Samalkot Power Limited
IDA Peddapuram
East Godavari District
Andhra Pradesh 533440

Tel: +91 884 2392 355/356
Fax: +91 884 2392 800
www.reliancepower.co.in

CIN: U40103MH2010PLC206084

Ref:SMPL/CHEM.LAB/15/17-18/ 43 Dt:31-10-2017

To,

Mr.Sundar Ramanadhan,
Scientist 'D' Regional Office
(South Eastern Zone)
Ministry of Environment,
Forest and Climate Change,
1st and 2nd Floor, HEPC Building, No.34, Cathedral Garden Road
Nungambakkam, Chennai - 600034.
Tel: 044-28222325,
Fax: 044-28252536,
Email: roefccc@gmail.com

Sub: -Submission of Six Monthly Environmental report.

Dear Sir,

We are here with submitting "Six monthly Environmental reports" (From April 2017 – September 2017). The report contains: 1) EC compliance, 2) Project Progress Status, 3) Half Yearly Monitoring Reports. Kindly acknowledge. Soft copy of the report is also mailed to the mail ID given by you as per the instructions of MoEF.

Thanking you,

Yours faithfully,
For Samalkot Power Limited

(C. Dwarakanath)
Station Director

Copy to: APPCB Environmental Engineer, Kakinada
Station Director for Kind Information please
Plant Head O/C and EHS O/C

Soft Copy to: roszmon@yahoo.in

ENVIRONMENTAL MONITORING REPORT

RELIANCE

2400MW NATURAL GAS BASED POWER PLANT

SAMALKOT POWER LIMITED

IDA Peddapuram, Samalkot, East Godavari District,

Andhra Pradesh

MoEF-EC: J-13012/134/2010-IA.II (T) dt: 29.06.2011

CFO No: APPCB/VSP/RJY/16265/CFO/HO/2013/4831 dt: 08.01.2013

April 2017 - September 2017

INTRODUCTION

M/S Samalkot Power Limited has Constructed 2400 MW Combined cycle power plant at Peddapuram East Godavari District. The plant was commissioned 4 Gas Turbines in open cycle mode.

In order to establish baseline status, M/S Samalkot Power Limited had undertaken the post project Environment monitoring study in and around the plant site.

This report highlights the baseline status monitored during the period October 2016 to March 2017

SITE LOCATION

The Power plant is located near Samalkot, Peddapuram Taluka of East Godavari District in Andhra Pradesh.The area falls within East Longitude 82^0 10' and North Latitude 17^0 0' to 17^0 5' and is situated between Kakinada and Rajahmundary.The nearest habitat is located at a distances of about 2km in the SSE direction of the plant. The major towns Kakinada and Rajahmundary are located at a distance of about 20km and 50km from the plant respectively.

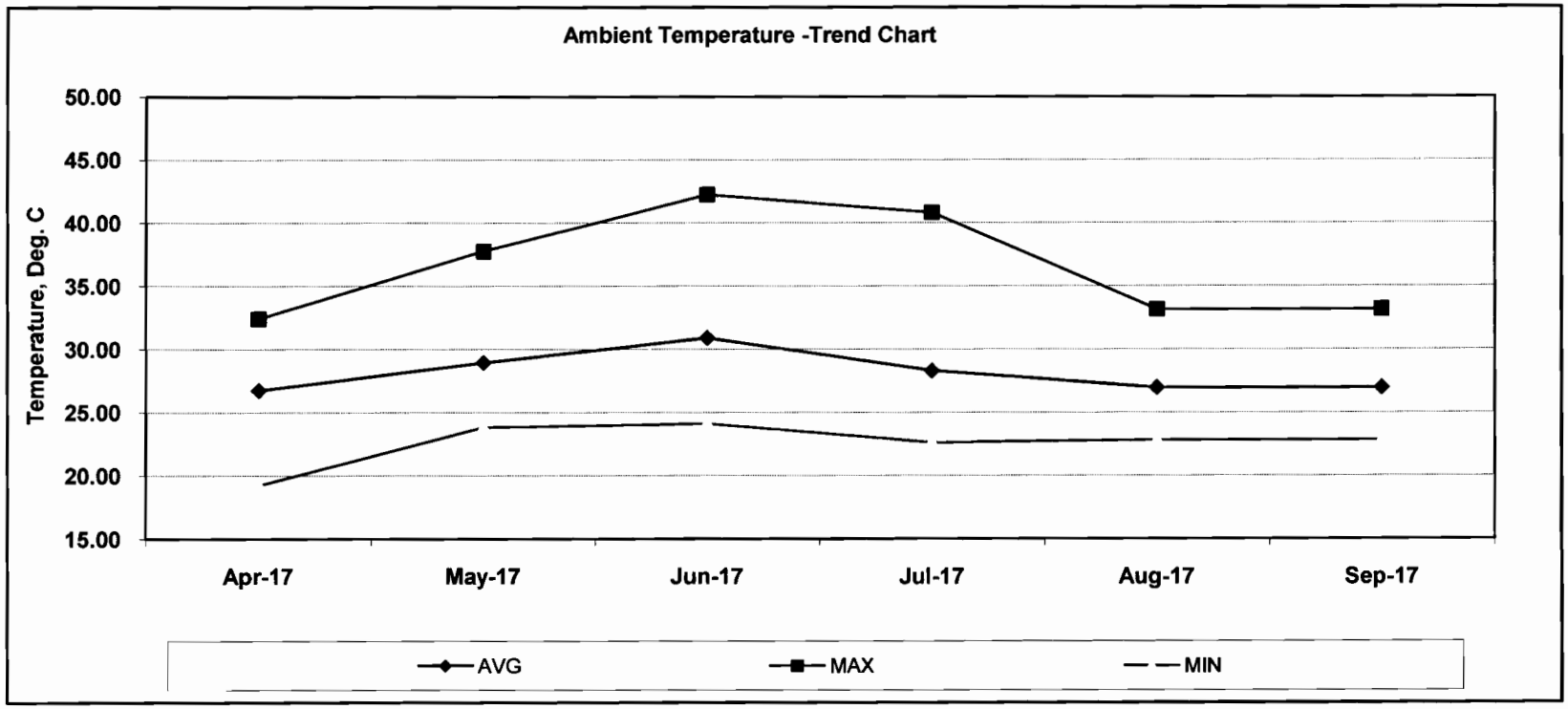
Samalkot is the nearest major town and the railway station is located at a distance of 2.5km from the plant site. South Central Railway Line Connecting Vishakapatnam and Vijayawada is located at about 2.5 km in the Southern direction of the site. National Highway NH-5 Connecting Chennai and Kolkatta are located at about 20 km in the North direction of the plant.

CONTENTS

WEATHER MONITORING DATA

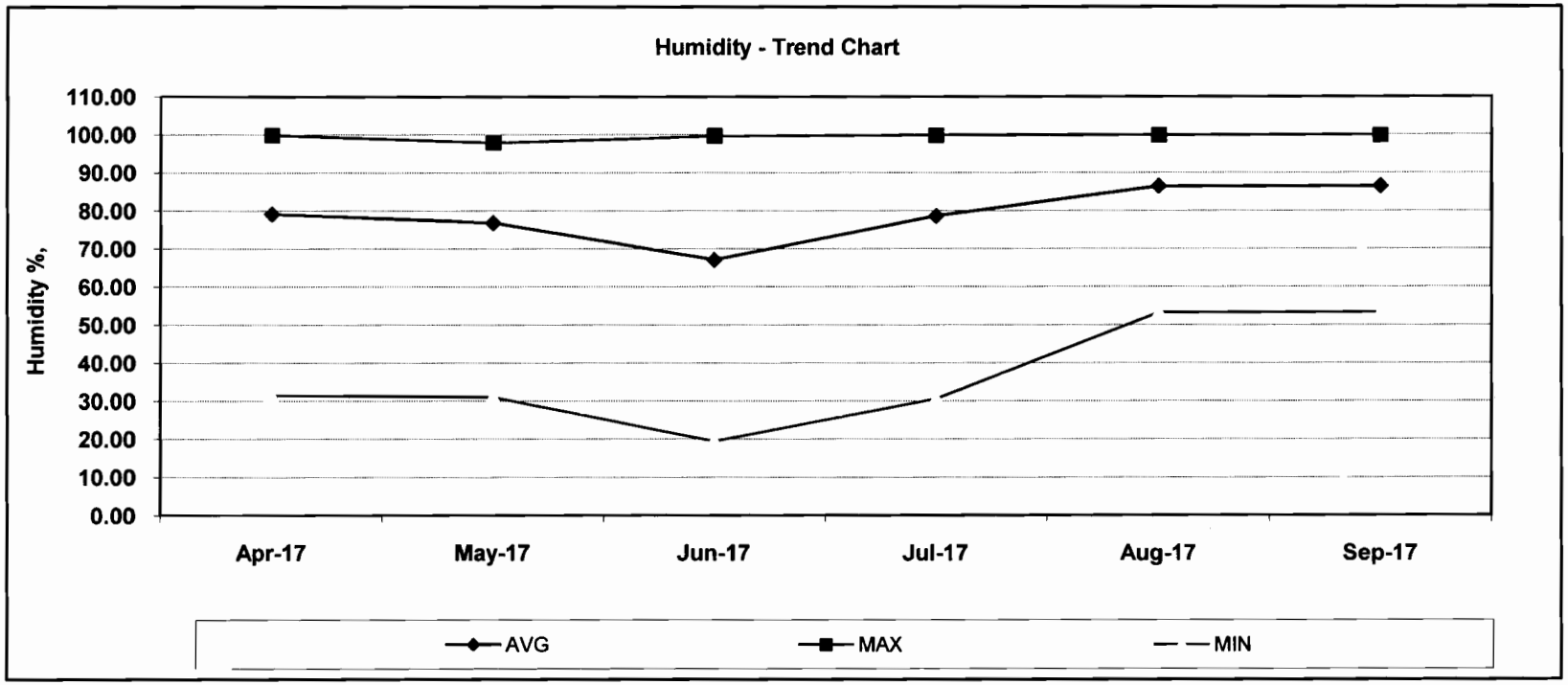
Monthly Average Ambient Temperature, °C **Apr-2017 to Sep-2017**

Month	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
AVG	26.74	28.95	30.91	28.30	26.96	26.96	**28.14**	30.91	26.74
MAX	32.44	37.79	42.28	40.85	33.18	33.18	**36.62**	42.28	32.44
MIN	19.24	23.84	24.13	22.63	22.83	22.83	**22.58**	24.13	19.24
AVG							**29.11**		
MAX								**42.28**	
MIN									**19.24**



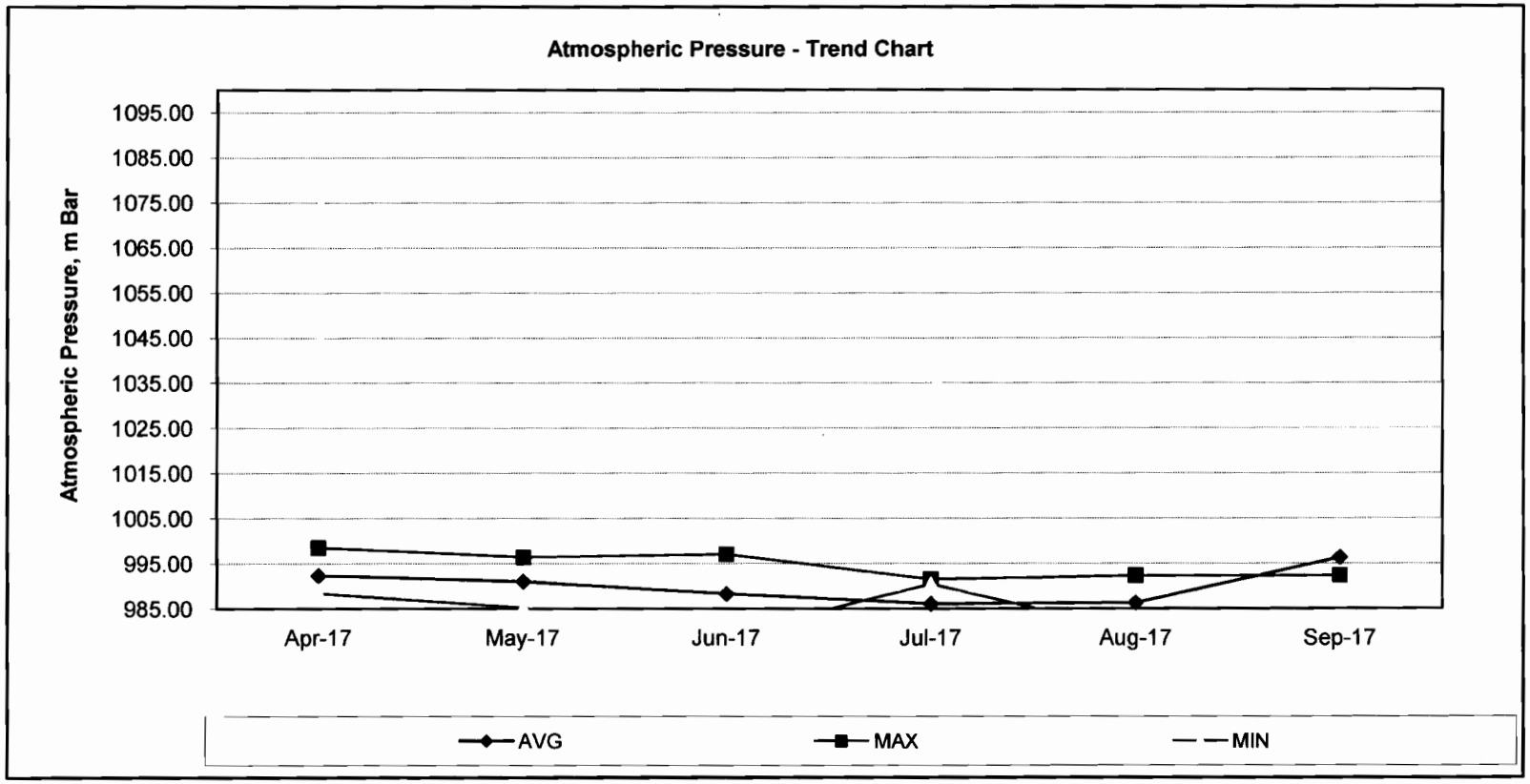
Monthly Average Humidity, % **Apr-2017 to Sep-2017**

Month	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
AVG	79.19	76.88	67.15	78.67	86.52	86.52	**79.16**	86.52	67.15
MAX	100.00	98.00	99.80	100.00	100.00	100.00	**99.63**	100.00	98.00
MIN	31.50	31.10	19.50	30.60	53.30	53.30	**36.55**	53.30	19.50
AVG							**71.78**		
MAX								**100.00**	
MIN									**19.50**



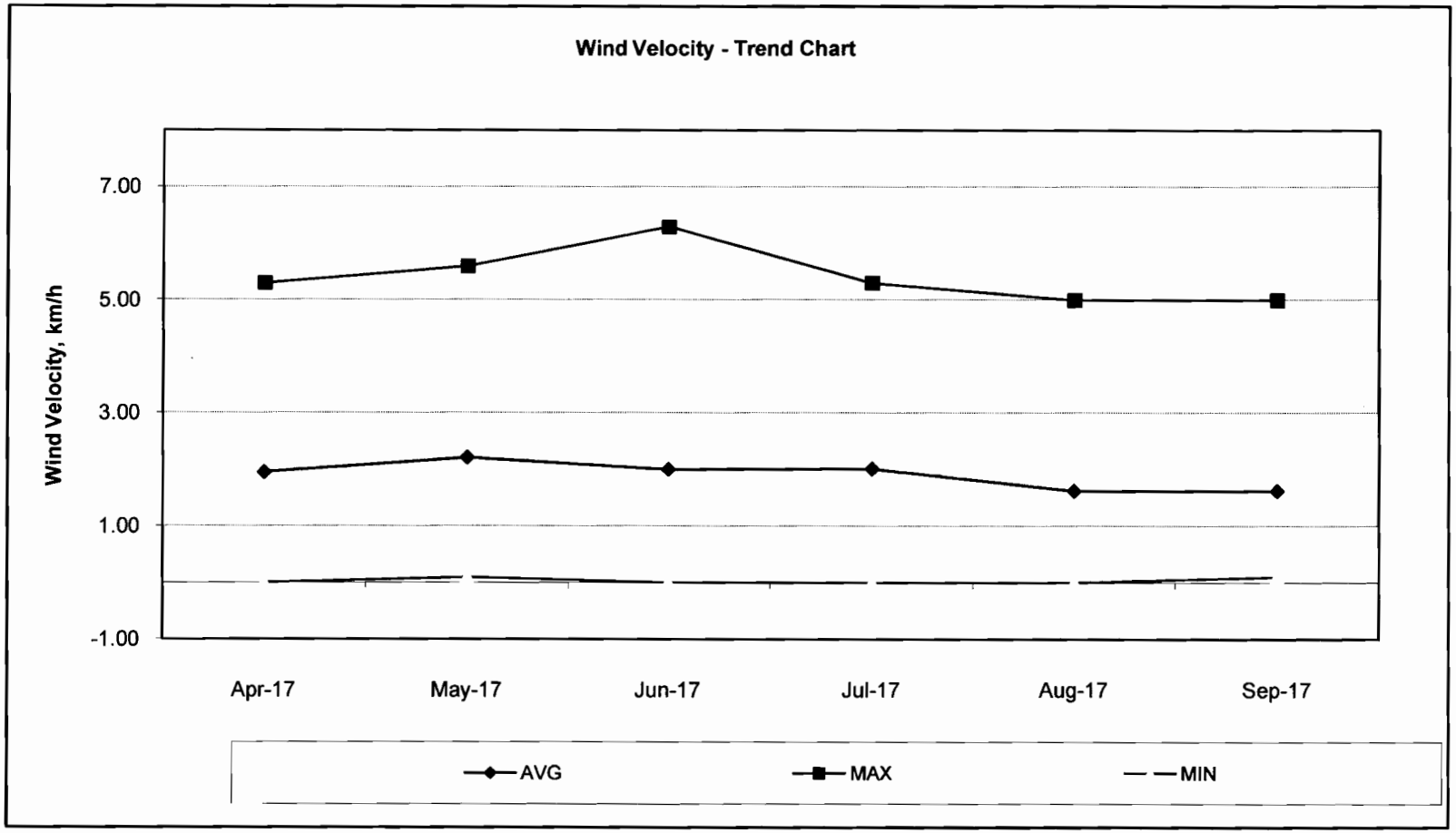
Monthly Average Atmospheric Pressure, m Bar — **Apr-2017** **to** **Sep-2017**

Month	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
AVG	992.39	991.05	988.33	986.09	986.33	996.33	**990.09**	996.33	986.09
MAX	998.60	996.50	997.10	991.60	992.40	992.40	**994.77**	998.60	991.60
MIN	988.40	985.30	979.30	990.50	979.90	979.90	**983.88**	990.50	979.30
AVG							**989.58**		
MAX								**998.60**	
MIN									**979.30**



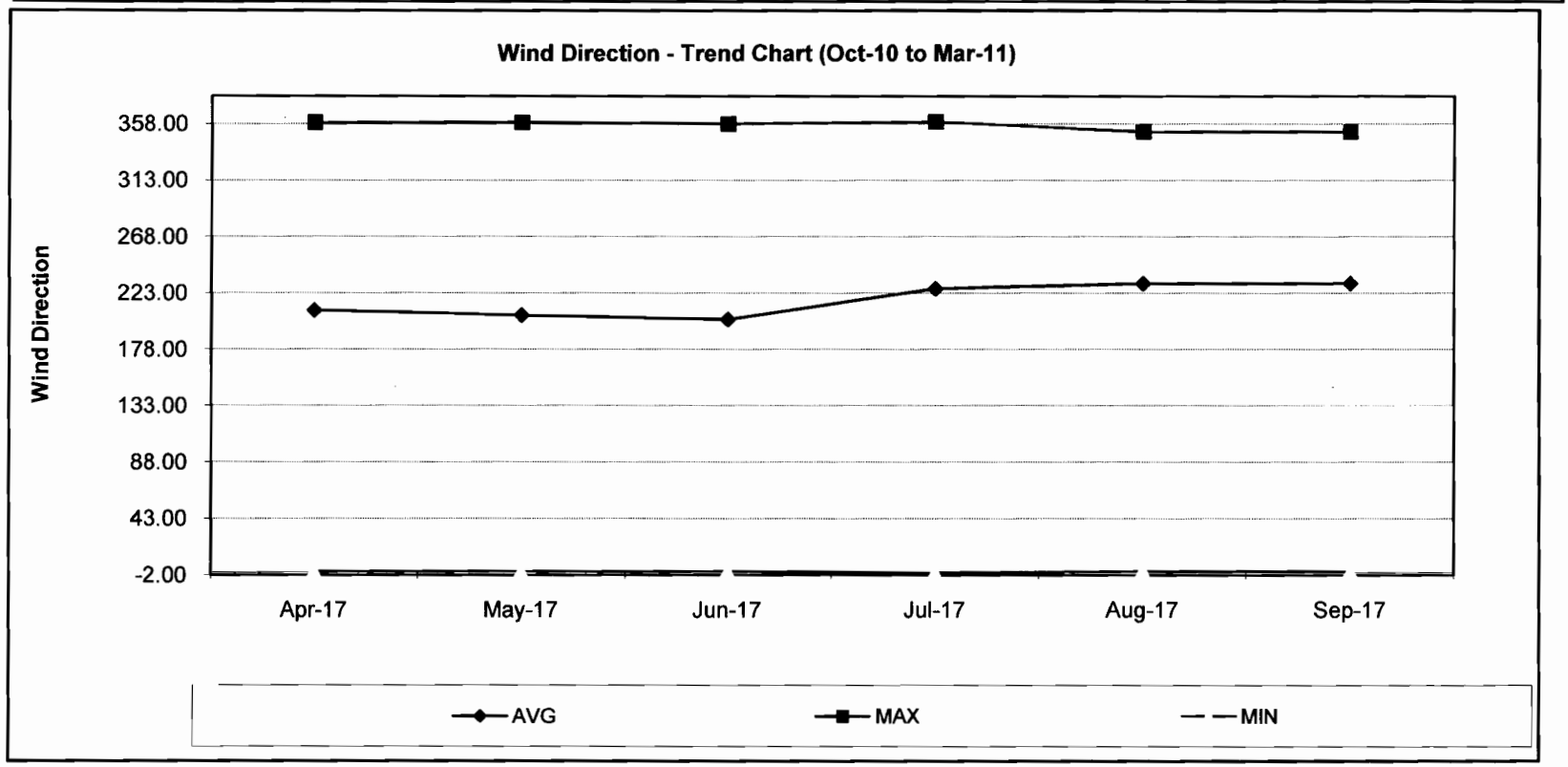
Monthly Average Wind Velocity, km/h — **Apr-2017 to Sep-2017**

Month	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
AVG	1.95	2.21	2.00	2.01	1.62	1.62	**1.90**	2.21	1.62
MAX	5.30	5.60	6.30	5.30	5.00	5.00	**5.42**	6.30	5.00
MIN	0.00	0.10	0.00	0.00	0.00	0.10	**0.03**	0.10	0.00
AVG							**2.45**		
MAX								**6.30**	
MIN									**0.00**



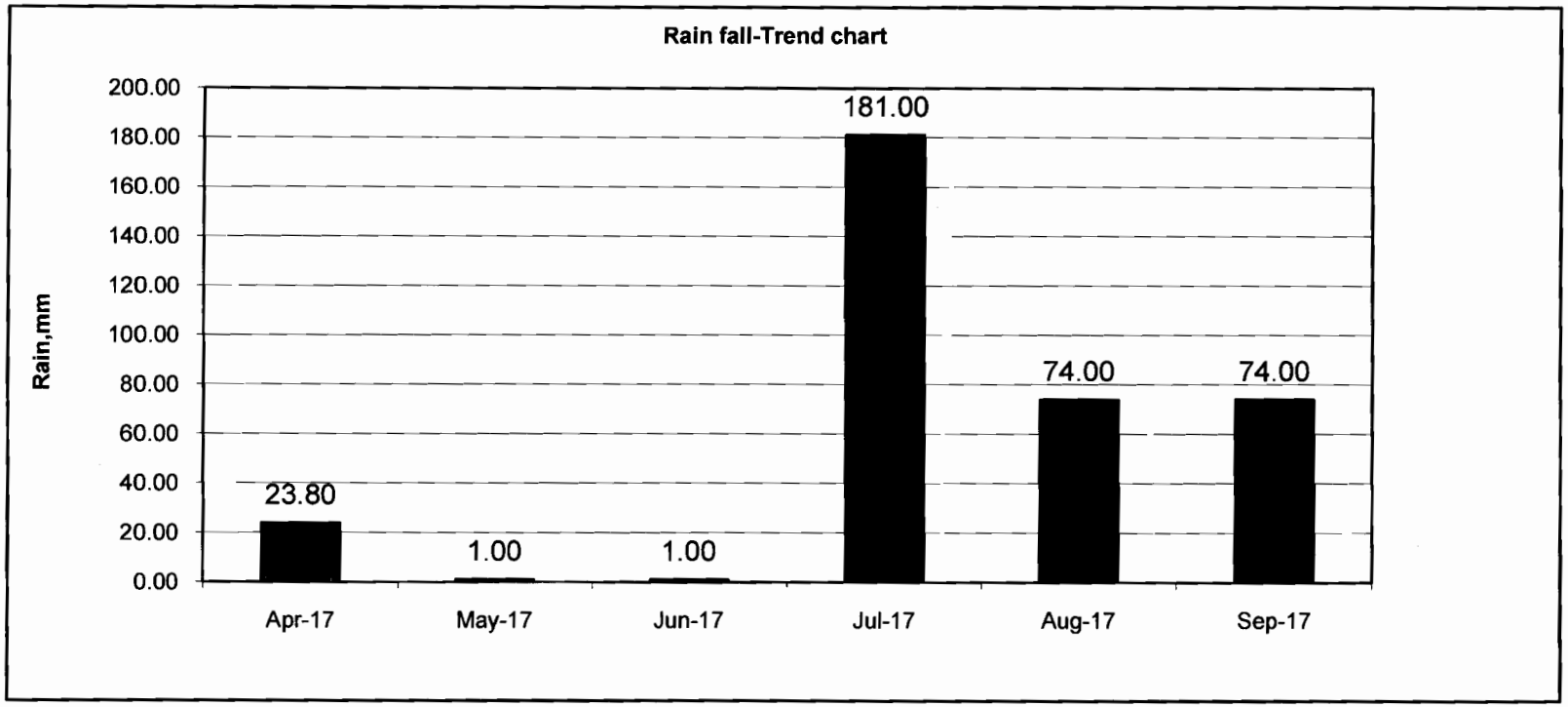
Monthly Average Wind Direction, Degree (Reference- North 0°) — Apr-2017 to Sep-2017

Month	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
AVG	209.28	205.19	201.82	226.56	230.59	230.59	**217.34**	230.59	201.82
MAX	359.30	359.40	358.20	360.00	352.00	352.00	**356.82**	360.00	352.00
MIN	0.90	0.80	0.80	0.00	1.08	1.08	**0.78**	1.08	0.00
AVG							**191.64**		
MAX								**360.00**	
MIN									**0.00**



Monthly Total Rain Fall, mm **Apr-2017 to Sep-2017**

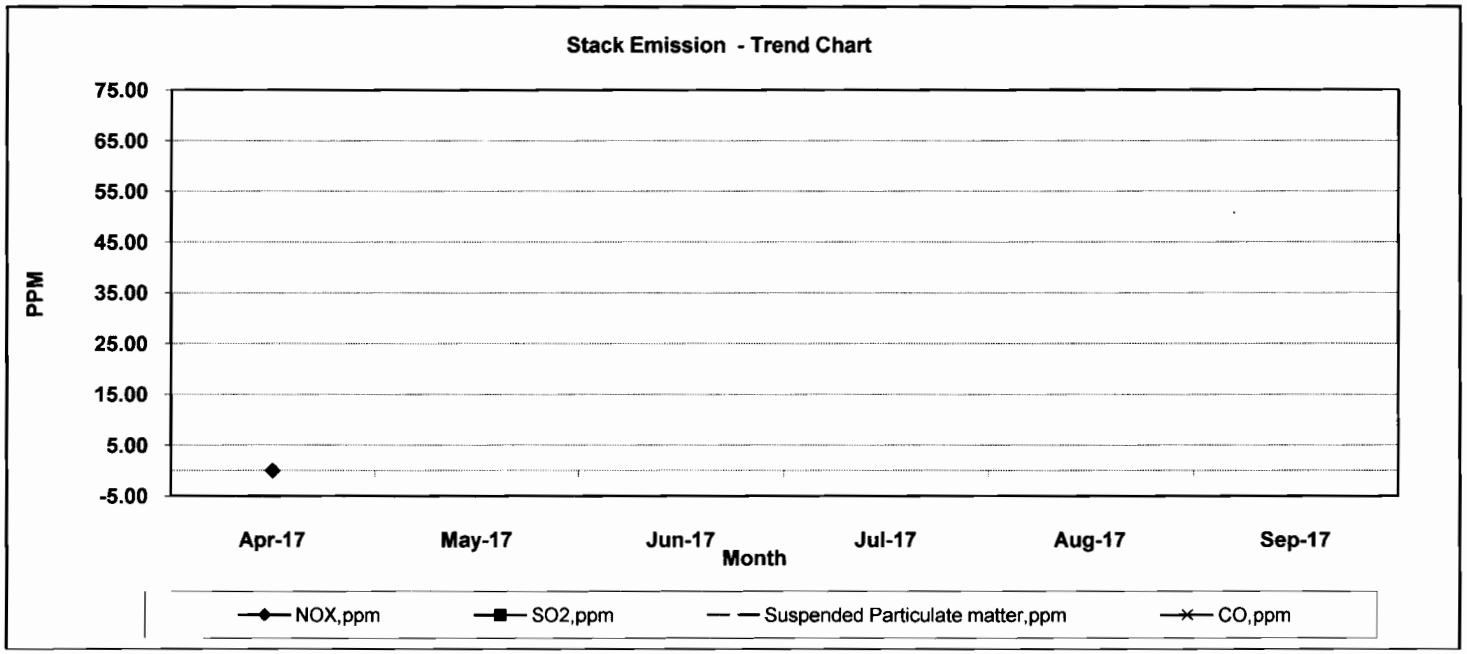
Month	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
Total	23.80	1.00	1.00	181.00	74.00	74.00	**354.80**	**181.00**	**1.00**



STACK MONITORING DATA

Monthly Average Stack Emission Report **Apr/2017 to Sep/2017**

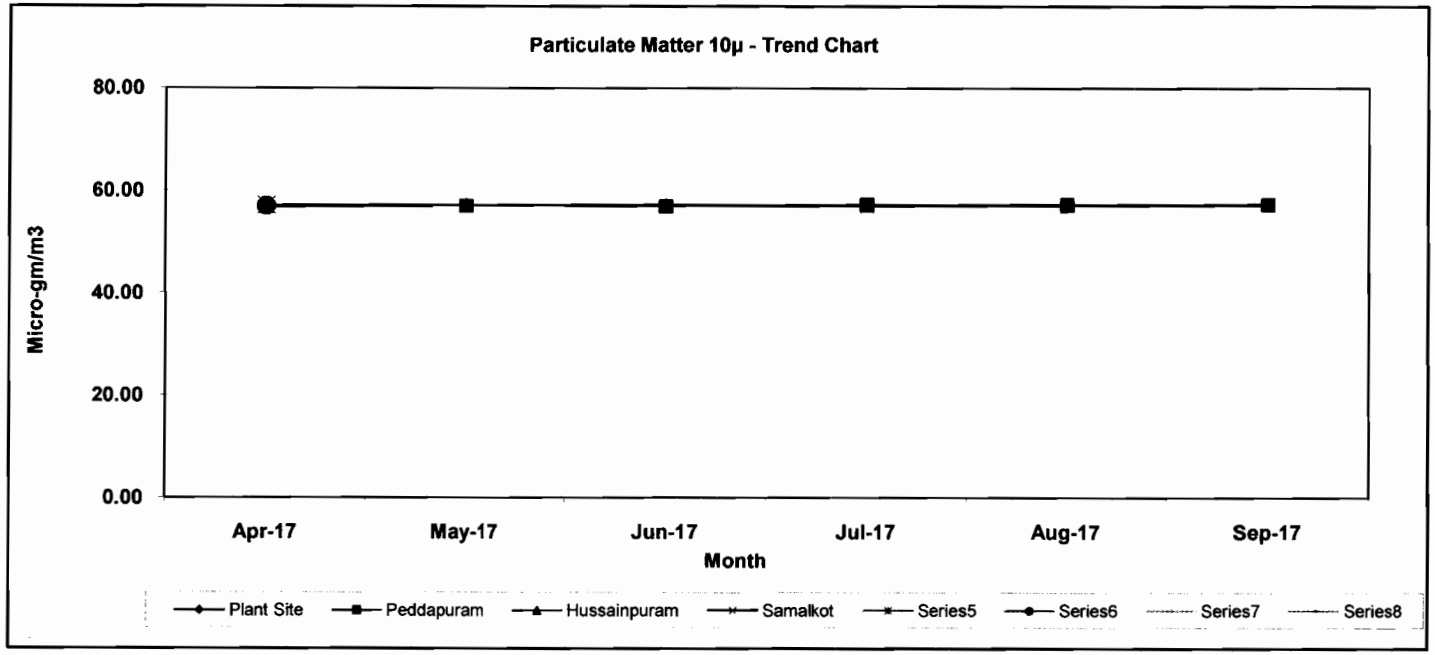
Month/Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
NOX,ppm	PLANT IS NOT IN OPERATION CONDITION						#DIV/0!	0.00	0.00
SO2,ppm							#DIV/0!	0.00	0.00
Suspended Particulate							#DIV/0!	0.00	0.00
CO,ppm							#DIV/0!	0.00	0.00



AMBIENT AIR QUALITY MONITORING DATA

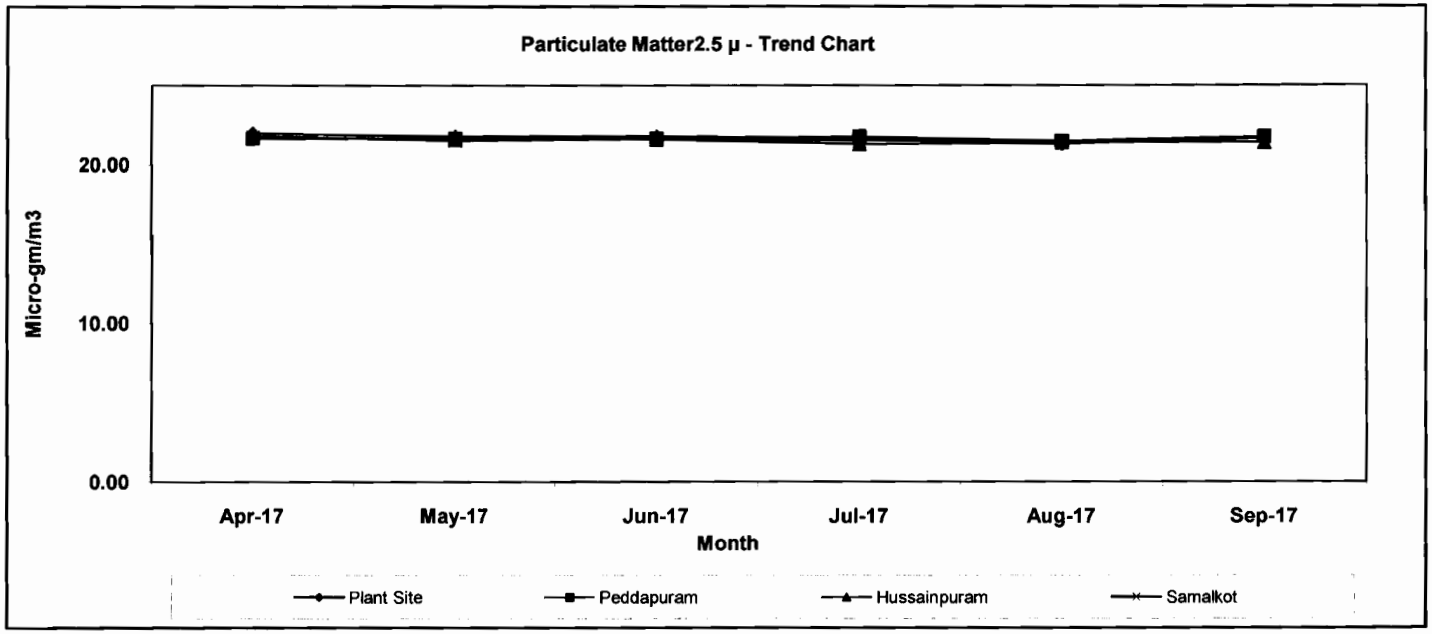
Monthly Average PM 10.0 µg/m3 **Apr-2017 to Sep-2017**

Month / Location	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
Plant Site	57.10	57.20	57.2	57.3	57.3	57.3	**57.23**	57.30	57.10
Peddapuram	56.90	57.10	57.0	57.3	57.4	57.4	**57.18**	57.40	56.90
Hussainpuram	57.00	57.20	57.1	57.4	57.20	57.5	**57.23**	57.50	57.00
Samalkot	57.10	57.10	57.1	57.0	57.10	57.2	**57.22**	57.20	57.00



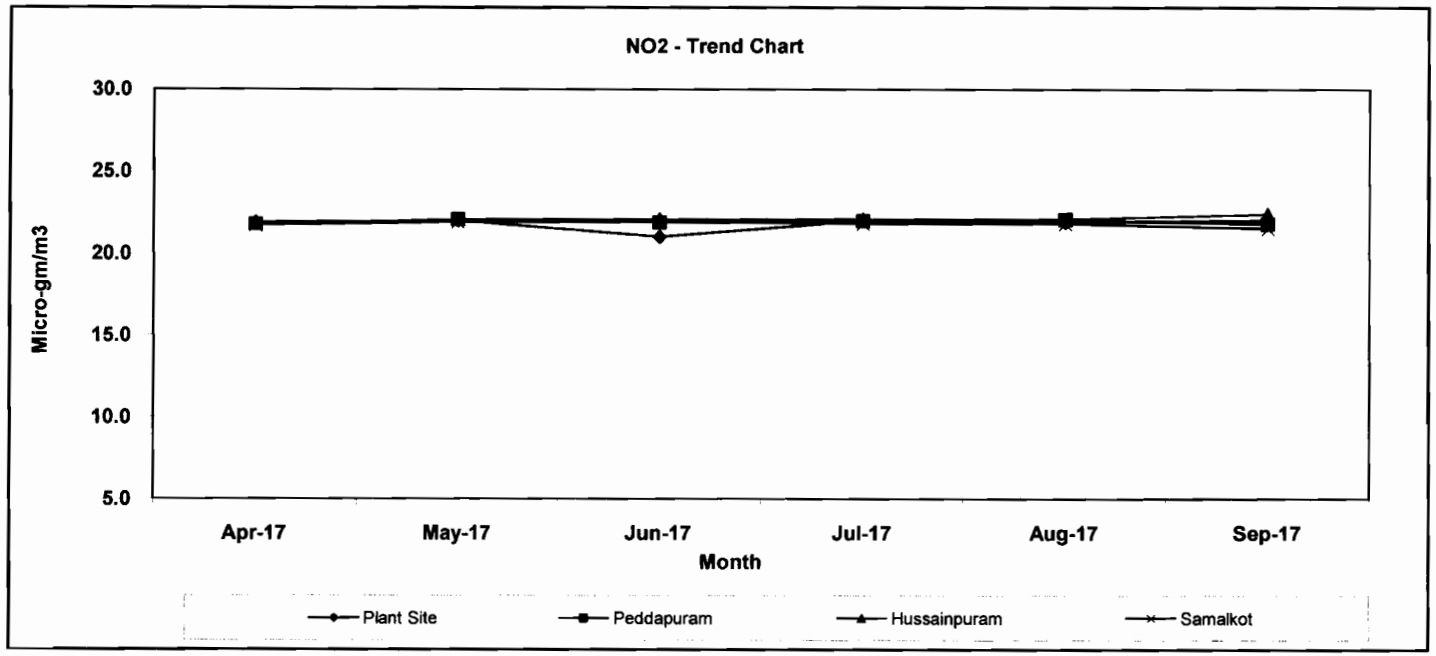
Monythly Average PM 2.5 µg/m3 — **Apr-2017 to Sep-2017**

Month / Location	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
Plant Site	22.00	21.80	21.8	21.7	21.3	21.7	**21.72**	22.00	21.30
Peddapuram	21.70	21.70	21.7	21.8	21.5	21.8	**21.70**	21.80	21.50
Hussainpuram	21.70	21.60	21.6	21.3	21.4	21.4	**21.50**	21.70	21.30
Samalkot	21.80	21.50	21.6	21.5	21.4	21.4	**21.64**	21.80	21.40



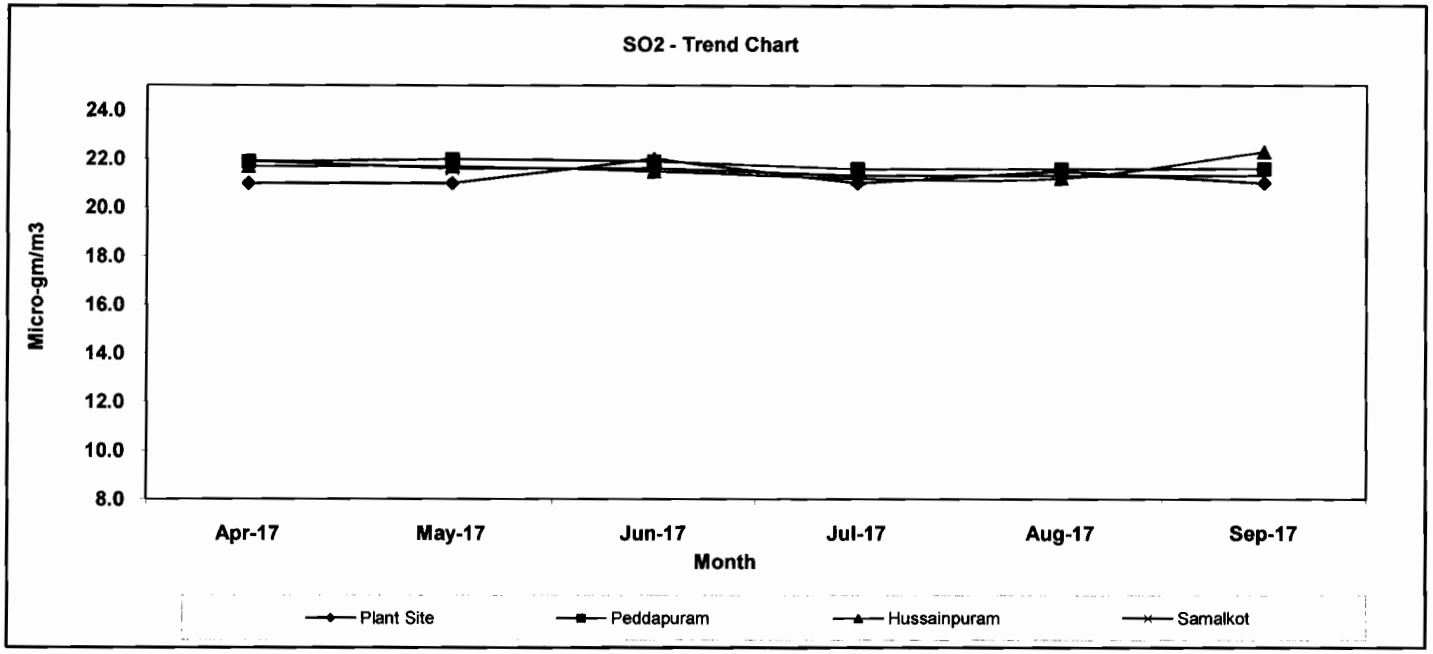
Monthly Average NO2 µg/m3 **Apr-2017 to Sep-2017**

Month / Location	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
Plant Site	21.9	22.00	21.0	22.0	21.9	22.0	**21.80**	22.00	21.00
Peddapuram	21.8	22.10	21.9	22.0	22.1	21.8	**21.95**	22.10	21.80
Hussainpuram	21.8	22.10	22.1	22.1	22.1	22.4	**22.10**	22.40	21.80
Samalkot	21.7	21.90	21.9	21.8	21.8	21.5	**21.95**	21.90	21.50



Monthly Average SO_2 µg/m3 — **Apr-2017 to Sep-2017**

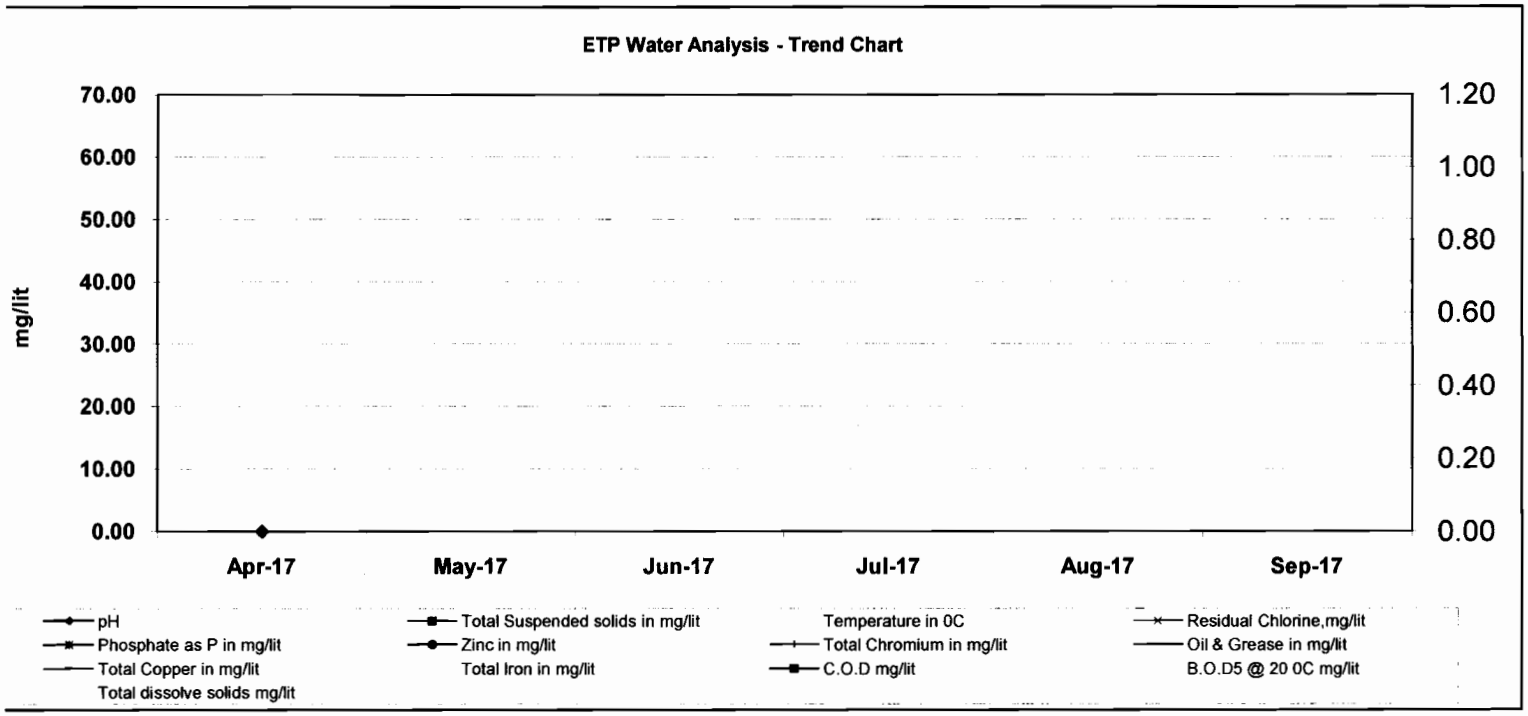
Month / Location	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
Plant Site	21.0	21.00	22.0	21.0	21.5	21.0	**21.25**	22.00	21.00
Peddapuram	21.9	22.00	21.9	21.6	21.6	21.6	**21.77**	22.00	21.60
Hussainpuram	21.7	21.70	21.5	21.2	21.2	22.3	**21.60**	22.30	21.20
Samalkot	21.9	21.60	21.6	21.3	21.3	21.3	**21.54**	21.90	21.30



EFFLUENT QUALITY MONITORING RECORD

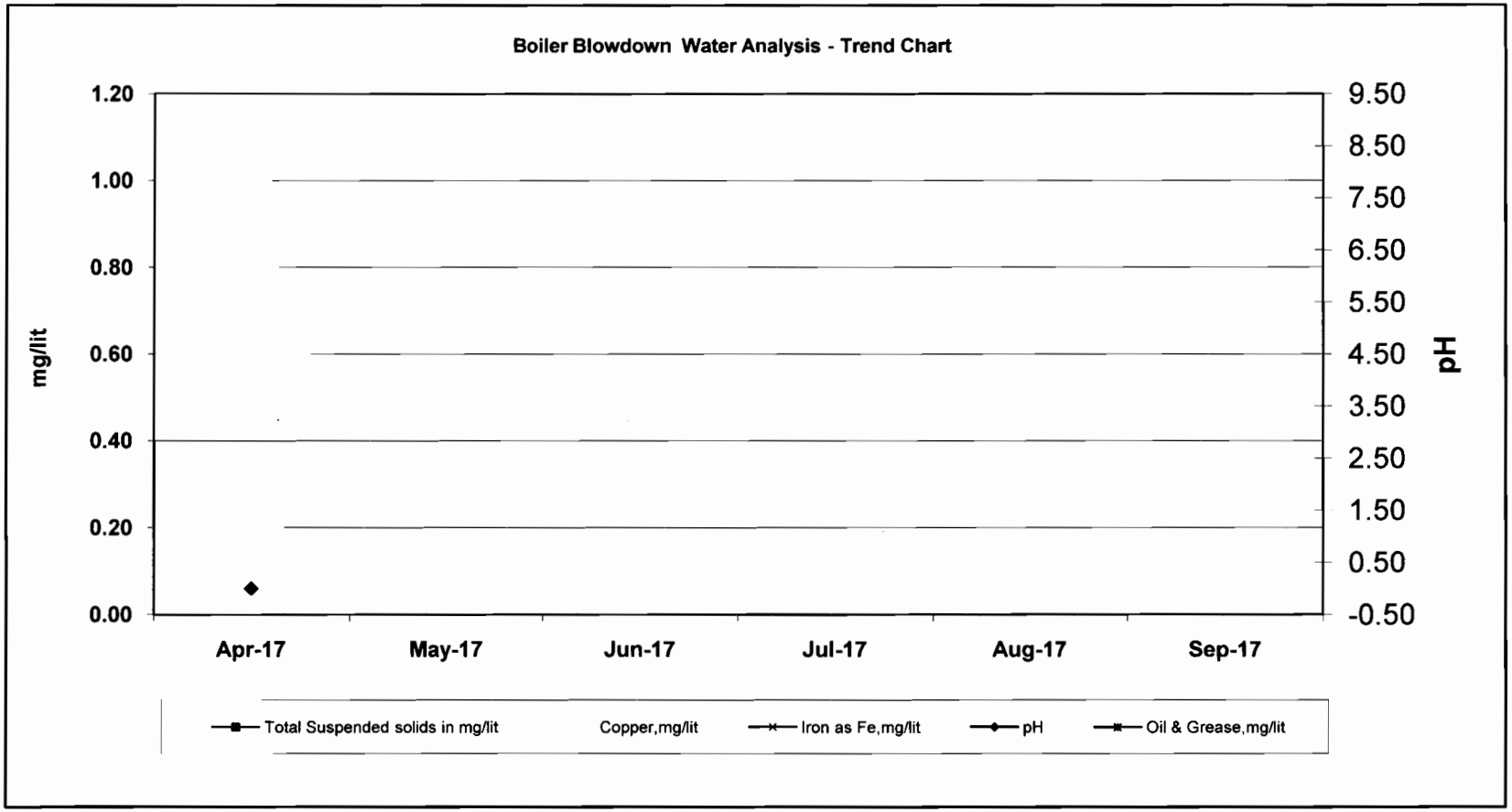
Monthly Effluent Treatment Plant Water Analysis Report Reading Apr/2017 to Sep/2017

Month/Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
pH	PLANT IS NOT IN OPERATION CONDITION						#DIV/0!	0.00	0.00
Total Suspended solids in mg/lit							#DIV/0!	0.00	0.00
Temperature in 0C							#DIV/0!	0.00	0.00
Residual Chlorine,mg/lit							#DIV/0!	0.00	0.00
Phosphate as P in mg/lit							#DIV/0!	0.00	0.00
Zinc in mg/lit							#DIV/0!	0.00	0.00
Total Chromium in mg/lit							#DIV/0!	0.00	0.00
Oil & Grease in mg/lit							#DIV/0!	0.00	0.00
Total Copper in mg/lit							#DIV/0!	0.00	0.00
Total Iron in mg/lit							#DIV/0!	0.00	0.00
C.O.D mg/lit							#DIV/0!	0.00	0.00
B.O.D5 @ 20 0C mg/lit							#DIV/0!	0.00	0.00
Total dissolve solids mg/lit							#DIV/0!	0.00	0.00



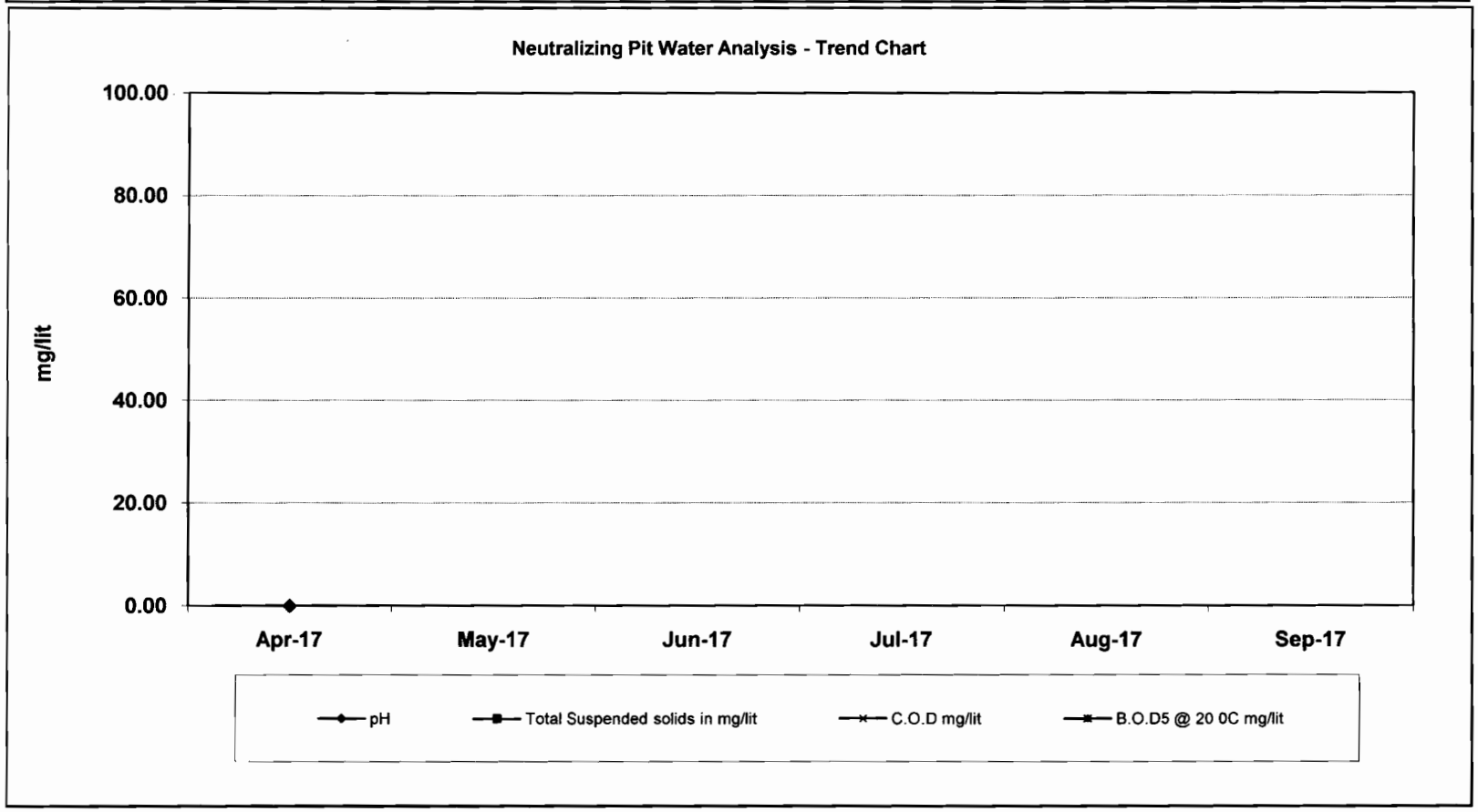
Monthly Avg Boiler Blowdown Water Analysis Report Reading **Apr/2017 to Sep/2017**

Month/Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
pH	PLANT IS NOT IN OPERATION CONDITION						#DIV/0!	0.00	0.00
Total Suspended solids in mg/lit							#DIV/0!	0.00	0.00
Copper,mg/lit							#DIV/0!	0.00	0.00
Iron as Fe,mg/lit							#DIV/0!	0.00	0.00
Oil & Grease,mg/lit							#DIV/0!	0.00	0.00



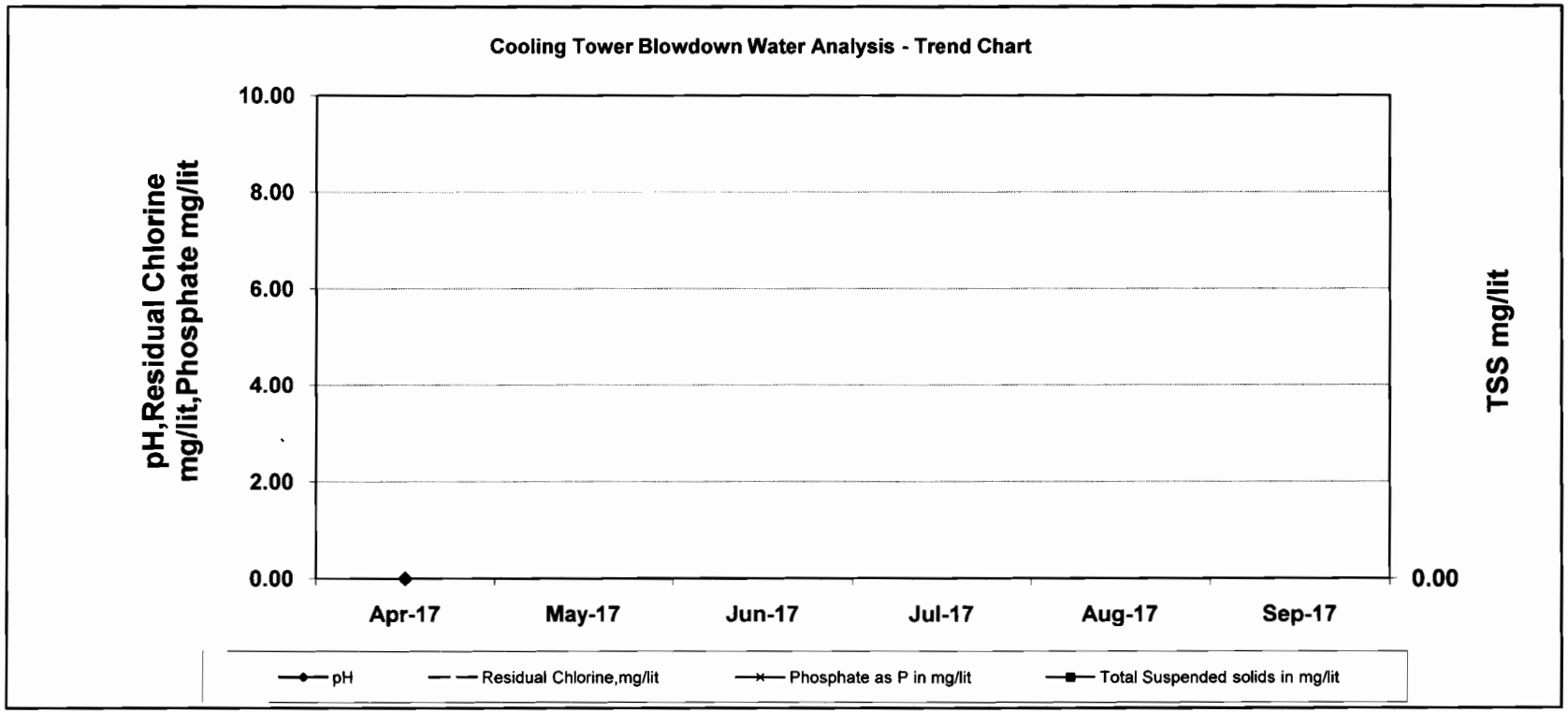
Monthly Maximum Neutralizing Pit Water Analysis Report Reading **Apr/2017 to Sep/2017**

Month/Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
pH	PLANT IS NOT IN OPERATION CONDITION						#DIV/0!	0.00	0.00
Total Suspended solids in mg/lit							#DIV/0!	0.00	0.00
C.O.D mg/lit							#DIV/0!	0.00	0.00
$B.O.D_5$ @ 20 ^{0}C mg/lit							#DIV/0!	0.00	0.00



Cooling Tower Blowdown Water Analysis Report Reading **Apr/2017 to Sep/2017**

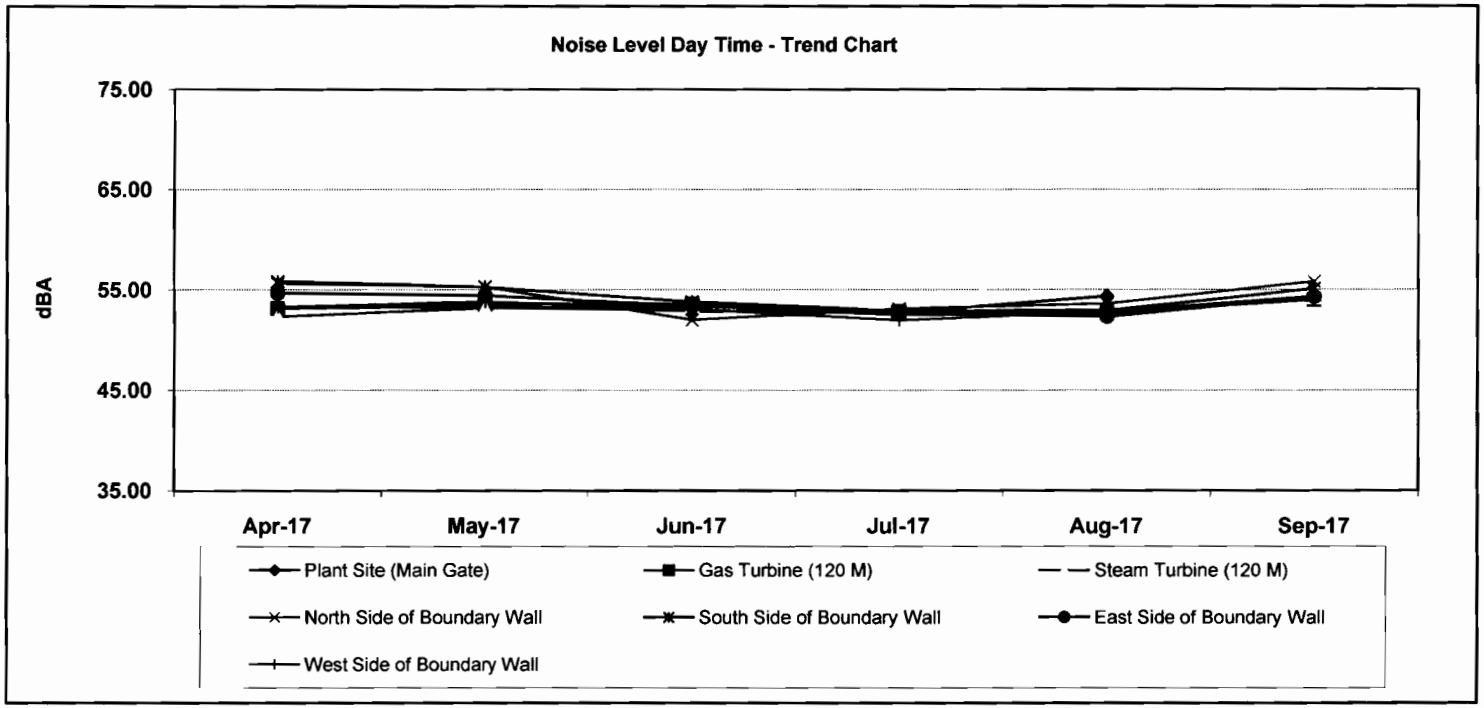
Month/Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
pH	PLANT IS NOT IN OPERATION CONDITION						#DIV/0!	0.00	0.00
Total Suspended solids in mg/lit							#DIV/0!	0.00	0.00
Residual Chlorine,mg/lit							#DIV/0!	0.00	0.00
Phosphate as P in mg/lit							#DIV/0!	0.00	0.00



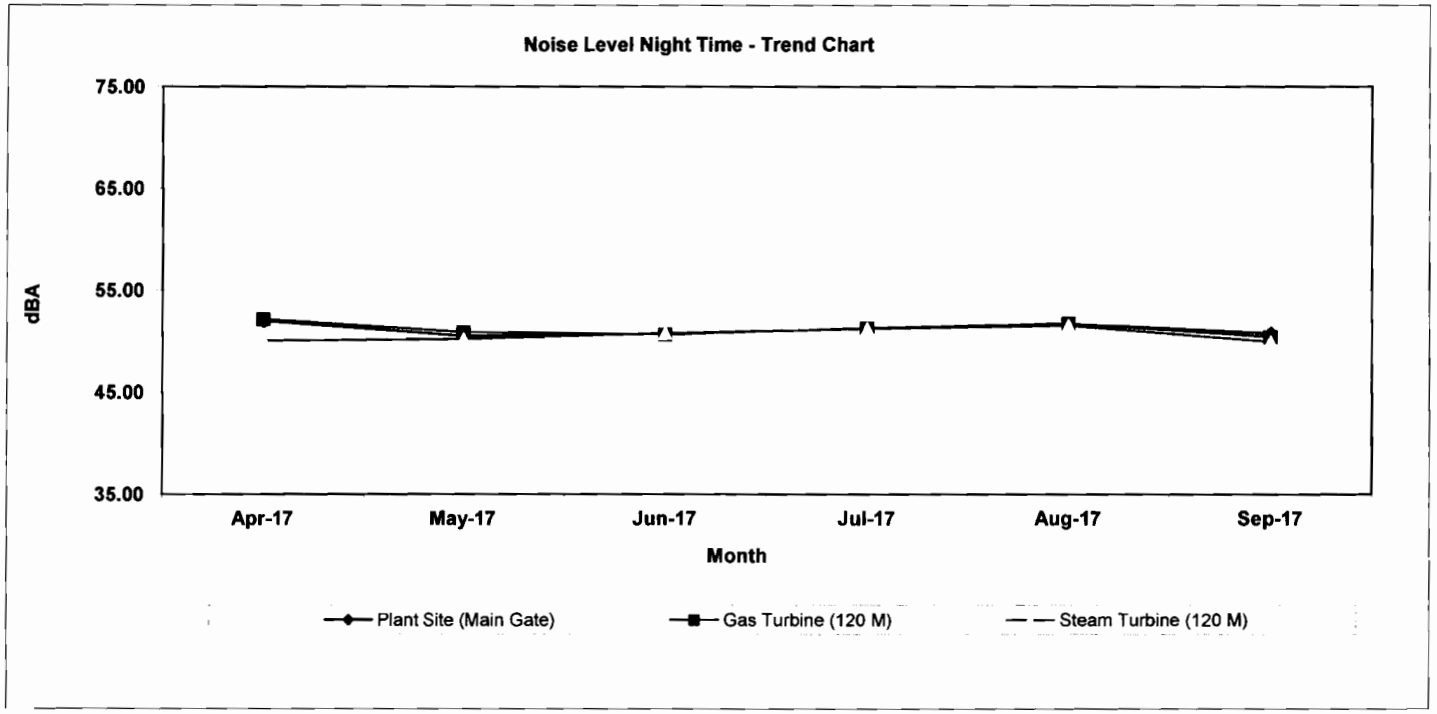
NOISE LEVEL MONITORING RECORD

Noise Level Day Time **Apr/2017 to Sep/2017**

Month/Location	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
Plant Site (Main Gate)	54.9	53.23	53.32	52.91	52.74	54.39	**53.57**	54.39	52.74
Gas Turbine (120 M)	53.20	53.58	53.65	52.87	52.73	54.06	**53.35**	54.06	52.73
Steam Turbine (120 M)	52.35	53.22	53.45	52.56	52.51	54.32	**53.07**	54.32	52.35
North Side of Boundary Wall	55.65	55.34	52.02	53.12	53.65	55.85	**54.27**	55.85	52.02
South Side of Boundary Wall	55.87	55.35	53.85	52.95	52.98	55.14	**54.36**	55.87	52.95
East Side of Boundary Wall	54.65	54.44	53.40	52.65	52.32	54.32	**53.63**	54.65	52.32
West Side of Boundary Wall	53.32	53.82	53.11	51.98	52.84	54.38	**53.24**	54.38	51.98

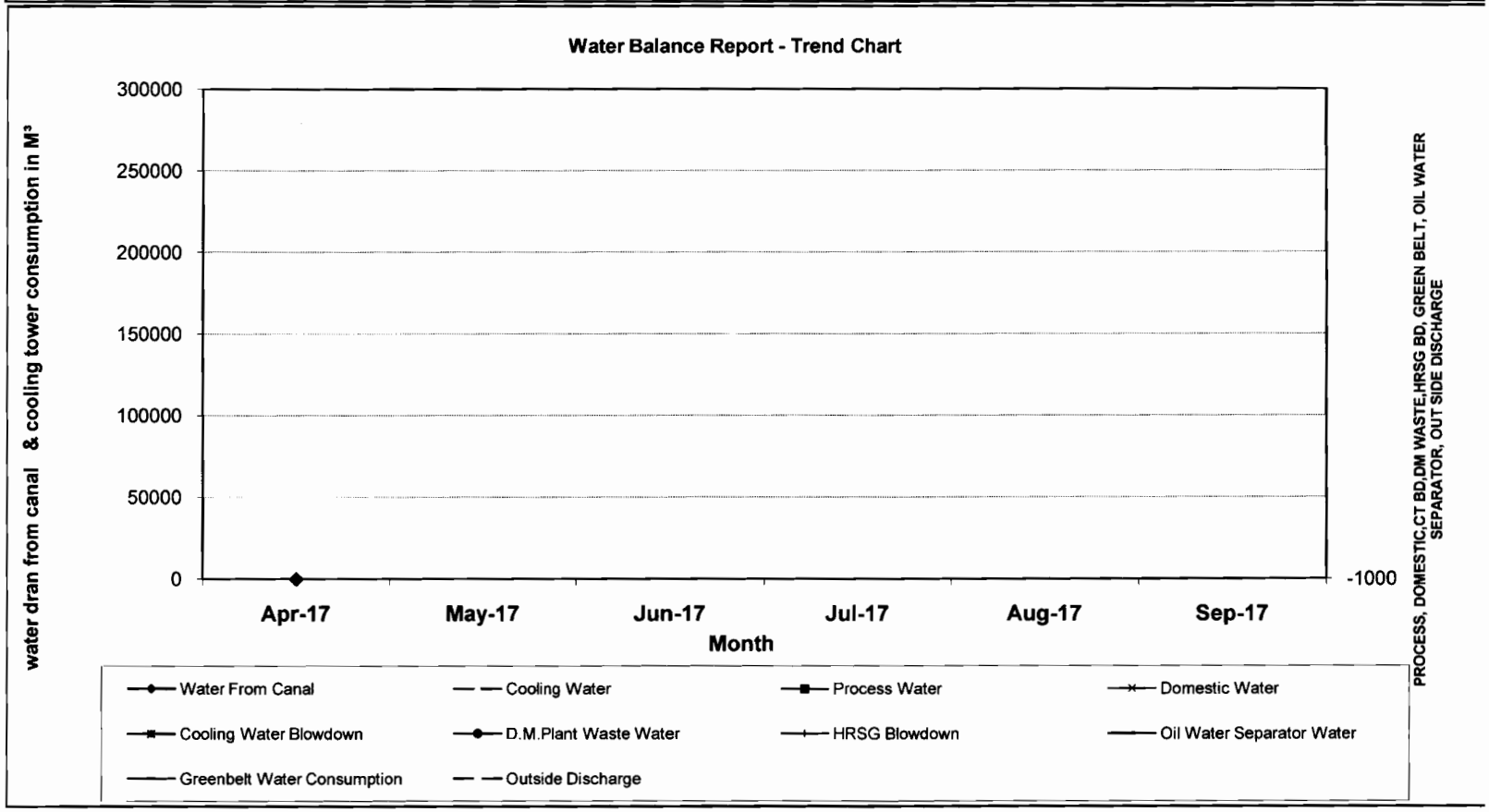


Noise Level Night Time							Apr/2017	to	Sep/2017
Month/Location	**Apr-17**	**May-17**	**Jun-17**	**Jul-17**	**Aug-17**	**Sep-17**	**AVG**	**MAX**	**MIN**
Plant Site (Main Gate)	52.00	50.54	50.80	51.26	51.76	50.80	**51.19**	52.00	50.54
Gas Turbine (120 M)	52.20	50.95	50.72	51.31	51.78	50.46	**51.24**	52.20	50.46
Steam Turbine (120 M)	50.10	50.25	50.86	51.27	51.58	49.99	**50.68**	51.58	49.99



Water Balance Report **Apr-2017 to Sep-2017**

Month/Location	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	AVG	MAX	MIN
Water From Canal	PLANT IS NOT IN OPETATION CONDITION						#DIV/0!	0	0
Process Water							#DIV/0!	0	0
Cooling Water							#DIV/0!	0	0
Domestic Water							#DIV/0!	0	0
Cooling Water Blowdown							#DIV/0!	0	0
D.M.Plant Waste Water							#DIV/0!	0	0
HRSG Blowdown							#DIV/0!	0	0
Oil Water Separator Water							#DIV/0!	0	0
Greenbelt Water Consumption							#DIV/0!	0	0
Outside Discharge							#DIV/0!	0	0



Proposed 1200 MW Phase I & II Expansion Project at Samalkot Power Station, IDA Peddapuram, Samalkot Mandal, East Godavari Distt., Andhra Pradesh State MoEF Clearance No. J-13012/134/2010-IA-II(T) dated 26th April, 2011		
Clause	**Conditions**	**Compliance Status**
4. A. Specific Conditions		
i	Environmental clearance is subject to obtaining CRZ clearance (as may be applicable) for undertaking permissible activities in CRZ areas.	Complied Later this clause was amended and relaxed as per our request. Amendment: MoEF letter J-13012/134/2010-I-A,II(T)
ii	In case flue for running the power project is proposed to be changed from natural gas to their fuel (liquid of solid), the project proponent shall apply for such a change in Environmental Clearance along with the necessary documents as required under EIA Notification 2006 (and its amendments). In such a case necessity for holding the public hearing again or otherwise will be determined by the Ministry in consultation wit the Expert Appraisal Committee (Thermal)	Agreed to comply We have Carried out only Test Synchronization of the some of the GT units and are kept Idle due to short fall Gas. We agree to comply up on operation/commissioning the respective units
iii	Vision document specifying prospective plan for the site shall be formulated and submitted to the Ministry within Six Months	Complied We have submitted the vision document and prospective plan to MoEF
iv	COC 1.25 shall be adopted for use of sea water as source of condenser cooling	Complied Later the clause was amended and relaxed as per our request. **Amendment:** MoEF letter J-13012/134/2010-I-A,II(T) We Shall be adhering the same once the project commissioning is completed
v	No Discharge shall be made into the estuary nor intake point shall be located in estuary	Complied Later the clause was amended and relaxed as per our request **Amendment:** MoEF letter J-13012/134/2010-I-A,II(T)
vi	No ground water shall be extracted for the project work at any stage.	Refer Below Ground water is not drawn from the Project Site. Water is taken from the Phase-1 Units as per the allocation from Godavari Canal after obtaining permission from Irrigation Department
vii	It shall be ensured that the area drainage is not disturbed due to the proposed expansion	Complied We confirm that area drainage was not disturbed due to expansion.

Proposed 1200 MW Phase I & II Expansion Project at Samalkot Power Station, IDA Peddapuram, Samalkot Mandal, East Godavari Distt., Andhra Pradesh State MoEF Clearance No. J-13012/134/2010-IA-II(T) dated 26th April, 2011		
Clause	**Conditions**	**Compliance Status**
viii	Hydro-geological study of the area shall be reviewed annually to assess the sustainability of the source of water particularly in lean season. The review report duly vetted by the concerned department. In the state government shall be submitted to the Ministry. in case adverse impact on ground and surface water is observed, immediate mitigating steps to contain the same shall be undertaken.	Complied We are periodically doing the report and no adverse impacts were found.
ix	The treated effluents conforming to the prescribed standards only shall be reused to the extent possible and excess discharged. Arrangements shall be made that effluents and storm water do not do get mixed	Agreed to comply We to comply once the project commissioning is complied
x	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation. Continuous monitoring of effluent discharge shall be undertaken and it shall be ensured that when discharge enters the natural drain the temperature of effluent shall be at ambient.	Agreed to comply The STP shall be constructed and put in to operation once the Project is fully commissioned and operational
xi	Monitoring of ground and surface water quality (if any nearby) shall be regularly conducted and records maintained. The monitoring data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and the drainage in the direction of flow of the ground water and records maintained. Monitoring of heavy metals in ground water shall be undertaken.	Complied. Surface Water and Ground Water Quality are monitored thru external agency at three locations on monthly basis and records are maintained. Heavy metal are not monitored and agreed to monitor in future. The sampling locations for the ground water shall be decided with CGWB Authorities
xii	A well designed Rainwater harvesting shall be put in place. Central Ground Water Authority/Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished. Status of implementation shall be submitted to the Regional Office of the Ministry.	Shall be complied PA informed Rain Water Harvesting Technology and designs were made in consultation with CWGB and the copy of the same was submitted to RO,
xiii	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires especially during summer seasons. Copy of these measures with full details along with location in plant layout shall be submitted to the Ministry as well as to the Regional office of the Ministry	Adequate safety measures were provided at the site during the construction for the employees and workers including the fire fighting measures.
xiv	Noise level emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite personnel protective equipments like ear plugs / ear muffs etc. shall be provided. Workers engaged in noisy areas such as gas turbine area, air compressor area etc shall be periodically examined to maintain audiometric record and for the treatment for any hearing loss including shifting to non noisy areas.	Monitored the Six Locations during the day and night time thru external agency during the construction time. Workers were provided Personal Protective equipment and also acoustic enclosures for Noise Generating Units

Proposed 1200 MW Phase I & II Expansion Project at Samalkot Power Station, IDA Peddapuram, Samalkot Mandal, East Godavari Distt., Andhra Pradesh State MoEF Clearance No. J-13012/134/2010-IA-II(T) dated 26th April, 2011		
Clause	**Conditions**	**Compliance Status**
xv	NOx emission from each gas turbine shall not exceed 50 ppm.	Agreed to comply PA Agreed to comply once the Projects completed and put it in to operational
xvi	Stacks of 70 mts shall be provided with continuous online monitoring equipments. Exit velocity of flue gases shall not be less than 22 m/sec	Complied Later the clause was amended and relaxed as per our request **Amendment:** MoEF letter J-13012/134/2010-I-A,II(T)
xvii	Regular monitoring of ground water concentration of SO2, NOx, RSPM, (PM10 and PM 2.5) etc. shall be carried out in the impact zone and records maintained. If at any stage these levels are found to be exceed the prescribed limits, necessary control measures shall be provided immediately. The location of monitoring station and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional office of this Ministry.	Complied. We are monitoring SO2, NoX, PM10 and PM2.5 thru CPCB approved agency at 4 location on weekly twice 24 hours basis as per the directions of SPCB and the periodic reports are submitted to MoEF/RO As per the reports are the levels found to be within the limits.
xviii	Impact on fishery shall be studied in case sea water use is feasible and adopted. Accordingly a scheme for uplifting the livelihood of fishermen community shall be formulated and a separate fishermen welfare fund created to enhance their quality of life through creation of facilities for fish landing platforms/fishing harbour/cold storage etc. and also to provide relief in case of emergency situations such as missing of fishermen on duty due to rough seas, tropical cyclones and storms etc. the fund shall be created not out of CSR budget.	Complied Later the clause was amended and relaxed as per our request **Amendment:** MoEF letter J-13012/134/2010-I-A,II(T)
xix	Local employable youth shall be trained in skills relevant to the project for eventual employment in the project itself. The action taken report and details thereof to this effect shall be submitted to the regional office of the ministry and the State Govt. Department concerned from time to come	Agreed to comply Local employable youth were put on Job during the construction activity and report has been submitted to local State Gove
xx	An amount of Rs. 20.40 Crs shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs. 4.08 Crs per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.	Agree to Comply We have allocated the Rs 20.4 Cr as one time capital cost for the CSR activities and shall be spent as per the plan once the project restarts the construction
xxi	CSR Scheme shall identified based on assessment in around the villages within 5 KM of site and constant consultation with the village Panchayat and District Administration. As a part of CSR prior identification of Local employable youth shall be trained in skills relevant to the project for eventual employment in the project itself. The action taken report and details thereof to this effect shall be submitted to the regional office of the ministry and the State Govt. Department concerned from time to come. Income generating projects consistent with the traditional skill of the people shall be undertaken. Development of fodder forms,	A need based assessment was conducted for the nearby villages with the action plan and it is being implemented. Vocational Training on the various fields was imparted for the people for the self employment.

Proposed 1200 MW Phase I & II Expansion Project at Samalkot Power Station, IDA Peddapuram, Samalkot Mandal, East Godavari Distt., Andhra Pradesh State MoEF Clearance No. J-13012/134/2010-IA-II(T) dated 26th April, 2011		
Clause	**Conditions**	**Compliance Status**
	fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. vocational training programme for possible self employment and jobs shall be imparted to identify villagers free of cost	
xxii	It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region . The project proponent shall also submit the status of implementation of the scheme from time to time	Agreed to comply Project is not yet commissioned however the PA carrying out the CSR activities and have agreed to get audited after commissioning of the project
xxiii	Green belt consisting of three tiers of plantations around the plant of 50 mts width and adequate tree density not less than 2500 per ha with survival rate not less than 80% shall be developed. In area where 50 mts width is not possible adequate justification shall be submitted to the regional office of the ministry and greenbelt shall not be less than 33% of the total area	Complied The PA has carried out 3 tier plantation around the plant of 150 mt width with adequate species and density. 33% of green belt is completed
xxiv	In addition to green belt, shelter belt shall also be raised additionally on the side facing the sea. To meet the expenditure of these plantations and their management, a common Green Endowment Fund shall be created by the project proponent. The interest earned out of it shall be utilized for the development and management of green cover of the area.	Later the clause was amended and relaxed as per our request letter ref MoEF letter J-13012/134/2010-I-A,II(T)
B. General Conditions:		
i	Storage facility for auxiliary liquid fuel such as LDO and/ HFO/LSHS (if any) shall be made in the plant area in consultation with the Department of Explosive, Nagpur. Sulfur content in the liquid fuel will not exceed 0.5%. Disaster management plan shall be prepared to meet the eventuality in case of an accident taking place due to the storage of oil.	Complied Storage Facilities Fuel Tanks are constructed in consultation with Department of Explosives. As per the Fuel Supply Reports the Sulphur content is within the 0,5% DMP is prepared and made available
ii	First aid and sanitation arrangements shall be made for the drivers and other contract workers during the construction phase.	Complied Necessary infrastructure facilities are made during the construction period for the workers
iii	Provision shall be made for the housing of construction labour within the site with all infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, mobile health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project	Complied Necessary infrastructure facilities such as Drinking Water and Health care provided for the construction workers. The housing for the labour is in the form of temporary structure and agreed to remove after completion of the project

Proposed 1200 MW Phase I & II Expansion Project at Samalkot Power Station, IDA Peddapuram, Samalkot Mandal, East Godavari Distt., Andhra Pradesh State MoEF Clearance No. J-13012/134/2010-IA-II(T) dated 26th April, 2011		
Clause	**Conditions**	**Compliance Status**
iv	The project proponent shall advertise in at least two local news papers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing the project has been accorded environmental clearance and copies of clearance letter are available with the state pollution control board/ committee and may also be seen at website of the Ministry of Environment and Forests at http://envfor.nic.in	Complied We have given advertisement in two local news papers and copies of the same were submitted to the regional office.
v	A copy of the clearance letter shall also be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, urban local body and the local NGO, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied A copy of the EC has been sent to local Panchayat authorities
vi	An Environmental cell shall be created at the project site itself and shall be headed by an officer of appropriate seniority and qualification. It shall be ensured that the Head of the cell shall directly report to the Head of the organization	Complied EMC with suitable qualified personal were set up under the control of Sr Executive
vii	The proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitoring data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MoEF, the respective zonal office of CPCB and the SPCB	We have not uploaded the compliance status including the on their website because the Units are not yet commissioned and have agreed to upload after commissioning the units.
viii	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitoring data (both in hard copies as well as e-mail) to the respective regional office of MoEF, the respective zonal office CPCB and the SPCB	We are Periodically submitting the reports to RO. Hard copies are submitted. We agree to submit the same thru the email
ix	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, it Regional office, Central Pollution Control Board and State Pollution Control Board. the project proponent shall upload the status of compliance of environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.	We did not upload the compliance status including the on their website because the Units are not yet commissioned and have agreed to upload after commissioning the units
x	Regional office of the MoEF willl monitors the implementation of the stipulated conditions. A complete set of documents including EIA report and EMP along with the additional information submitted from time to time shall be forwarded to the Regional office for their use durihg monitoring. Project proponent will upload the compliance status in their website and update from time to time at least six monthly basis. Criteria Pollutants levels including NOx (from stack & ambient air) shall be displayed at the main gate of the power plant and in public domain.	We have submitted the complete set of documents to RO We have not uploaded in website is and agree to do it
xi	Separate funds shall be allocated form implementation of environmental protection measures along with item wise breakup. These cost shall be included as part of the project cost. The finds earmarked for the environmental protection measures shall not be diverted for other purpose and year wise expenditure should be reported to MoEF	Complied An amount Rs.200 Cr was allocate and spend for as a capital cost and also spent. An amount of Rs 45 L as recurring cost

Proposed 1200 MW Phase I & II Expansion Project at Samalkot Power Station, IDA Peddapuram, Samalkot Mandal, East Godavari Distt., Andhra Pradesh State MoEF Clearance No. J-13012/134/2010-IA-II(T) dated 26th April, 2011		
Clause	**Conditions**	**Compliance Status**
xii	The project Authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	Agreed to comply Once the FC is completed the we agree to submit the same
xiii	Full cooperation shall be extended to the Scientists/Officers form the Ministry/Regional office of Ministry at Bangalore /CPCB/SPCB who would be monitoring the compliance of environmental status	Complied The PA have extended full cooperation during the Visit

Point Wise Compliance Report: J-13012/37/2009-IA-II(T) dated 28th May, 2010 Appendix-1

Proposed 1200 MW Phase I Expansion Project at Samalkot Power Station, IDA Peddapuram, Samalkot Mandal, East Godavari Distt., Andhra Pradesh State MoEF Clearance No. J-13012/37/2009-IA-II(T) dated 28th May, 2010 Present Status of the Compliance :		
Clause	**Conditions**	**Compliance Status**
4. A. Specific Conditions		
i	The proponent shall comply with all the conditions stipulated while according environmental clearance to existing 220MW (Phase-I) vide letter dated 11.11.1998	Complied.
ii	In case fuel for running the power project is proposed to be changed from natural gas to their fuel (liquid of solid), the project proponent shall apply for such a change in Environmental Clearance along with the necessary documents as required under EIA Notification 2006 (and its amendments). In such a case necessity for holding the public hearing again or otherwise will be determined by the Ministry in consultation wit the Expert Appraisal Committee (Thermal)	Shall be Complied Carried out only Test Synchronization of the some of the GT units and are kept Idle due to short fall Gas. We agree to comply up on operation/commissioning the respective units.
iii	NOx emission from each gas turbine shall not exceed 50 ppm. Stacks of 70 mts shall be provided with continuous online monitoring equipments. Exit velocity of flue gases shall not be less than 25 m/sec	Agreed to comply Provided 70 mtrs height stacks all the GT and ST. We agree to install Online continuous monitoring equipment after commissioning the units,
iv	Regular monitoring of ground water concentration of SO2, NOx, RSPM, (PM10 and PM 2.5) etc. shall be carried out in the impact zone and records maintained. If at any stage these levels are found to be exceed the prescribed limits, necessary control measures shall be provided immediately. The location of monitoring station and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional office of this Ministry.	Complied. We are monitoring SO2, NoX, PM10 and PM2.5 thru CPCB approved agency at 4 location on weekly twice 24 hours basis as per the directions of SPCB and the periodic reports are submitted to MoEF/RO All the reports are the levels found to be within the limits.
v	The project proponent shall upload the status of compliance to the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e mail to the Regional office, MoEF. The data shall also be put on the website of the company. Criteria pollutants levels including NOx (from stack & ambient air) shall be displayed at the main gate of the power plant and in public domain.	Refer Below We have not uploaded the compliance status including the on our website because the Units are not yet commissioned and we shall upload after commissioning the units. Six Monthly Compliance reports were submitted to MoEF/RO by hard copy hence forth mails also shall be sent.
vi	COC 6 shall be adopted. Closed cycle cooling system with Induced draft cooling towers shall be provided	Agreed to comply after commissioning of the unit.
vii	No ground water shall be extracted for the project work at any stage.	Ground water is not drawn from the Project Site. Water is taken from the Phase-1 Units as per the allocation from Godavari Canal after obtaining permission from Irrigation Department

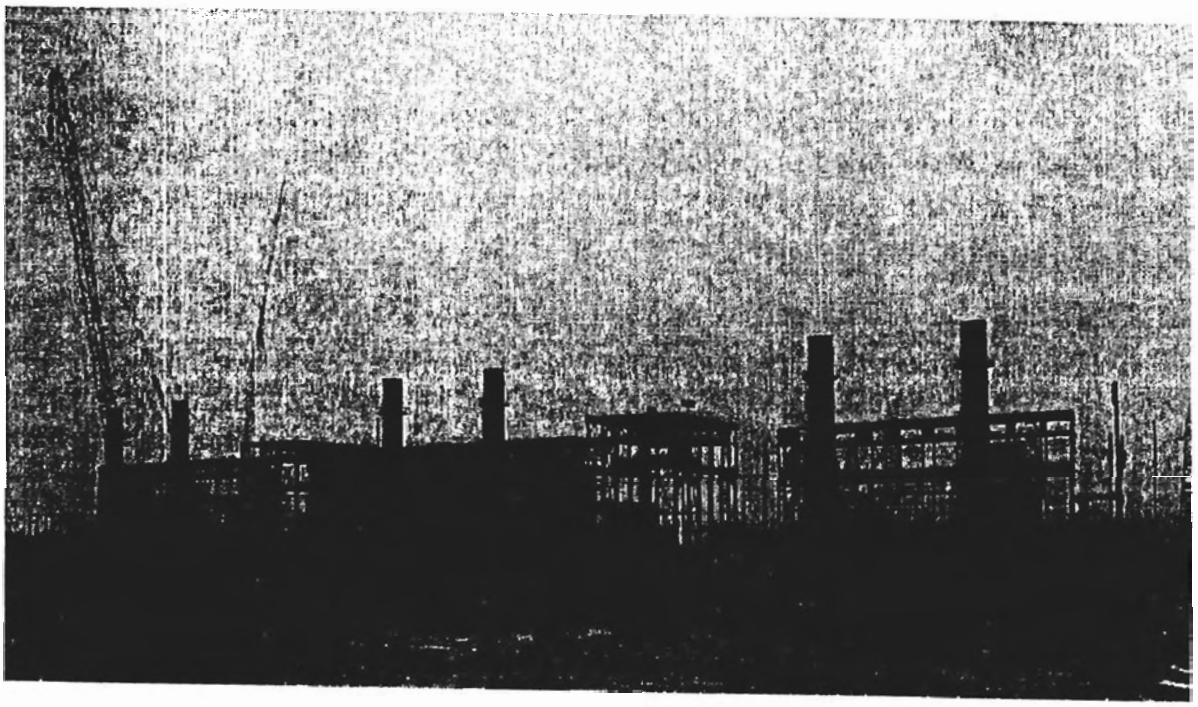
Proposed 1200 MW Phase I Expansion Project at Samalkot Power Station, IDA Peddapuram, Samalkot Mandal, East Godavari Distt., Andhra Pradesh State MoEF Clearance No. J-13012/37/2009-IA-II(T) dated 28th May, 2010 Present Status of the Compliance :		
Clause	**Conditions**	**Compliance Status**
viii	The related effluent conforming to the prescribed standard shall be reused to the extent possible end excess discharged. Arrangements shall be made that effluents and storm water do not per mixed	We agree to comply after commissioning of the unit.
ix	The sewage treatment plant shall be provided (as applicable) and treated sewage shall be used for raising greenbelt/plantation. Continuous monitoring of effluent discharge shall be undertaken and it shall be ensured that when discharge enters the natural drain, the temperature of effluent shall be at the ambient temperature.	We agree to comply after commissioning of the unit..
x	Monitoring of ground and surface water quality (if any nearby) shall be regularly conducted and records maintained. The monitoring data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and the drainage in the direction of flow of the ground water and records maintained. Monitoring of heavy metals in ground water shall be undertaken.	Complied. Surface Water and Ground Water Quality are monitored thru external agency at three locations on monthly basis and records are maintained. Heavy metal are not monitored and agreed to monitor in future. The sampling locations for the ground water shall be decided with CGWB Authorities
xi	Rainwater harvesting should be adopted. Central Ground Water Authority/Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.	Complied Rain Water Harvesting Technology and designs were made in consultation with CWGB and the copy of the same was submitted to RO,
xii	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires especially during summer seasons. Copy of these measures with full details along with location in plant layout shall be submitted to the Ministry as well as to the Regional office of the Ministry	Provided adequate safety measures were provided at the site during the construction for the employees and workers including the fire fighting measures.
xiii	Noise level emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite personnel protective equipments like ear plugs / ear muffs etc. shall be provided. Workers engaged in noisy areas such as gas turbine area, air compressor area etc shall be periodically examined to maintain audiometric record and for the treatment for any hearing loss including shifting to non noisy areas.	Monitoring the Six Locations during the day and night time thru external agency during the construction time. Workers were provided Personal Protective equipment and also acoustic enclosures for Noise Generating Units
xiv	An amount of Rs. 6.0 Crs shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs. 1.20 Crs per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.	We have allocated the Rs 6 Cr as one time capital cost for the CSR activities and so far an amount Rs has been incurred for the said proposal.
xv	As part of CSR programme, the company shall conduct need based assessment for the nearby villages to study economic measures with action plan which can help in upliftment of poor section of the society. Income generating projects consistent with the traditional skill of the people besides development of fodder forms, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to the vocational training from individuals imparted to take-up self employments and jobs.	As informed a need based assessment was conducted for the nearby villages with the action plan and it is being implemented. Vocational Training on the various fields was imparted for the people for the self employment.

Proposed 1200 MW Phase I Expansion Project at Samalkot Power Station, IDA Peddapuram, Samalkot Mandal, East Godavari Distt., Andhra Pradesh State MoEF Clearance No. J-13012/37/2009-IA-II(T) dated 28th May, 2010 Present Status of the Compliance :			
Clause		**Conditions**	**Compliance Status**
xvi	It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audits shall be got done from the nearest Government institute of repute in the region. The project proponent shall also submit the status of implementation of scheme from the time to time.		Agreed to comply Project is not yet commissioned however the PA carrying out the CSR activities and have agreed to get audited after commissioning of the project
xvii	Green belt consisting of three tiers of plantations around the plant of 150 mts width and adequate tree density not less than 2500 per ha with survival rate not less than 75% shall be developed. In area where 150 mts width is not possible, Green belt of not less than 50 mts width shall be raised with adequate justification submitted to the Regional office on the Ministry		Complied We have carried out 3 tier plantation around the plant of 150 mt width with adequate species and density. The survival rate is about 80%
B. General Conditions:			
i	Storage facility for auxiliary liquid fuel such as LDO and/ HFO/LSHS (if any) shall be made in the plant area in consultation with the Department of Explosive, Nagpur. Sulfur content in the liquid fuel will not exceed 0.5%. Disaster management plan shall be prepared to meet the eventuality in case of an accident taking place due to the storage of oil.		Complied Storage Facilities Fuel Tanks are constructed in consultation with Department of Explosives. As per the Fuel Supply Reports the Sulphur content is within the 0,5% DMP is prepared and made available
ii	First aid and sanitation arrangements shall be made for the drivers and other contract workers during the construction phase.		Complied That necessary infrastructure facilities are made during the construction period for the workers
iii	Provision shall be made for the housing of construction labour within the site with all infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, mobile health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project		Complied The necessary infrastructure facilities such as Drinking Water and Health care provided for the construction workers. The housing for the labour is in the form of temporary structure and agreed to remove after completion of the project
iv	The project proponent shall advertise in at least two local news papers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing the the project has been accorded environmental clearance and copies of clearance letter are available with the state pollution control board/ committee and may also be seen at website of the Ministry of Environment and Forests at http://envfor.nic.in		Complied we given advertisement in two local news papers and copies of the same were submitted to the regional office.
v	A copy of the clearance letter shall also be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, urban local body and the local NGO, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.		Complied A copy of the EC has been sent to local Panchayat authorities

Proposed 1200 MW Phase I Expansion Project at Samalkot Power Station, IDA Peddapuram, Samalkot Mandal, East Godavari Distt., Andhra Pradesh State MoEF Clearance No. J-13012/37/2009-IA-II(T) dated 28th May, 2010 Present Status of the Compliance :			
Clause		**Conditions**	**Compliance Status**
vi	A dedicated Environment Management Cell with suitable qualified personnel shall be set up under the control of Sr. Executive, who will report directly to the head of the organization.		Complied EMC with suitable qualified personal were set up under the control of Sr Executive
vii	The proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitoring data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional office of of MoEF, the respective zonal office of CPCB and the SPCB		The PA did not upload the compliance status including the on their website because the Units are not yet commissioned and have agreed to upload after commissioning the units.
viii	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitoring data (both in hard copies as well as e-mail) to the respective regional office of MoEF, the respective zonal office CPCB and the SPCB		The PA Periodically submitted the reports to RO
Ix	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, it Regional office, Central Pollution Control Board and State Pollution Control Board.		Complied Six Monthly Compliance reports are submitted to MoEF/RO
x	Regional office of the MoEF shall monitor the implementation of the stipulated conditions. A complete set of documents including EIA report and EMP along with the additional information submitted from time to time shall be forwarded to the Regional office for their use during monitoring. Project proponent will upload the compliance status in their website and update from time to time at least six monthly basis.		Complied We have submitted the complete set of documents to RO They have not uploaded in website is and agree to do it
xi	Separate funds shall be allocated form implementation of environmental protection measures along with item wise breakup. These cost shall be included as part of the project cost. The finds earmarked for the environmental protection measures shall not be diverted for other purpose and year wise expenditure should be reported to MoEF		Complied An amount Rs.200 Cr was allocated and spends for as a capital cost and also spent. An amount of Rs 45 L as recurring cost
xii	The project Authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.		Complied. The PA informed the regional office about commencement of construction work and final approval of all concerned authorities
xiii	Full cooperation shall be extended to the Scientists/Officers form the Ministry/Regional office of Ministry at Bangalore /CPCB/SPCB who would be monitoring the compliance of environmental status		Complied The PA have extended full cooperation during the Visit

Project Construction Progress Report

Samalkot 2400 MW Combined Cycle Power Plant



EXECUTIVE SUMMARY

Samalkot Power Limited (SPL) is implementing a 2,262 MW, combined cycle gas based thermal power plant at Industrial Development Area of Peddapuram, Samalkot Mandal, East Godavari District, Andhra Pradesh, India. The Project comprises of 3 modules of 754 MW each. Out of the total 2,262 MW capacity, 51 MW (17 MW X 3) is based on evaporative cooling system, which works under favorable environmental conditions and is seasonal in nature.

SPL has received all the necessary clearances for the proposed Project. SPL has already received MoEF clearance for 2400 MW capacity, Consent for Establishment for 2400 MW, from Govt. of Andhra Pradesh and Civil Aviation Clearance for chimney height for all the 6 chimneys. The project has all approval for water drawl from Sir Arthur Cotton Barrage.

The total land requirement for the project is estimated at around 111 acre. The Company has been allotted land area of 50 acre by Andhra Pradesh Industrial Infrastructure Corp. Ltd ("APIIC"), vide Agreement of Sale dated May 2, 2011. The Company has created mortgage on this 50 acre of land in favor of IDBI Trusteeship Services Ltd., acting as the Security Trustee on behalf of EXIM Bank. Further, Reliance Infrastructure is already having land area of 216.36 acre in its possession as allotted earlier by APIIC in the Peddapuram Industrial Area, Samalkot, East Godavari District, Andhra Pradesh, India. Company is proposing to enter into long term lease agreement with Reliance Infrastructure for the land admeasuring 61 acre. The execution of long term lease agreement for land admeasuring 61 acre is in process and will be completed soon. Further SPL has entered into Shared Facility Agreement with Reliance Infrastructure to use some of the common facilities with the existing 220 MW project.

The total water requirement of the proposed project is around 26.2 cusec. SPL plans to meet the water requirement from Sir Arthur Cotton Barrage ("SAC"), Dowlaiswaram (20 cusec of water) and Samalkot canal (6.2 cusec of water from the existing project). The approval given to Reliance Infrastructure by Andhra Pradesh State Irrigation Department ("APSID") to draw 20 cusec of water from SPL has been transferred to SPL. The process of approval for allocation of 6.2 cusec of water out of the 9 cusec of water is in process. SPL has also applied to the irrigation department for the transfer of 6.2 cusec allocation in its name. The turnkey package for the construction of Water Intake and pipeline system has been awarded to M/s Amiantit. The basic engineering for the package is complete and the manufacturing of 6 km long GRP pipe is also complete.

The EPC Contract for the Project was signed between Reliance Power and Reliance Infrastructure in July 2010, which was later assigned to SPL through deed of assignment on March 21, 2011. The Notice To Proceed ("NTP") letter was issued to Reliance Infrastructure for project implementation on August 10th, 2010. The EPC contract price is on turn-key, lump sum basis, which includes all taxes and duties payable.

The contract for Gas Turbines, Steam Turbines, Generators and Auxiliaries has been signed with M/S General Electric on October 2010. Reliance Infrastructure has already tied up with CMI-EPTI of USA for purchasing Heat

Recovery Steam Generators and related Auxiliaries, M/s Hangzhou for Condenser and Auxiliaries, Hamon Cooling Towers, Belgium, to purchase Cooling Towers, Xian Electric, China to purchase GIS and Hyundai Heavy Industries to purchase Generator Transformer. The EPC contract for civil works has been awarded to M/S Shapoorji Pallonji & Co.

The supply of major inputs required for the project is completed. All the offshore supplies have been received at the Indian ports of Kakinada and Vizag. All our Gas Turbines have been shipped out from GE's Greenville facility and reached the Indian Port. Other major offshore packages like Heat Recovery Steam Generator (HRSG), Steam Turbine, Condenser, Generator Transformers, Gas Insulated Switchgear (GIS), Extra High Voltage (EHV) Cables, etc. have also reached the Indian port. The first four Gas Turbines and other major equipment required for the open cycle commissioning of 4 Gas Turbines have already been erected and commissioned. 2 HRSG have also been delivered and erected.

SPL has already commissioned its first four gas turbines. The first firing of the four Gas Turbines has been completed on February 4, 2012, March 9, 2012, March 21, 2012 and March 31, 2012 respectively. The Full Speed No Load (FSNL) testing for four Gas Turbines was completed on February 14, 2012, March 10, 2012, March 23, 2012 and April 07, 2012 respectively. SPL synchronized its first two gas turbines to APTRANSCO state grid on 13th April, 2012 and 11th May, 2012 respectively. SPL synchronized its next two gas turbines to APTRANSCO state grid on 28-December 2012. SPL charged its 400 KV Gas Insulated Switchyard on December 23, 2012.

Natural Gas will be the primary fuel for the project. The project requires around 7.9 million standard cubic meters per day (mmscmd) of Natural gas based on a PLF of 80%, Gross Calorific Value ("GCV") of 8,700 kcal/scm, Gross Station Heat Rate for each module (at 100% Base Load on LHV basis) taken as 1,550 kCal/kWh and auxiliary consumption of 3%. The gas is proposed to be sourced from the fields in Krishna Godavari basin or other adjacent basins in the east coast of the country.

The project has been recommended for gas allocation by various government authorities like CEA, Ministry of Power, Ministry of Petroleum and Natural Gas (MoPNG) several times. Samalkot Project has been noted as a XIth Plan period Project. However, due to declining gas production in India, GOI has not been able to allocate gas to Samalkot Project.

The Company proposes to build a dedicated gas transportation pipeline from the Project site to Gadimoga, the landfall point of RIL's D-6 gas field at the east coast of Andhra Pradesh, which is at a distance of around 50 km from the Project site. SPL has also evaluated an alternate route for transmission of gas for its project from East West Pipeline Sectionalizing valve -1 station (EWPL SV- 1) to the project site. In addition, to mitigate any fuel risk, Reliance Power had entered a short term gas transportation agreement with GAIL Ltd for a capacity of 3.5 mmscmd of gas. GSPC India Transco Limited is also building a gas transmission network in Andhra Pradesh and the project could potentially get connected to this network as well.

The company plans to sell power generated from the project through a mix of long term Power Purchase Agreement ("PPA") with state distribution companies, long/medium term power selling arrangement with power trading companies and short term transaction through merchant power sale. Company has entered into long term (25 years) PPA with Reliance Energy Trading Limited ("RETL") for 819 MW with a provision of increasing it upto 10% of the above quantum. Further, Company is also planning to enter into long term PPA with state distribution companies ("Discom") through one or more Case-1 bidding. The Company proposes to sell around 25% of its total capacity under Project on merchant basis on power exchanges or through short term agreements.

In order to facilitate evacuation of power from upcoming power plants (majorly from Andhra Pradesh) the Power Grid Corporation of India Ltd. (PGCIL), a Central Transmission Utility (CTU) has proposed a new 765kV D/C Vemagiri-Chilakaluripeta-Cuddapah-Salem lines in place of Vemagiri to Hyderabad lines, to evacuate power from the Vemagiri area. SPL and other power developers are actively pursuing with PGCIL to expedite implementation of the lines.

As an interim arrangement till the time PGCIL system is ready, the Project Company plans to evacuate the power from Samalkot through the upcoming transmission systems of State Transmission Utility (STU) APTRANSCO. For connecting to STU grid, part of the same Samalkot- Vemagiri-II 400kV 2xD/C dedicated line which is meant for CTU pooling station will be utilized for Loop-in-Loop-out (LILO) arrangement.

The project company has received permission from Eastern Power Distribution Company of Andhra Pradesh (APEPDCL) on 16th November, 2010 for construction power of CMD 630kVA with CL of 850kW at 11kV point of supply under HT Category-II. The company has already paid necessary charges and the connection has been provided to it.

The company has received permission from Transmission Corporation of Andhra Pradesh (APTransco) to have Loop-in-Loop out (LILO) on their 400kV Kalpakka-Vemagiri D/C line for a maximum demand of 41 MVA for start-up power.

ENGINEERING, PROCUREMENT AND CONSTRUCTION STATUS

ENGINEERING

The Engineering progress is at 95.7% as against revised plan of 98.6%. Figure 1 shows the 'S' curve for the progress of engineering activities.

The basic engineering of majority of the systems is completed. The technical specifications of 67 packages out of a total 69 packages have been issued. The Technical Evaluation Reports of 67 packages out of a total of 69 packages have been completed and released.

All major civil drawings have been released for construction. 1007civil drawings out of a total of 1035 civil drawings have been released for construction. Further 10,104vendor drawings out of a total 10,359 vendor drawings have been approved and released for manufacturing.

The last 2 packages – Specification of landscaping and Township is under preparation and will be released soon.

M/s Black & Veatch (B&V) has been appointed as the main engineering consultant, M/s Toshiba Power System Company Ltd (TPSC) as civil consultant and M/s Shah & Talati consulting Engg for Switchyard consultant, M/s Treactebel Engineering Pvt Ltd for Gas Pipeline consultant. **Annexure 4** provides the status of design consultancy contracts.

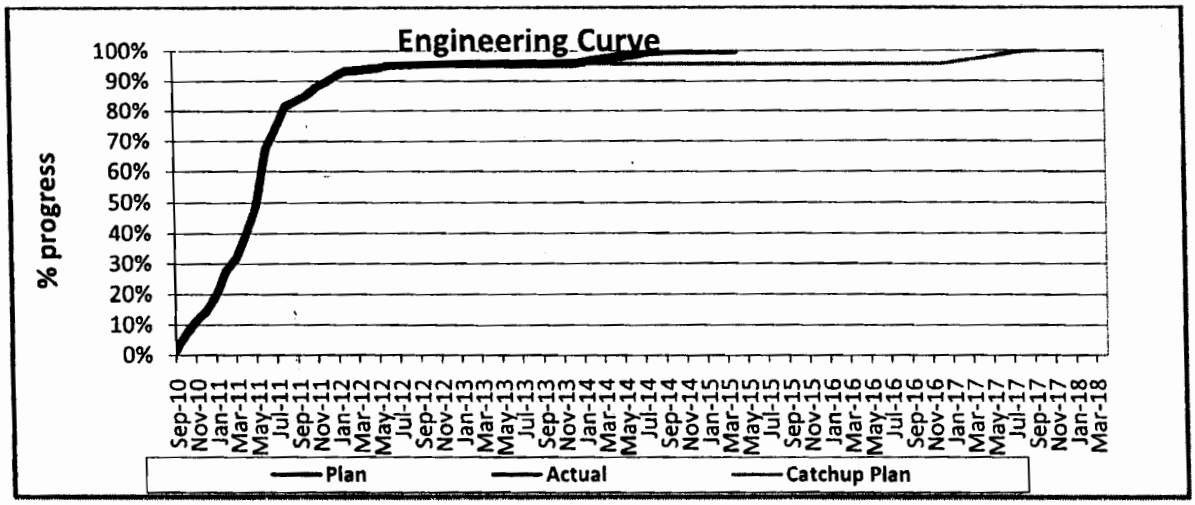


Figure 1: 'S' curve for Engineering progress

Major initial engineering studies such as Soil & Survey Investigation of Main Plant, Geo-Hydrological Study, Ash-Pond Leaching Study, Water Intake Study, Drainage Study, Seismic Study, Soil Investigation of Water Intake and Logistics Study have been completed.

PROCUREMENT

The Procurement progress is at 88.9% as against revised plan of 95.9%. Figure 2 shows the 'S' curve for the progress of procurement activities.

Orders have been placed for the supply of Gas Turbine, Steam Turbine and Auxiliaries with M/s General Electric (GE), HRSG & Auxiliaries with M/s CMI, Condenser & Auxiliaries with M/s Hangzhou, IDCT with Hamon Shriram Cottrell Pvt Ltd., GIS with Xian Electric, and Generator Transformer with Hyundai Heavy Industries by the EPC contractor. The contract for all packages awarded, like civil work has been awarded to M/S Shapoorji Pallonji, Mechanical erection to M/S Power Mech and Piping and BOP erection to M/S Raunaq. The detailed list of all the 67 awarded packages is enclosed in Annexure 5.

All offshore supplies have been received at Indian port. Further about 90% of onshore supplies is dispatched and balance supply is expected shortly.

The following figure shows the S curve for Procurement progress:

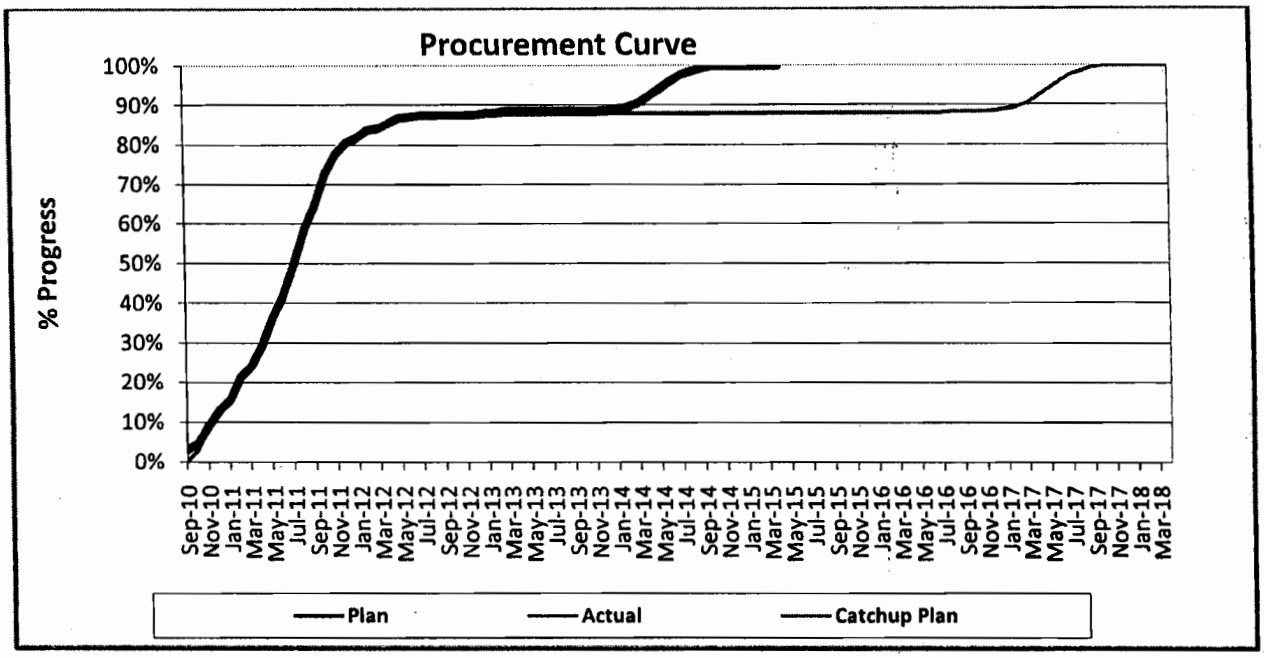


Figure 2: 'S' curve for Procurement Progress

CONSTRUCTION PROGRESS

The Construction progress is at 55.7 % as against revised plan of 65%.Figure 3 shows the 'S' curve for the progress of construction activities. The construction progress for the project is mentioned as follow. The construction progress till 11-Mar-17 is as follow:

A. GCW#1: (Cumulative Concreting 71, 492 CuM)

1. **Unit # 1 (Block#3)**

- All civil foundation work related to open cycle(GT pedestal, Bypass stack, GTG PHB pedestal, Auxiliary Foundations, Transformer Foundations, ECB) completed
- GTG Grade slab completed
- GTG 0.00Lvl Flooring Completed
- GTG 14.00mt Lvl. Deck slab concrete completed
- GTG 31.00mt level deck roof slab casting completed
- GTG PHB Structure completed

- GTG side Cladding Completed
- All civil foundation work related to Combined cycle completed (STG Deck, condenser foundation & Pit ,HRSG Pedestal ,Main Stack, STG PHB pedestal , STG Aux Foundations,)
- STG Grade slab completed
- STG Block#3 34.00mt level deck roof slab casting completed
- STG Structure completed

2. **Unit # 2 (Block#2)**

- All civil foundation work related to open cycle completed (GT pedestal, Bypass stack, GTG PHB pedestal, Auxiliary Foundations, Transformer Foundations, ECB)
- GTG Grade slab completed
- GTG 14.00mt Lvl. Deck slab concrete completed
- GTG 31.00mt level deck roof slab casting completed
- GTG PHB Structure completed
- GTG side Cladding Completed
- Major foundation work related to Combined cycle completed (STG Deck, HRSG Pedestal , Main Stack, STG PHB pedestal , STG Aux Foundations)
- STG Grade slab completed
- STG 34.00mt level deck roof slab casting completed
- STG Structure completed

3. **Unit # 3 (Block#4)**

- Major civil foundation work related to open cycle completed (GT pedestal, Bypass stack, GTG PHB pedestal, Auxiliary Foundations, ECB)
- GTG Grade slab 80% completed
- GTG 14.00mt Lvl. Deck slab concrete 50% completed
- GTG PHB Structure 80% completed
- Major foundation work related to Combined cycle completed (HRSG Pedestal , Main Stack, STG PHB pedestal)
- STG PHB Structure 70% completed
- STG Deck: Casted in Feb-13.
- Balance Civil Work deferred in 3rd Unit

B. GCW#2 : (Cumulative Concreting 27,816 CuM)

- CWPH – Slab casting of Unit – 1completed. For Unit -2 and Unit – 3 wall under progress.

- Unit-3: Cum 1471 MT out of 1900 MT erected

Pipe Rack Structure

- Main Plant : Cum 1672 MT out of 1900 MT erected
- BOP : work not started (Total 1900 MT)

H. Mechanical Erection

- GT 12:
  - ✓ First fire done on 4th February, 2012, FSNL done on 14thFebruary, 2012
  - ✓ Synchronization done on 13th April, 2012
- GT 11:
  - ✓ First fire completed on 9thMarch, 2012, FSNL done on 10th March, 2012
  - ✓ Synchronization done on 28th December, 2012
- GT 21:
  - ✓ First fire done on 21st March, 2012, FSNL done on 23rd March, 2012
  - ✓ Synchronization done on 11th May, 2012
- GT 31:
  - ✓ First fire done on 31st March, 2012, FSNL done on 7th April, 2012
  - ✓ Synchronization done on 28th December, 2012
- HRSG
  - ✓ All 15 Tube bundles erection in HRSG-1 and alignment completed
  - ✓ All 15 Tube bundles erection in HRSG-2 and alignment completed
- Main Stack
  - ✓ Erection of Main Stack 50% completed in Unit 11&12
- EOT Crane
  - ✓ Erection of 4 no of EOT crane completed.
  - ✓ Load testing completed for all the 4 crane

I. Electrical Erection

- 6 Generator Transformers erected and 4 commissioned
- 400 KV GIS Erection & Testing completed, Charged on 23-Dec-12
- Inter Connecting Transformer commissioned and 2 Reactors erected
- Erection of Cable Trays, High Tension and Low Tension Switchgears completed at Electrical Control Building and Switch Yard Control Building
- 21 Terminations of EHV Cables out of 39 Nos completed.
- DG sets and Auxiliary Transformers erected
- HT & LT Switchgear erected.

- AC & Ventilation system in control rooms erection

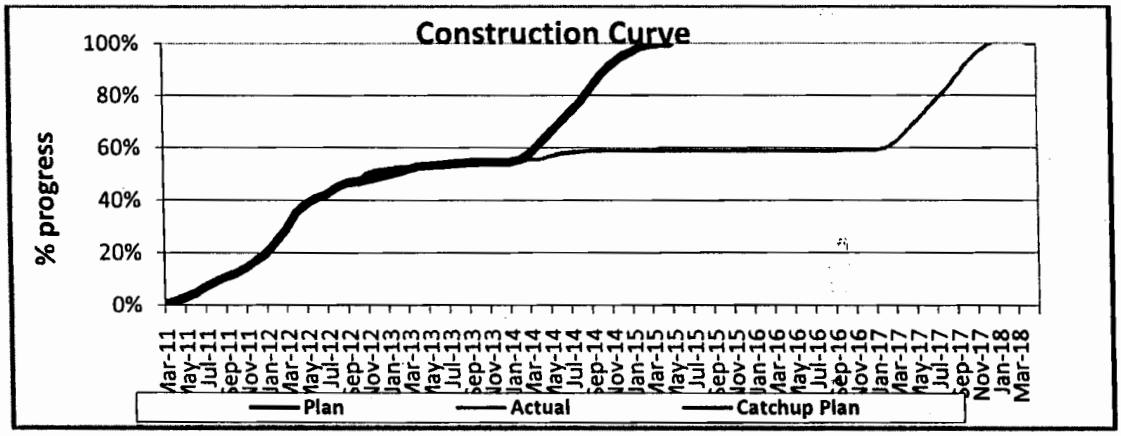


Figure 3: 'S' curve for Construction Progress

OVERALL PROGRESS

Overall progress in EPC has been 69.5% as against revised plan of 82.0%. Following figure shows the overall progress of the project:

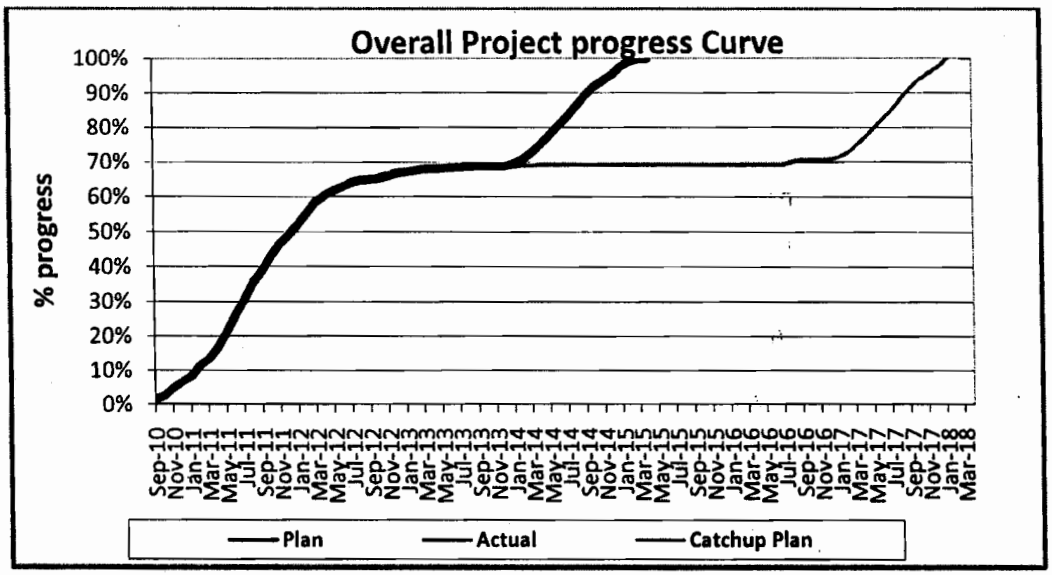
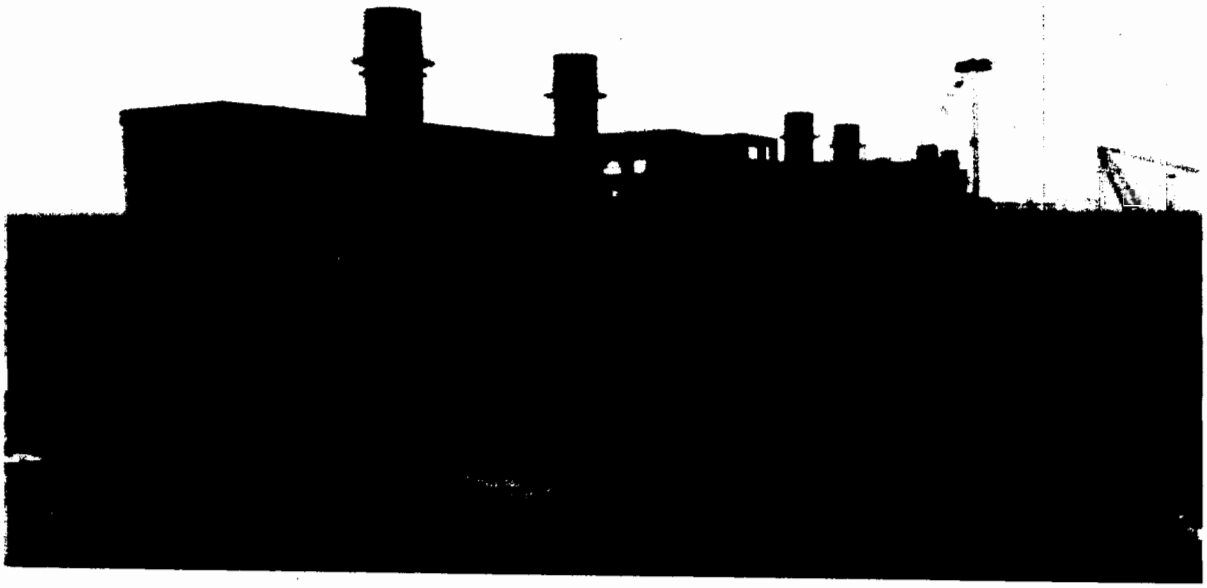
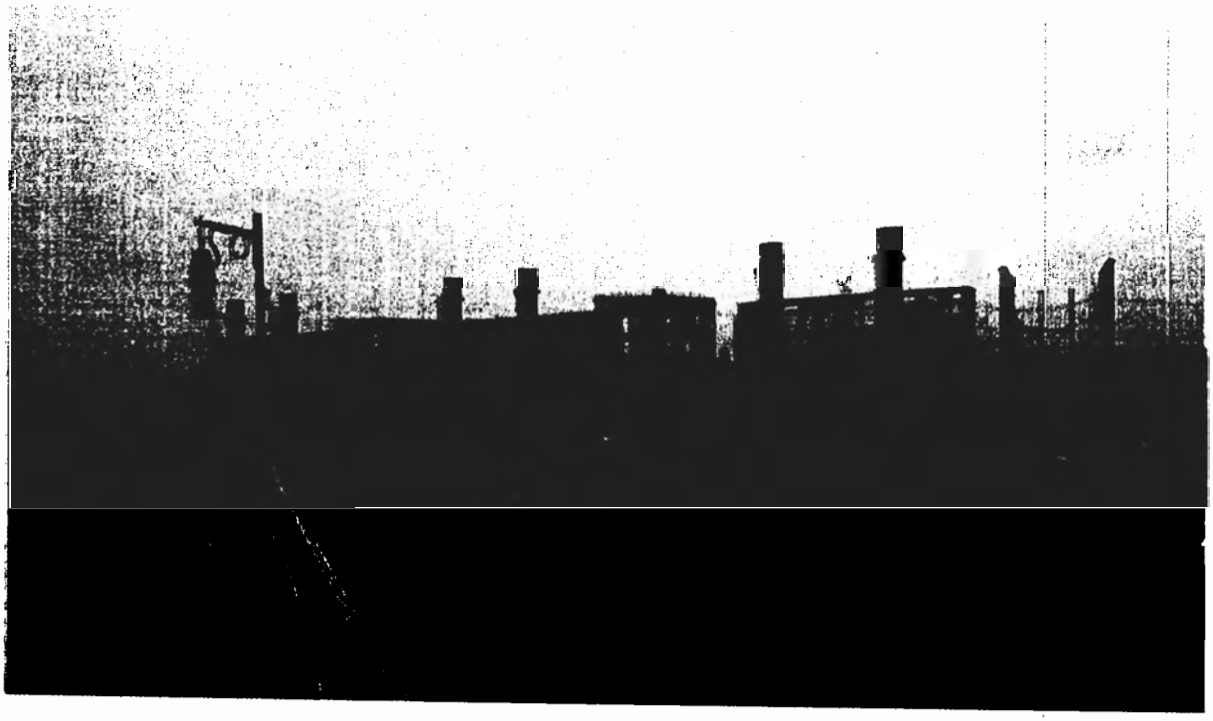


Figure 4: 'S' curve for Overall Progress

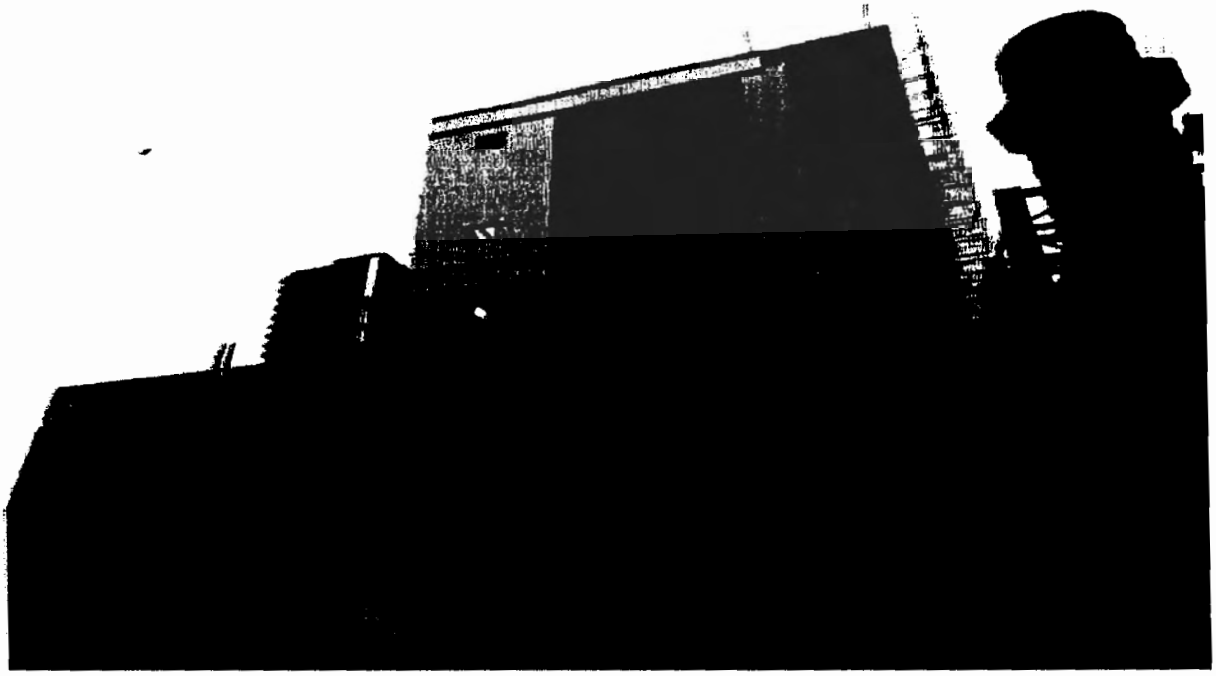
PROJECT PROGRESS PHOTOGRAPHS



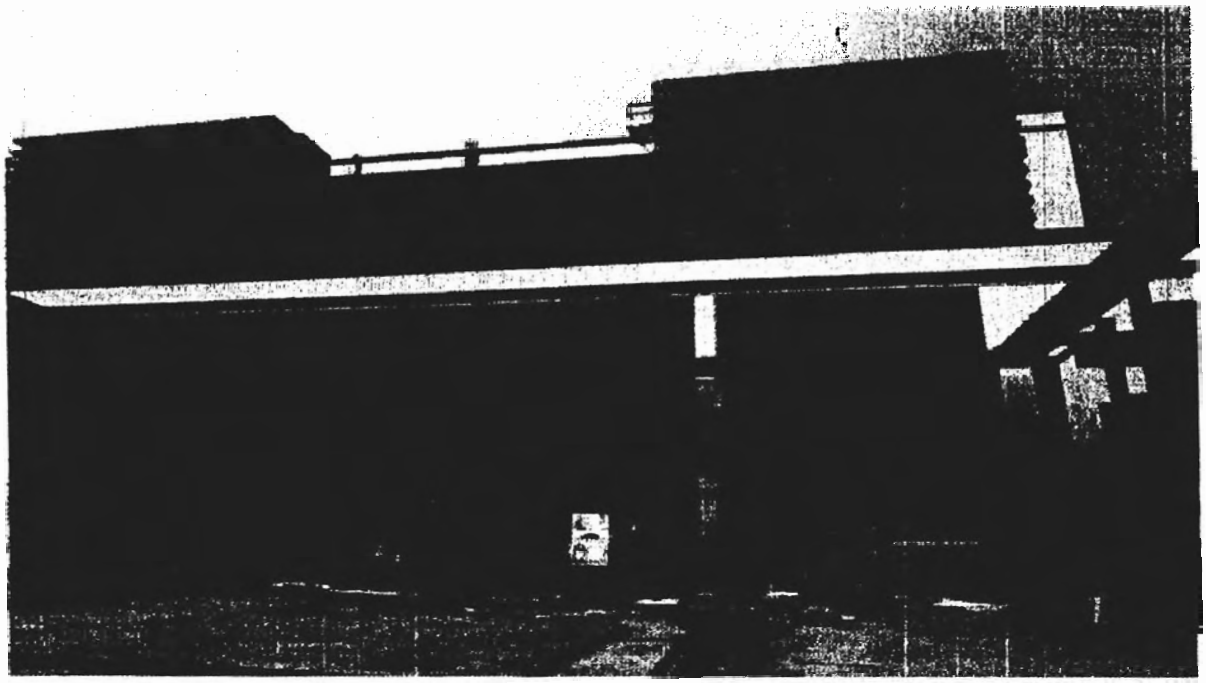
Overall Plant: Stack side View 1



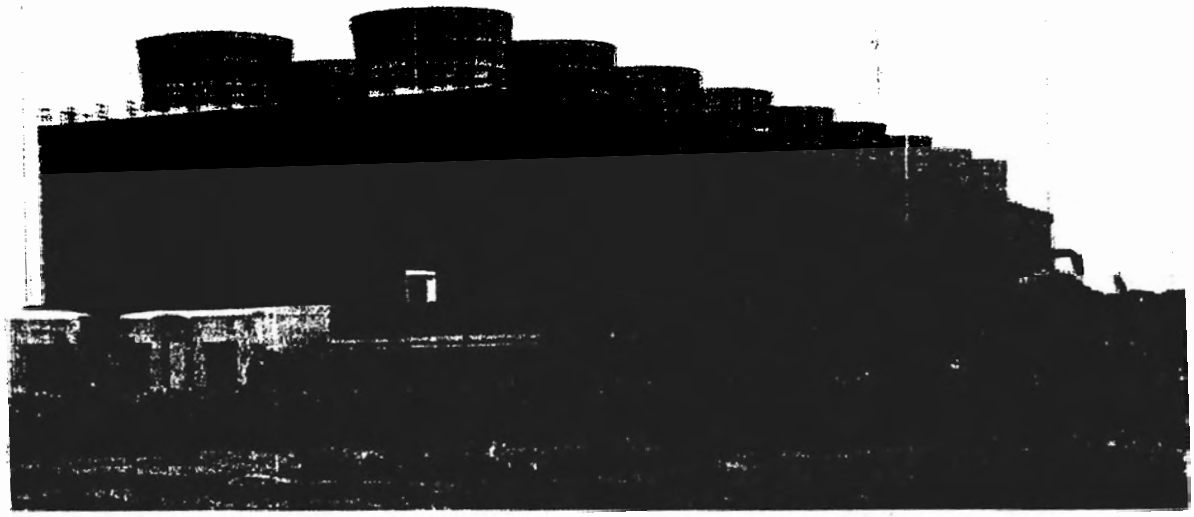
Overall Plant: Stack side View 2



Block#3 (Module 1): Cladding Work Completed: View 1



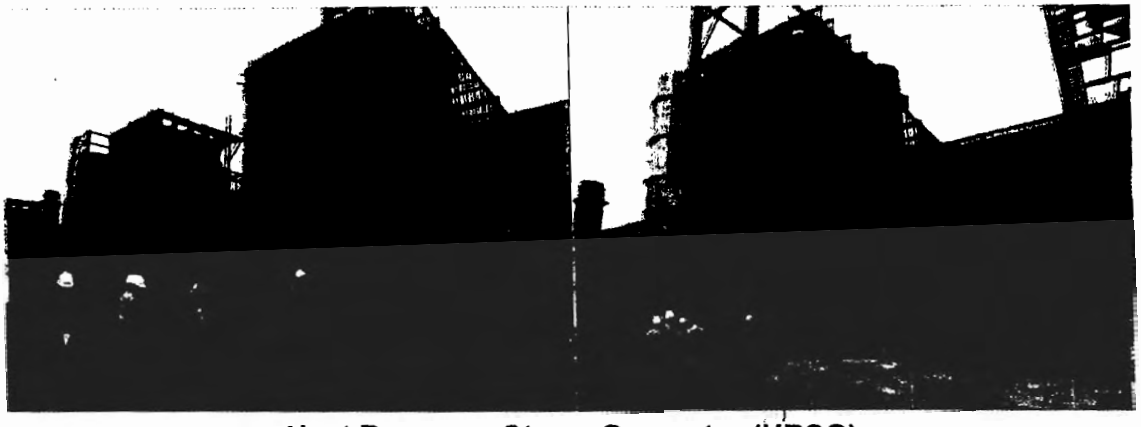
Block#3 (Module 1): Cladding Work Completed: View 2



IDCT: Erection Completed in all 3 Modules

1.0

Generator Transformers & STG Building



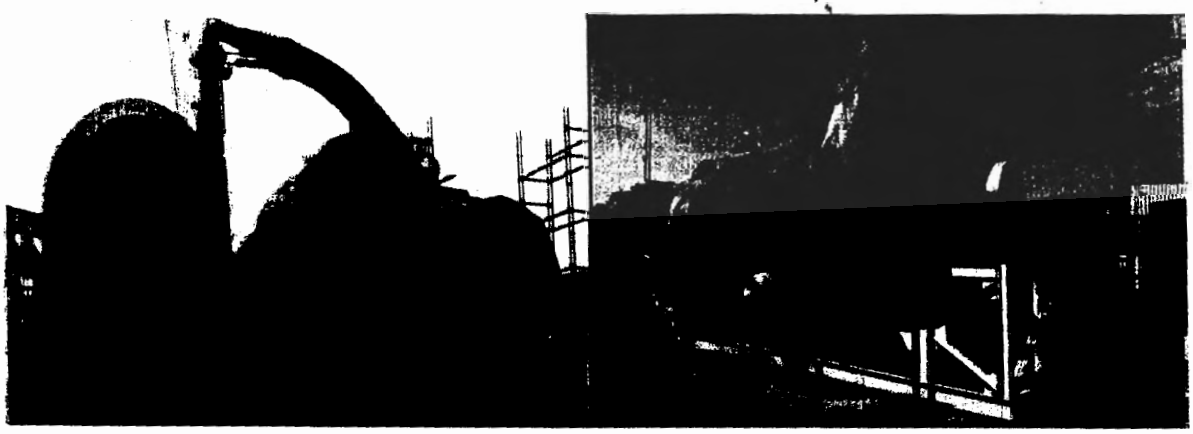
Heat Recovery Steam Generator (HRSG)

400 KV Gas Insulated Switchyard: Commissioned

40

Gas Insulated Switch Yard (GIS)

Packaged Electrical & Electronics Compartment (PEEC) and Load Commutated Inverter (LCI)



Gas Turbines, Generators & Steam Turbine Preserved at Kakinada Sea Port limited.