

COMPLIANCE STATUS ON EC CONDITIONS OF GREENFIELD CAPITAL CITY AMARAVATI

(Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

1st HALF YEARLY COMPLIANCE REPORT – 2018

SPECIFIC CONDITIONS:

WATER ENVIRONMENT

S. NO.	EC CONDITION	COMPLIANCE STATUS
1	The Krishna river be protected from all types of harmful discharges from all developmental activities before, during and after Capital Region Development.	<p>Measures have been incorporated such that no harmful discharges enter into River Krishna while preparing Water supply, Waste Water, Solid Waste and Storm Water Master Plans as part of the Smart Integrated Infrastructure Master Plan of Amaravati.</p> <p>In the Capital city so far the STPs have been incorporated in the designs of interlinked projects to ensure no harmful discharge enter into River Krishna.</p> <p>Total 13 (Zone wise) STPs along with trunk sewers are planned in capital city and of which tenders have been finalised for 6 STPs and for the remaining 7 STPs tenders will be floated.</p>
2	The proponent shall utilize only surface water from Krishna River and Kondaveetivagu to the tune of 1067 MLD, after obtaining the approvals from the concerned statutory bodies and after proper treatment in the proposed Water Treatment Plants. Proponent shall ensure supply of water round the clock i.e., 24×7, meeting the drinking water quality standards as per IS 10500.	<p>Being complied and Water for all the interlinked projects in the capital city is being drawn from Rayapudi and Thullur lift irrigation schemes for which the source is from Krishna river only and in the completed interlink projects (Interim Government Complex) water is supplied after proper treatment in WTP.</p> <p style="color: green;">Details are enclosed Annexure-1</p>
3	The proponent shall construct nine internal detention ponds and two reservoirs within the Capital City in	Sewage and storm water network are designed in such a way that sewage does not enter storm water drainage system.

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	<p>addition to two external detention ponds of adequate capacity to overcome the flood menace posed by the Kondaveetivagu and its tributaries. The proponent shall carry detailed hydrological study of the Kondaveetivagu and its tributaries and plan location of detention ponds and reservoirs to achieve twin objectives – combat of inundation and utilization of water. The proponent shall consider factor of increase in intensity of the flow and volume due to pavement of the City and area inundated for 1 hour or more and having water depth more than 6 inches may be considered as affected by water logging for designing of Storm Water Drainage System. The proponent shall take into account climate change considerations and design storm water drains for 20% more capacity than the calculated discharge. The proponent shall protect and improve the existing natural drains and construct modern storm water drainage system to avoid flooding and water logging problems. The proponent shall ensure that sewage shall not enter into storm water drainage system under any circumstances. Proponent shall construct adequate detention ponds and reservoirs at appropriate locations to collect entire storm water. Proponent shall also take measures to strengthen the Krishna River Bund to minimize flood related issues.</p>	<p>Subsequent to detailed engineering studies, the storm water network including detention ponds are planned (Apart from the two detention Reservoirs near Krishnayapalem and Neerukonda, many of the existing ponds in the Capital City will be retained and redesigned as detention ponds) to achieve twin objectives combat of inundation and utilization of water. Storm water drainage network has been planned to avoid flooding and water logging problems and to effectively use storm water for ground water recharge as well for other purposes.</p> <p>The hydrological study of the Kondaveetivagu and its tributaries has considered the expected paved areas and its factor contributing to the flooding conditions and accordingly suggested various possible options. Further, the Design of the storm sewers have been done considering the effects of various land cover areas and its respective runoff coefficients considering the 1 in 5 year storm frequency and 1 in 100 extreme storm conditions.</p> <p>Bund strengthening/ alignment changes may be required considering that the capital city shall be protected from potential flooding from Krishna River. Proposals in this regard will be taken up after duly conducting studies. Agency, M/s WAPCOS has been identified for the study.</p>
4	<p>Detailed studies on the flood management of the Storm water drains, mainly Kondaveeti vagu and its branches and a detailed plan to avoid inundation of the areas be developed taking in to account of the</p>	<p>In building a world-class capital city, GoAP have considered all the measures pertaining to city resilience. ADCL has appointed M/s. Arcadis, a Dutch consulting firm and M/s. TCE for the preparation of Blue Master Plan. The Blue Master Plan has</p>

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	impact of the increased built up area in different development zones of the project.	been prepared in consultation with the Expert Committee constituted by Government of Andhra Pradesh for flood management works in Amaravati. Further, the DPRs have been reviewed by the KWD, the World Bank & CLC Singapore. The CE&CDO of WRD Department, GoAP has vetted all the designs and DPRs.
5	The proponent shall ensure cleaning of storm water drains at least three times a year. (i) First, the process must start by 31 March each year. (ii) The drains should also be thoroughly cleaned after first heavy shower (iii) subsequently, after retreating of rain i.e., in the post monsoon.	Provision has been made in the tender conditions. Since it is planned as green field city, storm water drains in the entire city is planned and tenders have been floated / awarded. One of the conditions of the contract is to maintain the storm water drains for about 7 to 10 years of the period from the date of its completion. The provision is made in the contract is that during the pre and post and during monsoon the storm water drains are to be inspected and cleaned and made ready for free flow of storm water as per IRC standards.
6	Proponent shall ensure construction of rain water harvesting structures and also promote rain water storage and use system by considering heavy rains in the area. Proponent shall make these as mandatory by incorporating in the Bye-laws of APCRDA & CA.	The construction of RWH structure is made mandatory by incorporating it in building rules.
7	Water pumping system and sewage conveyance and treatment systems are energy intensive and as such the proponent shall follow Bureau of Energy Efficiency Norms.	The Condition of EC is complied and provisions are made in the tender documents. 1. VFDs in Pumping system is proposed as a part of water supply scheme and sewerage scheme to reduce the energy consumption. 2. Energy audit for saving energy is proposed as a part of operation and maintenance. Appropriate O&M will ensure

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		<p>minimum electrical energy usage in pumping of raw water from the Intake Well, raw water transmission main, various treatment processes in WTP, clear water pumping station, clear water transmission main and in water distribution system through WDCs to the users. Accounting monthly energy consumption and annual energy audit are important performance indicators to take necessary remedial action to control consumption within approved guaranteed energy parameters. Actual electrical energy usage for each components / process units will be metered on daily and accounted for weekly and monthly basis and average monthly energy consumption will be compared with the standards to be evolved at the time of the project commissioning / trial run stage.</p> <p>An MoU was concluded by APCRDA with BEE & APSECM on 26.02.2018 to comprehensively come up with Energy Conservation guidelines, which will be adopted in the Capital City.</p>
8	<p>Proponent shall encourage low flow plumbing efficient fixtures, sensors, auto valves, pressures reducing devices including for toilets, faucet aerators and shower heads to conserve the water. Proponent shall incorporate these guidelines in the Bye-laws.</p>	<p>Water efficient products have been used in the interlinked projects of the capital city (IGC) and shall be followed for all projects under construction and necessary provision will be incorporated in the building bye laws.</p>
9	<p>The proponent shall ensure 100% collection of sewage by covering entire area of the city with modern underground sewerage network. The proponent shall treat entire (100%) waste water of 877 MLD (year 2050) in the proposed Five Sewage Treatment Plants and one dedicated Industrial Waste Water Treatment Plant to the International Municipal Sewage reuse standards of BOD \leq 10 mg/l, COD \leq 10 mg/l, Total</p>	<p>742 MLD capacity is envisaged for treatment to the required standards.</p> <p>Sewage collection system has been planned for the entire Capital City area, with the city divided into thirteen sewerage zones, serviced by 12 sewage treatment plants and 1 combined effluent treatment plant. All generated sewage shall be collected and conveyed to the treatment plants for treatment. The total wastewater generation for the year 2050 is projected to be 742</p>

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	<p>Suspended Solids (TSS) \leq 10 mg/l, Residual Chlorine \leq 1MG/l and Faecal Coli /100 ML – No detectable levels as committed in EIA report. The proponent shall recycle 100% of treated sewage for non potable applications like flushing, gardening, road and vehicle cleaning, HVAC, fire protection, construction activities, industrial applications by lying dedicated pipeline for supply of treated grey water as committed in the EIA report. The proponent shall construct treated sewage storage ponds of adequate capacity with HDPE liner to store treated sewage during rainy season as committed. The proponent shall lay dual piping at street level shall be laid out in service ducts with 24 x7 water supply provision by ensuring pressure in the main water supply network is always maintained at least twice of the pressure in dual pipe carrying treated waste water to avoid contamination of the fresh water</p>	<p>MLD, and treatment plants of sufficient capacity have been Provided to treat this quantity.</p> <p>CPCB Guidelines have been followed for quality of treated effluent. 29% of treated wastewater is proposed to be used for urban irrigation including avenue plantations, parks, landscaping etc and supply to District Cooling plant, and 71% shall be used for discharging to navigational channels. Dedicated pipeline system is provided for distribution of treated effluent.</p> <p>Thus dual piping system is proposed – one for treated effluent supply and one for potable water supply, so there will be no contamination of potable water.</p> <p>Potable water network is planned for 24 x 7 supply.</p>
10	<p>The proponent shall construct Sewage Treatment Plant of capacity 216 MLD in the 1st phase and reuse 114 MLD for green belt development and Horticulture and 102 MLD for flushing, construction activities, HVAC requirements, road washings, emergency fire fighting, industrial applications etc., as committed. The proponent shall also construct 3500 MLD treated sewage storage pond for storage of treated sewage in the rainy season as committed. The proponent shall undertake construction of Sewage Treatment Plant simultaneously with the construction of the city.</p>	<p>Tenders were invited and awarded for construction of STPs in six zones (total 13 zones) and the waste water will be treated as per the standards for various applications and shall be distributed through reuse water network system. The balance is proposed to be taken up in subsequent phase on modular basis including the provision for storage of treated effluent during rainy season.</p>
11	<p>The proponent shall provide continuous online water</p>	<p>Online Water Quality System shall be installed on upstream of</p>

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	quality monitoring facilities for WTPs, STPs and upstream of drinking water source at Krishna River. Results of monitoring shall be linked to SPCB / CPCB website.	River Krishna. The City level WTPs and STPs shall be monitored using SCADA system and same shall be integrated with SPCB/CPCB.
12	All roads should have rain water drains connected separately (from the sewage network) to the treatment facility of the zone.	Separate system for Storm water and Sewage Water has been proposed as per the norms.
13	Appropriate sites be identified and selected for establishing the STPs for different zones, and the proponent shall reserve the area within 200 m from the STPs, as no habitation vegetation zone and may use for establishing waste recycling or processing or handling facilities for the respective zone.	Each LPS Zone of the City is served by one STP, with capacity sufficient to treat the sewage flows expected to be generated from that Zone with necessary greenbelt will be developed and are part of the Tender documents.
14	Water quality of all the surface water bodies, including the storm water drains be monitored during pre-monsoon and post-monsoon seasons, for their management purposes and the report is submitted as compliance.	Water quality monitoring for surface water is being carried out on quarterly basis. The analysis reports are enclosed in annexure-2
15	The proponent shall prepare water footprint and carry auditing every year.	Water footprint will be prepared and Water Audit will be carried out as part of the Operation and Maintenance measures proposed for the system.

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AIR ENVIRONMENT

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1	The proponent shall give priority for walking, cycling and integrated public transport system for laying of the roads and usage of cleaner fuels and plying of fuel efficient vehicles on the road.	<p>All roads in the capital city have designated pedestrian walk ways and cycle tracks, totalling 3444 kms.</p> <p>1. The elements of walking, cycling, public transport were well planned and spread over in the city as per notified Master Plan</p> <p>2. Walking, Cycling: Dedicated space is planned on all Trunk and LPS roads.</p> <p>3. Public Transportation: Sub-Arterial roads are provided with dedicated PT corridor and ordinary PT system will ply on Arterial Roads.</p> <p>Provision planned for use of Electrical Vehicles in the traffic and transportation master plan.</p> <p>In the interlinked project of the Capital city – i.e., Transit Government Complex, battery operated vehicles have been in use for internal transportation.</p> <p>Collection of waste in the existing settlements by using battery operated vehicles is in conceptual stage.</p> <p>As an initiative in developing Amaravati as an environmental friendly city, APCRDA on behalf of Govt. of Andhra Pradesh has applied for procuring 40 Electric Buses and 40 no. Electric Cars to operate in Amaravati under FAME Scheme. In addition, APCRDA is initiating talks with various Manufactures of Battery Operated Vehicles to bring various kinds of fleet in a big way.</p>

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2	<p>Proponent shall construct a continuous unobstructed foot path on each side of all streets with ROW wider than 12 mtrs. Minimum width of footpath shall be 2 mtrs. In addition to space for trees/greenery/vending spaces and surface utilities. Width of footpath shall be determined based on pedestrian volume and have to be wider than 2m wherever required. Intermittent buffers, bollards and other physical elements should be used to protect foot paths from encroachment by motor vehicle parking. At least 125 trees per kilometre length of footpath on the streets shall be ensured. Spacing of trees at no place should be greater than 12 m except at intersections. On streets with ROW of 18 m or less, if pedestrian traffic is greater than 8000 per hour in both directions together, the entire ROW should be notified for pedestrianization. Footpath Elevation over the carriage way at all times should be less than 150 mm. All pedestrian facilities should be barrier free for universal access by all persons with reduced mobility including those with hearing and visual impairments. At least 5 safe street-level crossing opportunities per kilometre of street with 250m being maximum spacing between two crossings shall be ensured. Depending on context, these crossings may be signalized and / or traffic calmed (through raising crosswalk over street level by 150 mm) to reduce vehicular speed. Limiting speed on urban arterial roads and sub-arterial streets to 50 kmph and on collector and local streets to 30 kmph shall be ensured. Traffic calming of all streets with ROW of 12m or less through narrowing of driveway and meandering path with use of trees, islands and street</p>	<p>Yes, the conditions of EC have been complied in planning documents / design of roads.</p> <ol style="list-style-type: none"> 1. The walking and plantation elements were well planned and spread over in the city as per the notified Master Plan. 2. Footpaths: Proposed on all the Trunk and LPS roads of length 3444 Km with width ranging between 2 mt to 3 mt. 3. Trees per Km.: Plantation zones with width ranging from 5 mt to 1 mt are proposed all along the Trunk and LPS roads. These Plantation zones along with Multifunctional Zones will house with continuous row of tress, which provide beauty, creates shadow to the pedestrians and cyclists in the city. Big Trees were placed at 5 mt interval whereas small trees were placed at 2 mt to 3 mt interval in all trunk roads. The Avenue and Median plantation in the LPS zones has been tendered and awarded. 4. Speeds on roads: The city roads were planned by following the Urban road hierarchy system and designed by adopting the best national, International standards/practices. <p>The major road classes of Master Plan were designed with recommended speed limits along with proper safety measures.</p>
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	<p>furniture should be done and speed should be limited to 20 km/hr by design. Highways within urban areas should be avoided since they disrupt pedestrian activity and disconnect neighbourhoods. Vending spaces should be marked in addition and adjacent to the walking path, especially along high pedestrian volume areas to activate the street and make it safe. Space to be planned for utilities including drinking water kiosks and toilets so that the walking space is enhanced but not compromised.</p>	
<p>3</p>	<p>Proponent shall</p> <ul style="list-style-type: none"> - Construct dedicated and physically segregated bicycle tracks with width of 2m or more, one in each direction on all streets with total motor vehicle carriageway larger than 10 m (not ROW) after providing adequately sized footpaths in each direction based on pedestrian traffic - Develop at least 5 safe street crossings per km for bicycles with spacing between two crossings not more than 250m. - Provide secure parking for cycles at transit stations, all public places and commercial and institutional buildings. - Promote and implement public sharing schemes. 	<ol style="list-style-type: none"> 1. With a vision and objective to encourage Non-Motorized Transport (NMT) in the city, required Infrastructure is planned in the notified Master Plan. A dedicated NMT corridor of 3,444 km length all along the trunk and LPS roads were proposed in the master plan. The Right of Way (RoW) created for NMT will encourage and generate awareness among citizens about the bicycle activity. In context of maintaining the safety of cyclists and create environment friendly transport system these segregated bicycle tracks were planned. 2. The proposed Multi-functional Zone width allows a degree of flexibility to fit several different infrastructures such as kiosks, street furniture, Bicycle stations, etc. 3. APCRDA has taken up developing the pre-feasibility analysis study for Public Bike Sharing (PBS) system in Amaravati along with Vijayawada and Guntur with World Research Institute (WRI). This study will provide the recommendations related to the System size, Bike Station location Plan, infrastructure requirement, implementation plan, awareness & advocacy training programs, etc.

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		<p>4. Based on the IRC and other international standards road and street crossing designs such as Table Tops, Pelican signals, zebra crossings, etc. and bollards restricting the vehicles entering into Pedestrian and Cycle tracks were proposed as part of detailed Infrastructure Master Plan and are included in the awarded tenders of the LPS zone development.</p>
4	<p>Proponent shall design streets with emphasis on Pedestrian and cyclist safety, comfort and convenience. Proponent shall establish a dedicated unit for planning and auditing of Non-Motorized Transport (NMT) facility. Area of blocks surrounded by public access pedestrian / cyclist streets or pathways shall not exceed 2 Ha. No development shall be permitted until local street grid is put in the place which subdivides land into blocks of no more than 2 Ha.</p>	<p>Yes, the conditions of EC have been complied in planning documents / design of roads. Local grid is being first implemented in the form of LPS layouts, major roads.</p> <p>All Non Motorized transportation provision are addressed and are being complied both in plan and while executing the project.</p> <p>APCRDA has taken up developing the pre-feasibility analysis study for Public Bike Sharing (PBS) system in Amaravati along with Vijayawada and Guntur with World Research Institute (WRI). This study will provide the recommendations related to the infrastructure requirement, implementation plan, awareness & advocacy training programs, etc., Based on the study recommendations a dedicated unit will be setup for Planning and auditing of NMT.</p>
5	<p>Proponent shall develop high quality and high frequency rapid public transport system with dedicated lines for bus rapid transit system. All public facilities (institutional / educational / cultural etc.) should be accessible by public transport within 400m walking distance.</p>	<p>1. The road network planned in the city is of Grid pattern. The distance between any two major roads (Arterial/Sub-Arterial) in the city is 1km. All the sub-arterial roads were provided with dedicated PT corridor and ordinary PT system will ply on arterial roads. The Arterial and Sub-Arterial roads were planned one adjacent to another. This will create an access to citizen for Public Transportation system within 400mt walking</p>

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		<p>distance.</p> <p>2. Each Community Centre is within 5 minute walking distance for any resident, and public transport node is within 10 minute walking distance.</p>
6	<p>The proponent shall encourage battery operated vehicles by providing separate lane with a provision for recharging.</p>	<p>Options are being explored for the use of battery operated vehicles for provision of separate lane and recharging.</p> <p>As an initiative in developing Amaravati as an environmental friendly city, APCRDA on behalf of Govt. of Andhra Pradesh has applied for procuring 40 Electric Buses and 40 no. Electric Cars to operate in Amaravati under FAME Scheme. In addition, APCRDA is initiating talks with various Manufactures of Battery Operated Vehicles to bring various kinds of fleet in a big way.</p>
7	<p>On making available of cleaner fuels like LPG/CNG, the proponent shall ensure plying of only CNG/LPG fuelled public transport vehicles like buses, taxis, autos on the road. Proponent shall also ensure that vehicle beyond 15 years of age shall not ply in the city. Proponent shall also encourage usage of low sulphur diesel and unleaded petrol by vehicles. Proponent shall ensure plying of latest emission compliant vehicles only on road.</p>	<p>The use of the cleaner fuels in Amaravati is the subject of the national level and state level policies. Also, in the design of infrastructure much emphasis is being given to the battery / electric vehicles, which are non polluting vehicles.</p>
8	<p>The proponent shall encourage environmental friendly modes of transport like public transport and non motorized transport and discourage usage of personal cars by devising disincentives for private car use, in the form of both spatial (like parking control) and</p>	<p>The design of the city encourages the public transport system for which about 150 km of dedicated corridor for public transportation network is identified.</p> <p>Model split in favour of public transportation is 80:20 by 2050.</p>

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	physical (like levies on car, fuels, congesting charges).	where the portion of public transport trips also include walk and cycle trips. Designated commercial areas are connected with public transportation in the master plan. Policy shall be prepared for discouraging the use of personal vehicles and promotion of public transport.
9	The proponent shall provide adequate parking facilities by giving priority to public vehicles and non motorized transport vehicles.	<p>1. Dedicated Park and Ride locations total with an extent of 23 Acres of land were identified near prime activity areas in city as per the Infrastructure Master Plan.</p> <p>2. In addition, all the commercial parcels with C2 land use are provided with exclusive parking area under LPS plan preparation at individual village level.</p>
10	The proponent shall ensure that all utility lines (electricity, telephone, cable, water supply, sewerage, drainage etc.) shall be laid below the ground. Duct shall be provided along and across the roads to lay the utility lines. Major trunk (water/sewerage) lines are to be laid along the utility corridor.	With an objective to make Amaravati as a dig free city, the Infrastructure Master plan has recommended to develop Utility Corridor all along Trunk and LPS roads placed on either sides of the carriageway. Utility duct works are tendered for select roads under execution.
11	The proponent shall ensure that DG sets shall comply with noise and emission norms prescribed by MoEF& CC in Environment (Protection) Rules.	Will be complied as and when DG sets are being installed in developments and status reported. The DG sets installed will be as per the ARAI norms and the monitoring results of the of Noise and Air of the DG sets at the interlinked projects are attached in Annexure-3
12	The proponent shall ensure development and meeting of not less than 10% of energy needs from the renewable energy sources like Solar, Wind, WTE, Bio mass etc. To meet the demands of the Capital City, at least 120 MW of solar power with investment to the	Policies and guidelines are being worked out to achieve the 10% of the energy needs from Renewable energy Use.

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	tune of RS.500 Crores and wind power with investment of Rs.100 Crores in the 1 st phase shall be taken up as committed.	
13	The proponent shall ensure installation of solar panels by all buildings by allocating at least 1/3 of roof top for this purpose. This is in addition to installation of solar heaters. The proponent shall incorporate these guidelines in Bye-laws.	Policies and guidelines are being worked out to achieve the requirement of EC. Guidelines regarding installation of solar panels for buildings by allocating at least 1/3 of roof top will be incorporated in Bye-laws. In the major projects provision for the roof top Solar harvesting is incorporated in the designs.
14	The proponent shall incorporate energy efficiency guidelines (Energy Conservation Building Code) and Green Building Concepts (GRIHA/IGBC/LEED) in the Bye-laws. Buildings shall utilize natural lighting and ventilation to the maximum extent. All point light sources shall be CFL or LEDs or equivalent. All linear light sources shall be T-5 or at least 4* BEE rated TFLs or equivalent. The distributed cooling system shall be at least BEE 3* rated products. All the major buildings having connected load of more than 100 KW shall maintain power factor of above 0.95. All multi story residential apartment / complexes shall meet at least 15% of total external lighting load through renewable energy sources and all commercial, institutional, industrial and mixed use buildings shall meet at least 5% of the total lighting loads through the renewable energy sources. All residential buildings having plot area of more than 500 Sq.mtrs, multi story residential apartments / complexes, hotels and banquet halls, hospitals, all government buildings, residential schools, educational institutes, hostels and industries requiring hot water shall	Efforts are being made to incorporate the guidelines of ECBC, GRIHA, IGBC, LEED in to the bye laws. M/s TERI, CII and ASCI are actively working with APCRDA in drafting guidelines and handholding both government and public in implementation of energy efficiency guidelines.

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	<p>install solar water heating systems to meet at least 20% of hot water requirement. 24 hours use buildings like hospitals, hotels, call centers, shall ensure that thermal performance of external walls and roof shall conform to ECBC 2007 requirements i.e., maximum U-factor (W/m²K) of 0.44 and 0.261 respectively and for day time use buildings U-factor of 0.44 and 0.409 respectively. U-factor for windows shall not be more than 3.30. All major buildings land complexes shall meet Energy Performance Index of less than 150kWh/Sq.m per year. All commercial buildings with connected load of 100kW and above shall invariably comply with energy conservation building code. All the Capital complexes, Commercial, institutional and major residential complexes should be constructed following Green Building concepts and ensure – energy efficiency, low carbon foot-print, resources conservation etc. The proponent shall ensure that all the bulk consumers of the energy, shall meet a greater part of their demand through renewable energies and avoid use of fossil fuels; The proponent shall incorporate these in Bye-laws.</p>	
15	<p>The proponent shall establish minimum 3 online continuous Ambient Air Quality Stations in there zones i.e., residential, commercial and business zones and connect the results to CPCB / SPCB website in the 1st phase. Permanent Online Air Monitoring Stations for Air Quality be established, one for every 25 km²of area, located strategically considering the wind rose of the area and terrain conditions.</p>	<p>One station installed by SPCB at Interim Government Complex, Velagapudi is connected to SPCB/CPCB. Other stations will be taken up simultaneous with developments.</p>

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16	The project proponent should develop mechanism for monitoring Carbon sequestration from the plantations made and should achieve a Mean Annual Increment of the Carbon stock of at least 5 tons/Ha/annum. The proponent should monitor the carbon stock of each area, at least once in two years and submit reports.	Will be complied. M/s TERI has been entrusted with the task of conducting this study.
17	The proponent shall prepare carbon footprint for the city and strive for carbon neutrality.	Will be complied. M/s TERI has been entrusted with the task of conducting this study.

SOLID WASTE MANAGEMENT

S. NO.	EC CONDITION	COMPLIANCE STATUS
1	The proponent shall ensure that occupiers of all premises to keep two receptacles, one for the storage of food / organic / biodegradable waste and another for non biodegradable / recyclable and other types of solid waste generated. Hazardous waste generated by households shall be kept separately in suitable container as and when such a waste is generated.	Will be complied as per the norms and it is addressed in waste management plan.
2	The project proponent shall ensure that all the newly developed areas shall not have any open waste disposal sites on the road sides and develop efficient waste collection mechanism that ensures segregation at the origin level only.	Will be complied. Mechanism for segregation and collection of waste at source is incorporated in Waste Management Plan and shall be as per the norms.
3	Proponent shall arrange for door to door collection and / or community bin collection of domestic waste;	Will be complied. The Provision of door to door collection is provided in the waste management plan.

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	trade and institutional waste stored by the waste generators in segregated manner.	
4	Proponent shall identify and allocate suitable pieces of land in the jurisdiction of the city to facilitate sorting of various components of recyclable material collected by waste collectors and prevent such activities being carried out on the foot paths / road side etc.	Will be complied. Provided in the waste management plan.
5	The proponent shall identify and allocate adequate land for Multiple Transfer Stations with mechanical Material Recovery Facility for secondary segregation and storage of dry waste as committed. Transfer Stations shall be properly covered and hygienically maintained to minimize Environmental and Health Hazards.	Will be complied. In the city solid waste management plan transfer stations are provided with necessary material recover facility and secondary segregation.
6	The proponent shall ensure daily sweeping of all public streets and periodical cleaning of all public places.	Will be complied. Provision is made in the waste management plan.
7	The proponent shall make arrangements for separate collection of construction and demolition waste and shall be transferred to Construction and Demolition Waste Recycling Facility. Proponent shall allocate adequate and suitable land for establishment of Construction and Demolition Waste Recycling Facilities.	Will be complied. Care is being taken for the C&D waste and this is being used in for filling in low lying areas of the city and construction of roads.
8	The proponent shall ensure that a separate adequate space for segregation / storage and decentralized processing of solid waste is demarcated in the plan for	These provisions will be incorporated in buildings Bye-Laws

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	group housing or commercial / institutional or any non residential complex exceeding 200 dwellings or having a plot area of more than 10000 Sq.mtrs.	
9	The proponent shall ensure collection of waste from vegetable, fruit, meat and fish markets on daily basis and promote setting up of de-centralized compost plant or bio methanisation plant at suitable location in the market.	Space is provided for de-centralized compost plants / bio methanisation plants for waste generated from vegetable, fruit, meat and fish markets at transfer stations which are proposed to be established as a part of Solid Waste Management.
10	The proponent shall ensure establishment of modern abattoirs (slaughter houses) with appropriate waste management facilities. The proponent shall also take measures for establishment of Rendering Plant for disposal of carcass or parts of any dead animal in scientific manner.	Suitable land will be identified for Modern abettor
11	The proponent shall allocate suitable and adequate site for setting up of Common Bio Medical Waste Treatment and Disposal Facility within the city limits.	Suitable site will be allocated for Common Bio Medical Waste Treatment and Disposal Facility
12	Proponent shall make arrangement for setting up of Waste Collection Centers for plastic waste in association with plastic manufacturers. The Proponent shall also ensure safe collection, storage, segregation and transportation, processing and disposal of plastic waste in environmentally sound manner. The proponent shall allocate suitable and adequate site for setting up of plastic recycling, processing and disposal facilities.	Will be complied. Plastic wastes are taken to the Transfer Station, processed through the Material Recovery Facility, and forwarded to the Recyclable Waste Collection Centre (RWCC) and then to respective recycling facilities.
13	The proponent shall facilitate setting up of E-waste	Will be complied. E-wastes are segregated at the Material

COMPLIANCE STATUS ON EC CONDITIONS OF GREENFIELD CAPITAL CITY AMARAVATI (Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

	Collection Centers by the producers and channelize e-waste to recyclers or dismantlers. The proponent shall allocate suitable and adequate site for setting up of e-waste recycling / dismantling facilities.	Recovery Facility and forwarded to the Recyclable Waste Collection Centre, which shall have a special Electronic Waste Collection Centre. The waste generator can also himself deposit his waste at the center. From the collection center, the waste shall then be transferred to respective recycling facilities
14	The proponent shall identify and allocate suitable site for establishment of common Hazardous Waste Treatment and Disposal Facility.	Suitable site will be allocated for Common Hazardous Waste Treatment and Disposal Facility.
15	The proponent shall facilitate establishment of used battery Collection Centers by manufactures / importers / assemblers / reconditioners and canalize the used batteries to registered recyclers. Proponent shall allocate suitable site for setting up of used battery recycling facilities.	It will be complied. Used batteries are classified as hazardous waste, and shall be handled as per rules.
16	Proponent shall ensure proper collection and scientific disposal of sludge from the water treatment plants, sewage treatment plants, water seal latrines and septic tanks.	Sludge generated from WTP/STP/ETP/Septic Tanks is proposed to be disposed in the Sanitary Landfill. SIIMP Master Plan has proposed to adopt certain regulations as part of the bye-laws to the APCRDA.
17	Proponent shall take measures for proper collection and scientific disposal of bulky waste like discarded tables, chairs, cots, cub boards, mattresses, gas cookers, microwave ovens, washing machines etc.	It will be complied. Transfer Station is suitably designed with special arrangements to handle bulky objects.
18	Proponent shall take measures for establishment of state of art modern Integrated Solid Waste Management Facility for the city as committed consisting of Sorting / Material Recovery Plant, Compost Plant / Anaerobic Digesters, Waste to Energy Plant, Construction and Demolition Waste	It will be complied. Integrated Solid Waste Management facility has been proposed in Amaravati. The entire solid waste management infrastructure is proposed to be developed in Phase-1 of the development of the Capital City.

COMPLIANCE STATUS ON EC CONDITIONS OF GREENFIELD CAPITAL CITY AMARAVATI (Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

	Recycling Plant, Bio medical Waste Facility, Plastic Waste Processing and Recycling Facility and Engineered Landfill Facility. Proponent shall allocate suitable and adequate space for ISWMF in the city limits and ensure establishment of ISWMF simultaneously with the construction of the city in the first phase itself.	
19	The proponent shall maintain adequate green buffer around Integrated Solid Waste Management Facility and Common Hazardous Waste Treatment and Disposal facility By carrying proper assessment, but not less than 100 mtrs width.	It will be complied. List of plant species for buffer area is provided.
20	The proponent shall ensure usage of fly ash for levelling / reclamation of low lying areas, road embankments, for raising platforms in inundated areas, and usage of fly ash based products for construction purpose including fly ash bricks, PPC cement, Concrete etc., in compliance with Fly Ash Notification issued by the MoEF under Environment (Protection) Act. The proponent shall incorporate usage of fly ash by construction agencies in the Bye-laws.	This will be incorporated in Zonal Regulations and usage of fly ash and its products in the constructions activities of interlinked projects is under practice.

COMPLIANCE STATUS ON EC CONDITIONS OF GREENFIELD CAPITAL CITY AMARAVATI

(Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

ECOLOGY

S. NO.	EC CONDITION	COMPLIANCE STATUS
1	A list of all existing water bodies (including ponds, tanks, drains, irrigating channels) falling in the proposed area, shall be prepared village wise with survey no., extent, use and other details duly certified by a competent authority and a certified map of these water ;bodies as on project commencement date should be kept as base map with the APCRDA & CA, and should be displayed on its web site;	All the existing water bodies, which were mentioned in the EIA report are being protected and maintained.
2	All construction activities by the proponent should ensure that the activities do not alter or do not adversely affect the water bodies and their ecology;	Will be ensured.
3	Improvement or rehabilitation of existing natural streams, channels / nallas shall be carried out without disturbing the ecological habitat.	It is being complied.
4	No untreated or treated wastewater shall be discharged in any of the water bodies including Krishna River under any circumstances.	As per CPCB norms all waste water will be treated to the Recycling & Reuse standards as per Environmental (Protection) Rules, 1986.
5	The proponent shall create primary green spaces of 7200 Ha. Consisting of city parks, lake parks, town parks, neighbourhood parks as committed. The proponent shall create primary green space of 3924.57 Ha in the 1 st phase as committed.	30.92% of total city area is planned for open green spaces and recreational spaces.
6	The proponent shall create and maintain secondary green space of 1910 Ha. Weave through the	Secondary green spaces are provided in the LPS layouts and will be developed as part of LPS development works.

COMPLIANCE STATUS ON EC CONDITIONS OF GREENFIELD CAPITAL CITY AMARAVATI (Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

	townships connecting the various town and neighbourhood parks acting as a passive recreation places, interactive jogging trails and Non Motorized Transport corridors across the city. The proponent shall create secondary green space of 510.04 Ha in the 1 st phase as committed.	
7	The proponent shall protect and conserve the existing water bodies of 4815 Ha. In addition to creating new water bodies integrated with green spaces as committed.	Will be complied. Existing Water bodies have been protected and two large water bodies in Krishnayapalem and Kuragallu (Neerukonda) are being developed to store up to 1 TMC in total.
8	A buffer of 30m on either side of canals and streams; 50m around water bodies and 100m along the Krishna River Front shall be reserved as greenbelt without allowing any development. Plantation along the side of the roads and in the open spaces shall be developed to act as sinks of air pollutants.	It will be complied.
9	The proponent shall encourage urban agriculture to meet the city food requirements and reserve high value agriculture land wherever possible for this purpose as committed.	As per City Zoning Regulations, urban agriculture is not allowed. However, necessary steps will be taken to increase productivity of farm lands within the Capital Region Area to compensate the loss within the city area.
10	The proponent shall utilize natural features such as forest and hills to create regional green network as committed.	Noted
11	The proponent shall utilize reserve forest land of 251.814 hectares, after obtaining approval for diversion from competent authorities for development of green belt / eco friendly activities only.	Provision made in Amaravati Zoning Regulations and Master Plan. Master Plan proposes 13.62% of total City area as 'Protected Area' that comprise of 'Reserve forest land'. This RF land will be utilized only after obtaining diversion approval.

COMPLIANCE STATUS ON EC CONDITIONS OF GREENFIELD CAPITAL CITY AMARAVATI (Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

12	The proponent shall utilize treated sewage water for irrigation of primary and secondary green areas by laying pipeline network.	Dedicated pipeline shall be provided for distribution of treated effluent network for irrigation purposes.
13	All archaeological, cultural and ecologically-sensitive areas (i.e. estuaries, mangroves, rocky shores, caves etc.) in and around the Amaravati capital city be adequately protected and conserved. The proponent shall take appropriate measures for protection of Undavalli caves. The proponent has to declare no development activity Zone of 100 to 300 mtrs around Undavalli caves as per ASI regulations.	Complied as per master plan.
14	A comprehensive PRIMARY BASELINE DATA on the productivity of the Krishna River in the CRDA area (primary, secondary and tertiary productions), before and after Capital region development shall essentially be collected and processed in systematic and scientific way.	It will be complied.
15	Development of the green belts, green corridors, avenue plantations etc., be made only with the native species with multiple uses, and the plantation should not affect the native species diversity and shall help enhance carbon stocks.	It is proposed to take up greenery based on the agro climatic zone of Guntur and Krishna district with native species of these districts along with native species of AP and India only will be planted.
16	The proponent shall reserve most of the waterfront along the Krishna River for public use as committed.	River front along Krishna is planned as vibrant city edge for public use in Master Plan.
17	The proponent shall create 780 Ha recreational landscapes including Theme Parks, Golf Courts, Sports and Recreational Spaces.	City Master Plan provides for 9.83% as 'Passive Recreational Zones' and 7.01% as 'Active Recreational Zones'

COMPLIANCE STATUS ON EC CONDITIONS OF GREENFIELD CAPITAL CITY AMARAVATI (Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

18	The proponent shall create green and blue network interconnecting all reservoirs, water bodies and green spines as committed.	Will be complied. Details are provided in Amaravati Capital City Master Plan.
19	The proponent shall create network of water ways as committed to connect various eco tourism attractions on the cluster of islands in the river Krishna. These water ways have to inter connect Islands and mainland within the city.	Navigation by water is integrated as part of the Blue Master Plan.
20	A major part of the development of the water bodies and green areas be completed before the end of the construction phase;	Actions are being initiated to develop water bodies and green areas before taking up the full scale construction.
21	All construction activities by the proponent should ensure that the activities do not adversely affect the water bodies and their ecology.	Noted and will be complied. Certain public and economic development works were initiated without disturbance to the water bodies and designated green spaces.
22	No natural water body shall be lined or no embankment shall be cemented except for protection and safety of the people in the surrounding area. The water bodies shall be kept in natural conditions without disturbing the ecological habitat.	The blue plan is prepared with no lining concept. However, considering the soil nature, additional measures will be taken up after due technical study.
23	Improvement or rehabilitation of existing natural streams, channels / nallas shall be carried out without disturbing the ecological habitat.	Improvement of existing natural streams will be taken up only in case of protection/safety from flood is needed as per the study and will be carried out without disturbing the ecological habitat.
24	Mitigation measures like providing adequate drainage, embankment consolidation and slope stabilization shall be taken on the built up areas and along the city roads to avoid soil erosion. Top soils (30	The contractors are stacking and preserving top soil near borrow area and will be utilized for landscape works.

COMPLIANCE STATUS ON EC CONDITIONS OF GREENFIELD CAPITAL CITY AMARAVATI
(Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

	cm) of the borrow pit sites shall be conserved and restored after completion of excavation. All the topsoil excavated during construction activities shall be stored for use in horticulture / landscape development within the project site. Proper erosion control and sediment control measures shall be adopted.	
25	Recognizing the fact that the Capital City project is being proposed on the Green & Blue Concepts, as such to protect the environment, the 24.29% of the land allocation for greening and open spaces, be achieved at the Development zone wise as far as possible.	It is being complied
26	Deep rooted large foliage plantation along the side of the roads and in the open spaces shall be developed to act as sinks of air pollutants.	It is proposed to develop plantation on road sides and open spaces with the deep rooted, large foliage sapling of trees.

RESETTLEMENT AND REHABILITATION

S. NO.	EC CONDITION	COMPLIANCE STATUS
1	The APCRDA & CA shall submit the specific plans for the inclusion of the existing habitations in the capital area development and submit the details of the Project Affected Families and the RR Plans to address the PAFs. As far as possible, Least Dislocation Principle be adopted;	Being adopted.
2	The proponent shall develop a peripheral area development plan and provide plans for the	Implemented through Amaravati Skill Development Centre. Support of Tata Trusts to enhance livelihood opportunities is

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compensation of the loss of rural productivity like loss of grazing areas for the livestock dependent communities; vegetable growing farmers and sellers etc.	enlisted. The Details are attached in Annexure-4
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DISASTER MANAGEMENT

S. NO.	EC CONDITION	COMPLIANCE STATUS
1	The proponent shall prepare and implement proper flood management plan to overcome threats posed by the Kondaveeti Vagu and its tributaries, Krishna River, heavy rains (more than 1000 mm) and cyclones.	In efforts to build a world-class capital city, GoAP have considered all the measures pertaining to city resilience. ADCL has appointed M/s. Arcadis a Dutch consulting firm and M/s. TCE for the preparation of Blue Master Plan. The Blue Master Plan has been prepared in consultation with the Expert Committee constituted by Government of Andhra Pradesh for flood management works in Amaravati. Further, the DPRs have been reviewed by the KWD, the World Bank & CLC Singapore. The CE&CDO of WRD Department, GoAP has vetted all the designs and DPRs.
2	The proponent shall prepare earth quake response management plan by considering the location of the city in the class III seismic zone. The proponent shall incorporate structural design requirements of buildings for Seismic Zone – III in the Bye-Laws.	Will be incorporated in bye laws. It is requested with NDMA to carry out the earthquake response management plan for the capital city.
3	The proponent shall create adequate infrastructure for emergency fire fighting.	At the city level, it is being taken up by Andhra Pradesh Disaster Management & fire services Department. It is requested with NDMA to prepare emergency fire fighting plan for the capital city.

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4	The proponent shall prepare emergency Health Management Plan.	<p>1. At present, contractors have prepared Health Safety Management plan as per EHS policy for ongoing construction projects and implemented accordingly on site.</p> <p>2. It is requested with NDMA to prepare emergency Health Management plan for the capital city.</p>
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ENVIRONMENT MANAGEMENT DURING CONSTRUCTION PHASE

S. NO.	EC CONDITION	COMPLIANCE STATUS
1	The proponent shall ensure safe and secure accommodation, clean drinking water, hygienic sanitation facilities like mobile toilets, community level gas supply, rest areas for female workers, nutrition development programme for workers at all construction sites for the projected work force of 5000 – 10000 spread in about 40 labour camps as committed in EIA report.	<p>1. Contractors have been mandated to have onsite facilities/amenities as part of their contract. Monitoring of the same is undertaken by ADCL on regular basis.</p> <p>2. The contractors have constructed labour camps for labours with adequate welfare and sanitary facilities and other basic amenities for safe working conditions on site, safe and secure accommodation required for the social development of the workers and such facilities are within the reach of the workers camp. It is assessed by the authority and evaluated by a third party.</p> <p>It is ensured that the same conditions with regard to the provision of basic facilities to the labour at the construction sites are incorporated in the tender documents. Base camps for workers at ongoing interlinked projects are attached in Annexure-5</p>
2	The proponent shall ensure following mitigation measures as committed, to minimize pollution	All the materials transporting vehicles are covered with tarpaulin during transportation. Regular water sprinkling is

COMPLIANCE STATUS ON EC CONDITIONS OF GREENFIELD CAPITAL CITY AMARAVATI (Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

<p>problems during construction stage.</p> <ul style="list-style-type: none"> • All the loose material either stacked or transported shall be provided with suitable covering such as tarpaulins etc. • Water sprinkling shall be done at the location where dust generation is anticipated. • Construction equipment be maintained and serviced regularly such that the gaseous emissions from these equipment are maintained within the design specifications. • Provision for insulating caps and aids at the exit of noise source on the machinery. • The use of dampening materials such as thin rubber/ lead sheet for wrapping the work places like compressors, generator, etc. • Inlet and outlet mufflers shall be provided. • Earmuffs shall be provided to workers and enforced to be used by the workers. • Noise prone activities shall be restricted to the extent possible during the night time, in order to have minimum environmental impact on the workers as well as on the neighbourhood. 	<p>being done to suppress dust generation during construction.</p> <p>Regular servicing of equipment and vehicles used in construction activity is being done to maintain the gaseous emission from these equipment.</p> <p>PPEs have been provided to all workers and precautionary measures have been taken for safety of workers on site.</p>
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(Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

3	Groundwater should not be used for any activities during the construction phase also; and a policy for the use of water by different users in the project area be developed for their sustainable use and submitted.	For all the construction activities, only surface water from the designated places is being used.
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ENVIRONMENT MANAGEMENT MONITORING SYSTEM

S. NO.	EC CONDITION	COMPLIANCE STATUS
1	The responsibility of implementation of environmental safeguards rests fully on the project proponent. Project proponent shall establish an Environmental Management Regulatory Authority to carryout functions relating to environmental management under the supervision of a senior executive, directly reporting to the Project Proponent. It should have separate wings for (a) Greenery and Ecological Management; (b) Sewage Management; (c) Solid Waste Management; (d) Fly Ash Utilisation and (e) Pollution Control, staffed by Scientists / Engineers and supported by established laboratories and adequate supporting staff.	As per the condition in EC, Environment Management Regulatory authority has been constituted under the chairmanship of Additional commissioner, APCRDA to carry out function relating to environmental management. The EMRA is meeting regularly.

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GENERAL CONDITIONS

S. NO.	EC CONDITION	COMPLIANCE STATUS
1	Any change(s) in the scope of the project, shall require a fresh appraisal by. The SEIAA. As the details of the Inter Linked Projects for the Government Complexes, Housing Complexes, Cultural Centers, Industrial / IT Park, Commercial Complexes, Education Institutions etc. have not been submitted with-respect to built-up area, excavation, water consumption, sewage generation, solid wastes generation, power requirement, pollution control arrangements, environmental safeguards, construction material etc. for construction and operation phases, the respective project proponents shall obtain separate Environmental Clearances for all the projects which falls under the schedule of Environment Impact Assessment Notification, 2006 from State Level Environmental Impact Assessment Authority, as per provisions of Environment Impact Assessment Notification 2006.	<p>As per the EC condition, as per the provisions of EIA notification 2006 the APCRDA has obtained Separate environmental clearance for the following projects</p> <ol style="list-style-type: none"> 1. Interim Government Complex vide Order no: SEIAA/AP/GNT/CON/01/2016/18 dt: 09.02.2016. 2. Group-D Staff Housing project vide Order no: SEIAA/AP/GNT/CON/09/2017/417 dt: 12.10.2017. 3. Legislative Assembly Building Project vide Order no: SEIAA/AP/GNT/CON/09/2017/418 dt: 12.10.2017. 4. MLA/MLC Housing Project vide Order no: SEIAA/AP/GNT/CON/09/2017/419 dt: 12.10.2017. 5. Gazetted Officers Housing Project vide Order no: SEIAA/AP/GNT/CON/09/2017/422 dt: 12.10.2017. 6. Secretariat Staff Housing Project vide Order no: SEIAA/AP/GNT/CON/09/2017/423 dt: 12.10.2017. 7. AIS Officers Housing Project vide Order no: SEIAA/AP/GNT/CON/09/2017/444 dt: 12.10.2017. 8.High Court Building Project vide Order no: SEIAA//AP/GNT/CON/09/2017/420 – 322 dt: 17.05.2018. 9.HOD staff housing Project vide Order no: SEIAA//AP/GNT/CON/09/2017/422 – 321 dt: 17.05.2018. <p>ECs of High Court Building Project and HOD staff housing Project are enclosed in Annexure-6</p>
2	The proponent shall incorporate penal provision in the byelaws/regulations for any violation of environmental issues. The proponent shall also create	Under progress.

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(Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

	proper intuitional mechanism to ensure continual environmental awareness among all stakeholders.	
3	The proponent shall obtain consent from Andhra Pradesh Pollution Control Board.	Obtained CFE from APPCB vide Order no: 373/APPCB/CFE/RO-GNT/HO/2015 dt: 19.10.2015.
4	The proponent shall strictly comply with Municipal solid waste (Management & Handling) Rules, the plastic manufacturer, sales & usage Rules, the Hazardous Waste (Management, Handling & Transboundary movement) Rules, Bio Medical Waste (Management and Handling) Rules, E-waste (Management & handling) Rules, the noise pollution (Regulation and Control) Rules, the Manufacture, Storage and Import of Hazardous Chemical Rules, Fly ash notification and standards notified by MoEF under Environment (Protection) Act, wherever applicable..	It will be complied.
5	The project proponent shall inform the public that the project has been accorded Environmental Clearance by SEIAA, AP and copies of clearance letters are available with the APPCB and may also be seen at website of SEIAA, AP at www.seiaa.ap.nic.in and at website of Ministry of Environment and Forest at http://envfor.nic.in . This shall be advertised within 7 days from the date of issue of clearance letter, at least in 2 local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned and a copy of the same forwarded to SEIAA AP and Regional Office, MoEF & CC, Chennai.	Published in two local Newspapers one of which is vernacular languages dt: 16.10.2015 and forwarded the same to SEIAA, AP and MoEF & CC, Regional Office, Chennai.

COMPLIANCE STATUS ON EC CONDITIONS OF GREENFIELD CAPITAL CITY AMARAVATI (Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

6	The proponent shall obtain all other mandatory clearances from respective departments.	Noted and it will be complied
7	The project proponent shall submit / upload half yearly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the MoEF & CC, its Regional Office, Chennai, SEIAA, AP, Zonal Office of Central Pollution Control Board, Bangalore and A.P. Pollution Control Board. The Regional Office of MoEF / APPCB / CPCB / SEIAA, AP shall monitor the stipulated conditions. The proponent shall upload the status of compliance of the environmental clearance, conditions including results of monitored data on their websites and shall update the same periodically.	Submitting and uploading half yearly reports on the status of compliance of the stipulated environmental clearance conditions. Monitored data is enclosed Annexure-7
8	The environmental statement for each financial year ending 31st march in Form-V as mandated is to be submitted by the project proponent to the A.P. Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the Proponent along with the status of compliance of environmental clearance conditions and shall also be sent to the Regional office of the MoEF & CC, Chennai by e-mail.	Noted and it will be complied
9	Concealing the 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	Noted

COMPLIANCE STATUS ON EC CONDITIONS OF GREENFIELD CAPITAL CITY AMARAVATI
(Order No: SEIAA/AP/GTN-151/2015, Dated: 09.10.2015)

	provisions of Environment (Protection) Act, 1986.	
10	The SEIAA may revoke or suspend the order, if implementation of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	Noted
11	Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted
12	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Noted


Commissioner
APCRDA
Vijayawada, AP


09/10/2015





B.S. ENVI - TECH PVT. LTD.

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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0635	
Sample Description: WTP Water Sample		Lab Code No : 18986505	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Water Treatment Plant Outlet Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	8.12	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1.0	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	810		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	529	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	< 10	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	186	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	36	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	23	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	123	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	78	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.67	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	2.3	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	146	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	< 0.1	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	98		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	3.9		--

Note: * the parameter not covered in NABL scope .
Interpretation of results: Nil, Deviation from test method: Nil


 Authorized Signatory
 (A.V. HanumanthaRao)
 Director – Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0635	
Sample Description: WTP Water Sample		Lab Code No : 18986505	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Water Treatment Plant Outlet Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.37	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	<0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	0.53	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-58	4.9	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	4	-	-
*31	BOD for 3 days at 27oC	mg/l	IS:3025 -Part-44	< 2.0	-	-
*32	Total Nitrogen as N	mg/l	-	1.1	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	< 0.3	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


 Authorized Signatory
 (A.V. Hanumantha Rao)
 Director – Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0635	
Sample Description: WTP Water Sample		Lab Code No : 180986505	Issue Date : 14.06.2018
		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Quantity : 1 No. x 250 ml Sample		Date of Registration	29.05.2018
Packing : Pre Sterilized Bottle		Date of commencement of testing	29.05.2018
Test Required : As given below		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Water Treatment Plant Outlet Water		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS


Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	<1.8	-
*2	Faecal Coliforms	MPN/100 ml	9221E, APHA 22 nd Edition, 2012	<1.8	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0627	
Sample Description: Surface Water Sample		Lab Code No : 18987305	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Right bank of River Krishna at Ganapathi Sachidananda Ashramam (Upstream-500m from Barrage)		General Environment conditions: Ok	
			Page No: 1 of 2

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.95	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	2	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	810		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	529	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	18	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	201	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	42	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	23	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	104	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	71	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.54	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	1.5	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	181	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	< 0.1	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	93		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	2.9		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0627	
Sample Description: Surface Water Sample		Lab Code No : 18987305	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Right bank of River Krishna at Ganapathi Sachidananda Ashramam (Upstream-500m from Barrage)		General Environment conditions: Ok	
		Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.06	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	0.53	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	5.7	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	15	-	-
*31	BOD for 3 days at 27oC	mg/l	IS:3025 -Part-44	3	-	-
*32	Total Nitrogen as N	mg/l	-	1.7	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	0.8	-	-
*34	Total Organic Carbon	mg/l	-	4.8	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

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Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0627	
Sample Description: Surface Water Sample		Lab Code No : 180987305	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Right bank of River Krishna at Ganapathi Sachidananda Ashramam (Upstream 500 m from Barriage)			
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	70	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	<1.8	-

Interpretation of results: Nil
Deviation from test method: Nil

Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0628 Lab Code No : 18987205 Issue Date : 14.06.2018 Your Ref : Letter Dated 29.05.2018 Date of Receipt : 29.05.2018	
Sample Description: Surface Water Sample		Date of Registration : 29.05.2018 Date of commencement of testing : 30.05.2018 Date of completion of testing : 12.06.2018 Sample condition at receipt : Found ok Sample tested as received	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)			
Packing : Plastic Bottle			
Test Required : As given below			
Sampling Details			
Date of Sampling: 26.05.2018 Location of Sampling: Right bank of River Krishna near Hon'ble CM's House (Upstream-3 km from Barrage)		Sampling Method/Procedure: IS 3025 Part 1 General Environment conditions: Ok	
		Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.98	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	2	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	820		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	532	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	14	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	206	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	40	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	26	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	101	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	73	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.56	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	2.2	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	186	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	< 0.1	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	92		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	2.8		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0628	
Sample Description: Surface Water Sample		Lab Code No : 18987205	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Right bank of River Krishna near Hon'ble CM's House (Upstream-3 km from Barrage)		General Environment conditions: Ok	
Page No: 2 of 2			

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.05	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	0.53	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	5.6	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	13	-	-
*31	BOD for 3 days at 27°C	mg/l	IS:3025 -Part-44	3.0	-	-
*32	Total Nitrogen as N	mg/l	-	2.2	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	1.1	-	-
*34	Total Organic Carbon	mg/l	-	4.5	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0628	
Sample Description: Surface Water Sample		Lab Code No : 180987205	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Right Bank of River Krishna near Hon'ble CM's House (Upstream 3KM from Barriage)		Page No: 1 of 1	
General Environment conditions: Ok			

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	110	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	<1.8	-

Interpretation of results: Nil
Deviation from test method: Nil

Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0629 Lab Code No : 18987105 Issue Date : 14.06.2018 Your Ref : Letter Dated 29.05.2018 Date of Receipt : 29.05.2018	
Sample Description: Surface Water Sample		Date of Registration : 29.05.2018 Date of commencement of testing : 30.05.2018 Date of completion of testing : 12.06.2018 Sample condition at receipt : Found ok Sample tested as received	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)	Packing : Plastic Bottle Test Required : As given below	Sampling Details Date of Sampling: 26.05.2018 Location of Sampling: Left bank of River Krishna near Dr. K.L.Rao Head water works (Upstream-500 m from Barrage)	
		Sampling Method/Procedure: IS 3025 Part 1 General Environment conditions: Ok	

Page No: 1 of 2

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	8.02	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	2	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	826		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	536	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	16	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	211	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	44	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	25	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	106	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	73	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.59	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	2.2	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	181	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	< 0.1	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	90		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	2.7		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0629	
Sample Description: Surface Water Sample		Lab Code No : 18987105	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Left bank of River Krishna near Dr. K.L.Rao Head water works (Upstream-500 m from Barrage)		General Environment conditions: Ok	
		Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.02	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	0.54	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	5.5	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	16	-	-
*31	BOD for 3 days at 27°C	mg/l	IS:3025 -Part-44	3	-	-
*32	Total Nitrogen as N	mg/l	-	2.2	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	1.1	-	-
*34	Total Organic Carbon	mg/l	-	5.2	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director - Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0629	
Sample Description: Surface Water Sample		Lab Code No : 180987105	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Krishna River Left Bank Dr K.L.Rao Head Water Works (Up stream-500 m from Barriage)			
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	94	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	<1.8	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0630 Lab Code No : 18987005 Issue Date : 14.06.2018 Your Ref : Letter Dated 29.05.2018 Date of Receipt : 29.05.2018	
Sample Description: Surface Water Sample		Date of Registration : 29.05.2018 Date of commencement of testing : 30.05.2018 Date of completion of testing : 12.06.2018 Sample condition at receipt : Found ok Sample tested as received	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)	Packing : Plastic Bottle	Test Required : As given below	
Sampling Details			
Date of Sampling: 26.05.2018 Location of Sampling: Left bank of River Krishna at SKCV Children Trust (Upstream-3 km from Barrage)		Sampling Method/Procedure: IS 3025 Part 1 General Environment conditions: Ok	
		Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	8.04	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	2	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	814		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	528	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	18	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	206	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	42	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	25	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	101	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	73	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.57	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	2.2	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	186	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	< 0.1	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	91		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	2.8		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


 Authorized Signatory
 (A.V. HanumanthaRao)
 Director – Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0630	
		Lab Code No : 18987005	
		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018	
		Date of Receipt : 29.05.2018	
Sample Description: Surface Water Sample		Date of Registration	29.05.2018
Quantity : 1 No. x 2.0 Ltrs Sample		Date of commencement of testing	30.05.2018
1 No. x 500 ml Sample(Metals)		Date of completion of testing	12.06.2018
Packing : Plastic Bottle		Sample condition at receipt	Found ok
Test Required : As given below		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Left bank of River Krishna at SKCV Children Trust (Upstream-3 km from Barrage)		General Environment conditions: Ok	
		Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.03	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	0.53	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	5.6	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	17	-	-
*31	BOD for 3 days at 27oC	mg/l	IS:3025 -Part-44	3.0	-	-
*32	Total Nitrogen as N	mg/l	-	2.5	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	1.1	-	-
*34	Total Organic Carbon	mg/l	-	5.6	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0630	
Sample Description: Surface Water Sample		Lab Code No : 180987005	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Krishna River Left Bank at SKCV Children Trust (Upstream-3 Km from Barriage)			
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	84	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	<1.8	-

Interpretation of results: Nil
Deviation from test method: Nil

Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0613	
Sample Description: Surface Water Sample		Lab Code No : 18988705	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Navuluru Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.88	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	18	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1670		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1082	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	34	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	282	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	59	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	33	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	291	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	97	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.80	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	8.5	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	302	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.20	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	236		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	32		--

Note: * the parameter not covered in NABL scope .
Interpretation of results: Nil, Deviation from test method: Nil


 Authorized Signatory
 (A.V. HanumanthaRao)
 Director – Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0613	
Sample Description: Surface Water Sample		Lab Code No : 18988705	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Navuluru Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.21	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.03	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	0.05	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	1.08	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	4.9	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	42	-	-
*31	BOD for 3 days at 27oC	mg/l	IS:3025 -Part-44	13	-	-
*32	Total Nitrogen as N	mg/l	-	8.0	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	3.4	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0613	
Sample Description: Surface Water Sample		Lab Code No : 180988705	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: APHA 22 nd Edn	
Location of Sampling: Navuluru Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	210	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	11	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0614	
Sample Description: Surface Water Sample		Lab Code No : 18988605	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Venkatapalem Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	8.24	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	9	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	2010		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1316	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	23	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	529	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	99	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	69	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	311	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	190	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.53	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	1.2	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	363	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.18	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	162		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	102		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0614	
Sample Description: Surface Water Sample		Lab Code No : 18988605	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Venkatapalem Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.05	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	<0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	1.32	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	5.1	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	34	-	-
*31	BOD for 3 days at 27°C	mg/l	IS:3025 -Part-44	10	-	-
*32	Total Nitrogen as N	mg/l	-	4.2	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	2.3	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

BSET/TR/Form -56

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0614	
Sample Description: Surface Water Sample		Lab Code No : 180988605	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Venkatapalem Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	280	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	09	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0615	
Sample Description: Surface Water Sample		Lab Code No : 18988505	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Velagapuri Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.75	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	15	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	2440		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1568	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	36	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	655	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	117	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	88	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	332	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	343	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.62	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	7.4	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	383	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.15	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	238		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	36		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0615	
Sample Description: Surface Water Sample		Lab Code No : 18988505	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Velagapudi Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.27	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	1.57	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	3.8	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	47	-	-
*31	BOD for 3 days at 27oC	mg/l	IS:3025 -Part-44	15	-	-
*32	Total Nitrogen as N	mg/l	-	8.7	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	3.9	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

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Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0615	
Sample Description: Surface Water Sample		Lab Code No : 180988505	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Velagapudi Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	430	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	14	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0616	
Sample Description: Surface Water Sample		Lab Code No : 18988405	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Nidamaru Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.93	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	10	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1150		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	742	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	29	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	292	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	61	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	34	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	157	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	73	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.71	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	3.1	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	262	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.10	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	123	--	--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	10	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0616	
Sample Description: Surface Water Sample		Lab Code No : 18988405	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Nidamaru Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.09	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	0.74	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	4.7	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	30	-	-
*31	BOD for 3 days at 27oC	mg/l	IS:3025 -Part-44	9	-	-
*32	Total Nitrogen as N	mg/l	-	4.5	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	2	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0616	
Sample Description: Surface Water Sample		Lab Code No : 180988405	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Nidamaru Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	350	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	12	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0617	
Sample Description: Surface Water Sample		Lab Code No : 18988305	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 24.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Nelapadu Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.30	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	11	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	590		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	385	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	30	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	126	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	28	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	13	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	43	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	18	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.75	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	5.2	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	202	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	< 0.1	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	74		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	5.8		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


 Authorized Signatory
 (A.V. HanumanthaRao)
 Director - Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/Form -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0617	
Sample Description: Surface Water Sample		Lab Code No : 18988305	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 24.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Nelapadu Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.13	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	0.39	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	4.9	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	38	-	-
*31	BOD for 3 days at 27oC	mg/l	IS:3025 -Part-44	12	-	-
*32	Total Nitrogen as N	mg/l	-	7.0	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	3.1	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director - Laboratory

... End of the Report...

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TEST REPORT


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0617	
Sample Description: Surface Water Sample		Lab Code No : 180988305	Issue Date : 14.06.2018
.Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 24.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Nelapadu Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	540	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	14	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0618	
Sample Description: Surface Water Sample		Lab Code No : 18988205	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Yerrabalem Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	8.11	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	9	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1790		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1167	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	25	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	282	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	59	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	33	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	272	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	65	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.79	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	9.0	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	423	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.13	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	234	--	--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	81	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0618	
Sample Description: Surface Water Sample		Lab Code No : 18988205	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Yerrabalem Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.16	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	<0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	1.17	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	4.2	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	36	-	-
*31	BOD for 3 days at 27°C	mg/l	IS:3025 -Part-44	11	-	-
*32	Total Nitrogen as N	mg/l	-	7.3	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	2.8	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0618	
Sample Description: Surface Water Sample		Lab Code No : 180988205	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Yerrabalem Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	210	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	07	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0619	
Sample Description: Surface Water Sample		Lab Code No : 18988105	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Thulluru Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.53	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	8	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1280		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	835	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	21	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	146	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	30	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	17	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	236	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	66	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.94	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	6.2	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	217	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.28	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	221	--	--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	9.4	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0619	
Sample Description: Surface Water Sample		Lab Code No : 18988105	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Thulluru Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.28	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.04	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	0.83	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	4.3	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	23	-	-
*31	BOD for 3 days at 27°C	mg/l	IS:3025 -Part-44	8.0	-	-
*32	Total Nitrogen as N	mg/l	-	5.1	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	1.8	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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TEST REPORT


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0619	
Sample Description: Surface Water Sample		Lab Code No : 180988105	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Thulluru Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	170	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	04	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0620	
Sample Description: Surface Water Sample		Lab Code No : 18988005	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Thulluru Tank Water (Behind School)		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.30	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	17	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	2990		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1946	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	48	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	579	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	119	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	69	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	701	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	363	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.69	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	5.0	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	116	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.80	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	414		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	17		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0620	
Sample Description: Surface Water Sample		Lab Code No : 18988005	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Thulluru Tank Water (Behind School)		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.24	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.12	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.03	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	1.95	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	3.1	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	56	-	-
*31	BOD for 3 days at 27°C	mg/l	IS:3025 -Part-44	18	-	-
*32	Total Nitrogen as N	mg/l	-	9.0	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	4.8	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0620	
Sample Description: Surface Water Sample		Lab Code No : 180988005	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Thulluru Tank Behind School		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	540	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	110	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0621	
Sample Description: Surface Water Sample		Lab Code No : 18987905	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Inavolu Tank Water		General Environment conditions: Ok	
Page No: 1 of 2			

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	6.64	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	21	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	8000		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	4890	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	54	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	1229	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	226	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	162	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	2301	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	601	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.84	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	10.4	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	116	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.95	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	1175		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	183		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0621	
Sample Description: Surface Water Sample		Lab Code No : 18987905	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Inavolu Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.28	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.09	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.05	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	4.89	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	3.2	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	64	-	-
*31	BOD for 3 days at 27°C	mg/l	IS:3025 -Part-44	20	-	-
*32	Total Nitrogen as N	mg/l	-	10.9	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	5.6	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

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Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0621	
Sample Description: Surface Water Sample		Lab Code No : 180987905	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Inavolu Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	920	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	70	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0622	
Sample Description: Surface Water Sample		Lab Code No : 18987805	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Penumaka Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.95	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	9	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1800		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1162	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	25	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	478	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	99	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	56	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	226	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	101	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.72	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	9.7	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	458	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.10	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	145		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	83		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0622	
Sample Description: Surface Water Sample		Lab Code No : 18987805	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Penumaka Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.19	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	1.16	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	4.5	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	45	-	-
*31	BOD for 3 days at 27oC	mg/l	IS:3025 -Part-44	14	-	-
*32	Total Nitrogen as N	mg/l	-	8.4	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	3.7	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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TEST REPORT


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0622	
Sample Description: Surface Water Sample		Lab Code No : 180987805	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Penumaka Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	540	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	17	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0623	
Sample Description: Surface Water Sample		Lab Code No : 18987705	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Sakhamarru Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.83	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	7	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	850		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	554	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	20	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	191	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	40	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	22	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	135	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	78	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.59	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	3.1	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	141	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.20	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	105		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	4.1		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0623	
Sample Description: Surface Water Sample		Lab Code No : 18987705	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Sakhamarru Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.22	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	0.55	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	4.9	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	32	-	-
*31	BOD for 3 days at 27°C	mg/l	IS:3025 -Part-44	10	-	-
*32	Total Nitrogen as N	mg/l	-	5.3	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	2.5	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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TEST REPORT


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0623	
Sample Description: Surface Water Sample		Lab Code No : 180987705	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Sakhamuru Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	280	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	11	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0624	
Sample Description: Surface Water Sample		Lab Code No : 18987605	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Dondapadu Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	8.20	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	38	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1670		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1094	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	62	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	121	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	26	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	13	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	323	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	165	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.85	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	9.9	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	191	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.20	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	326		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	4.8		--

Note: * the parameter not covered in NABL scope .
Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0624	
Sample Description: Surface Water Sample		Lab Code No : 18987605	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Dondapadu Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	1.47	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.07	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	0.13	-	-
*28	Salinity	PPT or g/kg	-	1.09	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	4.0	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	60	-	-
*31	BOD for 3 days at 27°C	mg/l	IS:3025 -Part-44	19	-	-
*32	Total Nitrogen as N	mg/l	-	10.1	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	5.1	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

... End of the Report...

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TEST REPORT

BSET/TR/Form -56

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0624	
Sample Description: Surface Water Sample		Lab Code No : 180987605	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Dondapadu Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	920	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	170	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0625	
Sample Description: Surface Water Sample		Lab Code No : 18987505	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Nekkallu Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.39	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	9	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1080		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	703	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	32	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	161	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	36	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	17	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	224	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	65	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.59	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	7.0	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	141	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.15	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	157		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	30		--

Note: * the parameter not covered in NABL scope .
Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0625	
Sample Description: Surface Water Sample		Lab Code No : 18987505	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Nekkallu Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.33	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.05	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	0.70	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	4.4	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	28	-	-
*31	BOD for 3 days at 27°C	mg/l	IS:3025 -Part-44	8.0	-	-
*32	Total Nitrogen as N	mg/l	-	5.3	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	2.0	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


 Authorized Signatory
 (A.V. Hanumantha Rao)
 Director – Laboratory

*** End of the Report***

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TEST REPORT

BSET/TR/FORM -56


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0625	
Sample Description: Surface Water Sample		Lab Code No : 180987505	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Nekkallu Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	220	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	11	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/Form -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0626	
Sample Description: Surface Water Sample		Lab Code No : 18987405	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Kurugallu Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.58	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	11	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1050		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	684	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	38	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	206	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	42	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	25	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	185	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	71	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.83	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	7.3	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	176	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.15	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	136		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	19		--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0626	
Sample Description: Surface Water Sample		Lab Code No : 18987405	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part I	
Location of Sampling: Kurugallu Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.14	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	<0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	0.68	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	4.2	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	40	-	-
*31	BOD for 3 days at 27°C	mg/l	IS:3025 -Part-44	12	-	-
*32	Total Nitrogen as N	mg/l	-	7.0	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	3.1	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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Certificate No: TC-5233

TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0626	
Sample Description: Surface Water Sample		Lab Code No : 180987405	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Kuragallu Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	540	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	20	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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BSET/TR/Form -56


TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0631	
Sample Description: Surface Water Sample		Lab Code No : 18986905	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Mandadam Tank Water		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	8.01	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	14	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	2120		
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1368	500	2000
*5	Total Suspended Solids	mg/l	IS:3025 - Part-17	42	-	-
6	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	468	200	600
7	Calcium as Ca	mg/l	IS:3025- Part-40	97	75	200
8	Magnesium as Mg	mg/l	IS:3025 -Part-46	55	30	100
9	Chlorides as Cl	mg/l	IS:3025 -Part-32	383	250	1000
10	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	100	200	400
11	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.76	1.0	1.5
12	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	5.5	45	No Relaxation
13	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	398	200	600
14	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.20	0.5	1
15	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	209		--
16	Potassium as K	mg/l	IS:3025 -Part-45, 1993	108		--

Note: * the parameter not covered in NABL scope.
Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0631	
Sample Description: Surface Water Sample		Lab Code No : 18986905	
Quantity : 1 No. x 2.0 Ltrs Sample		Issue Date : 14.06.2018	
1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Bottle		Date of Receipt : 29.05.2018	
Test Required : As given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Mandadam Tank Water		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
17	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.03	1.0	No Relaxation
18	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
19	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
20	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	5	15
21	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
22	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
23	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
24	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
25	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
26	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*27	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*28	Salinity	PPT or g/kg	-	1.37	-	-
*29	Dissolved Oxygen	mg/l	IS:3025 -Part-38	2.6	-	-
*30	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	72	-	-
*31	BOD for 3 days at 27oC	mg/l	IS:3025 -Part-44	21	-	-
*32	Total Nitrogen as N	mg/l	-	11.5	-	-
*33	Ammonical Nitrogen as N	mg/l	IS:3025 -Part-34	5.9	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0631	
Sample Description: Surface Water Sample		Lab Code No : 180986905	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre sterilized Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: APHA 22 nd	
Location of Sampling: Mandadam Tank		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	540	-
2	Faecal Coliforms	MPN/100 ml	9221B, APHA 22 nd Edition, 2012	220	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Project : Andhra Pradesh Capital Region Development
Authority, Vijayawada, Andhra Pradesh
Location : AP Secretariat, Guntur Dist., Andhra Pradesh.

STACK GAS QUALITY MONITORING REPORT

Location : DG-2-500 KVA
 Date of sampling : 21.06.2018
 Time of sampling : 11 : 15 AM
 Ambient Temperature : 43°C

FLUE GAS PARTICULARS

Flue gas Temperature	Deg C	143
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POLLUTANT CONCENTRATIONS

PARAMETERS	UNITS	CONCENTRATION	Emission Limits as per G.S.R 520(E)
Particulate matter	g/kw-hr	0.028	0.3
Sulphur Dioxide, SO ₂	g/kw-hr	-	-
Oxides of Nitrogen, NO _x	g/kw-hr	0.048	9.2
Carbon Monoxide, CO	g/kw-hr	0.206	3.5
Hydrocarbon, HC	g/kw-hr	0.108	1.3

For B.S.Envi-Tech (P) Ltd


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TEST REPORT

Project : Andhra Pradesh Capital Region Development
Authority, Vijayawada, Andhra Pradesh
Location : AP Secretariat, Guntur Dist., Andhra Pradesh.

STACK GAS QUALITY MONITORING REPORT

Location : DG-1-500 KVA - 1
 Date of sampling : 21.06.2018
 Time of sampling : 12 : 10 PM
 Ambient Temperature : 40°C

FLUE GAS PARTICULARS

Flue gas Temperature	Deg C	127
----------------------	-------	-----

POLLUTANT CONCENTRATIONS

PARAMETERS	UNITS	CONCENTRATION	Emission Limits as per G.S.R 520(E)
Particulate matter	g/kw-hr	0.021	0.3
Sulphur Dioxide, SO ₂	g/kw-hr	-	-
Oxides of Nitrogen, NO _x	g/kw-hr	0.048	9.2
Carbon Monoxide, CO	g/kw-hr	0.251	3.5
Hydrocarbon, HC	g/kw-hr	0.133	1.3

For B.S.Envi-Tech (P) Ltd


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TEST REPORT

Project : Andhra Pradesh Capital Region Development
Authority, Vijayawada, Andhra Pradesh
Location : AP Secretariat, Guntur Dist., Andhra Pradesh.

STACK GAS QUALITY MONITORING REPORT

Location : DG-1-750 KVA
Date of sampling : 21.06.2018
Time of sampling : 12 : 50 PM
Ambient Temperature : 40°C

FLUE GAS PARTICULARS

Flue gas Temperature	Deg C	133
----------------------	-------	-----

POLLUTANT CONCENTRATIONS

PARAMETERS	UNITS	CONCENTRATION	Emission Limits as per G.S.R 520(E)
Particulate matter	g/kw-hr	0.020	0.3
Sulphur Dioxide, SO ₂	g/kw-hr	-	-
Oxides of Nitrogen, NO _x	g/kw-hr	0.065	9.2
Carbon Monoxide, CO	g/kw-hr	0.450	3.5
Hydrocarbon, HC	g/kw-hr	0.152	1.3

For B.S.Envi-Tech (P) Ltd


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TEST REPORT

Project : Andhra Pradesh Capital Region Development
Authority, Vijayawada, Andhra Pradesh
Location : AP Secretariat, Guntur Dist., Andhra Pradesh.

STACK GAS QUALITY MONITORING REPORT

Location : DG-1-500 KVA – B5
 Date of sampling : 21.06.2018
 Time of sampling : 01 : 45 PM
 Ambient Temperature : 44°C

FLUE GAS PARTICULARS

Flue gas Temperature	Deg C	154
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POLLUTANT CONCENTRATIONS

PARAMETERS	UNITS	CONCENTRATION	Emission Limits as per G.S.R 520(E)
Particulate matter	g/kw-hr	0.042	0.3
Sulphur Dioxide, SO ₂	g/kw-hr	-	-
Oxides of Nitrogen, NO _x	g/kw-hr	0.037	9.2
Carbon Monoxide, CO	g/kw-hr	0.195	3.5
Hydrocarbon, HC	g/kw-hr	0.110	1.3

For B.S.Envi-Tech (P) Ltd


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TEST REPORT

Project : Andhra Pradesh Capital Region Development
Authority, Vijayawada, Andhra Pradesh
Location : AP Secretariat, Guntur Dist., Andhra Pradesh.

STACK GAS QUALITY MONITORING REPORT

Location : DG-2-500 KVA – B2
 Date of sampling : 21.06.2018
 Time of sampling : 02 : 10 PM
 Ambient Temperature : 46°C

FLUE GAS PARTICULARS

Flue gas Temperature	Deg C	134
----------------------	-------	-----

POLLUTANT CONCENTRATIONS

PARAMETERS	UNITS	CONCENTRATION	Emission Limits as per G.S.R 520(E)
Particulate matter	g/kw-hr	0.021	0.3
Sulphur Dioxide, SO ₂	g/kw-hr	-	-
Oxides of Nitrogen, NO _x	g/kw-hr	0.042	9.2
Carbon Monoxide, CO	g/kw-hr	0.215	3.5
Hydrocarbon, HC	g/kw-hr	0.116	1.3

For B.S.Envi-Tech (P) Ltd

Authorized Signatory



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TEST REPORT

Project : Andhra Pradesh Capital Region Development

Authority, Vijayawada, Andhra Pradesh

Location : AP Secretariat, Guntur Dist., Andhra Pradesh.

STACK GAS QUALITY MONITORING REPORT

Location : DG-2-750 KVA – B2
Date of sampling : 21.06.2018
Time of sampling : 03 : 30 PM
Ambient Temperature : 42°C

FLUE GAS PARTICULARS

Flue gas Temperature	Deg C	160
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POLLUTANT CONCENTRATIONS

PARAMETERS	UNITS	CONCENTRATION	Emission Limits as per G.S.R 520(E)
Particulate matter	g/kw-hr	0.030	0.3
Sulphur Dioxide, SO ₂	g/kw-hr	-	-
Oxides of Nitrogen, NO _x	g/kw-hr	0.064	9.2
Carbon Monoxide, CO	g/kw-hr	0.412	3.5
Hydrocarbon, HC	g/kw-hr	0.120	1.3

For B.S.Envi-Tech (P) Ltd


Authorized Signatory



B.S. ENVI - TECH PVT. LTD.

ENVIRONMENTAL CONSULTANTS & ANALYTICAL LABORATORY

4th Floor, 'AMITY VILLE', 12-13-1270/71/73, St. Ann's Road,
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Ph. : +91 40 49723062 / 27016806 Fax : +91 40 49783063

Email : info@bsenvitech.com Website : www.bsenvitech.com

TEST REPORT

Project : Andhra Pradesh Capital Region Development
Authority, Vijayawada, Andhra Pradesh
Location : AP Secretariat, Guntur Dist., Andhra Pradesh.

STACK GAS QUALITY MONITORING REPORT

Location : DG-1-500 KVA – B4
 Date of sampling : 21.06.2018
 Time of sampling : 04 : 15 PM
 Ambient Temperature : 36°C

FLUE GAS PARTICULARS

Flue gas Temperature	Deg C	150
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POLLUTANT CONCENTRATIONS

PARAMETERS	UNITS	CONCENTRATION	Emission Limits as per G.S.R 520(E)
Particulate matter	g/kw-hr	0.021	0.3
Sulphur Dioxide, SO ₂	g/kw-hr	-	-
Oxides of Nitrogen, NO _x	g/kw-hr	0.041	9.2
Carbon Monoxide, CO	g/kw-hr	0.187	3.5
Hydrocarbon, HC	g/kw-hr	0.148	1.3

For B.S. Envi-Tech (P) Ltd


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TEST REPORT

Project : Andhra Pradesh Capital Region Development
Authority, Vijayawada, Andhra Pradesh
Location : AP Secretariat, Guntur Dist., Andhra Pradesh.

STACK GAS QUALITY MONITORING REPORT

Location : DG-2-750 KVA – B5
Date of sampling : 21.06.2018
Time of sampling : 04 : 45 PM
Ambient Temperature : 40°C

FLUE GAS PARTICULARS

Flue gas Temperature	Deg C	310
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POLLUTANT CONCENTRATIONS

PARAMETERS	UNITS	CONCENTRATION	Emission Limits as per G.S.R 520(E)
Particulate matter	g/kw-hr	0.036	0.3
Sulphur Dioxide, SO ₂	g/kw-hr	-	-
Oxides of Nitrogen, NO _x	g/kw-hr	0.099	9.2
Carbon Monoxide, CO	g/kw-hr	0.153	3.5
Hydrocarbon, HC	g/kw-hr	0.058	1.3

For B.S.Envi-Tech (P) Ltd


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TEST REPORT

Project : Andhra Pradesh Capital Region Development
Authority, Vijayawada, Andhra Pradesh
Location : AP Secretariat, Guntur Dist., Andhra Pradesh.

STACK GAS QUALITY MONITORING REPORT

Location : DG-2-750 KVA – B3
 Date of sampling : 21.06.2018
 Time of sampling : 05 : 15 PM
 Ambient Temperature : 41°C

FLUE GAS PARTICULARS

Flue gas Temperature	Deg C	316
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POLLUTANT CONCENTRATIONS

PARAMETERS	UNITS	CONCENTRATION	Emission Limits as per G.S.R 520(E)
Particulate matter	g/kw-hr	0.051	0.3
Sulphur Dioxide, SO ₂	g/kw-hr	-	-
Oxides of Nitrogen, NO _x	g/kw-hr	0.142	9.2
Carbon Monoxide, CO	g/kw-hr	0.160	3.5
Hydrocarbon, HC	g/kw-hr	0.063	1.3

For B.S.Envi-Tech (P) Ltd

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TEST REPORT

Project : Andhra Pradesh Capital Region Development
Authority, Vijayawada, Andhra Pradesh
Location : AP Secretariat, Guntur Dist., Andhra Pradesh.

STACK GAS QUALITY MONITORING REPORT

Location : DG-1-500 KVA – B3
 Date of sampling : 21.06.2018
 Time of sampling : 5 : 50 PM
 Ambient Temperature : 40°C

FLUE GAS PARTICULARS

Flue gas Temperature	Deg C	448
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POLLUTANT CONCENTRATIONS

PARAMETERS	UNITS	CONCENTRATION	Emission Limits as per G.S.R 520(E)
Particulate matter	g/kw-hr	0.029	0.3
Sulphur Dioxide, SO ₂	g/kw-hr	-	-
Oxides of Nitrogen, NO _x	g/kw-hr	0.144	9.2
Carbon Monoxide, CO	g/kw-hr	0.159	3.5
Hydrocarbon, HC	g/kw-hr	0.224	1.3

For B.S. Envi-Tech (P) Ltd

Authorized Signatory



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TEST REPORT

Project : Andhra Pradesh Capital Region Development
Authority, Vijayawada, Andhra Pradesh
Location : AP Secretariat, Guntur Dist., Andhra Pradesh.

STACK GAS QUALITY MONITORING REPORT

Location : DG-2-750 KVA
 Date of sampling : 21.06.2018
 Time of sampling : 06 : 30 PM
 Ambient Temperature : 40°C

FLUE GAS PARTICULARS

Flue gas Temperature	Deg C	140
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POLLUTANT CONCENTRATIONS

PARAMETERS	UNITS	CONCENTRATION	Emission Limits as per G.S.R 520(E)
Particulate matter	g/kw-hr	0.028	0.3
Sulphur Dioxide, SO ₂	g/kw-hr	-	-
Oxides of Nitrogen, NO _x	g/kw-hr	0.053	9.2
Carbon Monoxide, CO	g/kw-hr	0.389	3.5
Hydrocarbon, HC	g/kw-hr	0.119	1.3

For B.S.Envi-Tech (P) Ltd


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TEST REPORT

Project : Andhra Pradesh Capital Region Development Authority

SUMMARY OF THE SOURCE NOISE LEVEL QUALITY-DG SETS (SAMPLING DONE AT 1M DISTANCE FROM SOURCE)

S. No	Station	NOISE LEVEL, dB (A)					
		L_{eq}	L_{10}	L_{50}	L_{90}	L_{Min}	L_{Max}
1	DG-2-500 KVA	74.3	74.8	74.2	74.5	71.1	74.8
2	DG-1-500 KVA-1	73.2	74.3	73.0	73.8	72.6	74.6
3	DG-1-750 KVA	71.7	72.4	70.9	71.5	70.9	73.9
4	DG-1-500 KVA-B5	72.6	73.2	71.2	72.6	71.0	74.2
5	DG-2-500 KVA-B2	73.8	74.6	72.6	73.2	72.4	74.9
6	DG-2- 750 KVA-B2	71.9	72.6	70.4	71.8	70.6	73.5
7	DG-1-500 KVA-B4	73.5	74.3	73.0	73.5	72.3	74.8
8	DG-2-750 KVA-B5	70.4	71.8	70.1	70.5	70.1	72.6
9	DG-2 750 KVA-B3	72.6	73.5	71.3	72.7	70.9	74.2
10	DG-1-500 KVA-B3	73.8	74.2	72.8	73.5	71.2	74.7
11	DG-2-750 KVA	74.2	74.6	73.1	73.9	72.6	74.9

CPCB Standards for DG Sets : 75 dB (A) at 1m from the enclosure surface

Authorized Signatory

(G. Chandra Mouli)
Env. Scientist



Annexure - 4

APCRDA-APSSDC SKILL DEVELOPMENT TRAINING & PLACEMENTS DETAILS AS ON 20-07-2018

S.No	Course	Training Partner	Duration	Year	Training Imparted			Training Status	Placement completed
					M	F	Total		
1	IT Java	APSSDC,Etcherla	4Months	2015-16	54	35	89	Completed	58
2	Jute Bags	St. Jhon's Welfare Mandadam,Malkapuram	45 Days	2015-16	0	143	143	Completed	143
3	Automation	SIMS,Bangalore	2 Months	2015-16	26	0	26	Completed	5
4	Electrical	ASV & QXY,Jedcherla	1 Month	2015-16	30	0	30	Completed	3
5	BCBF	Stardigm,Thulluru	2 Months	2015-16	15	28	43	Completed	0
6	Electrical	L&T,Jedcherla	1 Month	2015-16	6	0	6	Completed	2
7	Logistics	ADS Softech,Thulluru	2 Months	2015-16	10	20	30	Completed	30
8	Land Surveyour	APSSDC,Vijayawada	4 Months	2015-16	20	4	24	Completed	24
9	Herbal Making	Dhatri Foundation,Undavalli	45 Days	2015-16	0	40	40	Completed	40
10	Maggam Work	Dhatri Foundation,Venkatapalem	45 Days	2015-16	0	40	40	Completed	40
11	Electrical	Involute,Lam	1 Month	2015-16	5	0	5	Completed	1
12	Mechanical	Involute,Lam	1 Month	2015-16	6	0	6	Completed	1
13	LMV Driving	KDLOA,Gannavaram	21 Days	2015-16	20	0	20	Under Training	20
14	English Employability skills	APSSDC,Nowluru	2 Months	2016-17	9	24	33	Completed	7
15	Beautician	Centum Skills,Nowluru	2 Months	2017-18	0	77	77	Completed	77
16	Mobile technician	Centum Skills,Nowluru	2 Months	2017-18	13	0	13	Completed	13
17	2Wheeler Technician	Gram Tarang,Nowluru	2 Months	2017-18	8	0	8	Completed	8
18	AC Technician	Gram Tarang,Nowluru	2 Months	2017-18	25	0	25	Completed	25
19	LMV Driving	KDLOA,Gannavaram	21 Days	2017-18	27	0	27	Completed	27
20	Land surveyor	SDC,Vijayawada	4 Months	2017-18	21	4	25	Under Training	-
21	Accountancy	Synchroserve Global Ltd,Nowluru	2 Months	2017-18	40	60	100	Completed	64
22	Tailoring&Fashion designing	COWE,Penumaka	2 Months	2017-18	0	596	596	Completed	596
23	Gardener	AP Urban Greening & Beautification, Vijayawada	1 Month	2017-18	13	13	26	Completed	24
24	Electrician	NAC,Thulluru	15Days	2017-18	47	0	47	Completed	47
25	Painter	NAC,Thulluru	15Days	2017-18	44	0	44	Completed	44
26	Missionary	NAC,Thulluru	15Days	2017-18	22	0	22	Completed	22
27	Finance	YSK Infotech,Nowluru	2 Months	2017-18	17	9	26	Completed	0
28	Electrician	NAC,Thulluru	15Days	2018-19	25	0	25	Completed	25
29	Painter	NAC,Thulluru	15Days	2018-19	24	0	24	Completed	24
30	Missionary	NAC,Thulluru	15Days	2018-19	0	25	25	Completed	25
Grand Total					527	1118	1645		1395

Annexure - 5

Base camp photos of Interlinked projects



Annexure - 5

Base camp photos of Interlinked projects



Annexure - 5


Base camp photos of Interlinked projects



10



11

	<p>State Level Environment Impact Assessment Authority (SEIAA) Andhra Pradesh Ministry of Environment, Forests & Climate Change Government of India D.No.33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamavari Street, Kasturibaipet, Vijayawada</p>
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BY REGD. POST WITH ACK DUE

Order No. SEIAA//AP/GNT/CON/09/2017/422 - 321

Dt:17.05.2018

Sub:	SEIAA, AP – Construction of HOD Staff Housing Project, Survey No: Part of 57,69,70,71, 72 & 76, Nelapadu Village, Thullur, Amaravati Capital City, Guntur District, Andhra Pradesh - Environmental Clearance – Issued – Reg.
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I. This has reference to your application submitted through online on 18.09.2017 and EIA report submitted on 22.03.2018, seeking Environmental Clearance for Construction of “HOD Staff Housing Project” at Survey No: Part of 57,69,70,71, 72 & 76, Nelapadu Village, Thullur, Amaravati Capital City, Guntur District, Andhra Pradesh by M/s.APCRDA. The capital cost of the project is Rs.420.0 Crores.

II. It is noted that the proposal is a Construction Project in a total site area of 66,169 Sq.m. The total Built-up area is – 1,92,525 Sq.m. Parking area – 20,925 Sq.m to park about 1083 four wheelers & Open Car parks proposed 110. The amenities to be provided includes Sewage Treatment Plants (STPs), Tot lots/ open spaces, MSW Segregation /processing plant, D.G. sets for emergency supply – 2 x 1010 kVA & 2 x 750 kVA. The details of the project are as follows:

Built up area of a Tower - Type-I		
Floors	No. of Apartments	Built up Area in Sq.m
Stilt Floor for parking		1165
First Floor	8	1165
Second Floor	8	1165
Third Floor	8	1165
Fourth Floor	8	1165
Fifth Floor	8	1165
Sixth Floor	8	1165
Seventh Floor	8	1165
Eighth Floor	8	1165
Ninth Floor	8	1165
Tenth Floor	8	1165
Eleventh Floor	8	1165
Twelfth Floor	8	1165
Total	96	15145

No of Type – I Towers Proposed	9
Total No. of Apartments Proposed (96 x 9)	864
Built up Area of Towers – 15145 x 9 sq.m	1,36,305

Built up area of a Tower - Type-II		
Floors	No. of Apartments	Built up Area in Sq.m
Stilt Floor for parking		905
First Floor	6	905
Second Floor	6	905
Third Floor	6	905
Fourth Floor	6	905
Fifth Floor	6	905
Sixth Floor	6	905
Seventh Floor	6	905
Eighth Floor	6	905
Ninth Floor	6	905
Tenth Floor	6	905
Eleventh Floor	6	905
Twelfth Floor	6	905
Total	72	11765

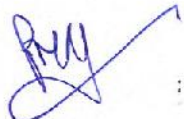
No of Type – II Towers Proposed	3
Total No. of Apartments Proposed (72 x 3)	216
Built up Area of Towers – 11765 x 3 sq.m	35,295

Built-up Area Breakup:

Total No. of Towers Proposed for Tower Types 1 & 2	12
Total No. of Apartments Proposed for Tower Types 1 & 2	1,080
Built up Area of all towers (Type 1 & 2)	1,71,600 Sq.m
Additional Covered Parking Area	20,925 Sq.m
Total Built up Area	1,92,525 Sq.m

III. The source of fresh water is Thulluru lift irrigation Scheme. The total water requirement during occupational stage is 599 KLD. Out of that, fresh water requirement is 169 KLD & treated waste water recycled is 430 KLD. Quantity of sewage generated is 505 KLD and it shall be treated in a STP of capacity 520 KLD. The treated waste water is to be used for flushing the toilets, development of greenery. The Garbage-2160 kg/day (Organic waste – 1188 kg/day & In-organic waste – 972 kg/day) generated is to be sent to Municipal Solid Waste facilities; STP sludge (151 kg/day) is to be used as manure; used oil and used batteries are to be sent to Authorized Recyclers.

The proposal has been examined and processed in accordance with EIA Notification, 2006 & its amendments thereof. The State Level Expert Appraisal Committee (SEAC) examined the proposal in its meeting held on **06.04.2018**. The representative of the project proponent and their Consultant M/s. B.S Envi-Tech Pvt. Ltd., have attended the meeting and presented the Final EIA report. Also the committee noted that this proposed project is one of the inter-linked projects of the Greenfield Capital City



Amaravati Project. The proposed project falls under Item 8(b) of the schedule of the EIA Notification 2006- Township and Area Development Projects - [$\geq 1,50,000$ sq. mtrs and $< 3,00,000$ sq. mtrs built up area] or [covering an area ≥ 50 Ha. and < 150 Ha.]. The public hearing was exempted, as provided for under Para 7(i) III. Stage (3)(i)(d) of EIA Notification, 2006. The final EIA report was submitted on 03.01.2018. The Committee recommended for issue of **Environmental Clearance** to this Township & area development project: **HOD Staff Housing Project in an extent of area - 66,169 sq.m with built up area- 1,92,525 Sq.m**, by stipulating the standard conditions and other conditions: The Project Proponent shall implement the solid waste management as per the Solid Waste Management Rule, 2016, applicable for construction projects; The parking area in compliance with the NBC/ MoEF/ local Government regulations as applicable, whichever is higher; The Project Proponent shall develop the avenue plantation along the approach road leading to the proposed project site. The State Level Environment Impact Assessment Authority (SEIAA), in its meeting held on **24.04.2018** examined the proposal and the recommendations of SEAC, and decided to issue Environmental Clearance. The SEIAA, A.P hereby **accords prior Environmental Clearance to the project** as mentioned at Para No. II under the provisions of the EIA Notification 2006 and its subsequent amendments issued under Environment (Protection) Act, 1986 subject to implementation of the following special, specific and general conditions.

PART-A: SPECIAL CONDITIONS:

1. This proposed project falls within the "Greenfield Capital City, Amaravati" which was accorded the Environmental Clearance vide order No.SEIAA/AP/GTN-151/2015, dated 09.10.2015 and the project proponent shall comply with the EC conditions applicable to this construction project.
2. The proponent shall provide the Sewage Treatment Plant (STP) of 520 KLD. As the treated effluent is proposed for recycle, the suitable disinfection system is to be provided in addition to the STP proposed in the EMP.
3. Dual plumbing system to be provided for reuse of the treated effluent for flushing and other purposes.
4. Solar Energy systems to be planned to utilize at least one third of the roof area.
5. The building shall be designed for compliance with earth quake resistance and resisting other natural hazards.
6. The proponent shall use only fly ash based products for construction, such as cement or concrete, fly ash bricks or tiles or clay fly ash bricks, or bricks, blocks or tiles or cement fly ash bricks or blocks or similar products or a combination or aggregate of them as required under MOEF notification S.O.763(E) d 14.9.1999 amended thereof.
7. Provision for Rain Water Harvesting (RWH) is to be made for collection, usage and also for ground water table maintenance.
8. The proponent shall use only LED lights in the common areas and internal roads.
9. The proponent shall create Corpus Fund of Rs.3.12 Crores to ensure continuous operation of STP.



10. The proponent shall obtain required clearances if any from all regulatory Departments including Fire Department, before starting the construction.
11. The proponent shall develop green belt in an area not less than 10% of plot area in addition to green belt in set-back areas.
12. The proponent shall dispose solid waste management as per the SWM Rules, 2016, applicable for Construction Projects and the parking area in compliance with the NBC/ MoEF/ local Government regulations as applicable. Separate space for segregation, storage, decentralized processing of solid waste shall be provided in addition to processing of biodegradable waste in the premises.
13. Construction and demolition waste shall be handled and disposed as per the provisions of construction and demolition waste Management Rules, 2016.

PART-B SPECIFIC CONDITIONS:

I. CONSTRUCTION PHASE:

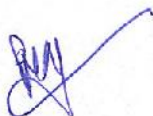
- i. Provision shall be made for the housing of the construction labour within the site with all necessary infrastructure and facilities such as safe drinking water, fuel for cooking, mobile toilets, mobile STP, medical health care, crèche etc.. The housing may be in the form of temporary structures to be removed after the completion of the project. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
- ii. A First Aid Room shall be provided in the project both during construction and operation of the project.
- iii. All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
- iv. Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- v. Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
- vi. Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.
- vii. Any hazardous waste including biomedical waste, if any, should be disposed of as per applicable Rules & norms with necessary approvals of the Andhra Pradesh Pollution Control Board.
- viii. The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to E (P) Rules prescribed for air and noise emission standards.
- ix. Vehicles hired for bringing construction material to the site should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.



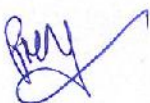
- x. Ambient noise levels should conform to the residential standards both during day and night as notified by the MoEF&CC, GOI from time to time. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by the CPCB.
- xi. Ready mixed concrete must be used in building construction.
- xii. Storm water control and its re-use shall be as per CGWB and BIS standards for various applications.
- xiii. Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.
- xiv. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- xv. Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices of sensor based control.
- xvi. Use of glass may be reduced by upto 40% to reduce the electricity consumption and load on air-conditioning. If necessary, high quality double glass with special reflective coating in window is to be used.
- xvii. Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.
- xviii. Adequate measures to reduce air and noise pollution during construction keeping in mind CPCB norms on noise limits.
- xix. Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all air-conditioned spaces while it is aspirational for non-air conditioned spaces by use of appropriate thermal insulation material to fulfill requirement.
- xx. The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National Building Code including protection measures from lightening etc.
- xxi. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.

II. Occupational Phase:

- i. The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the SEIAA before the project is commissioned for operation. Discharge of treated sewage shall conform to the norms & standards of the Andhra Pradesh Pollution Control Board. Sewage Treatment Plant should be monitored on a regular basis. No waste water shall be discharged out side the premises until outlet is connected to public sewer line. Till such time, the excess treated sewage, if any, is to be discharged into an artificial pond with in the premises and can be utilized for recreational purpose.



- ii. Rain water harvesting for roof run-off and surface run-off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease.
- iii. The solid waste generated should be properly collected & segregated before disposal to the Facility. The organic waste shall be composted.
- iv. The D.G. Sets shall be provided with acoustic enclosures and adequate stack height as per CPCB norms. The fuel used for the diesel generator sets should be low sulphur diesel and should conform to E (P) Rules prescribed for air and noise emission standards.
- v. Any hazardous waste including biomedical waste should be disposed of as per applicable Rules & norms with necessary approvals of the Andhra Pradesh Pollution Control Board.
- vi. The green belt design along the periphery of the plot shall achieve attenuation factor conforming to the day and night noise standards prescribed for residential land use by the MoEF&CC, GOI/CPCB. The open spaces inside the plot should be suitably landscaped and covered with vegetation of indigenous variety. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
- vii. Incremental pollution loads on the ambient air quality, noise and water quality should be periodically monitored after commissioning of the project.
- viii. Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. A hybrid systems or fully solar system for a portion of the apartments should be provided by utilizing atleast 1/3rd roof area for solar energy system.
- ix. Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.
- x. Adequate number of parking spaces shall be provided for visitor vehicles. Rest room facilities should be provided for service population. The proponent shall provide public convenience facilities such as toilets, bathrooms, waiting rooms etc. for the drivers, workers etc. so as to maintain cleanness/hygienic conditions in the surroundings of the project.
- xi. The proponent shall comply with Energy Conservation Practices, Energy efficient practices and energy audit practices. Wherever feasible, green building concepts shall be adopted. Use of solar panels may be done to the extent possible.
- xii. Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.



PART – C. GENERAL CONDITIONS:

- i. This order is valid for a period of 7 years.
- ii. "Consent for Establishment" shall be obtained from Andhra Pradesh Pollution Control Board under Air and Water Act before the start of any construction work at site.
- iii. The proponent shall submit half-yearly compliance reports in respect of the terms and conditions stipulated in this order & monitoring reports in hard and soft copies to the SEIAA and Ministry's Regional office, Chennai on 1st June and 1st December of each calendar year.
- iv. Officials from the Regional Office of MoEF&CC, Chennai who would be monitoring the implementation of environmental safeguards should be given full co-operation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents shall be submitted to the CCF, Regional Office, MoE&F, Chennai.
- v. In the case of any change (s) in the scope of the project, the project would require a fresh appraisal by this SEIAA. No further expansion or modifications in the project shall be carried out without prior approval of the SEIAA, AP.
- vi. The project proponent shall submit the copies of the environmental clearance to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- vii. The proponent shall obtain clearance from Fire Department. All other statutory clearances shall be obtained, as applicable by project proponents from the competent authorities.
- viii. The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded environmental clearance and copies of clearance letters are available with the Andhra Pradesh Pollution Control Board. The advertisement should be made within 7 days from the day of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Chennai.
- ix. The funds earmarked for environmental protection measures (**Capital cost is Rs.7.32 Crores and recurring cost is 0.6 Crores/annum**) should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the SEIAA and Ministry's Regional Office located at Chennai.
- x. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
- xi. The SEIAA may revoke or suspend the order, if implementation of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.



- xii. Concealing the factual data or 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 without any prior notice.
- xiii. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

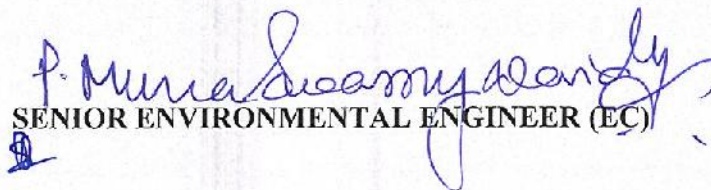
Sd/-
MEMBER SECRETARY,
SEIAA, A.P.


Sd/-
MEMBER,
SEIAA, A.P.

Sd/-
CHAIRMAN,
SEIAA, A.P.

To
The Additional Commissioner (CCP),
Andhra Pradesh Capital Region Development Authority (APCRDA),
Lenin Centre, Governorpet,
Vijayawada- 520002,
Andhra Pradesh
Phone : 7995084172
Email. dorababu@apcrda.org / shan@apcrda.org

//T.C.F.B.O//


SENIOR ENVIRONMENTAL ENGINEER (EC)

	State Level Environment Impact Assessment Authority (SEIAA)
	Andhra Pradesh
	Ministry of Environment, Forests & Climate Change
	Government of India
D.No.33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamavari Street, Kasturibaipet, Vijayawada	

BY REGD. POST WITH ACK DUE

Order No. SEIAA//AP/GNT/CON/09/2017/420 - 322

Dt:17.05.2018

Sub:	SEIAA, AP – Construction of High Court Building Project, Part of 1, 17, 18, 21, 22, 23 Nelapadu Village; Part of 56, 57, 67, 68, 69, 70, 71, 72, 73, 75, 76, 109, Kondamarajupalem Village, Thullur, Amaravati Capital City, Guntur District, Andhra Pradesh., Andhra Pradesh - Environmental Clearance – Issued – Reg.
-------------	--

- I. This has reference to your application submitted through online on 18.09.2017 and EIA report submitted on 22.03.2018, seeking Environmental Clearance for Construction of “High Court Building Project” at Survey No: Part of 1, 17, 18, 21, 22, 23, Nelapadu Village; Part of 56, 57, 67, 68, 69, 70, 71, 72, 73, 75, 76, 109, Kondamarajupalem Village, Thullur, Amaravati Capital City, Guntur District, Andhra Pradesh by M/s.APCRDA. The capital cost of the project is Rs.1322.0 Crores.
- II. It is noted that the proposal is a Construction Project in a total Plot area of 18.61 Ha. The total Built-up area is – 1,76,710 Sq.m. Parking to be provided for about 800 four wheelers. The amenities to be provided includes Sewage Treatment Plants (STPs), Tot lots/ open spaces, MSW Segregation /processing plant, D.G. sets for emergency supply – 10 x 1800 kVA. The details of the project are as follows:

High Court Building Project	
Description	Sq.m
Ground Floor Level	35024
First Floor Level	26021
Second Floor Level	26116
Third Floor Level	13281
Fourth Floor Level	14355
Fifth Floor Level	2888
Sixth Floor Level	12662
Total Super Structure	130346
LHS Basement	16275
RIIS Basement	17297
Central Basement	12792
Total Sub-Structure	46364
Total area (Sub + Super Structure)	176710

- III. The source of fresh water is Thulluru lift irrigation Scheme. The total water requirement during occupational stage is 517 KLD. Out of that, fresh water requirement is 288 KLD

& treated waste water recycled is 229 KLD. Quantity of sewage generated is 270.0 KLD and it shall be treated in a STP of capacity 300.0 KLD. The treated waste water is to be used for flushing the toilets, development of greenery. The Garbage-5830.3 kg/day (Organic waste – 2001.09 kg/day & In-organic waste – 3829.21 kg/day) generated is to be sent to Municipal Solid Waste facilities; STP sludge (348 kg/day) is to be used as manure; used oil and used batteries are to be sent to Authorized Recyclers.

The proposal has been examined and processed in accordance with EIA Notification, 2006 & its amendments thereof. The State Level Expert Appraisal Committee (SEAC) examined the proposal in its meeting held on **06.04.2018**. The representatives of the project proponent and their Consultant B.S Envi-Tech Pvt. Ltd., have attended the meeting and presented the Final EIA report. Also the committee noted that this proposed project is one of the inter-linked projects of the Greenfield Capital City Amaravati Project. The proposed project falls under Item 8(b) of the schedule of the EIA Notification 2006- Township and Area Development Projects - [$\geq 1,50,000$ sq. mtrs and $< 3,00,000$ sq. mtrs built up area] or [covering an area ≥ 50 Ha. and < 150 Ha.]. The public hearing was exempted, as provided for under Para 7(i) III. Stage (3)(i)(d) of EIA Notification, 2006. The final EIA report was submitted on 03.01.2018. The Committee recommended for **issue of Environmental Clearance** to this Township & area development project : **High Court Building Project** with in an extent of area: **1,86,155 sq.m with built up area- 1,76,710 Sq.m**, by stipulating the standard conditions and other conditions: The Project Proponent shall implement the solid waste management as per the Solid Waste Management Rule, 2016, applicable for construction projects; The parking area in compliance with the NBC/ MoEF/ local Government regulations as applicable, whichever is higher; The Project Proponent shall develop the avenue plantation along the approach road leading to the proposed project site. The State Level Environment Impact Assessment Authority (SEIAA), in its meeting held on **24.04.2018** examined the proposal and the recommendations of SEAC, and decided to issue Environmental Clearance. The SEIAA, A.P hereby **accords prior Environmental Clearance to the project** as mentioned at Para No. II under the provisions of the EIA Notification 2006 and its subsequent amendments issued under Environment (Protection) Act, 1986 subject to implementation of the following special, specific and general conditions.

PART-A: SPECIAL CONDITIONS:

1. This proposed project falls within the "Greenfield Capital City, Amaravati" which was accorded the Environmental Clearance vide order No.SEIAA/AP/GTN-151/2015, dated 09.10.2015 and the project proponent shall comply with the EC conditions applicable to this construction project.
2. The proponent shall provide the Sewage Treatment Plant (STP) of 300 KLD. As the treated effluent is proposed for recycle, the suitable disinfection system is to be provided in addition to the STP proposed in the EMP.
3. Dual plumbing system to be provided for reuse of the treated effluent for flushing and other purposes.



4. Solar Energy systems to be planned to utilize at least one third of the roof area.
5. The building shall be designed for compliance with earth quake resistance and resisting other natural hazards.
6. The proponent shall use only fly ash based products for construction, such as cement or concrete, fly ash bricks or tiles or clay fly ash bricks, or bricks, blocks or tiles or cement fly ash bricks or blocks or similar products or a combination or aggregate of them as required under MOEF notification S.O.763(E) d 14.9.1999 amended thereof.
7. Provision for Rain Water Harvesting (RWH) is to be made for collection, usage and also for ground water table maintenance.
8. The proponent shall use only LED lights in the common areas and internal roads.
9. The proponent shall create Corpus Fund of Rs.1.8 Crores to ensure continuous operation of STP.
10. The proponent shall obtain required clearances if any from all regulatory Departments including Fire Department, before starting the construction.
11. The proponent shall develop green belt in an area not less than 10% of plot area in addition to green belt in set-back areas.
12. The proponent shall dispose solid waste management as per the SWM Rules, 2016, applicable for Construction Projects and the parking area in compliance with the NBC/ MoEF/ local Government regulations as applicable. Separate space for segregation, storage, decentralized processing of solid waste shall be provided in addition to processing of biodegradable waste in the premises.
13. Construction and demolition waste shall be handled and disposed as per the provisions of construction and demolition waste Management Rules, 2016.

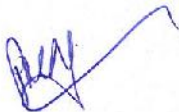
PART-B SPECIFIC CONDITIONS:

I. CONSTRUCTION PHASE:

- i. Provision shall be made for the housing of the construction labour within the site with all necessary infrastructure and facilities such as safe drinking water, fuel for cooking, mobile toilets, mobile STP, medical health care, crèche etc., The housing may be in the form of temporary structures to be removed after the completion of the project. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
- ii. A First Aid Room shall be provided in the project both during construction and operation of the project.
- iii. All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
- iv. Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- v. Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.



- vi. Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.
- vii. Any hazardous waste including biomedical waste, if any, should be disposed of as per applicable Rules & norms with necessary approvals of the Andhra Pradesh Pollution Control Board.
- viii. The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to E (P) Rules prescribed for air and noise emission standards.
- ix. Vehicles hired for bringing construction material to the site should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
- x. Ambient noise levels should conform to the residential standards both during day and night as notified by the MoEF&CC, GOI from time to time. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by the CPCB.
- xi. Ready mixed concrete must be used in building construction.
- xii. Storm water control and its re-use shall be as per CGWB and BIS standards for various applications.
- xiii. Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.
- xiv. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- xv. Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices of sensor based control.
- xvi. Use of glass may be reduced by upto 40% to reduce the electricity consumption and load on air-conditioning. If necessary, high quality double glass with special reflective coating in window is to be used.
- xvii. Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.
- xviii. Adequate measures to reduce air and noise pollution during construction keeping in mind CPCB norms on noise limits.
- xix. Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all air-conditioned spaces while it is aspirational for non-air conditioned spaces by use of appropriate thermal insulation material to fulfill requirement.



- xx. The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National Building Code including protection measures from lightening etc.
- xxi. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.

II. Occupational Phase:

- i. The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the SEIAA before the project is commissioned for operation. Discharge of treated sewage shall conform to the norms & standards of the Andhra Pradesh Pollution Control Board. Sewage Treatment Plant should be monitored on a regular basis. No waste water shall be discharged out side the premises until outlet is connected to public sewer line. Till such time, the excess treated sewage, if any, is to be discharged into an artificial pond with in the premises and can be utilized for recreational purpose.
- ii. Rain water harvesting for roof run-off and surface run-off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease.
- iii. The solid waste generated should be properly collected & segregated before disposal to the Facility. The organic waste shall be composted.
- iv. The D.G. Sets shall be provided with acoustic enclosures and adequate stack height as per CPCB norms. The fuel used for the diesel generator sets should be low sulphur diesel and should conform to E (P) Rules prescribed for air and noise emission standards.
- v. Any hazardous waste including biomedical waste should be disposed of as per applicable Rules & norms with necessary approvals of the Andhra Pradesh Pollution Control Board.
- vi. The green belt design along the periphery of the plot shall achieve attenuation factor conforming to the day and night noise standards prescribed for residential land use by the MoEF&CC, GOI/CPCB. The open spaces inside the plot should be suitably landscaped and covered with vegetation of indigenous variety. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
- vii. Incremental pollution loads on the ambient air quality, noise and water quality should be periodically monitored after commissioning of the project.
- viii. Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. A hybrid systems or fully solar system for a portion of the apartments should be provided by utilizing atleast 1/3rd roof area for solar energy system.
- ix. Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.



- x. Adequate number of parking spaces shall be provided for visitor vehicles. Rest room facilities should be provided for service population. The proponent shall provide public convenience facilities such as toilets, bathrooms, waiting rooms etc. for the drivers, workers etc. so as to maintain cleanness/hygienic conditions in the surroundings of the project.
- xi. The proponent shall comply with Energy Conservation Practices, Energy efficient practices and energy audit practices. Wherever feasible, green building concepts shall be adopted. Use of solar panels may be done to the extent possible.
- xii. Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.

PART – C. GENERAL CONDITIONS:

- i. **This order is valid for a period of 7 years.**
- ii. “Consent for Establishment” shall be obtained from Andhra Pradesh Pollution Control Board under Air and Water Act before the start of any construction work at site.
- iii. The proponent shall submit half-yearly compliance reports in respect of the terms and conditions stipulated in this order & monitoring reports in hard and soft copies to the SEIAA and Ministry’s Regional office, Chennai on 1st June and 1st December of each calendar year.
- iv. Officials from the Regional Office of MoEF&CC, Chennai who would be monitoring the implementation of environmental safeguards should be given full co-operation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents shall be submitted to the CCF, Regional Office, MoE&F, Chennai.
- v. In the case of any change (s) in the scope of the project, the project would require a fresh appraisal by this SEIAA. No further expansion or modifications in the project shall be carried out without prior approval of the SEIAA, AP.
- vi. The project proponent shall submit the copies of the environmental clearance to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- vii. The proponent shall obtain clearance from Fire Department. All other statutory clearances shall be obtained, as applicable by project proponents from the competent authorities.
- viii. The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded environmental clearance and copies of clearance letters are available with the Andhra Pradesh Pollution Control Board. The advertisement should be made within 7 days from the day of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Chennai.



- ix. The funds earmarked for environmental protection measures (**Capital cost is Rs.7.57 Crores and recurring cost is 0.7 Crores/annum**) should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the SEIAA and Ministry's Regional Office located at Chennai.
- x. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
- xi. The SEIAA may revoke or suspend the order, if implementation of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
- xii. Concealing the factual data or 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 without any prior notice.
- xiii. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

Sd/-
**MEMBER SECRETARY,
SEIAA, A.P.**

Sd/-
**MEMBER,
SEIAA, A.P.**

Sd/-
**CHAIRMAN,
SEIAA, A.P.**

To

The Additional Commissioner (CCP),
Andhra Pradesh Capital Region Development Authority (APCRDA),
Lenin Centre, Governorpet,
Vijayawada- 520002,
Andhra Pradesh
Phone : 7995084172
Email. dorababu@apcrda.org / shan@apcrda.org

//T.C.F.B.O//


SENIOR ENVIRONMENTAL ENGINEER (EC)

Ambient Air Quality Data



B.S. ENVI - TECH PVT. LTD.

ENVIRONMENTAL CONSULTANTS & ANALYTICAL LABORATORY

4th Floor, 'AMITY VILLE', 12-13-1270/71/73, St. Ann's Road,

Tarnaka, Secunderabad - 500 017, Telangana, INDIA

Ph. : +91 40 49723062 / 27016806 Fax : +91 40 49783063

Email : info@bsenvitech.com Website : www.bsenvitech.com

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0658	
Sample Description: Ambient Air Quality sample		Lab Code No : 18984205	
		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018	
		Date of Receipt : 29.05.2018	
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 02.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Date of Sampling: 22.05.2018		Location of Sampling: Venkatapalem Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	8.4	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	12.8	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	56.7	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	24.9	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	23.5	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.022	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	13.8	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.111	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	5.9	20 (Annual)
13	VOC, ppb	VOC Meter	4.67	-
14	Hydro Carbons, ppm	Using GC		-

Interpretation of results: Nil

Deviation from test method: Nil



Authorized Signatory



B.S. ENVI - TECH PVT. LTD.

ENVIRONMENTAL CONSULTANTS & ANALYTICAL LABORATORY

4th Floor, 'AMITY VILLE', 12-13-1270/71/73, St. Ann's Road,

Tarnaka, Secunderabad - 500 017, Telangana, INDIA

Ph. : +91 40 49723062 / 27016806 Fax : +91 40 49783063

Email : info@bsenvitech.com Website : www.bsenvitech.com

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0659	
Sample Description: Ambient Air Quality sample		Lab Code No : 18984105	Issue Date : 14.06.2018
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	02.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 22.05.2018		Location of Sampling: Mandadam Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	10.6	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	18.2	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	59.0	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	33.0	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	24.2	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.029	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	15.4	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.38	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	5.8	20 (Annual)
13	VOC, ppb	VOC Meter	26.43	-
14	Hydro Carbons, ppm	Using GC	-	-

Interpretation of results: Nil

Deviation from test method: Nil



Authorized Signatory



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Email : info@bsenvitech.com Website : www.bsenvitech.com

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0660	
Sample Description: Ambient Air Quality sample		Lab Code No : 18984005	
		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018	
		Date of Receipt : 29.05.2018	
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 02.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Date of Sampling: 22.05.2018		Location of Sampling: Rayapudi Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	11.2	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	16.4	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	57.5	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	21.2	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	21.4	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.044	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	16.2	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.28	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	9.9	20 (Annual)
13	VOC, ppb	VOC Meter	6.43	-
14	Hydro Carbons, ppm	Using GC	<1	-

Interpretation of results: Nil

Deviation from test method: Nil

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0661	
Sample Description: Ambient Air Quality sample		Lab Code No : 18983905	
		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018	
		Date of Receipt : 29.05.2018	
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 02.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Date of Sampling: 22.05.2018		Location of Sampling: Uddandrayunipalem Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	7.3	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	13.0	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	47.2	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	18.9	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	15.6	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.034	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	10.8	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.20	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	7.6	20 (Annual)
13	VOC, ppb	VOC Meter	5.95	-
14	Hydro Carbons, ppm	Using GC		-

Interpretation of results: Nil

Deviation from test method: Nil



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0662	
Sample Description: Ambient Air Quality sample		Lab Code No : 18983805	
		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018	
		Date of Receipt : 29.05.2018	
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 02.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Date of Sampling: 22.05.2018		Location of Sampling: Thulluru Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	9.8	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	16.0	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	63.5	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	30.1	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	32.4	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.030	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	17.4	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.13	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	5.8	20 (Annual)
13	VOC, ppb	VOC Meter	15.20	-
14	Hydro Carbons, ppm	Using GC	<1	-

Interpretation of results: Nil

Deviation from test method: Nil



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0663	
Sample Description: Ambient Air Quality sample		Lab Code No : 18983705	
		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018	
		Date of Receipt : 29.05.2018	
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Date of Registration	
		29.05.2018	
		Date of commencement of testing	
		30.05.2018	
		Date of completion of testing	
		02.06.2018	
		Sample condition at receipt	
		Found ok	
		Sample tested as received	
Date of Sampling: 25.05.2018		Location of Sampling: Navuluru Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	12.2	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	16.6	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	42.2	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	17.4	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	23.8	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.025	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	16.0	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.13	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	4.3	20 (Annual)
13	VOC, ppb	VOC Meter	4.37	-
14	Hydro Carbons, ppm	Using GC	<1	-

Interpretation of results: Nil

Deviation from test method: Nil



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0664	
Sample Description: Ambient Air Quality sample		Lab Code No : 18983605	Issue Date : 14.06.2018
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	02.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 25.05.2018		Location of Sampling: Nidamaru Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	8.4	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	15.8	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	47.3	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	38.6	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	25.2	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.032	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	15.2	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.17	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	6.7	20 (Annual)
13	VOC, ppb	VOC Meter	1.89	-
14	Hydro Carbons, ppm	Using GC	<1	-

Interpretation of results: Nil

Deviation from test method: Nil


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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0665	
Sample Description: Ambient Air Quality sample		Lab Code No : 18983505	
		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018	
		Date of Receipt : 29.05.2018	
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 02.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Date of Sampling: 25.05.2018		Location of Sampling: Kurugallu Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	9.3	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	14.5	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	52.6	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	20.9	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	23.1	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.028	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	14.6	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.20	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	4.7	20 (Annual)
13	VOC, ppb	VOC Meter	11.20	-
14	Hydro Carbons, ppm	Using GC		-

Interpretation of results: Nil

Deviation from test method: Nil



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0666	
Sample Description: Ambient Air Quality sample		Lab Code No : 18983405	
		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018	
		Date of Receipt : 29.05.2018	
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 02.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Location of Sampling: Undavalli Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	7.6	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	13.8	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	65.2	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	21.8	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	33.1	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.034	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	12.4	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.24	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	7.0	20 (Annual)
13	VOC, ppb	VOC Meter	7.15	-
14	Hydro Carbons, ppm	Using GC		-

Interpretation of results: Nil

Deviation from test method: Nil



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0667	
Sample Description: Ambient Air Quality sample		Lab Code No : 18983305	Issue Date : 14.06.2018
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	02.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Location of Sampling: Krishnayapalem Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	8.1	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	13.3	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	50.5	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	17.1	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	29.5	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.024	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	11.6	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.16	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	5.8	20 (Annual)
13	VOC, ppb	VOC Meter	6.70	-
14	Hydro Carbons, ppm	Using GC	<1	-

Interpretation of results: Nil

Deviation from test method: Nil



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0668	
Sample Description: Ambient Air Quality sample		Lab Code No : 18983205	Issue Date : 14.06.2018
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	02.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 24.05.2018		Location of Sampling: Ananthavaram Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	12.4	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	15.6	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	72.2	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	30.4	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	34.2	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.035	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	14.3	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.21	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	6.8	20 (Annual)
13	VOC, ppb	VOC Meter	21.58	-
14	Hydro Carbons, ppm	Using GC	<1	-

Interpretation of results: Nil

Deviation from test method: Nil

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0669	
Sample Description: Ambient Air Quality sample		Lab Code No : 18983105	
		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018	
		Date of Receipt : 29.05.2018	
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 02.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Date of Sampling: 24.05.2018		Location of Sampling: Nekkallu Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	7.8	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	12.4	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	43.9	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	16.6	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	24.2	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.039	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	12.6	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.27	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	6.8	20 (Annual)
13	VOC, ppb	VOC Meter	5.84	-
14	Hydro Carbons, ppm	Using GC		-

Interpretation of results: Nil

Deviation from test method: Nil



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0670	
Sample Description: Ambient Air Quality sample		Lab Code No : 18983005	
		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018	
		Date of Receipt : 29.05.2018	
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 02.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Date of Sampling: 24.05.2018		Location of Sampling: Nelapadu Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	9.6	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	14.8	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	52.3	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	28.1	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	22.3	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.034	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	11.8	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.22	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	6.6	20 (Annual)
13	VOC, ppb	VOC Meter	7.40	-
14	Hydro Carbons, ppm	Using GC	<1	-

Interpretation of results: Nil

Deviation from test method: Nil





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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0671	
Sample Description: Ambient Air Quality sample		Lab Code No : 18982905	
		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018	
		Date of Receipt : 29.05.2018	
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Date of Registration : 29.05.2018	
		Date of commencement of testing : 30.05.2018	
		Date of completion of testing : 02.06.2018	
		Sample condition at receipt : Found ok	
		Sample tested as received	
Date of Sampling: 24.05.2018 General Environment conditions: Ok		Location of Sampling: Sakhamaru Village Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	10.4	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	17.9	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	42.6	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	19.2	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	23.5	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.032	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	12.2	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.23	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	6.0	20 (Annual)
13	VOC, ppb	VOC Meter	7.14	-
14	Hydro Carbons, ppm	Using GC	<1	-

Interpretation of results: Nil

Deviation from test method: Nil

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0672	
Sample Description: Ambient Air Quality sample		Lab Code No : 18982805	Issue Date : 14.06.2018
Qty & Packing : 1 filter paper for PM ₁₀ , PM _{2.5} , Lead, Benzo(a) pyrene, Arsenic, Nickel, 30ml absorbing solution for SO ₂ , NO ₂ and Ammonia, 10 ml absorbing solution for Ozone, 1 No Charcoal tube for Benzene, CO tested by CO analyzer. Test Required : As per given below		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	02.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 24.05.2018		Location of Sampling: Dondapadu Village	
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S. No.	Test Parameter	Test Method	Result	NAAQ Standards for Industrial, Residential, Rural and Other areas
1	Sulphur Dioxide (SO ₂), µg/ m ³	IS:5182 (Part-2) 2001 (Reaffirmed 2012)	8.9	80 (24 Hours)
2	Nitrogen Dioxides (NO ₂), µg/ m ³	IS:5182 (Part-6) 2006 (Reaffirmed 2012)	16.4	80 (24 Hours)
3	Particulate Matter – 10 µm (PM ₁₀), µg/ m ³	IS:5182 (Part-23) 2006 (Reaffirmed 2012)	46.2	100 (24 Hours)
4	Particulate Matter – 2.5 µm (PM _{2.5}), µg/ m ³	BSET/SOP/AA-02, Issue – 01, Date: 16-07-2014 (CPCB guidelines)	13.6	60 (24 Hours)
5	Ozone (O ₃), µg/ m ³	IS:5182 (Part-IX) 1974 (Reaffirmed 2014)	21.8	180 (1 Hour)
6	Lead (Pb), µg/ m ³	USEPA – IO – 3.2 – 1999, BY AAS	0.042	1 (24 Hours)
7	Carbon Monoxide, mg/m ³	BSET/SOP/AA-09 Issue – 01, Date: 18-08-2016	<1	2 (8 Hours)
8	Ammonia (NH ₃), µg/ m ³	BSET/SOP/AA-06, (Indophenol Blue Method)	13.4	400 (24 Hours)
9	Benzene, µg/ m ³	IS: 5182 (P-11) :2006 (Reaffirmed 2012)	<0.1	5 (Annual)
10	Benzo (a) Pyrene, (BaP) Particulate phase only, ng / m ³	IS: 5182 (P-12) :2004 (Reaffirmed 2014)	<1	1 (Annual)
11	Arsenic (As), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS - VGA	0.25	6 (Annual)
12	Nickel (Ni), ng / m ³	USEPA – IO – 3.2 – 1999, BY AAS	5.9	20 (Annual)
13	VOC, ppb	VOC Meter	4.25	-
14	Hydro Carbons, ppm	Using GC		-

Interpretation of results: Nil
Deviation from test method: Nil


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Water Quality Data



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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0593	
Sample Description: Ground Water Sample		Lab Code No : 18990705	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 24.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Krishnayapalem Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.20	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	2790	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1806	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	962	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	228	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	96	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	397	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	273	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.78	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	160	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	373	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.23	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	196	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	3.4	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0593	
Sample Description: Ground Water Sample		Lab Code No : 18990705	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 24.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Krishnayapalem Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.18	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	4	-	-
*28	Salinity	PPT or g/kg	-	1.81	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0593	
Sample Description: Water Sample		Lab Code No : 180990705	Issue Date : 14.06.2018
		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Quantity : 1 No. x 250 ml Sample		Date of Registration	29.05.2018
Packing : Pre Sterilised Bottle		Date of commencement of testing	29.05.2018
Test Required : As given below		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 24.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Krishnayapalem Village		General Environment conditions: OK Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	CFU/100 ml	Cl.3.3.2 of IS 1622:1981 (RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0594	
Sample Description: Ground Water Sample		Lab Code No : 18990605	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Nekkallu Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.09	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1290	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	835	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	458	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	113	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	43	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	199	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	42	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.80	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	1.4	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	317	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.15	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	63	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	39.1	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


 Authorized Signatory
 (A.V. HanumanthaRao)
 Director - Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/Form -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0594	
Sample Description: Ground Water Sample		Lab Code No : 18990605	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part I	
Location of Sampling: Nekkallu Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.39	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.03	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	< 4	-	-
*28	Salinity	PPT or g/kg	-	0.83	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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Certificate No: TC-5233

TEST REPORT

BSET/TR/Form -56


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh		Test Report No. : BSET/18-19/TR-0594	
Sample Description: Water Sample		Lab Code No : 180990605	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Nekkallu Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0595	
Sample Description: Ground Water Sample		Lab Code No : 18990505	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Yerrabalem Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.34	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	3650	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	2376	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	363	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	75	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	43	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	506	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	295	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	1.92	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	116	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	695	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.43	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	587	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	146	--	--

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0595	
Sample Description: Ground Water Sample		Lab Code No : 18990505	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Yerrabalem Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.14	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.05	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.07	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	6	-	-
*28	Salinity	PPT or g/kg	-	2.38	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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TEST REPORT

BSET/TR/Form -56

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0595	
Sample Description: Water Sample		Lab Code No : 180990505	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: YerrabalemVillage		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0596	
Sample Description: Ground Water Sample		Lab Code No : 18990405	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Navuluru Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	6.82	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	3120	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	2016	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	1128	200	600
6	Calcium as Ca	mg/l	IS:3025 -Part-40	218	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	142	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	672	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	119	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	1.00	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	74	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	433	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.33	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	182	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	8.8	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0596	
Sample Description: Ground Water Sample		Lab Code No : 18990405	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Navuluru Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.40	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.03	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	1.55	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	6	-	-
*28	Salinity	PPT or g/kg	-	2.02	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director - Laboratory

*** End of the Report***

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TEST REPORT

BSET/TR/Form -56

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0596	
Sample Description: Water Sample		Lab Code No : 180990405	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Navuluru Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0597	
Sample Description: Ground Water Sample		Lab Code No : 18990305	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Thulluru Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.46	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	2230	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1456	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	237	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	48	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	28	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	226	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	158	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.91	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	56	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	559	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.15	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	274	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	219	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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Certificate No: TC-5233
BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0597	
Sample Description: Ground Water Sample		Lab Code No : 18990305	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Thulluru Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.05	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	4	-	-
*28	Salinity	PPT or g/kg	-	1.46	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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TEST REPORT

BSET/TR/Form -56

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. BSET/18-19/TR-0597	
Sample Description: Water Sample		Lab Code No : 180990305	Issue Date : 14.07.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 1622 :198	
Location of Sampling: Thulluru Village		General Environment conditions: OK Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0598	
Sample Description: Ground Water Sample		Lab Code No : 18990205	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Sakhamarru Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.18	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	3180	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	2064	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	710	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	147	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	83	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	390	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	327	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	1.07	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	118	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	569	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.25	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	209	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	320	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0598	
Sample Description: Ground Water Sample		Lab Code No : 18990205	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Sakhamarru Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.13	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.06	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.09	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	6	-	-
*28	Salinity	PPT or g/kg	-	2.06	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0598	
Sample Description: water Sample		Lab Code No : 180990205	Issue Date : 14.07.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Sakhamuru Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	C1.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0599	
Sample Description: Ground Water Sample		Lab Code No : 18990105	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Venkatapalem Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.58	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	890	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	579	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	312	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	65	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	37	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	63	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	67	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.70	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	5.9	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	277	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	< 0.1	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	60	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	3.2	--	--

Note: * the parameter not covered in NABL scope.
Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0599	
Sample Description: Ground Water Sample		Lab Code No : 18990105	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Venkatapalem Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.11	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.23	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.05	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	< 4	-	-
*28	Salinity	PPT or g/kg	-	0.58	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

BSET/TR/FORM -56

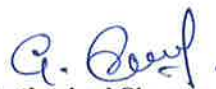
Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0599	
Sample Description: Water Sample		Lab Code No : 180990105	Issue Date : 14.07.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Venkatapalem Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0600	
Sample Description: Ground Water Sample		Lab Code No : 18990005	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Uddandrayunipalem Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.29	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1690	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1102	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	634	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	111	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	87	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	125	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	169	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.68	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	69	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	428	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.18	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	94	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	3.4	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


 Authorized Signatory
 (A.V. HanumanthaRao)
 Director - Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0600	
Sample Description: Ground Water Sample		Lab Code No : 18990005	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Uddandrayunipalem Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.16	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.37	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.05	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	< 4	-	-
*28	Salinity	PPT or g/kg	-	1.10	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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BSET/TR/FORM -56

TEST REPORT


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0600	
Sample Description: Water Sample		Lab Code No : 180990005	Issue Date : 14.07.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: UddandrayunipalemVillage		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0601	
Sample Description: Ground Water Sample		Lab Code No : 18989905	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Mandadam (ZPS High School)		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7,15	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	6040	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	3920	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	1385	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	301	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	254	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	1301	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	370	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.87	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	198	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	615	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.70	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	712	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	75	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0601	
Sample Description: Ground Water Sample		Lab Code No : 18989905	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Mandadam (ZPS High School)		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.04	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	1.58	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.04	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	10	-	-
*28	Salinity	PPT or g/kg	-	3.92	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

BSET/TR/Form -56


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0601	
Sample Description: Water Sample		Lab Code No : 180989905	Issue Date : 14.07.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: MandadamVillage(ZPS High School)			
General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

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BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0602	
Sample Description: Ground Water Sample		Lab Code No : 18989805	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Mandadam Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.31	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1570	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1024	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	594	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	131	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	65	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	118	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	178	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.71	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	57	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	378	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.15	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	86	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	3.3	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0602	
Sample Description: Ground Water Sample		Lab Code No : 18989805	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
1 No. x 500 ml Sample(Metals)		Date of Registration	29.05.2018
Packing : Plastic Bottle		Date of commencement of testing	30.05.2018
Test Required : As given below		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Mandadam Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.04	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.48	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	<0.02	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	6	-	-
*28	Salinity	PPT or g/kg	-	1.02	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0602	
Sample Description: Water Sample		Lab Code No : 180989805	
Quantity : 1 No. x 250 ml Sample		Issue Date : 14.07.2018	
Packing : Pre Sterilised Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Mandadam Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0603	
Sample Description: Ground Water Sample		Lab Code No : 18989705	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Dondapadu Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.59	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	920	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	597	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	302	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	71	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	31	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	82	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	74	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.64	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	1.0	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	262	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.10	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	70	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	2.6	--	--

Note: * the parameter not covered in NABL scope.
Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0603	
Sample Description: Ground Water Sample		Lab Code No : 18989705	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Dondapadu Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.07	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.06	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	< 4	-	-
*28	Salinity	PPT or g/kg	-	0.60	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/Form -56

TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0603	
Sample Description: Water Sample		Lab Code No : 180989705	Issue Date : 14.07.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Dondapadu Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0604	
Sample Description: Ground Water Sample		Lab Code No : 18989605	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 24.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Nelapadu Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.24	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	3140	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	2045	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	675	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	163	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	65	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	475	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	378	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.98	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	78	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	433	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.28	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	396	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	27	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


 Authorized Signatory
 (A.V. HanumanthaRao)
 Director - Laboratory

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BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0604	
Sample Description: Ground Water Sample		Lab Code No : 18989605	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 24.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Nelapadu Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.24	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.52	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	6	-	-
*28	Salinity	PPT or g/kg	-	2.05	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

*** End of the Report***

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BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0604	
Sample Description: Water Sample		Lab Code No : 180989605	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 24.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Nelapadu Village		General Environment conditions: Ok	Page No: 1 of 1

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

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BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0605	
Sample Description: Ground Water Sample		Lab Code No : 18989505	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Kurugallu Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.45	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1320	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	856	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	403	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	87	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	45	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	108	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	48	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	1.38	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	42	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	418	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.18	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	115	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	5.9	--	--

Note: * the parameter not covered in NABL scope.
Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0605	
Sample Description: Ground Water Sample		Lab Code No : 18989505	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Kurugallu Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.20	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.07	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	< 4	-	-
*28	Salinity	PPT or g/kg	-	0.86	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

BSET/TR/FORM -56


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0605	
Sample Description: Water sample		Lab Code No : 180989505	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Kuragallu Village		General Environment conditions: Ok	
		Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0606	
Sample Description: Ground Water Sample		Lab Code No : 18989405	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Penumaka Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.28	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	2010	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1309	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	634	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	119	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	82	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	217	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	118	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	1.35	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	35	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	549	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.18	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	152	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	39	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0606	
Sample Description: Ground Water Sample		Lab Code No : 18989405	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Penumaka Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.24	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.06	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	<0.02	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	4	-	-
*28	Salinity	PPT or g/kg	-	1.31	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

... End of the Report...

Note: This report is subject to the terms and conditions mentioned overleaf.



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TEST REPORT

BSET/TR/Form -56


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0606	
Sample Description: Water Sample		Lab Code No : 180989405	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 1622 :198	
Location of Sampling: Penumaka Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0607	
Sample Description: Ground Water Sample		Lab Code No : 18989305	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Anantavaram Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.05	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	2300	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1492	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	735	200	600
6	Calcium as Ca	mg/l	IS:3025 -Part-40	143	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	92	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	296	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	131	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.88	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	128	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	484	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.28	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	190	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	2.1	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil


 Authorized Signatory
 (A.V. HanumanthaRao)
 Director – Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0607	
Sample Description: Ground Water Sample		Lab Code No : 18989305	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Anantavaram Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.07	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	6	-	-
*28	Salinity	PPT or g/kg	-	1.49	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

... End of the Report...

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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0607	
Sample Description: Water Sample		Lab Code No : 180989305	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Anantavaram Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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Certificate No: TC-5233
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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0608	
Sample Description: Ground Water Sample		Lab Code No : 18989205	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
Sample tested as received			
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part I	
Location of Sampling: Undavalli Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.48	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1370	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	892	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	327	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	69	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	38	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	130	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	99	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	1.03	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	5.0	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	398	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.23	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	109	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	91	--	--

Note: * the parameter not covered in NABL scope.
Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0608	
Sample Description: Ground Water Sample		Lab Code No : 18989205	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Undavalli Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.44	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.08	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	4	-	-
*28	Salinity	PPT or g/kg	-	0.89	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director - Laboratory

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0608	
Sample Description: Water Sample		Lab Code No : 180989205	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Undavalli Village		General Environment conditions: Ok	Page No: 1 of 1

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0609	
Sample Description: Ground Water Sample		Lab Code No : 18989105	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Velagapudi Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.36	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	4	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	2700	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	1764	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	554	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	122	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	60.5	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	641	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	1.2	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.93	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	6.2	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	433	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.25	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	366	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	9.6	--	--

Note: * the parameter not covered in NABL scope .
Interpretation of results: Nil, Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0609	
Sample Description: Ground Water Sample		Lab Code No : 18989105	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Velagapudi Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	1.50	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	1.72	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.31	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	8	-	-
*28	Salinity	PPT or g/kg	-	1.76	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

... End of the Report...

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0609	
Sample Description: Water Sample		Lab Code No : 180989105	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: velagapudi Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0610	
Sample Description: Ground Water Sample		Lab Code No : 18989005	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Nidamaru Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.69	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	1090	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	710	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	418	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	81	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	53	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	99	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	116	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.86	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	4.6	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	282	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.20	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	50	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	11	--	--

Note: * the parameter not covered in NABL scope.
Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0610	
Sample Description: Ground Water Sample		Lab Code No : 18989005	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Nidamaru Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.13	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.03	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.16	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	< 4	-	-
*28	Salinity	PPT or g/kg	-	0.71	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

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TEST REPORT


Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0610	
Sample Description: Water Sample		Lab Code No : 180989005	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Nidamaru Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0611	
Sample Description: Ground Water Sample		Lab Code No : 18988905	
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Issue Date : 14.06.2018	
Packing : Plastic Bottle		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Rayapudi Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025- Part-11	7.41	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	930	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 - Part-16	607	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	327	200	600
6	Calcium as Ca	mg/l	IS:3025- Part-40	63	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	42	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	70	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	33	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	0.80	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	7.9	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	327	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	0.20	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	61	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	2.6	--	--

Note: * the parameter not covered in NABL scope .

Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0611	
Sample Description: Ground Water Sample		Lab Code No : 18988905	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 3025 Part I	
Location of Sampling: Rayapudi Village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.12	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.02	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.27	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	0.02	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	< 0.02	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	< 4	-	-
*28	Salinity	PPT or g/kg	-	0.61	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


 Authorized Signatory
 (A.V. Hanumantha Rao)
 Director - Laboratory

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0611	
Sample Description: Water Sample		Lab Code No : 180988905	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Rayapudi Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil


 Authorized Signatory
 (G.Muralidhara Swamy)
 Sr.Microbiologist

*** End of the Report***

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0612	
Sample Description: Ground Water Sample		Lab Code No : 18988805	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle	Test Required : As given below	Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Inavolu Village		General Environment conditions: Ok Page No: 1 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
1	pH at 25 °C	--	IS:3025 -Part-11	7.06	6.5-8.5	No Relaxation
2	Turbidity	NTU	IS:3025 -Part-10	< 1	1	5
3	Electrical Conductivity	µs/cm	IS:3025 -Part-14	23200	-	-
4	Total Dissolved Solids @ 105°C	mg/l	IS:3025 -Part-16	14180	500	2000
5	Total Hardness as CaCO ₃	mg/l	IS:3025 -Part-21	3847	200	600
6	Calcium as Ca	mg/l	IS:3025 -Part-40	751	75	200
7	Magnesium as Mg	mg/l	IS:3025 -Part-46	480	30	100
8	Chlorides as Cl	mg/l	IS:3025 -Part-32	6432	250	1000
9	Sulphate as SO ₄	mg/l	IS:3025 -Part-24	1991	200	400
10	Fluoride as F ⁻	mg/l	4500-F D, APHA 22 nd Edition 2012	1.34	1.0	1.5
11	Nitrate as NO ₃	mg/l	4500-NO3-B UV Spectrophotometric Screening Method	150	45	No Relaxation
12	Total Alkalinity as CaCO ₃	mg/l	IS:3025 -Part-23	378	200	600
13	Boron as B	mg/l	4500-B B. Curcumin Method, APHA 22 nd Edition 2012	1.90	0.5	1
14	Sodium as Na	mg/l	IS:3025 -Part-45, 1993	3640	--	--
15	Potassium as K	mg/l	IS:3025 -Part-45, 1993	5.0	--	--

Note: * the parameter not covered in NABL scope .
Interpretation of results: Nil, Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0612	
Sample Description: Ground Water Sample		Lab Code No : 18988805	Issue Date : 14.06.2018
Quantity : 1 No. x 2.0 Ltrs Sample 1 No. x 500 ml Sample(Metals)		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 3025 Part 1	
Location of Sampling: Inavolu village		General Environment conditions: Ok Page No: 2 of 2	

TEST RESULTS

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012	
					Acceptable limits	Permissible limits in absence of alternative source
16	Iron as Fe	mg/l	3111 B of APHA 22 nd Edition 2012	0.29	1.0	No relaxation
17	Copper as Cu	mg/l	3111 C of APHA 22 nd Edition 2012	0.04	0.05	1.5
18	Manganese as Mn	mg/l	3111 C of APHA 22 nd Edition 2012	0.05	0.1	0.3
19	Zinc as Zn	mg/l	3111 C of APHA 22 nd Edition 2012	1.64	5	15
20	Cadmium as Cd	mg/l	3111 C of APHA 22 nd Edition 2012	< 0.003	0.003	No relaxation
21	Lead as Pb	mg/l	3111 C of APHA 22 nd Edition 2012	0.04	0.01	No relaxation
22	Mercury as Hg	mg/l	3112 B of APHA 22 nd Edition 2012	< 0.001	0.001	No relaxation
23	Total Arsenic as As	mg/l	3114 B of APHA 22 nd Edition 2012	< 0.01	0.01	No relaxation
24	Nickel as Ni	mg/l	3111 B of APHA 22 nd Edition 2012	0.02	0.02	No relaxation
25	Total Chromium as Cr	mg/l	3111 B of APHA 22 nd Edition 2012	0.04	0.05	No Relaxation
*26	Phosphate as P	mg/l	4500 PE of APHA 22 nd Edition 2012	< 0.1	-	-
*27	Chemical Oxygen Demand	mg/l	IS:3025 -Part-58	10	-	-
*28	Salinity	PPT or g/kg	-	14.18	-	-

Note: * the parameter not covered in NABL scope.

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/FORM -56

TEST REPORT

Name & Address of the Customer : M/s. Andhrapradesh Capital Region Development Authority, Vijayawada, Andhrapradesh.		Test Report No. : BSET/18-19/TR-0612	
Sample Description: Water Sample		Lab Code No : 180988805	Issue Date : 14.06.2018
Quantity : 1 No. x 250 ml Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Pre Sterilised Bottle		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	29.05.2018
		Date of completion of testing	31.05.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
<u>Sampling Details</u>			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: IS 1622 :1981	
Location of Sampling: Inavolu Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

Microbiological Analysis:

S. No.	Test Parameter	Units	Test Method	Result	Requirement as per IS 10500:2012
1	Total Coliforms	cfu /100 ml	Cl.3.3.2 of IS 1622:1981(RA 2014)	Absent	-

Interpretation of results: Nil
Deviation from test method: Nil

**Authorized Signatory
(G.Muralidhara Swamy)
Sr.Microbiologist**

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.

Noise Level Data



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TEST REPORT

Project : Andhra Pradesh Capital Region Development Authority

NOISE LEVELS (dB (A))

	Location			
	Venkatapalem	Mandadam	Rayapudi	Uddandrayunipalem
Date of Sampling	23.06.2018	23.06.2018	23.05.2018	23.06.2018
Day Time				
06:00	52	55.1	52.1	51.8
07:00	47.8	49.3	46.5	47.6
08:00	54.6	56.8	59.3	57.3
09:00	51.9	49.3	48.1	47.8
10:00	52.5	54.4	50.4	49.8
11:00	50.3	54.4	50.4	51.4
12:00	50.7	49.7	49.6	52.9
13:00	47.6	50.7	51.6	50.7
14:00	55.1	52.9	45.7	51.5
15:00	54.2	53	55	57.2
16:00	51.7	51.6	49.1	48.3
17:00	54	56.7	54.2	52.6
18:00	51.1	52.5	54.3	53.1
19:00	43.9	52.2	50.1	46.8
20:00	54.5	55.8	55.5	55.9
21:00	47.1	47.8	42.7	42.5
Night Time				
22:00	44.9	42.2	44.2	44.9
23:00	43	45.3	45.3	43
24:00	37.5	41.5	42.2	37.5
01:00	47.5	47.5	43.1	47.5
02:00	42	39.2	42.9	42
03:00	46.5	46.1	46.7	46.5
04:00	43.8	44.3	43.4	43.8
05:00	43.4	42.8	40.2	43.4
Day Equivalent (Ld)	52.1	53.4	52.8	52.6
Night Equivalent (Ln)	44.4	44.3	43.9	44.1
Ambient Air Quality Standards w.r.t Noise for Residential Area	Day Time	55		
	Night Time	45		

*BSET laboratory is accredited by NABL vide no. TC-5233

Duration: Sample was collected on 24 hourly basis



Authorized Signatory
(G. Chandra Mouli)
Env. Scientist



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TEST REPORT

Project : Andhra Pradesh Capital Region Development Authority

NOISE LEVELS (dB (A))

Date of Sampling	Location			
	Thulluru	Navuluru	Nidamarru	Kurugallu
	23.06.2018	24.06.2018	25.05.2018	24.06.2018
Day Time				
06:00	50.0	52.1	53.1	49.8
07:00	44.8	48.3	44.5	44.6
08:00	53.6	57.8	56.3	56.3
09:00	52.9	47.3	47.1	48.8
10:00	50.5	51.4	51.4	48.8
11:00	47.3	53.4	48.4	52.4
12:00	49.7	50.7	46.6	50.9
13:00	48.6	48.7	50.6	48.7
14:00	54.1	49.9	46.7	48.5
15:00	55.2	52.0	54.0	54.2
16:00	49.7	52.6	50.1	47.3
17:00	51.0	54.7	52.2	53.6
18:00	50.1	49.5	52.3	51.1
19:00	44.9	51.2	47.1	43.8
20:00	52.5	56.8	52.5	54.9
21:00	44.1	45.8	41.7	43.5
Night Time				
22:00	42.9	41.9	43.2	42.2
23:00	43.0	42.0	43.3	42.3
24:00	38.4	38.5	38.5	41.2
01:00	45.9	46.5	46.5	44.1
02:00	40.3	43.0	40.2	40.9
03:00	43.8	44.5	44.1	43.7
04:00	41.0	41.8	41.3	42.4
05:00	41.2	40.4	41.8	41.2
Day Equivalent (Ld)	51.0	52.6	51.1	51.3
Night Equivalent (Ln)	42.6	42.9	43.0	42.4
Ambient Air Quality Standards w.r.t Noise for Residential Area	Day Time	55		
	Night Time	45		

*BSET laboratory is accredited by NABL vide no. TC-5233

Duration: Sample was collected on 24 hourly basis



Authorized Signatory
(G. Chandra Mouli)
Env. Scientist



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TEST REPORT

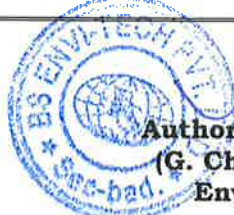
Project : Andhra Pradesh Capital Region Development Authority

NOISE LEVELS (dB (A))

	Location			
	Undavalli	Krishnayapalem	Ananthavaram	Nekkallu
Date of Sampling	24.06.2018	24.06.2018	22.06.2018	22.06.2018
Day Time				
06:00	49.8	51.9	52.9	49.6
07:00	45.9	49.4	45.6	45.7
08:00	53.4	57.6	56.1	56.1
09:00	52.8	47.2	47	48.7
10:00	52.5	53.4	53.4	50.8
11:00	46	52.1	47.1	51.1
12:00	50	51	46.9	51.2
13:00	48.4	48.5	50.4	48.5
14:00	54.3	50.1	46.9	48.7
15:00	54.1	50.9	52.9	53.1
16:00	49.5	52.4	49.9	47.1
17:00	51.1	54.8	52.3	53.7
18:00	50.3	49.7	52.5	51.3
19:00	44.4	50.7	46.6	43.3
20:00	51.1	55.4	51.1	53.5
21:00	45.3	47	42.9	44.7
Night Time				
22:00	40.5	41.2	38.9	38.9
23:00	41.6	40.6	41.9	40.9
24:00	38.7	38.8	38.8	41.5
01:00	45.6	46.2	46.2	43.8
02:00	39.2	41.9	39.1	39.8
03:00	42.4	43.1	42.7	42.3
04:00	41.3	42.1	41.2	42.7
05:00	41	40.2	41.4	41
Day Equivalent (Ld)	50.9	52.4	51.0	51.1
Night Equivalent (Ln)	41.8	42.3	42.0	41.6
Ambient Air Quality Standards w.r.t Noise for Residential Area	Day Time	55		
	Night Time	45		

*BSET laboratory is accredited by NABL vide no. TC-5233

Duration: Sample was collected on 24 hourly basis



 Authorized Signatory
 (G. Chandra Mouli)
 Env. Scientist



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TEST REPORT


Project : Andhra Pradesh Capital Region Development Authority

NOISE LEVELS (dB (A))

	Location		
	Nelapadu	Sakhamuru	Dondapadu
Date of Sampling	22.06.2018	22.06.2018	24.05.2018
Day Time			
06:00	47.6	49.7	50.7
07:00	47.5	51	47.2
08:00	49	53.2	51.7
09:00	54.4	48.8	48.6
10:00	50.3	51.2	51.2
11:00	45.6	51.7	46.7
12:00	47.8	48.8	44.7
13:00	48.2	48.3	50.2
14:00	50.1	45.9	42.7
15:00	52.3	49.1	51.1
16:00	47.5	50.4	47.9
17:00	47.7	51.4	48.9
18:00	45.9	45.3	48.1
19:00	47.8	54.1	50
20:00	48.9	53.2	48.9
21:00	46.9	48.6	44.5
Night Time			
22:00	42.9	43.6	41.3
23:00	41	40	41.3
24:00	42.1	42.2	42.2
01:00	44.2	44.8	44.8
02:00	42.2	44.9	42.1
03:00	39.8	40.5	40.1
04:00	39.1	39.9	39
05:00	42.8	42	43.2
Day Equivalent (Ld)	49.3	50.7	49.0
Night Equivalent (Ln)	42.0	42.7	42.1
Ambient Air Quality Standards w.r.t Noise for Residential Area	Day Time	55	
	Night Time	45	

*BSET laboratory is accredited by NABL vide no. TC-5233

Duration: Sample was collected on 24 hourly basis


 Authorized Signatory
 (G. Chandra Mouli)
 Env. Scientist

Soil Quality Data



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Certificate No: IC-5233

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0636	
Sample Description: Soil Sample		Lab Code No : 18986405		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Date of Sampling: 26.05.2018			Sampling Method/Procedure: BSET-MSP-20		
Location of Sampling: Inavolu Village			General Environment conditions: Ok		
			Page No: 1 of 1		

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	7.78
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	468
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	107
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	789
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	3888
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	754
7	Organic Carbon	%	BSET/SOP/SS-07	0.69
8	Organic Matter	%	BSET/SOP/SS-14	1.19
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.21
10	Texture :			Clay Loam
	a) Sand	%	BSET/SOP/SS-16	25
	b) Silt	%		39
	c) Clay	%		36
11	Moisture Content	%	BSET/SOP/SS-05	8.86

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0636	
Sample Description: Soil Sample		Lab Code No : 18986405	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 26.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Inavolu Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	16960
2	Manganese as Mn	mg/kg	USEPA-3050 B	326
3	Copper as Cu	mg/kg	USEPA-3050 B	40
4	Nickel as Ni	mg/kg	USEPA-3050 B	41
5	Chromium as Cr	mg/kg	USEPA-3050 B	51
6	Lead as Pb	mg/kg	USEPA-3050 B	29
7	Cadmium as Cd	mg/kg	USEPA-3050 B	4.1
8	Zinc as Zn	mg/kg	USEPA-3050 B	38
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: IC-5233

BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0637	
Sample Description: Soil Sample		Lab Code No : 18986305		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Date of Sampling: 26.05.2018			Sampling Method/Procedure: BSET-MSP-20		
Location of Sampling: Undavalli Village			General Environment conditions: Ok		
			Page No: 1 of 1		

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	7.88
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	564
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	118
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	492
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	4329
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	876
7	Organic Carbon	%	BSET/SOP/SS-07	0.98
8	Organic Matter	%	BSET/SOP/SS-14	1.69
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.28
10	Texture :			Silty Clay
	a) Sand	%	BSET/SOP/SS-16	13
	b) Silt	%		44
	c) Clay	%		43
11	Moisture Content	%	BSET/SOP/SS-05	9.61

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0637	
Sample Description: Soil Sample		Lab Code No : 18986305	Issue Date : 14.06.2018
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Cover		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Undavalli Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	24620
2	Manganese as Mn	mg/kg	USEPA-3050 B	444
3	Copper as Cu	mg/kg	USEPA-3050 B	56
4	Nickel as Ni	mg/kg	USEPA-3050 B	46
5	Chromium as Cr	mg/kg	USEPA-3050 B	69
6	Lead as Pb	mg/kg	USEPA-3050 B	26
7	Cadmium as Cd	mg/kg	USEPA-3050 B	2.5
8	Zinc as Zn	mg/kg	USEPA-3050 B	48
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Report No. : BSET/18-19/TR-0639	
Sample Description: Soil Sample		Lab Code No : 18986105		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Date of Sampling: 26.05.2018			Sampling Method/Procedure: BSET-MSP-20		
Location of Sampling: Krishnayapalem Village			General Environment conditions: Ok		
			Page No: 1 of 1		

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	7.79
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	525
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	124
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	896
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	4429
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	790
7	Organic Carbon	%	BSET/SOP/SS-07	0.86
8	Organic Matter	%	BSET/SOP/SS-14	1.48
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.48
10	Texture :			Silty Clay
	a) Sand	%	BSET/SOP/SS-16	11
	b) Silt	%		43
	c) Clay	%		46
11	Moisture Content	%	BSET/SOP/SS-05	9.92

Interpretation of results: Nil

Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0639	
Sample Description: Soil Sample		Lab Code No : 18986105	Issue Date : 14.06.2018
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Cover	Test Required : As given below	Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 26.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Krishnayapalem Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	17710
2	Manganese as Mn	mg/kg	USEPA-3050 B	364
3	Copper as Cu	mg/kg	USEPA-3050 B	44
4	Nickel as Ni	mg/kg	USEPA-3050 B	34
5	Chromium as Cr	mg/kg	USEPA-3050 B	51
6	Lead as Pb	mg/kg	USEPA-3050 B	18
7	Cadmium as Cd	mg/kg	USEPA-3050 B	1.9
8	Zinc as Zn	mg/kg	USEPA-3050 B	37
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0640	
Sample Description: Soil Sample		Lab Code No : 18986005		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Date of Sampling: 26.05.2018			Sampling Method/Procedure: BSET-MSP-20		
Location of Sampling: Yerrabalem Village			General Environment conditions: Ok		
			Page No: 1 of 1		

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	9.31
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	296
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	49
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	560
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	1242
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	207
7	Organic Carbon	%	BSET/SOP/SS-07	0.37
8	Organic Matter	%	BSET/SOP/SS-14	0.64
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	1.72
10	Texture :			Sandy Loam
	a) Sand	%	BSET/SOP/SS-16	67
	b) Silt	%		15
	c) Clay	%		18
11	Moisture Content	%	BSET/SOP/SS-05	7.32

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0640	
Sample Description: Soil Sample		Lab Code No : 18986005	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 26.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Yerrabalem Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	11720
2	Manganese as Mn	mg/kg	USEPA-3050 B	143
3	Copper as Cu	mg/kg	USEPA-3050 B	11
4	Nickel as Ni	mg/kg	USEPA-3050 B	12
5	Chromium as Cr	mg/kg	USEPA-3050 B	32
6	Lead as Pb	mg/kg	USEPA-3050 B	15
7	Cadmium as Cd	mg/kg	USEPA-3050 B	< 1.0
8	Zinc as Zn	mg/kg	USEPA-3050 B	11
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil

Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0641	
Sample Description: Soil Sample		Lab Code No : 18985905		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Sampling Details					
Date of Sampling: 26.05.2018		Sampling Method/Procedure: BSET-MSP-20			
Location of Sampling: Nidamaru Village		General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	7.73
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	543
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	132
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	1604
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	2144
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	657
7	Organic Carbon	%	BSET/SOP/SS-07	0.90
8	Organic Matter	%	BSET/SOP/SS-14	1.55
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.35
10	Texture :			Clay Loam
	a) Sand	%	BSET/SOP/SS-16	37
	b) Silt	%		35
	c) Clay	%		28
11	Moisture Content	%	BSET/SOP/SS-05	7.86

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0641	
Sample Description: Soil Sample		Lab Code No : 18985905	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 26.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Nidamaru Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	27792
2	Manganese as Mn	mg/kg	USEPA-3050 B	479
3	Copper as Cu	mg/kg	USEPA-3050 B	31
4	Nickel as Ni	mg/kg	USEPA-3050 B	34
5	Chromium as Cr	mg/kg	USEPA-3050 B	64
6	Lead as Pb	mg/kg	USEPA-3050 B	23
7	Cadmium as Cd	mg/kg	USEPA-3050 B	1.5
8	Zinc as Zn	mg/kg	USEPA-3050 B	43
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Report No. : BSET/18-19/TR-0642	
Sample Description: Soil Sample		Lab Code No : 18985805		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Sampling Details					
Date of Sampling: 24.05.2018		Sampling Method/Procedure: BSET-MSP-20			
Location of Sampling: Penumaka Village		General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	8.52
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	303
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	69
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	234
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	1363
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	292
7	Organic Carbon	%	BSET/SOP/SS-07	0.45
8	Organic Matter	%	BSET/SOP/SS-14	0.78
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.78
10	Texture :			Sandy Loam
	a) Sand	%	BSET/SOP/SS-16	58
	b) Silt	%		23
	c) Clay	%		19
11	Moisture Content	%	BSET/SOP/SS-05	7.25

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0642	
Sample Description: Soil Sample		Lab Code No : 18985805	Issue Date : 14.06.2018
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Cover		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 24.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Penumaka Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	15540
2	Manganese as Mn	mg/kg	USEPA-3050 B	254
3	Copper as Cu	mg/kg	USEPA-3050 B	14
4	Nickel as Ni	mg/kg	USEPA-3050 B	17
5	Chromium as Cr	mg/kg	USEPA-3050 B	46
6	Lead as Pb	mg/kg	USEPA-3050 B	16
7	Cadmium as Cd	mg/kg	USEPA-3050 B	1.0
8	Zinc as Zn	mg/kg	USEPA-3050 B	24
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0643	
Sample Description: Soil Sample		Lab Code No : 18985705		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Sampling Details					
Date of Sampling: 26.05.2018		Sampling Method/Procedure: BSET-MSP-20			
Location of Sampling: Navuluru Village		General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	8.21
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	471
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	185
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	881
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	3567
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	790
7	Organic Carbon	%	BSET/SOP/SS-07	0.79
8	Organic Matter	%	BSET/SOP/SS-14	1.36
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.77
10	Texture :			Clay Loam
	a) Sand	%	BSET/SOP/SS-16	35
	b) Silt	%		32
	c) Clay	%		33
11	Moisture Content	%	BSET/SOP/SS-05	8.76

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0643	
Sample Description: Soil Sample		Lab Code No : 18985705	Issue Date : 14.06.2018
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Cover		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 26.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Navuluru Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	15,874
2	Manganese as Mn	mg/kg	USEPA-3050 B	123
3	Copper as Cu	mg/kg	USEPA-3050 B	20
4	Nickel as Ni	mg/kg	USEPA-3050 B	29
5	Chromium as Cr	mg/kg	USEPA-3050 B	47
6	Lead as Pb	mg/kg	USEPA-3050 B	21
7	Cadmium as Cd	mg/kg	USEPA-3050 B	1.2
8	Zinc as Zn	mg/kg	USEPA-3050 B	29
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0644	
Sample Description: Soil Sample		Lab Code No : 18985605		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Sampling Details					
Date of Sampling: 23.05.2018		Sampling Method/Procedure: BSET-MSP-20			
Location of Sampling: Mandadam Village		General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	8.19
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	282
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	62
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	332
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	4148
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	960
7	Organic Carbon	%	BSET/SOP/SS-07	0.43
8	Organic Matter	%	BSET/SOP/SS-14	0.74
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.17
10	Texture :			Silty Clay
	a) Sand	%	BSET/SOP/SS-16	12
	b) Silt	%		43
	c) Clay	%		45
11	Moisture Content	%	BSET/SOP/SS-05	9.46

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0644	
Sample Description: Soil Sample		Lab Code No : 18985605	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 23.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Mandadam Village		General Environment conditions: Ok Page No: 1of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	30,232
2	Manganese as Mn	mg/kg	USEPA-3050 B	387
3	Copper as Cu	mg/kg	USEPA-3050 B	35
4	Nickel as Ni	mg/kg	USEPA-3050 B	44
5	Chromium as Cr	mg/kg	USEPA-3050 B	71
6	Lead as Pb	mg/kg	USEPA-3050 B	25
7	Cadmium as Cd	mg/kg	USEPA-3050 B	2.3
8	Zinc as Zn	mg/kg	USEPA-3050 B	44
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

Note: This report is subject to the terms and conditions mentioned overleaf.



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Certificate No: TC-5233

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0646	
Sample Description: Soil Sample		Lab Code No : 18985405		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Date of Sampling: 24.05.2018			Sampling Method/Procedure: BSET-MSP-20		
Location of Sampling: Nelapadu Village			General Environment conditions: Ok		
			Page No: 1 of 1		

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	7.38
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	403
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	101
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	763
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	3968
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	936
7	Organic Carbon	%	BSET/SOP/SS-07	0.67
8	Organic Matter	%	BSET/SOP/SS-14	1.16
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.58
10	Texture :			Clay Loam
	a) Sand	%	BSET/SOP/SS-16	27
	b) Silt	%		35
	c) Clay	%		38
11	Moisture Content	%	BSET/SOP/SS-05	9.04

Interpretation of results: Nil

Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0646	
Sample Description: Soil Sample		Lab Code No : 18985405	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 24.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Nelapadu Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	16,878
2	Manganese as Mn	mg/kg	USEPA-3050 B	246
3	Copper as Cu	mg/kg	USEPA-3050 B	31
4	Nickel as Ni	mg/kg	USEPA-3050 B	45
5	Chromium as Cr	mg/kg	USEPA-3050 B	56
6	Lead as Pb	mg/kg	USEPA-3050 B	31
7	Cadmium as Cd	mg/kg	USEPA-3050 B	2.8
8	Zinc as Zn	mg/kg	USEPA-3050 B	40
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0648	
Sample Description: Soil Sample		Lab Code No : 18985205		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Sampling Details					
Date of Sampling: 23.05.2018			Sampling Method/Procedure: BSET-MSP-20		
Location of Sampling: Rayapudi Village			General Environment conditions: Ok Page No: 1 of 1		

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	8.34
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	343
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	58
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	1128
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	3747
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	997
7	Organic Carbon	%	BSET/SOP/SS-07	0.53
8	Organic Matter	%	BSET/SOP/SS-14	0.91
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.32
10	Texture :			Silty Clay
	a) Sand	%	BSET/SOP/SS-16	16
	b) Silt	%		43
	c) Clay	%		41
11	Moisture Content	%	BSET/SOP/SS-05	8.76

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0648	
Sample Description: Soil Sample		Lab Code No : 18985205	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 23.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Rayapudi Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	19,676
2	Manganese as Mn	mg/kg	USEPA-3050 B	244
3	Copper as Cu	mg/kg	USEPA-3050 B	26
4	Nickel as Ni	mg/kg	USEPA-3050 B	43
5	Chromium as Cr	mg/kg	USEPA-3050 B	62
6	Lead as Pb	mg/kg	USEPA-3050 B	26
7	Cadmium as Cd	mg/kg	USEPA-3050 B	2.8
8	Zinc as Zn	mg/kg	USEPA-3050 B	37
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

TEST REPORT		Test Report No. : BSET/18-19/TR-0649	
Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Lab Code No : 18985105	Issue Date : 14.06.2018
Sample Description: Soil Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Quantity : 1 No. x 1 Kg Sample		Date of Registration	29.05.2018
Packing : Plastic Cover		Date of commencement of testing	30.05.2018
Test Required : As given below		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 23.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Venkatapalem Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	8.26
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	375
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	72
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	211
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	4349
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	1034
7	Organic Carbon	%	BSET/SOP/SS-07	0.59
8	Organic Matter	%	BSET/SOP/SS-14	1.02
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.21
10	Texture :			Silty Clay
	a) Sand	%	BSET/SOP/SS-16	12
	b) Silt	%		40
	c) Clay	%		48
11	Moisture Content	%	BSET/SOP/SS-05	10.35

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0649	
Sample Description: Soil Sample		Lab Code No : 18985105	Issue Date : 14.06.2018
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Cover		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 23.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Venkatapalem Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	29,924
2	Manganese as Mn	mg/kg	USEPA-3050 B	261
3	Copper as Cu	mg/kg	USEPA-3050 B	28
4	Nickel as Ni	mg/kg	USEPA-3050 B	51
5	Chromium as Cr	mg/kg	USEPA-3050 B	80
6	Lead as Pb	mg/kg	USEPA-3050 B	30
7	Cadmium as Cd	mg/kg	USEPA-3050 B	2.2
8	Zinc as Zn	mg/kg	USEPA-3050 B	46
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil

Deviation from test method: Nil

Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0650	
Sample Description: Soil Sample		Lab Code No : 18985005		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Sampling Details					
Date of Sampling: 25.05.2018			Sampling Method/Procedure: BSET-MSP-20		
Location of Sampling: Kurugallu Village			General Environment conditions: Ok Page No: 1 of 1		

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	8.20
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	446
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	130
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	883
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	2926
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	547
7	Organic Carbon	%	BSET/SOP/SS-07	0.71
8	Organic Matter	%	BSET/SOP/SS-14	1.22
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.40
10	Texture :			Clay Loam
	a) Sand	%	BSET/SOP/SS-16	43
	b) Silt	%		30
	c) Clay	%		27
11	Moisture Content	%	BSET/SOP/SS-05	8.92

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0650	
Sample Description: Soil Sample		Lab Code No : 18985005	Issue Date : 14.06.2018
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018	Date of Receipt : 29.05.2018
Packing : Plastic Cover		Date of Registration	29.05.2018
Test Required : As given below		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 25.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Kurugallu Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	14,052
2	Manganese as Mn	mg/kg	USEPA-3050 B	130
3	Copper as Cu	mg/kg	USEPA-3050 B	18
4	Nickel as Ni	mg/kg	USEPA-3050 B	32
5	Chromium as Cr	mg/kg	USEPA-3050 B	39
6	Lead as Pb	mg/kg	USEPA-3050 B	24
7	Cadmium as Cd	mg/kg	USEPA-3050 B	3.2
8	Zinc as Zn	mg/kg	USEPA-3050 B	32
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0652	
Sample Description: Soil Sample		Lab Code No : 18984805		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Sampling Details					
Date of Sampling: 25.05.2018			Sampling Method/Procedure: BSET-MSP-20		
Location of Sampling: Sakhamurru Village			General Environment conditions: Ok Page No: 1 of 1		

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	8.21
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	428
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	96
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	1173
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	3507
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	851
7	Organic Carbon	%	BSET/SOP/SS-07	0.67
8	Organic Matter	%	BSET/SOP/SS-14	1.16
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.46
10	Texture :			Clay Loam
	a) Sand	%	BSET/SOP/SS-16	21
	b) Silt	%		43
	c) Clay	%		36
11	Moisture Content	%	BSET/SOP/SS-05	8.65

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0652	
Sample Description: Soil Sample		Lab Code No : 18984805	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Sakhamurru Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	12,010
2	Manganese as Mn	mg/kg	USEPA-3050 B	174
3	Copper as Cu	mg/kg	USEPA-3050 B	13
4	Nickel as Ni	mg/kg	USEPA-3050 B	36
5	Chromium as Cr	mg/kg	USEPA-3050 B	49
6	Lead as Pb	mg/kg	USEPA-3050 B	29
7	Cadmium as Cd	mg/kg	USEPA-3050 B	2.6
8	Zinc as Zn	mg/kg	USEPA-3050 B	28
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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Certificate No: TC-5233

BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0653	
Sample Description: Soil Sample		Lab Code No : 18984705		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Cover		Date of Receipt : 29.05.2018		Date of Registration : 29.05.2018	
Test Required : As given below		Date of commencement of testing : 30.05.2018		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok		Sample tested as received	
Sampling Details					
Date of Sampling: 25.05.2018		Sampling Method/Procedure: BSET-MSP-20			
Location of Sampling: Dondapadu Village		General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	----	BSET/SOP/SS-06	8.08
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	386
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	69
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	669
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	3126
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	1058
7	Organic Carbon	%	BSET/SOP/SS-07	0.61
8	Organic Matter	%	BSET/SOP/SS-14	1.05
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.68
10	Texture :			Clay Loam
	a) Sand	%	BSET/SOP/SS-16	25
	b) Silt	%		36
	c) Clay	%		39
11	Moisture Content	%	BSET/SOP/SS-05	8.87

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0653	
Sample Description: Soil Sample		Lab Code No : 18984705	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Sampling Details			
Date of Sampling: 25.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Dondapadu Village		General Environment conditions: Ok Page No: 1of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	16,188
2	Manganese as Mn	mg/kg	USEPA-3050 B	142
3	Copper as Cu	mg/kg	USEPA-3050 B	21
4	Nickel as Ni	mg/kg	USEPA-3050 B	47
5	Chromium as Cr	mg/kg	USEPA-3050 B	69
6	Lead as Pb	mg/kg	USEPA-3050 B	29
7	Cadmium as Cd	mg/kg	USEPA-3050 B	2.1
8	Zinc as Zn	mg/kg	USEPA-3050 B	39
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0654	
Sample Description: Soil Sample		Lab Code No : 18984605		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Packing : Plastic Cover		Date of Registration		29.05.2018	
Test Required : As given below		Date of commencement of testing		30.05.2018	
		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Sampling Details					
Date of Sampling: 25.05.2018			Sampling Method/Procedure: BSET-MSP-20		
Location of Sampling: Anantavaram Village			General Environment conditions: Ok Page No: 1 of 1		

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	8.28
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	486
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	132
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	336
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	2385
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	608
7	Organic Carbon	%	BSET/SOP/SS-07	0.79
8	Organic Matter	%	BSET/SOP/SS-14	1.36
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.26
10	Texture :			Loam
	a) Sand	%	BSET/SOP/SS-16	47
	b) Silt	%		29
	c) Clay	%		24
11	Moisture Content	%	BSET/SOP/SS-05	8.72

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0654	
Sample Description: Soil Sample		Lab Code No : 18984605	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 25.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Anantavaram Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	9694
2	Manganese as Mn	mg/kg	USEPA-3050 B	91
3	Copper as Cu	mg/kg	USEPA-3050 B	11
4	Nickel as Ni	mg/kg	USEPA-3050 B	34
5	Chromium as Cr	mg/kg	USEPA-3050 B	47
6	Lead as Pb	mg/kg	USEPA-3050 B	25
7	Cadmium as Cd	mg/kg	USEPA-3050 B	1.7
8	Zinc as Zn	mg/kg	USEPA-3050 B	22
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0655	
Sample Description: Soil Sample		Lab Code No : 18984505		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018		Your Ref : Letter Dated 29.05.2018	
Packing : Plastic Cover		Date of Receipt : 29.05.2018		Date of Registration : 29.05.2018	
Test Required : As given below		Date of commencement of testing : 30.05.2018		Date of completion of testing : 12.06.2018	
		Sample condition at receipt : Found ok		Sample tested as received	
Sampling Details					
Date of Sampling: 23.05.2018		Sampling Method/Procedure: BSET-MSP-20			
Location of Sampling: Uddandrayunipalem Village		General Environment conditions: Ok		Page No: 1 of 1	

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	----	BSET/SOP/SS-06	8.26
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	443
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	112
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	876
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	3908
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	815
7	Organic Carbon	%	BSET/SOP/SS-07	0.64
8	Organic Matter	%	BSET/SOP/SS-14	1.10
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.22
10	Texture :			Silty Clay
	a) Sand	%	BSET/SOP/SS-16	11
	b) Silt	%		40
	c) Clay	%		49
11	Moisture Content	%	BSET/SOP/SS-05	10.52

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0655	
Sample Description: Soil Sample		Lab Code No : 18984505	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 23.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Uddandrayunipalem Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	15,206
2	Manganese as Mn	mg/kg	USEPA-3050 B	62
3	Copper as Cu	mg/kg	USEPA-3050 B	28
4	Nickel as Ni	mg/kg	USEPA-3050 B	39
5	Chromium as Cr	mg/kg	USEPA-3050 B	56
6	Lead as Pb	mg/kg	USEPA-3050 B	26
7	Cadmium as Cd	mg/kg	USEPA-3050 B	1.5
8	Zinc as Zn	mg/kg	USEPA-3050 B	40
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(A.V. Hanumantha Rao)
Director – Laboratory

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Certificate No: TC-5233

BSET/TR/Form -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0656	
Sample Description: Soil Sample		Lab Code No : 18984405		Issue Date : 14.06.2018	
Quantity : 1 No. x 1 Kg Sample		Date of Registration		29.05.2018	
Packing : Plastic Cover		Date of commencement of testing		30.05.2018	
Test Required : As given below		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Sampling Details					
Date of Sampling: 23.05.2018			Sampling Method/Procedure: BSET-MSP-20		
Location of Sampling: Thulluru Village			General Environment conditions: Ok Page No: 1 of 1		

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	8.01
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	364
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	79
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	414
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	3387
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	705
7	Organic Carbon	%	BSET/SOP/SS-07	0.57
8	Organic Matter	%	BSET/SOP/SS-14	0.98
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.26
10	Texture :			Clay Loam
	a) Sand	%	BSET/SOP/SS-16	41
	b) Silt	%		27
	c) Clay	%		32
11	Moisture Content	%	BSET/SOP/SS-05	8.94

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0656	
Sample Description: Soil Sample		Lab Code No : 18984405	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 23.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Thulluru Village		General Environment conditions: Ok Page No: 1of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	5782
2	Manganese as Mn	mg/kg	USEPA-3050 B	34
3	Copper as Cu	mg/kg	USEPA-3050 B	6
4	Nickel as Ni	mg/kg	USEPA-3050 B	18
5	Chromium as Cr	mg/kg	USEPA-3050 B	21
6	Lead as Pb	mg/kg	USEPA-3050 B	18
7	Cadmium as Cd	mg/kg	USEPA-3050 B	< 1.0
8	Zinc as Zn	mg/kg	USEPA-3050 B	15
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil
Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

*** End of the Report***

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BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority Vijayawada, Andhra Pradesh.		TEST REPORT		Test Report No. : BSET/18-19/TR-0657	
Sample Description: Soil Sample		Lab Code No : 18984305		Issue Date : 14.06.2018	
		Your Ref : Letter Dated 29.05.2018		Date of Receipt : 29.05.2018	
Quantity : 1 No. x 1 Kg Sample		Date of Registration		29.05.2018	
Packing : Plastic Cover		Date of commencement of testing		30.05.2018	
Test Required : As given below		Date of completion of testing		12.06.2018	
		Sample condition at receipt		Found ok	
		Sample tested as received			
Date of Sampling: 25.05.2018			Sampling Details		
Location of Sampling: Nekkallu Village			Sampling Method/Procedure: BSET-MSP-20		
			General Environment conditions: Ok		
			Page No: 1of 1		

TEST RESULTS

S.No	Test Parameter	Units	Test Method	Results
1	pH of 1.2 Soil water Extract	-----	BSET/SOP/SS-06	8.08
2	Available Nitrogen as N	kg/ha	BSET/SOP/SS-13	286
3	Available Phosphorous as P ₂ O ₅	kg/ha	BSET/SOP/SS-11	52
4	Available Potassium as K ₂ O	kg/ha	BSET/SOP/SS-09	597
5	Available Calcium as Ca	mg/kg	BSET/SOP/SS-01	2986
6	Available Magnesium as Mg	mg/kg	BSET/SOP/SS-02	511
7	Organic Carbon	%	BSET/SOP/SS-07	0.46
8	Organic Matter	%	BSET/SOP/SS-14	0.79
9	Sodium Absorption Ratio(SAR)	-	BSET/SOP/SS-17	0.19
10	Texture :			Sandy Clay Loam
	a) Sand	%	BSET/SOP/SS-16	48
	b) Silt	%		23
	c) Clay	%		29
11	Moisture Content	%	BSET/SOP/SS-05	8.16

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director – Laboratory

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TEST REPORT

BSET/TR/FORM -56

Name & Address of the Customer : Andhra Pradesh Capital Region Development Authority, Vijayawada, Andhra Pradesh.		Test Report No. : BSET/18-19/TR-0657	
Sample Description: Soil Sample		Lab Code No : 18984305	
Quantity : 1 No. x 1 Kg Sample		Issue Date : 14.06.2018	
Packing : Plastic Cover		Your Ref : Letter Dated 29.05.2018	
Test Required : As given below		Date of Receipt : 29.05.2018	
		Date of Registration	29.05.2018
		Date of commencement of testing	30.05.2018
		Date of completion of testing	12.06.2018
		Sample condition at receipt	Found ok
		Sample tested as received	
Date of Sampling: 25.05.2018		Sampling Method/Procedure: BSET-MSP-20	
Location of Sampling: Nekkallu Village		General Environment conditions: Ok Page No: 1 of 1	

TEST RESULTS

HEAVY METALS:				
S.No	Test Parameter	Units	Test Method	Results
1	Iron as Fe	mg/kg	USEPA-3050 B	12,578
2	Manganese as Mn	mg/kg	USEPA-3050 B	374
3	Copper as Cu	mg/kg	USEPA-3050 B	9
4	Nickel as Ni	mg/kg	USEPA-3050 B	45
5	Chromium as Cr	mg/kg	USEPA-3050 B	51
6	Lead as Pb	mg/kg	USEPA-3050 B	33
7	Cadmium as Cd	mg/kg	USEPA-3050 B	3.3
8	Zinc as Zn	mg/kg	USEPA-3050 B	27
9	Mercury as Hg	mg/kg	USEPA-3050 B	< 0.1
10	Arsenic as As	mg/kg	USEPA-3050 B	< 1.0

Interpretation of results: Nil

Deviation from test method: Nil


Authorized Signatory
(A.V. HanumanthaRao)
Director - Laboratory

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