304	<1.0	<0.001	<0.001	<1.0	<0.001	<20
27.03.2017	58.4	18.8	13.2	13.2	8.4	311	<1.0	<0.001	<0.001	<1.0	<0.001	<20
31.03.2017	58.5	19.2	12.9	13.6	8.6	306	<1.0	<0.001	<0.001	<1.0	<0.001	<20

Time Weighted Average (TWA) for PM_{10}, $PM_{2.5}$, SO_2 & NO_x is for 24-h and O_3 & CO are for 8 hours (As per NAAQS - No.B-29016/20/90/PCI-L dated 18.11.2009.)
Ammonia, Arsenic, Benzene (C_6H_6) and Benzo (Alpha) Pyrene (BαP) concentration found to be BDL.

Observations on Ambient Air Quality monitoring:

PM_{10}: The maximum value observed in plant is 66.30 µg/m^3 and minimum value at Ramapuram Village is 50.90 µg/m^3.
The 24 hours applicable limit for Industrial, Residential Rural and other areas is 100 µg/m^3.

$PM_{2.5}$: The maximum value observed in plant is 26.70 µg/m^3 and minimum value at Ramapuram Village is 17.50 µg/m^3.
The 24 hours applicable limit for Industrial, Residential Rural and other areas is 60 µg/m^3.

SO_2: The maximum value observed in plant is 20.20 µg/m^3 and minimum value at Ramapuram Village is 12.20 µg/m^3.
The 24 hours applicable limit for Industrial, Residential Rural and other areas is 80 µg/m^3.

NO_2: The maximum value observed in plant is 23.20 µg/m^3 and minimum value at Ramapuram Village is 12.40 µg/m^3.
The 24 hours applicable limit for Industrial, Residential Rural and other areas is 80 µg/m^3.

O_3: The maximum value observed in plant is 10.60 µg/m^3 and minimum value at Ramapuram Village is 7.20 µg/m^3.
The 8 hours applicable limit for Industrial, Residential Rural and other areas is 100 µg/m^3.

CO: The maximum value observed in plant is 361 µg/m^3 and minimum value at Dondapadu Village is 289 µg/m^3.
The 8 hour applicable limit for Industrial, Residential Rural and other areas is 2000 µg/m^3 (2 mg/m^3).

Ni: The maximum value observed in plant is 0.90 ng/m^3 and minimum value is 0.20 ng/m^3 in the site.
In Dondapadu and Ramapuram the values are BDL. The annual TWA applicable is 20 ng/m^3.

Pb: The maximum value observed is 0.009 µg/m^3 and minimum value is 0.004 µg/m^3 in the site.
In Dondapadu and Ramapuram the values are found to be BDL. The 8-hour TWA applicable is 1 µg/m^3.

Ammonia, Lead, Arsenic, Nickel, Benzene & Benzo(α) Pyrene: Below Detectable Limit.

NOISE LEVEL MONITORING

(IN PLANT)

Location	UOM	*OCT-16*	*NOV-16*	*DEC-16*	*JAN-17*	*FEB-17*	*MAR-17*
Primary Crusher	L_{eq} [dB(A)]	72.1	70.3	72.5	70.1	81.6	-
Near FD#1 Fan		-	-	-	-	-	60.5
Near FD#2 Fan		61.3	62.4	60.2	65.6	80.2	61.8
Near Chlorine tonner		57.6	54.5	51.8	55.5	61.5	-
Near Compressor Room		70.5	68.7	64.9	68.7	82.4	68.3
Near SPL office		43.2	42.7	40.5	42.0	44.3	-
Turbine building (GF)		-	-	-	-	-	62.6
Turbine building (FF)		-	-	-	-	-	58.8
Turbine Floor		-	-	-	-	-	64.3

(OFF PLANT)

	Time	*OCT-16*	*NOV-16*	*DEC-16*	*JAN-17*	*FEB-17*	*MAR-17*
Dondapadu	**L-Day**	53.3	51.3	53.2	54.5	53.2	54.4
	L-Night	42.5	41.2	42.5	45.6	43.8	42.7
	L-dn	53.0	51.3	56.9	54.9	53.4	53.9
Ramapuram	**L-Day**	50.2	49.6	50.5	52.1	50.8	52.3
	L-Night	40.6	39.4	40.4	42.3	40.6	41.6
	L-dn	50.3	49.5	50.5	52.2	50.7	52.1

Noise levels expressed in dB(A)

WASTE WATER QUALITY

WASTE WATER-1 Source: DM PLANT EFFLUENT

S.No.	Date of Sample Collection / Parameter	27.10.2016	29.11.2016	24.12.2016	31.01.2017	22.02.2017	28.03.2017
1.	pH	6.67	7.28	7.05	7.91	6.85	7.80
2.	Total Dissolved Solids, mg/L	702	1212	1324	1287	1735	1950
3.	Total Suspended Solids, mg/L	7	9	10	9	12	15
4.	Chloride as Cl, mg/L	245.3	275.3	284.8	261.2	292.8	253.3
5.	Sulfate as SO_4, mg/L	436.4	485.3	505.4	492.3	517.6	526.4
6.	Copper as Cu, mg/L	< 0.01	<0.01	<0.01	<0.01	< 0.01	< 0.01
7.	Iron as Fe, mg/L	0.14	0.11	0.13	0.11	0.18	0.21
8.	Chromium as Cr^{+6}, mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
9.	Zinc as Zn, mg/L	0.06	0.06	0.05	0.06	0.09	0.12
10.	Phosphate as PO_4, mg/L	1.5	1.8	1.5	1.2	1.8	2.3
11.	Chemical Oxygen Demand, mg/L	29.5	31.2	35.2	32.3	26.4	31.0
12.	Biochemical Oxygen Demand*, mg/L	7.6	8.2	9.0	8.7	9.2	10.2
13.	Oil & Grease, mg/L	<1.0	<1.0	< 1.0	<1.0	< 1.0	< 1.0

Note: All parameters are expressed in mg/L except pH *3-day@27°C

WASTE WATER-2 Source: GUARD POND

S.No.	Date of Sample Collection / Parameter	Discharge Limits	27.10.2016	29.11.2016	24.12.2016	31.01.2017	22.02.2017	28.03.2017
1.	pH	*6.0 – 9.0*	7.20	7.96	7.62	8.52	7.26	7.81
2.	Total Dissolved Solids, mg/L	*2100*	1785	1822	1755	2022	2041	1950
3.	Total Suspended Solids, mg/L	*100*	10	12	14	16	17	21
4.	Residual Free Chlorine, mg/L	*5.0*	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
5.	Copper as Cu, mg/L	*1.0*	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6.	Iron as Fe, mg/L	*1.0*	0.19	0.14	0.18	0.24	0.26	0.29
7.	Chromium as Cr+6, mg/L	*0.2*	0.04	0.02	<0.01	<0.01	<0.01	<0.01
8.	Zinc as Zn, mg/L	*1.0*	0.09	0.08	0.09	0.14	0.18	0.22
9.	Phosphates as PO4, mg/L	*5.0*	2.1	2.5	2.2	2.8	3.0	3.5
10.	Chemical Oxygen Demand, mg/L	*250*	18.3	17.8	18.8	22.4	6.5	28.6
11.	*Biochemical Oxygen Demand, mg/L	*100*	5.5	5.2	5.5	5.9	5.6	6.2
12.	Oil & Grease, mg/L	*10*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
13.	Chloride as Cl, mg/L	*1000*	385.4	396.3	412.6	467.8	478.9	465.2
14.	Sulfate as SO4, mg/L	*1000*	537.6	562.4	593.6	613.6	625.7	655.4

Note: All values are expressed in mg/L except pH **3-day@27°C*

Observations on waste water:

The wastewater generated mainly as blowdowns from Cooling Tower, Boiler and reject water from RO plant.

1. The pH of combined effluent from blowdown is in the permissible range of 6.5 – 8.5.
2. The TDS from guard pond is between 1700 – 2050 mg/L and from DM plant in the range of 700 – 1950 mg/L.
   The limiting standard as per CFO consent for TDS is 2100 mg/L.
3. The metals such as Iron in the between 0.14 – 0.29 against standard of 1.0mg/L, Chromium < 0.04 against standard of 0.20 mg/L and Zinc between 0.08 – 0.22 m/L in blowdown against standard of 1.0 mg/L.
4. Oil & grease is found to be <1.0 in waste water against limiting standard of 10 mg/L.
5. In guard pond water maximum COD & BOD found to be within limits of 250mg/L & 100 mg/L
   22.4 mg/L (Max.) & 6.2 mg/L (Max.) respectively and effluent from WTP found to be 35.2 mg/L & 10.2 mg/L (Max.).

STACK EMISSION MONITORING RESULT
(**Common Stack attached to ESP-I & II**)

Diameter of stack	5.6 m	Cross Sectional Area	24.6 m^2

Parameters	UOM	(1)	(2)	(3)	(4)	(5)	(6)
		OCT-16	***NOV-16***	***DEC-16***	***JAN-17***	***FEB-17***	***MAR-17***
Sulphur Dioxide	mg/Nm^3	386.9	342.3	302.5	292.3	312.5	348.3
Oxides of Nitrogen	mg/Nm^3	152.4	138.7	110.2	102.7	122.8	135.4
Carbon Monoxide	mg/Nm^3	68.3	65.5	60.3	65.8	72.4	81.2
Particulate Matter	mg/Nm^3	44.56	37.79	32.0	31.4	76.2	71.19

Annexure – I

Fly ash loading at Ash handling Plant

Dust Extraction System at CHP

First aid room and Toilets

Rain harvesting pit

Annexure-II

Jan 04 06 05:32p

06/10 2013 12:04 FAX P.1

Kind Attn: Ms. Kandalya
Fax: Ishwar

AIRPORT AUTHORITY OF INDIA
Rajiv Gandhi Bhavan Safdarjung Airport, New Delhi-11003

No.AAI/20012/ 1165/2005 -ARI (NOC) Dated, New Delhi the 30.12.05

To,
Sitapuram Power Ltd.,
Plot No. 431/A, Road No. 22,
Jubilee Hills,
HYDERABAD-500033.

Sub:- Issue of NOC . Case No. –

1. Please refer to your letter No. **SPL:AAI:KAS:061005:3** Dated -06.10.05 on the subject mentioned above.
2. This office has no objection to the construction of the proposed **Chimney By M/s. Sitapuram Powr Ltd. (SPL)** here in after refered to as the applicant(s) at location **Survey Nos. 310 to 317,319 to 322 & 324 of Dandupadu Village, Mella Cheruvu Mandalam Nalgonda District, Andhra Pradesh** to height 96.00 /M. (in figures) Ninety Six deci Zero /Metres (in words)
ABOVE GROUND LEVEL,so that the top of the proposed structure when erected shall not exceed 74.00 /M. (site Elevation)+ 96.00 /M/ (Height of the structure) i.e. 170.00 /M.
ABOVE MEAN SEA LAVEL.
3. This no objection certificate is being issued on the express understanding that the site-elevation reduced level (height above mean sea level) viz74.00 /M, relative location of the proposed Bldg./Structure & its distances and Bearings from the ARP/Runway ends, as tendered by the applicant (s) are correct. If, However, at any stage it is established that the said data as tendered by the said applicant is actually different from the one tendered & which could adversely affect aircraft operations, the structure or part(s) thereof in respect of which this 'NOC' is being issued will have to be demolished at his own cost as may be directed by the Airports Authority of India. The applicant(s) is /are therefore advised in his/their own interest to verify the elevation and other data furnished for the site, before embarking on the proposed construction.
4. The issue of the 'NOC' is further subject to the provisions of Section 9-A of the Indian Aircraft Act, 1934 and those of any notifications issued thereunder from time to time and under which the applicant may be called upon by the Airports Authority of India to demolish in whole or in part the structure now being authorised vide this 'NOC'.
5. No radio/TV Antenna, lighting arresters, staircase, Mumtee, Overhead water tank and attachments of fixtures of any kind shall project above the height indicated in para 2.
6. The use of oil fired of electric fired furnace is obligatory, within 8 Kms. Of the Aerodrome.
7. The certificate is valid for a period of four years from the date of its issue. If the building/structure/Chimney is not constructed & completed within the above mentioned period of four years he will be required to obtain a fresh 'No Objection Certificate' from the Chairman Airports Authority of India and/or the G.M (Aero) Southern Region. The date of completion of Building/Structure/Chimney should be intimated to the AAI and/or General Manager (Aero.) Southern Region.
8. No light or a combination of lights which by reason of its intensity, configuration of colour may cause confusion with the aeronautical ground lights of the Airport shall be installed at the site at nay time during or after the construction of the building.

"NOC FOR HEIGHT CLEARANCE ONLY"
Day & Night markings with secondary power supply may be provided as per ICAO standards.

(S.K. AUDITTO)
Asstt GENERAL MANAGER(NOC)
For Airports Authority of India

Copy to:
1. The Regional Executive Director, AAI Southern Region, Chennai Airport, Chennai-27 w.r.t. his letter No. Dt.
2. Sr. Manager, Maps & Maps & Charts, AAI, (NAD), Hqrs.
3. Guard file/Airport Director, AAI, Hyderabad Airport, Hyderabad.

Annexure – III

Ref: MOEF. BANG/DVBR/490
Date: 04.10.2006

To
The Director (S)
Ministry of Environment & Forests,
Regional Office (Southern Zone),
Kendriya Sadan, IVth Floor, E & F Wings,
17th Main Road, II Block, Koramangala,
Bangalore – 560 034

Sub: 43 MW Coal based Thermal Power Plant at Sitapuram, Nalgonda District of M/s. Sitapuram Power Limited.
Ref: Your Letter No. EP/12.1/472/AP/799/ dated 18.07.2006.

Sir,

With reference to the above cited, please find enclosed the point wise compliance of MoEF Clearance letter along with a copy of Detailed Project Report, Environmental Impact Assessment / Environment Management plan including Risk Analysis Report, No Objection Certificate of State Pollution Control Board, Filled in Questionnaires submitted for getting Clearance, Work Progress Report and a Copy of paper advertisement as per item xxii of your letter referred above in two local newspapers widely circulated in the project region in which one is in vernacular language (telugu). This is for your kind information.

Thanking you,

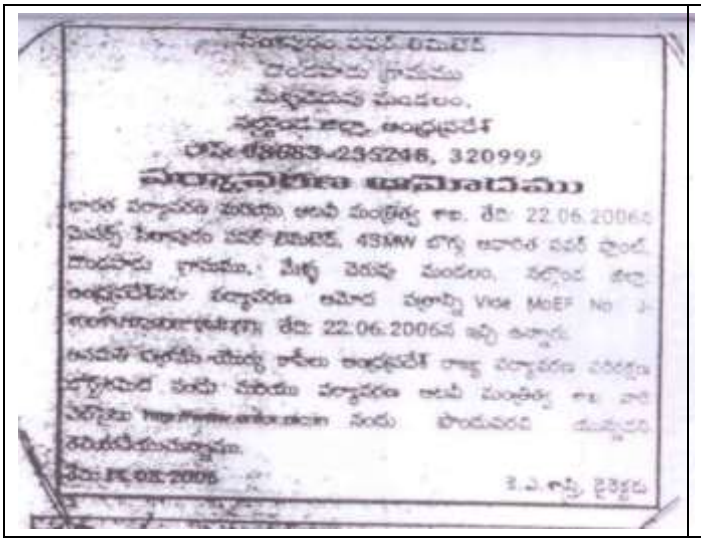
With regards,

Yours Sincerely,
For Sitapuram Power Limited

D. Vijayabhaskar Reddy
General Manager

Enclosures:
Annexure I : Point wise compliance of MOEF Clearance Letter
Annexure II : Site Progress Report
Annexure III : Coal Linkage & NOC from AAI
Annexure IV : Copy of Paper Advertisement
Annexure V : Detailed Project Report
Annexure VI : REIA / EMP Report
Annexure VII : Application submitted to SPCB / MOEF for obtaining Environment Clearance.

Annexure – IV




SITAPURAM POWER LIMITED
DONDAPADU VILLAGE,
MELLACHERUVU MANDAL,
NALGONDA DISTRICT,
ANDHRA PRADESH
PH: 08683-235246, 320999

ENVIRONMENTAL CLEARANCE

Ministry of Environment and Forests, Government of India have accorded Environmental Clearance on 22-06-2006 to M/s Sitapuram Power Limited for the proposed 43 MW Coal Based Powfir Plant near Dondapadu Village, Mellacheruvu Mandal, Nalgonda District, Andhra Pradesh Vide MoEF No. J-13011/1/2006-IA.II(T) dated 22-06-2006.

The copies of Environmental Clearance letter are available with Andhra Pradesh State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://www.envfor.nic.in

Date: 14.08.2006

K.A. SASTRY
DIRECTOR