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ANDHRA PRADESH POWER GENERATION CORPORATION LTD.

From
The Chief Engineer / O&M
Rayalaseema TPP,
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Kadapa Dist.,
FAX: 08563-232103.

To
The Regional Officer,
Integrated Regional Office(IRO),
Vijayawada,
Ministry of Environment,
Forest and climate change, Green house complex,
Gopal Reddy Road,
Vijayawada-520010, Andhra Pradesh.

Lr No.CE/O&M/EE/EC/RTTP/F.11/D.No.6832/2022, Dt : 08-02-2022.

Sir,

Sub:-RTTP-Present status on Compliance of conditions stipulated in the Environmental clearances for RTTP-Stage-I,II, III & IV -Submission of half-yearly compliance reports to Ministry, Integrated Regional Office(IRO),Vijayawada for the period of April-September 2021- -Reg.

- Ref:- 1) File No-IRO/VII/EPA/EC-A/101/01-01/2021/80,Dt:30.11.2021
2) Lr No.J-13011/16/86-IA dt. 01-03-1988 of MOE&F for Stage-I.
3) Lr No.J-13011/35/92-IA-II dt. 11-05-1993 of MOE&F for Stage-II.
4) Lr No.J-13011/76/2007-IA-II (T) dt. 01-05-2008 of MOE&F for Stage-III.
5) Lr No.J-13012/87/2008-IA-II (T) dt. 21-10-2010 of MOE&F for Stage-IV.

With reference to the letter cited in reference(1) to the above subject, the compliance to the conditions as mentioned in the Environment clearance issued by Ministry of Environment and forests vide references (2) to (5) for Rayalaseema Thermal Power Project (RTTP) Stage-I (2 x 210 MW), Stage-II (2 x 210 MW), Stage-III (1 x 210 MW) and stage-IV (1 x 600 MW) is herewith submitted for favour of information.

Yours faithfully

- Encl:-1)Compliance Report for EC of Stage-I, II, III & IV.
2)Annexures-(1) to (4)

CHIEF ENGINEER; O & M
RTTP, V.V.REDDY NAGAR / APGENCO

Copy submitted to Director, Government of India, Ministry of Environment & Forests, Paryavaran Bhawan, CGO Complex, Lodi Road, New Delhi-110 003.

Copy submitted to Director, Government of India, Ministry of Environment & Forests, Regional Office (South Zone), Kendriya Sadan, 4th floor, E&F wings, 17th Main, II block, Koramangala, Bangalore- 560 034. FAX: 080-25537184.

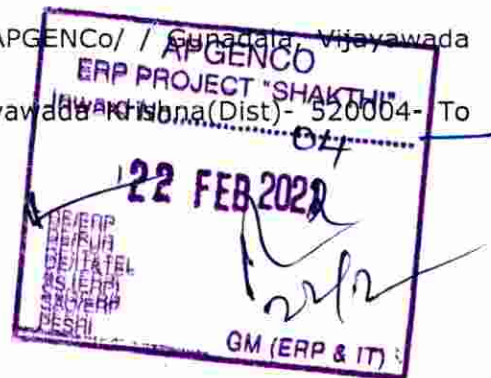
Copy submitted to The Chief Environmental Engineer / APPCB /D.No.-33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Center, Chalamavari Street, Kasturibaipet, Vijayawada.

Copy to the Joint Chief Environmental Engineer, APPCB, Zonal Office, 1st Floor, Shankar shopping complex, Krishna Nagar Main road, Kurnool-518 002:

The Environmental Engineer/Regional Office/APPCB/ 2 nd floor/D.No-1/2277/Rajiv park Road/AP Housing Board colony/YSR Kadapa-516003

Copy to the Chief Engineer/C/Hydel /GS & C&I/VS/APGENCO/ Gunadala, Vijayawada Krishna(Dist)- 520004

Copy to the CGM/Adm/VS/APGENCO/Gunadala, Vijayawada Krishna(Dist)- 520004- To notify in the APGENCO website please.



Status of compliance of conditions stipulated in Environmental Clearance for Existing Units RTPP Stage-I (2X210 MW):

Ministry of Environment and Forests, GOI have issued Environmental clearance vide Lr No.J-13011/16/86-IA dated 01-03-1988 for Rayalaseema Thermal Power Project Stage-I (2x210 MW). Unit-1 & Unit-2 have been commissioned on 16/11/1994 and 22/03/1995 respectively and are in operation. Status of implementation of environmental safeguards mentioned in the environmental clearance is furnished as follows for the period April-2021 - September-2021.

Sl.No	Environmental Conditions	Compliance Report
1	Air pollution	
i)	ESPs of operational efficiency of not less than 99.8% must be provided.	Electrostatic Precipitators (ESP) with an efficiency of 99.90% are provided with design outlet concentration of 100 mg/Nm ³ .
ii)	The emission of particulates must be below 115 mg/Nm ³ emissions must conform to the standards prescribed by the A.P.Pollution Control Board/ Central Board/under Environmental (Protection) Act, whichever are most stringent.	The Electrostatic Precipitators(ESP) with an efficiency of 99.9 % are provided with design outlet concentration of 100 mg/Nm ³ .The units are meeting the APPCB limit of 115 mg/Nm ³ . The stack emission for the period from April - September-2021 is enclosed in annexure-I
iii)	Adequate space of FGD plant should be kept available.	Space for FGD plant is available.
iv)	A single stack of 220 Mtr. having bi-flues should be provided for both the units.	A single stack of 220 meters height with bi-flues is provided.
v)	On line stack monitoring equipment should be provided for measuring particulates, NO _x and SO ₂ .	On-line stack monitoring equipment for measuring PM, SO ₂ and NO _x are installed.
vi)	At least four ambient air quality monitoring stations must set up to measure particulates, SO ₂ and NO _x .	Regular monitoring of ground level concentration of SO ₂ , NO _x , PM ₁₀ and PM _{2.5} is being carried out manually at 5 locations. In addition to the 5 locations, 1 No. CAAQMS is also provided and data has been uploaded to APPCB website. Ambient air quality data for the period from April - September-2021 is enclosed in annexure-II
2	Water Pollution	
i)	Liquid effluent emanating from the different plants of power station must be treated to conform to the standard prescribed by A.P.Pollution Control Board/ Central Board Environmental (Protection) Act, whichever are most string.	Sewage effluents are being treated in the sewage treatment plant (STP). Plant effluents are being treated in the effluent treatment plant (ETP). The liquid effluents reports for April - September-2021 is enclosed in annexure-III.
ii)	The power plant should have a recirculation cooling system with cooling towers.	Closed cycle cooling system with Cooling towers is provided.
iii)	Maximum efforts are to be made to conserve water by way of recycling/reuse.	Recycling and reuse system consisting of sedimentation chamber, clear water sump, recycling pumps and piping network has been installed. A part of the treated effluents is being recycled and balance is discharged for plantation/ irrigation.

iv)	Water should be made available to the Forest Department afforestation of the degraded adjacent reserve forest area.	No request is received from forest department. Water is available if requested.
3	Solid wastes	
i)	Proper ash dykes/ponds should be built and the effluent must meet the standards prescribed by APSPCB/ CENTRAL BOARD/under Environmental (Protection) Act, whichever are most stringent.	Proper ash pond with dyke was built. Decantation system is provided in the ash pond and clear effluents are being emerged from ash pond. The effluents are meeting the standards. The Ash pond effluents reports for April - September-2021 is enclosed in annexure-III.
ii)	As three cement factories are situated nearby, a provision for dry collection of fly ash should be made and efforts should be made to utilize fly ash/bottom ash for cement manufacturing.	For dry fly ash collection, storage and disposal 3 Nos. silos are provided. Dry fly ash is being issued to brick and cement industries. Bottom ash is being sent to ash pond. The ash from ash pond is being lifted by the cement industries at their requirement. 10 ac land was given to M/s.Dalmia Cement for utilizing pond ash.
4	<u>Green belt:</u> A green belt of sufficient width and density must be raised all around the power plant.	Greenbelt Development Scheme for RTPP has been prepared by AP State Biodiversity Board. Total green belt was covered in 223.00 Ha in RTPP. Necessary budget allocation is made for green belt development.
5)	<u>Financial Provision:</u> It is to be ensured that necessary cost for proper implementation of the environmental safeguards and control measures as per conditions laid down above is provided for in the project estimate.	Necessary expenditure towards environmental safeguards is met from the project cost.
6)	The project should set up a laboratory to examine and analyze air, water and solid waste emissions and discharged.	A separate environmental laboratory is established at RTPP and air emissions and waste water discharges are being monitored.
7)	The management of the project must have an environmental cell under a senior officer to monitor the progress and ensure proper implementation of the environmental safeguards.	A separate Environmental cell with suitable qualified people to carryout various functions is set up (Dy.EE/civil, AEE/civil & Chemist) under the control of the Senior Executive (Executive Engineer) and will report directly to the Head of the organization (Chief Engineer).
8)	This Ministry may amend any condition or impose new conditions, if required, from environmental angle.	Noted.

**Status of compliance of conditions stipulated in Environmental Clearance for Existing Units.
RTPP Stage-II (2X210 MW):**

Ministry of Environment and Forests, GOI have issued Environmental clearance vide Lr No.J-13011/35/92-IA-II dated 11-05-1993. Unit-3 and Unit-4 were commissioned on 12/08/2007 and 29/03/2008 respectively and are operation. Status of implementation of environmental safeguards mentioned in the environmental clearance is furnished as follows for the period April-2021 - September-2021.

Sl.No	Environmental Conditions	Compliance Report
2 i)	A single chimney of 220 meters height with bi-flues should be provided.	A single chimney of 220 meters height with bi-flues is provided.
ii)	Electrostatic Precipitators (ESP) with operational efficiency of not less than 99.8% should be provided. The particulate emission from the stacks should not exceed the limit of 150 mg/Nm ³ under any circumstances, failing which the plant should be shutdown.	Electrostatic Precipitators (ESP) with an efficiency of 99.879% is provided with design outlet concentration of 50 mg/Nm ³ .
iii)	Space provision for installation of desulphurization plant (FGD) should be made so that the same could be installed, if required, from environmental angle.	Space provision for desulphurization plant (FGD) is provided in the layout.
iv)	Liquid effluents including boiler blowdown, DM water and ash pond water should be properly treated to conform to the standards stipulated by the State Pollution Control Board (SPCB). Efforts should be made to recycle/reuse the treated effluent to the maximum extent possible.	Plant effluents are being treated in the effluent treatment plant (ETP). This treated effluent water is being utilized for plantation. Effluent from ash pond is treated in the decantation system. A part of the treated effluents is being recycled and balance is discharged for irrigation as per requirement of local farmers. Bore water test reports enclosed in Annexure-IV.
v)	No effluents should be discharged into the Western Yamuna Canal.	Not applicable.
vi)	A plan for full utilization of fly ash should be prepared as follows: 20% of fly ash should be put into use within one year of commissioning of the plant. Thereafter, 10% progressively for next 8 years and 100% within 9 years. Provision for dry fly ash collection must be made.	Dry fly ash collection system is provided for extraction, collection, storage and disposal of ash in dry form(2Nos Intermediate silos and 2 Nos remote silos are provided. Ash collected in the ESPs (fly ash) is totally being given to Brick and Cement industries. Ash utilization for the period April-2021-September-2021 is 60.64% in the station
vii)	The requirement of land for ash disposal should be based on ash utilization plan; ash disposal in the low lying areas will be permitted provided these areas are not environmentally sensitive and the land fill areas are suitably reclaimed by rising greenbelt. Ash pond area should be properly lined to avoid ground water contamination. Recycling and reuse of treated ash pond effluents should be done so as to achieve "Zero discharge" to the extent possible.	Ash pond area acquired during Stage-I units is being utilized for Stage-II units. No additional land is acquired for Stage-II ash pond. Recycling and reuse system consisting of sedimentation chamber, clear water sump, recycling pumps and piping network has been installed and recycled

		water is being utilized.
viii)	Affected families due to acquisition of land should be properly rehabilitated in consultation with the State Government.	Existing land is used for Stage-II works. R&R did not arise.
ix)	Adequate measures for control of fire and explosion hazards should be provided.	Following fire detection and control measures are provided in the fire hazard areas. a) Fixed foam system b) Medium velocity water spray system c) Water sprinkling system and emulsifier d) Portable fire extinguishers e) Smoke detectors at all control rooms, switch gear rooms, cable galleries etc., f) Communication facilities g) Emergency safety equipment.
x)	A greenbelt of adequate width and density should be raised all around the plant. Greenbelt plan should be submitted to this Ministry within 6 months for approval.	Greenbelt Development Scheme for RTPP has been prepared by AP State Biodiversity Board. Necessary budget allocation is made for green belt development. Total green belt was covered in 223.00 Ha in RTPP.
xi)	A separate Environmental cell with suitable qualified people to carryout various functions should be set up under the control of the Senior Executive who will report directly to the Head of the organization.	A separate Environmental cell with suitable qualified people to carryout various functions is set up (Dy.EE/civil, AEE/civil & Chemist) under the control of the Senior Executive (Executive Engineer) and will report directly to the Head of the organization (Chief Engineer).
xiii)	The project should provide a research study to find out impact if any, on the adjoining crops due to the emissions of pollutants from the power station vis-à-vis preventive and control measures to be adopted.	Impacts on crops due to RTPP were studied as a part of Environmental studies for RTPP Stage-III.
3)	Revised EIA report as discussed in the EAC meeting on 21-01-1993 should be submitted. Based on the examination of the EIA report, the above mentioned conditions may be modified or the additional ones may be imposed.	Revised EIA report was already submitted to MOE&F, GOI.
4)	The conditions stipulated maybe varied or new conditions may be added or the clearance revoked, if necessary, in the interest of environmental protection, and if there is any change in the project profile, non-satisfactory implementation of the stipulated conditions, etc.	Noted.

5)	The stipulations will be implemented, among others under the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1984, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991.	Noted.
6)	Necessary funds should be provided in the project for implementation of the above mentioned conditions and environmental safeguards. The funds earmarked for the environmental protection measures should not be diverted for other purposes and year wise expenditure should be reported to this Ministry.	Necessary funds required for implementation of environmental safeguards were met from the EPFF funds (Environmental protection and fly as utilization funds)

Status of compliance of conditions stipulated in Environmental Clearance for Existing Unit RTPP Stage-III (1X210 MW):

Ministry of Environment and Forests, GOI have issued Environmental clearance vide Lr No.J-13011/76/2007-IA-II (T) dated 01-05-2008. Unit-5 was commissioned on 10/02/2011 and is in operation. Status of implementation of environmental safeguards mentioned in the environmental clearance is furnished as follows for the period April-2021 - September-2021.

Sl.No.	Environmental condition	Compliance Report
3 (i)	No additional land shall be acquired for any activity / facility of this expansion project.	No additional land was acquired for this expansion project.
(ii)	Sulphur and Ash content in the coal to be used in the project shall not exceed 0.5% and 34 % respectively.	Sulphur content in the coal is around 0.45% only and the average ash content in the coal is around 42.19%.
(iii)	A stack of 220 m height shall be provided with continuous online monitoring equipments for SO _x , NO _x and Particulate. Exit velocity of flue gases shall not be less than 20 m/sec.	A stack of 220 m height with continuous online monitoring equipments for SO ₂ , NO _x and Particulate is provided. Exit velocity of flue gases is not less than 20 m/sec.
(iv)	High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that the particulate emission does not exceed 100 mg/Nm ³ .	High efficiency Electrostatic Precipitators (ESPs) with an efficiency of 99.879% is installed with design outlet dust concentration of 50 mg/Nm ³ . The stack emission for the period from April - September-2021 is enclosed in annexure-I
(v)	Space provision shall be kept for retrofitting of FGD, if required at a later date.	Space provision is made for of FGD.
(vi)	Adequate dust extraction systems such as cyclones /bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Adequate dust extraction and dust suppression systems (water spray system) are provided to control dust in the coal handling and ash handling areas etc. Pop filters are provided in Silos.
(vii)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. 100 % fly ash utilization shall be ensured from day one of the commissioning of the expansion unit. Unutilized bottom ash shall be disposed off in the ash pond in the form of conventional slurry mode.	Ash extracted from ESPs is being collected and stored in 1 No Intermediate silo and 1No remote silo. The ash collected from ESPs is being supplied to brick, cement industries and other fly ash based product manufacturing agencies. Unutilized bottom ash is being disposed off in the ash pond in the form of conventional slurry mode. Ash utilization for the period April-2021-September-2021 is 103.54% in the station.
(viii)	No ash pond shall be created for this expansion project. Existing ash pond shall be used for bottom ash disposal in emergency.	Existing ash pond is being used for Stage-III unit.

(ix)	Water requirement of 20232 m ³ /day shall be met from Mylavaram reservoir only.	Water requirement of 20232 m ³ /day is being met from Mylavaram reservoir. In case of shortage of water from Mylavaram reservoir, it is being drawn from SPVBR.
(x)	Closed cycle cooling system with cooling towers shall be provided. The effluent shall be treated as per the prescribed norms.	Closed cycle cooling system with IDCT cooling tower is provided. The Cooling tower blow down (water effluents) is used for ash disposal.
(xi)	The treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon for storm water. Arrangements shall be made that effluents and storm water do not get mixed.	The effluents are being treated to confirm the prescribed standards. The treated effluents are being recirculated.
(xii)	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.	STP of 2.0 MLD capacity is provided. Treated water is being used for greenbelt.
(xiii)	Rain water harvesting should be adopted. Central Ground Water Authority/Board shall be consulted for finalization of appropriate rain water harvesting technology within a period of three months from date of clearance and details shall be furnished.	Rain water harvesting structures are provided.
(xiv)	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Details of these measures along with location plant layout shall be submitted to Ministry as well as to the Regional Office of the Ministry at Bangalore.	Adequate safety measures such as a) Hydrant System b) Water Sprinkling system c) Fire extinguishers are provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season.
(xv)	Existing storage facilities for liquid fuel such as HFO and LDO shall be used. No additional facilities for liquid fuel shall be created. Existing Disaster Management Plan should be so modified to take care of the risk management of this expansion unit also. Mock drills shall be conducted regularly as planned.	Existing storage facilities for liquid fuel such as HFO and LDO are being used. Mock drills are conducted periodically.
(xvi)	Regular monitoring of the ground water in and around the ash pond shall be carried out, records maintained and periodic reports shall be furnished to the Regional office of this Ministry.	Ground water quality in nearby villages around the ash pond area is being monitored Centre for Materials for Electronics Technology(C-MET), a central Govt organization and reports enclosed as Annexure-IV latest report.
(xvii)	The existing greenbelt shall be expanded with additional land to take care of the expansion project. The expanded greenbelt shall be developed around the plant periphery with local species. The total area	Upto April-September -2021, greenbelt was developed is 223.00 Ha. Greenbelt Development Scheme for RTPP has been prepared by AP State

	under greenbelt (existing and expansion) shall cover about 287 ha of area	Biodiversity Board. Balance area of will be developed. Budget was requested from H.Q for the same.
(xviii)	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	The Project was commissioned on 29.11.2010.
(xix)	Leq of Noise levels emanating from gas and steam turbines shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as steam and gas turbines, air compressors etc. shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.	Acoustic Enclosure is provided near main unit. Personal protection devices like ear plug/ear muffs etc. are provided for the workers engaged in the noise generating areas. Workers engaged in noisy areas are periodically examined to maintain the audiometric record and for treatment for any hearing loss.
(xx)	Regular monitoring of ground level concentration of SO ₂ , NO _x , SPM and RSPM shall be carried out in impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry.	Regular monitoring of ground level concentration of SO ₂ , NO _x , PM10 and PM2.5 is being carried out manually at 5 locations which were finalized in consultation with APPCB. In addition to the 5 locations 1 No CAAQMs is also provided and data being uploaded to APPCB website.
(xxi)	The project proponent should advertise in at least two local news papers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letters 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 .	The unit was commissioned on 29.11.2010
(xxii)	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	A separate Environmental cell with suitable qualified people to carryout various functions is set up (Dy.EE/civil, AEE/civil & Chemist) under the control of the Senior Executive (Executive Engineer) and will report directly to the Head of the organization (Chief Engineer).
(xxiii)	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards should be submitted this ministry/ Regional Office/ CPCB/SPCB.	Half yearly report on the status of implementation of the environmental safeguards are being submitted to MoEF&CC, GOI and RO, MoEF regularly.

(xxiv)	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 and Environment Management Plan along with additional information submitted from time to time shall be forwarded to the Regional office for their use during monitoring.	Environmental Impact Assessment Report and Environment Management Plan were submitted.
(xxv)	Separate funds should 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 should not be diverted for any other purposes and year wise expenditure should be reported to the Ministry.	Necessary funds required for implementation of environmental safeguards were met from the project cost. Annual O&M budget is provided for maintaining the pollution control systems.
(xxvi)	The project authorities shall inform the Regional Office as well as Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and dates of start of land development work and commissioning of plant.	The unit was commissioned on 29.11.2010
(xxvii)	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.	Full Cooperation will be extended.
4	The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. MOEF may impose additional environmental conditions or modify the existing ones, if necessary.	Noted.
5	The Environmental clearance accorded shall be valid for a period of 5 years to start of production operations by the power plant.	Noted.
6	In case of any deviation or alteration in the project proposed from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.	Noted.
7	The above stipulations would be enforced among others under the water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.	Noted.
8	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within 30 days as prescribed under section 11 of the National Environment Appellate Act, 1997.	Noted.

Status of compliance of conditions stipulated in Environmental Clearance for RTPP Stage-IV (1X600 MW) unit

Ministry of Environment and Forests, GOI issued Environmental clearance vide Lr No.J-13012/87/2008-IA.II (T) dated 21-10-2010 and J-13012/87/2008-IA.II(T)pt.dt.26.02.2018. The unit is under construction. Status of implementation of environmental safeguards mentioned in the environmental clearance is furnished as follows for the period April-2021 - September-2021.

Sl. No.	A. Specific conditions	Compliance Report
(i)	Environmental clearance shall be applicable for generation of 1x500 MW capacity only until firm coal linkage for balance 100 MW is available. However at a later stage when firm coal linkage for balance 100 MW is also available, the project proponent may request the Ministry for inclusion for entire capacity of 1x600 MW which the Ministry shall consider appropriately.	The ministry of coal, Govt. of India vide file No.2301414/2017-CLD dated.19.09.2017, has allocated the coal linkage to remaining 100MW capacity. An amendment in EC for inclusion of remaining 100MW was also granted vide J-13012/87/2008-IA.TT(T)pt.dt.26.02.2018.
(ii)	Vision document specifying prospective plan for the site shall be formulated and submitted to the Ministry within six months .	APGENCO has formulated environmental Policy, Procedures & Framework for construction and operation of power plants. As per the policy, site selection for establishing new or expansion units is being done with a vision to operate the units without interruption on account of deficiency of infrastructure. APGENCO acquired adequate land to accommodate main plant activities, Auxiliary facilities, colonies and green belt requirement. The plant is in operation without any infrastructure deficit.
(iii)	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5 % and 34 % respectively at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to MOEF for suitable amendments to environmental clearance condition wherever necessary.	Sulphur content in the coal is around 0.45% only and the average ash content in the coal is around 42.25%.
(iv)	A stack of 275 m height shall be provided with continuous online monitoring equipments for SO _x , NO _x and Particulate Matter (PM _{2.5} & PM ₁₀). Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.	A stack of 275 m height is provided and Online monitoring equipments will be installed for SO _x , NO _x and Particulate Matter. Exit velocity of flue gases will not be less than 22 m/sec.
(v)	No ground water shall be extracted for use in operation of the power plant even in lean season.	No ground water is envisaged for the unit. Water requirement for the unit met from the S.P.V.B and Mylavaram reservoir.

(vi)	Source sustainability study of water requirement shall be carried out by an institute of repute. The study shall also specify the source of water for meeting the requirement during lean season. The report shall be submitted to the Regional Office of the Ministry within six months.	The source of water for the proposed unit of 600 MW is from S.P.V.B. Reservoir (Sri Pothuluri Veerabrahmendra Swami Reservoir). Govt of Andhra Pradesh has allocated 1.4 TMC of water from SPVB reservoir for RTPP vide G.O. Rt No. 183, dated 29-03-2010. Water requirement for RTPP Stage-IV unit is 0.5 TMC which can be met from the 1.4 TMC allocated for RTPP. This reservoir is fed by Srisailem reservoir constructed on Krishna river. Further there is an allocation of 1.3 TMC from Mylavaram reservoir. $(1.4+1.3)=2.7$ TMC the water allocated for RTPP units i.e. 1.40 TMC will be always available. It is an assured source for R.T.P.P. to run the units uninterruptedly.
(vii)	Hydro geological study of the area shall be reviewed annually and report submitted to the Ministry. No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.	Hydro geological study report has been prepared. No water bodies are present within the RTPP Stage IV project area.
(viii)	Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ River (as applicable) even in lean season.	----
(ix)	COC of 5.0 shall be adopted.	Complied
(x)	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. Dept. concerned from time to time.	Employment was provided to 88 local people. Skilled training will be given to the local educated youth under CSR budget of Rs. 14.90 Cr earmarked in the project cost to get employment in RTPP and other industries.
(xi)	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	The area earmarked for Stage IV works is almost plain topography. No rising of the ground level necessitated and hence no borrow areas are envisaged.
(xii)	Provision for installation of FGD shall be provided for future use. High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	Provision for installation of FGD is made. High Efficiency (99.885%) Electrostatic Precipitators are installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .
(xiii)	Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Dust suppression and dust extraction systems will be provided in coal handling and ash handling points, transfer areas and other vulnerable areas.
(xiv)	Utilization of 100% Fly Ash generated shall be made from 4 th year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Noted.

(xv)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (As,Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.	Dry ash extraction system (vacuum and pressure system) is constructed to extract the fly ash in dry form to cement, brick and other industries. Unutilized fly ash will be disposed off in the existing ash pond. Mercury and other heavy metals (As,Hg, Cr, Pb etc.) are being monitored in the bottom ash of existing units and effluents emanating from the existing ash pond. Mercury and other heavy metals (As,Hg, Cr, Pb etc.) will be monitored in the bottom ash of stage-IV unit. No ash will be disposed off in low lying area. Ash utilization for the period April-2021-September-2021 is 68.98% in the station.
(xvi)	Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	No new ash pond is proposed. The existing ash pond will be utilized to dispose unutilized ash.
(xvii)	For disposal of Bottom Ash in abandoned mines (if proposed to be undertaken) it shall be ensured that the bottom and sides of the mined out areas are adequately lined with clay before Bottom Ash is filled up. The project proponent shall inform the State Pollution Control Board well in advance before undertaking the activity.	Noted.
(xviii)	Old abandoned ash dyke (if any) shall be appropriately capped and rehabilitated so that no possible emission of fly ash takes place.	Noted.
(xix)	Green Belt consisting of three tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 75 %.	Greenbelt Development Scheme at RTPP has been prepared by AP State Biodiversity Board. 11000 Nos. of plants were already planted. Developing of Green belt around plant consisting of three tiers of plantations of native species is in progress. Further the vacant areas in the BTG area for development of greenbelt area located and plantation works completed for approximately Rs.1.00 Cr. Plantation works are near gate complex in which 4000 No's. Flower plants were planted and plantation along the fencing around the office sheds in which 9200 No's. border plants were planted also another 3000 No's. of plants were planted in front of stage IV office sheds, 500 No's. of plants were planted on North side of Chimney area and now these plants are under maintenance. Also plantation along the Stage-IV compound wall was carried out and maintenance of plantation is in progress and the present status/progress of report will be submitted periodically.
(xx)	For the tribal families (if any) affected directly or indirectly by the project, specific schemes for upliftment of their sustainable livelihood shall be prepared with time bound implementation and in-built monitoring programme. The status of implementation shall be submitted to the Regional Office of the Ministry from time to time.	Not applicable as no tribal families are affected directly or indirectly in the land acquisition for RTPP.

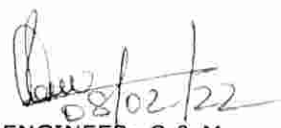
(xxi)	The project proponent shall also adequately contribute in the development of the neighboring villages. <i>Special</i> package with implementation schedule for free potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	An Amount of Rs.1.00 Crore was deposited with the District Collector/YSR District Kadapa on 30.03.2015 to provide Safe Drinking Water (RO Plants etc) to 100-150 habitations in the Y.S.R Dist under "NTR Sujala Pathakam" in the vicinity of plant as per G.O.O No.380/CE/Civil/ Thermal 2014, dt.11.11.2014. Constructed 3 No's of R.O. Plants with Bore wells in surrounding villages and the Maintenance Charges for the above are being reimbursed to the respective Grama Panchayaths regularly. Further maintenance charges for 1 No RO plant constructed by Honble MP/Rajya Sabha under MP LADS in Malepadu and 2 Nos. RO plant at Patha Kalamalla and Krishna Nagar constructed under MP FUNDS are being reimbursed to the respective Grama Panchayats from the year 2017-18. Further approval accorded for an amount of Rs:8.40Lakhs towards Swaccha Bharat Abhiyan to construct the INDIVIDUAL HOUSE HOLD LATRINE (IHHL) Scheme and the same was deposited with MPDO/Yerraguntla in March-2018.
(xxii)	An amount of Rs 12.40 Crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs 2.50 Crores 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.	G.O.O.No.479/CE/C/GS/2011-12 dated 02.01.2012 was issued for implementation of CSR programs at a capital cost of Rs.12.40 Crores and recurring expenditure of Rs.2.50 Crores per annum and constituted a committee with director (Technical) as chairman and Chief Engineer/O&M/RTPP,FA&CCA (Audit) & Chief Engineer/Civil/Thermal as members and superintending Engineer /C&I as convener for monitoring and implementation of the CSR activities at RTPP. M/s APGenco deposited an amount of Rs. 295.21 lakhs with District Collector to carry out CSR works in surrounding villages which are approved in 131 st board meeting as per Companies Act.2013 vide G.O.O.No.242/CE/ CivilThermal / 2014, dt.28.08.2014, apart from above maintenance charges for community toilets, R.O. water plants etc., is being reimbursed to the concerned Panchayaths on submission of actual expenditure by the respective Gram Panchayaths. Further maintenance charges for 1 No. RO plant constructed by honourable MP/RAJYASABHA under MP LADS in Malepadu and 2 No's. R.O. plant at PATHAKALAMALLA and KRISHNANAGAR constructed under MP FUNDS are being reimbursed to the respective Gram Panchayaths from the year 2016-17.Further, HQ was requested to deposit Rs.8346530.00 with district collector towards execution of balance proposed and approved works under RTPP-Stage-IV (1x600 MW)Corporate Social Responsibility policy.
(xxiii)	While identifying 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 society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, 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 vocational training for individuals imparted to take up self employment and jobs.	
(xxiv)	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.	Noted.

Sl. No.	B. General conditions	Compliance Report
(i)	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.	Noted.
(ii)	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.	The existing sewage treatment plant of capacity 2 MLD will be used for treating the sewage generated from the quarters constructed under Stage-IV. The treated sewage will be used for raising greenbelt/plantation.
(iii)	Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of issue of clearance and details shall be furnished to the Regional Office of the Ministry.	Following rainwater harvesting structure are implemented. 1) Check dams are provided 2) Rainwater harvesting pits are provided in appropriate locations of colony and plant area. 3) Storm water recharge pits are also being provided along the storm water drains at an interval of 50 m for the entire length of 15.25 KM storm water drains as per the drawing No. 0914-FCE-GEN-DR-C-023 Rev3.
(iv)	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	Following safety measures are being provided in the coal yard area to check/minimize spontaneous fires in coal yard. a) Hydrant System b) Water Sprinkling system c) Fire extinguishers
(v)	Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	Existing storage facilities for liquid fuel such as HFO and LDO are being used. DMP has been prepared to mitigate the disaster.
(vi)	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg,Cr,As,Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	Hydro geological study report has been prepared. Locations for monitoring of ground water quality to assess the impact of ash pond are identified. Ground water quality around ash pond is being monitored for heavy metals in the identified location.
(vii)	Monitoring surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	Noted.

(viii)	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	First Aid and sanitation arrangements are provided to the contract workers.
(ix)	Noise levels 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 personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.	During operation of the unit personal protective equipment such as earplugs/ear muffs will be provided for the employees working in the high noise areas.
(x)	Regular monitoring of ground level concentration of SO ₂ , NO _x , PM _{2.5} & PM ₁₀ and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.	The condition is noted. The concentration of SO ₂ , NO _x , PM _{2.5} & PM ₁₀ are being monitored and records maintained.
(xi)	Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Provided.
(xii)	The project proponent shall advertise in at least two local newspapers 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 that 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 with. The unit is now commissioned on 29.03.2018
(xiii)	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	The unit is now commissioned on 29.03.2018

(xiv)	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.	A separate Environmental cell with suitable qualified people to carryout various functions is set up (Dy.EE/civil, AEE/civil & Chemist) under the control of the Senior Executive (Executive Engineer) and will report directly to the Head of the organization (Chief Engineer).
(xv)	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored 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. The criteria pollutant levels namely; SPM, RSPM (PM _{2.5} & PM ₁₀), SO ₂ , NO _x (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.	Complied with.
(xvi)	The environment statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	Env. Statement for the FY ending 31.03.2021 was submitted.
(xvii)	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, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the 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.	Env. Statement for the FY ending 31.03.2021 was submitted.
(xviii)	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan 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 up-load the compliance status in their website and up-date the same from time to time at least six monthly basis. Criteria pollutants levels including NO _x (from stack & ambient air) shall be displayed at the main gate of the power plant.	Complied with.
(xix)	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 should be reported to the Ministry.	The cost towards environmental mitigation measures is being met from the project cost.

(xx)	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.	The unit is commissioned on 29.03.2018
(xxi)	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status.	Full Cooperation will be extended.
4.	The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. The Ministry may also impose additional environmental conditions or modify the existing ones, if necessary.	Noted.
5.	The environmental clearance accorded shall be valid for a period of 5 years to start operations by the power plant.	Validity period is extended for seven years vide EIA notification No. S.O. 1533 (E) dated 14.09.2006.
6.	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted.
7.	In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.	Noted.
8.	The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.	Noted.
9.	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.	Noted.


 08/02/22
 CHIEF ENGINEER; O & M
 RTPP, V.V.REDDY NAGAR
 APGENCO / ANDHRA PRADESH

ANNEXURE-I
Stack Emission data for the YEAR 2021-22 (4/2021-09/2021)

Month	STACK EMISSION														
& year	UNIT - I			UNIT - II			UNIT - III			UNIT - IV			UNIT - V		
	SPM	SO2	Nox	SPM	SO2	Nox	SPM	SO2	Nox	SPM	SO2	Nox	SPM	SO2	Nox
Apr-21	98	1083	357	UUS	UUS	UUS	58	1075	329	55	1069	337	53	1067	334
May-21	UUS	UUS	UUS	UUS	UUS	UUS	UUS	UUS	UUS	UUS	UUS	UUS	UUS	UUS	UUS
Jun-21	108	1098	350	UUS	UUS	UUS	57	1063	342	54	1058	339	54	1060	330
Jul-21	102	1090	345	UUS	UUS	UUS	55	1080	340	52	1058	329	50	1062	320
Aug-21	98	1086	349	UUS	UUS	UUS	UUS	UUS	UUS	59	1054	316	57	1069	320
Sep-21	99	1072	339	UUS	UUS	UUS	48	1044	328	46	1051	325	UUS	UUS	UUS
Average	101	1085.8	348	#DIV/0!	#DIV/0!	#DIV/0!	54.5	1065.5	334.75	53.2	1058	329.2	53.5	1064.5	326
APPCB Standard	100	-	-	100	-	-	100	-	-	100	-	-	100	-	-

* Unit-VI emissions are unavailable right now because some construction works are pending.


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ANNEXURE-II
Ambient Air Quality data for the YEAR 2021-22 (4/2021-09/2021)

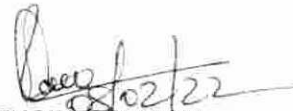
Month & year	AMBIENT AIR QUALITY																			
	Weigh Bridge				TXR Office				Project Hostel				Project Guest House				Police station Kalamalla Village			
	PM10	PM2.5	SO2	Nox	PM10	PM2.5	SO2	Nox	PM10	PM2.5	SO2	Nox	PM10	PM2.5	SO2	Nox	PM10	PM2.5	SO2	Nox
Apr-21	54	17	19	17	50	25	22	20	48	21	19	17	50	29	20	18	52	25	22	19
May-21	28	13	13	10	25	21	13	11	21	12	11	9	22	12	13	10	20	17	11	10
Jun-21	53	25	23	20	52	21	21	19	48	21	20	20	50	21	23	20	52	21	21	18
Jul-21	50	25	21	18	48	25	21	19	49	25	23	20	46	21	21	20	46	21	18	16
Aug-21	48	25	18	15	45	21	16	15	47	25	16	15	44	21	17	15	46	25	19	17
Sep-21	52	25	19	17	50	22	19	16	51	25	21	18	49	22	19	17	47	21	17	15
Average	47.50	21.67	18.83	16.17	45.00	22.50	18.67	16.67	44.00	21.50	18.33	16.50	43.50	21.00	18.83	16.67	43.83	21.67	18.00	15.83
APPCB Standard	100	60	80	80	100	60	80	80	100	60	80	80	100	60	80	80	100	60	80	80


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ANNEXURE-III

Effluent details for the year 04/21 to 09/22

Month &	PLANT EFFLUENT-I					PLANT EFFLUENT-II					ASH POND EFFLUENT					DOMESTIC EFFLUENT				
year	PH	TDS	TSS	BOD	O&G	PH	TDS	TSS	BOD	O&G	PH	TDS	TSS	BOD	O&G	PH	TDS	TSS	BOD	O&G
Apr-21	8.37	577	76	16	2.13	8.32	562	75	16	2.07	8.17	505	20	11	1.35	7.41	731	22	22	2.97
May-21	8.38	489	72	19	2.3	UUS	UUS	UUS	UUS	UUS	8.29	279	21	10	1.17	8.17	744	23	21	2.18
Jun-21	8.23	499	74	18	2	8.17	466	70	20	2.1	8.06	533	19	11	1.40	7.68	732	22	20	2.98
Jul-21	8.37	577	76	16.0	2.13	8.32	562.00	75.00	16.00	2.07	8.17	505	20	11	1.35	7.41	731	22	21.67	2.97
Aug-21	8.17	474.0	74.0	21.0	2.13	8.22	472.00	76.00	20.00	2.02	8.07	481	481	11	1.13	7.79	496	28	17	2.70
Sep-21	8.2	500.0	71.0	21.0	2.2	8.2	494.0	70.0	20.5	2.0	8.0	584.0	22.0	12.0	1.2	7.9	536.0	29.0	17.0	2.4
Average	8.29	519.33	73.83	18.50	2.15	8.25	511.20	73.20	18.50	2.06	8.13	481.17	97.17	11.00	1.27	7.73	661.67	24.33	19.78	2.69
APPCB Standard	6.5-8.5	-	100	-	20	6.5-8.5	-	100	-	20	5.5-9.0	-	200	100	-	5.5-9.0	-	200	100	-


 CHIEF ENGINEER / O&M
 RTPP / V.V. REDDY NAGAR

TEST REPORT

Name & Address of the customer:
The Executive Engineer/Civil/CMD
M/s. APGENCO/RTTP
V.V. Reddy Nagar - 516312
Kadapa (District), Andhrapradesh (State)

Test Report No : 140
Issue Date : 05-07-2021
Sample Reg. No : 0107032214
Received on : 01-07-2021
Sample condition at receipt : Found Ok
Test Commenced on : 01-07-2021
Test Completed on : 02-07-2021

Sample particulars : Water samples-07 Nos.
Sample quantity : 250 ml
Packing : Packed in plastic bottles
Test required : Mn, Cr, Ni, As, Hg, Pb, Cd, Co, Cu, Fe & Se

Test Results*(in ppm)

S. NO	Name of the sample	Name of the elements analysed (Results in ppm)										
		As	Cd	Co	Cr	Cr ⁶	Fe	Hg	Mn	Ni	Pb	Se
1	Seepage water collected toe drain of ash pond/RTTP	0.009	ND	ND	ND	ND	0.018	ND	0.002	ND	ND	ND
2	Decanted water collected toe drain of ash pond/RTTP	0.007	ND	ND	ND	ND	0.001	ND	0.002	ND	ND	ND
3	Bore water-old Gopulapuram/RTTP	ND	ND	ND	ND	ND	0.044	ND	0.001	ND	0.001	ND
4	Bore water-Krishna Nagar/RTTP	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.001	ND
5	Bore water- Chinnadanluru/RTTP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6	Bore water- Mekalabalayapalli/RTTP	ND	ND	ND	ND	ND	ND	ND	0.015	ND	ND	ND
7	Bore water-New Gopulapuram-RTTP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

- Instrument used: ICP-OES
- Interpretation of results: Nil
- Deviation from the test method conditions: Nil
- Sample(s) not drawn by the laboratory
- Test results relates only to the items tested
- ND-Not Detected

Authorized Signatory

malvi
(B. Mahender)
Deputy Quality Manager

