



GREEN & ENVIRONMENT AUDIT REPORT

TAMILNADU PHYSICAL EDUCATION AND
SPORTS UNIVERSITY
MELAKOTTAIYUR, CHENNAI-600127



MARCH 2023
QRO CERTIFICATIONS
CHENNAI

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Executive Summary

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institute which will pave way for sustainable development.

TNPESU believes that there is an urgent need to address these fundamental environmental problems and reverse the trends. The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution.

It works on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, and Alternative Energy. With this in mind, the specific objectives of the audit was to evaluate the adequacy of the management control framework of environment sustainability as well as the degree to which the Departments are in compliance with the applicable regulations, policies and standards. It can make a tremendous impact on student health and learning college operational costs and the environment. The criteria, methods and recommendations used in the audit were based on the identified risks.

Introduction

Green audit was initiated with the beginning of 1970s with the motive of inspecting the work conducted within the organizations whose exercises can cause risk to the health of inhabitants and the environment. It is known as the systematic identification, quantification, recording, reporting and analysis of components of environmental diversity.

It is the duty of organizations to carry out the Green Audits of their ongoing processes for various reasons such as; to make sure whether they are performing in accordance with relevant rules and regulations, to improve the procedures and ability of materials, to analyze the potential duties and to determine a way which can lower the cost and add to the revenue.

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Green Audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation. The intention of organizing Green Audit is to upgrade the environment condition in and around the institutes, colleges, companies and other organizations. It is carried out with the aid of performing tasks like waste management, energy saving and others to turn into a better environmental friendly institute.

About the College

The Tamil Nadu Physical Education and Sports University established by an Act of the Government of Tamil Nadu in 2004, is unique and the first of its kind in India as an affiliatory University, exclusively for Physical Education and Sports Accredited with ISO 9001 – 2015 Certification for Quality Management System It has been recognized as a premier institution of higher learning for job-oriented courses.



The campus is spread over an area of 127 acres of land with Huge built up area. The college offers Under Graduate Courses and Post Graduate and Research courses in Sports and Allied Fields & There are 421 students and 30 teaching faculty in the college which is promising to grow rapidly.

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The College offers job-oriented courses, extra-curricular activities and technologically advanced facilities accessible to the faculty, the students and the support staff. Here, each individual is encouraged to step beyond the confines of academic and administrative disciplines to explore and intervene in the larger interests of the TNPESU community that thrives on participation and the desire to venture into newer vistas.

Objectives of the Study

The main objective of the green audit is to promote the Environment Management and Conservation in the College Campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards.

The main objectives of carrying out Green Audit are:

- To introduce and aware students to real concerns of environment and its Sustainability.
- To secure the environment and cut down the threats posed to human health by analyzing the pattern and extent of resource use of the campus.
- To establish a baseline data to assess future sustainability by avoiding the Interruptions in environment that are more difficult to handle and their corrections requiring high cost.
- To bring out a status report on environmental compliance.

Benefits of green audit

- Green auditing should become a valuable tool in the management and monitoring of environmental and sustainable development programs of the college.
- Impart environmental education through systematic environmental Management approach and Improving environmental standards
- To create a green campus.
- To enable waste management through reduction of waste generation, solid- waste and water recycling.

Methodology

In order to perform green audit, the methodology included different tools such as preparation of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. The study covered the following areas to summarize the present status of environment management in the campus:

- Water management
- Energy Conservation
- Waste management
- E-waste management
- Green area management
- Environment Monitoring

Observations and Recommendations

Water Use

The study observed that the main source of water for the institute is received from two bore wells. Water is used for drinking purpose, toilets and gardening. The waste water from the RO water purifier is used for gardening purpose. During the survey, no loss of water is observed, neither by any leakages, or by over flow of water from overhead tanks. The data collected from all the departments is examined and verified. On an average the total use of water in the college is 30,000 L/day, which include 23,000 L/day for domestic, 5,000 L/day for gardening purposes and 2,000 L/day for drinking purpose.

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Pond inside the Campus



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Rain water harvesting units are also functional for recharging ground water level. The rain water collected from all floors of the building and Harvested in the recharge well available inside the campus .



Rain Water Harvesting Implemented inside the campus



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Recommendations

- There is a need for monitoring and controlling overflow and periodically supervision drills should be arranged.
- Minimize wastage of water and use of electricity during the reverse osmosis process and ensure that the equipment used are regularly serviced and in good condition.
- The cleaning products used by staff should have a minimal detrimental impact on the environment. They should be biodegradable and non-toxic.
- Ensure that all cleaning products used by college staff have a minimal detrimental impact on the environment, i.e. they are biodegradable and non-toxic, even where this exceeds the Control of Substances Hazardous to Health (COSHH) regulations.
- Gardens should be watered by using drip/sprinkler irrigation system to minimize water use.

Waste Management

This indicator addresses waste production and disposal of different wastes like paper, food, plastic, biodegradable, construction, glass, dust etc. Furthermore, solid waste often includes wasted material resources that could otherwise be channeled into better service through recycling, repair, and reuse. Solid waste generation and management is a burning issue. Unscientific handling of solid waste can create threats to everyone. The survey focused on volume, type and current management practice of solid waste generated in the campus.

Observations

Liquid waste management

They have a **Mini RO plant** in all the blocks which is easily access to all the students & staffs to provide water for drinking and Cooking Purpose in Mess & Canteen



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Purified Water in all the Blocks

Solid waste management

Waste generated from tree droppings and lawn management is major solid waste generated in the campus. Separate dustbins are provided for Bio-degradable and Plastic waste in order to segregate them at the source itself. Single sided used papers are reused for writing and printing in all the departments to minimize the usage of papers. Important and confidential reports/ papers are sent for pulping and recycling after completion of their preservation period.

Chemical waste generated in laboratories that are potentially hazardous are segregated. Very less plastic waste (0.1Kg/day) is generated by some departments, office, garden etc Metal waste and wooden waste is stored and sent to authorized scrap agents for further processing. Glass bottles are reused in the laboratories.

The college had Placed separate bins to collect biodegradable and non-biodegradable waste generated in the campus.

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Separate Bins for Degradable & Non Bio Degradable



Plastic Free Campus

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Recommendations

- The amount of waste generated from classrooms and staff rooms can be minimized.
- Full use of all recycling facilities provided by City Municipality and private suppliers can be utilized for waste disposal.
- Sufficient, accessible and well-publicized collection points can be made available for recyclable waste, with responsibility for recycling clearly allocated.
- If Biomedical Waste Accumulated Ensure to Proper Government Authorized Vendor to collect it.
- Solid Waste Management awareness Training Recommended for all the works one who are Involved in Gardening & Sweeping Work

E-waste Management

E-waste is a consumer and business electronic equipment that is near or at the end of its useful life. This waste makes up about 5% of all municipal solid waste worldwide. It is hazardous than other waste because electronic components contain cadmium, lead, mercury, and Polychlorinated biphenyls (PCBs) that can damage human health and the environment.

Observations

E-waste generated in the campus is of minimal quantity. It is being effectively managed, keeping in mind the environmental hazards that may arise if not disposed properly.

The cartridges of laser printers are refilled outside the college campus. Administration Awareness programmes are being conducted regarding E-waste Management in various departments. The E- wastes and defective items from computer laboratories are being stored properly.

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The dismantled hardware of personal computers are used in PC trouble shooting lab. This is put to use to conduct practical courses for Students and The dismantled electronic spare parts are immediately sold for reuse. The minimal amount of e-waste that is generated after reusing is sent to recycler at specific intervals.



E-Waste is Properly Collected in the campus



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E-Waste is Properly Collected and Disposed Frequently

Recommendations

- Use reusable resources and containers and avoid unnecessary packaging wherever possible.
- The management should take an initiative to purchase recycled resources when they are available.
- Recycle or safely dispose of white goods, computers and electrical appliances.
- The Management engage proper Vendor to dispose the E Waste frequently.

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Green Area Management

This includes the plants, greenery and sustainability of the campus to ensure that the buildings conform to green standards. This also helps in ensuring that the Environmental Policy enacted, enforced and reviewed using various environmental awareness programmes.

Observations

Campus is located in the vicinity of many trees (species) to maintain the biodiversity. Various tree plantation programs are being organized at college campus and surrounding villages through NSS (National Service Scheme) unit. This program helps in encouraging eco-friendly environment which provides pure oxygen within the institute and awareness among villagers. The plantation program includes various type of indigenous species of ornamental and medicinal wild plant species.

The college cultivates vegetables for its own use through organic farming initiatives.



Green Area Management Inside The campus

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Green Belt Across The campus



MIYAWAKI FOREST

A Miyawaki forest has been planted in the north-east corner of the campus. Miyawaki is a technique pioneered by the Japanese botanist, Akira Miyawaki that helps build dense, native forests. The approach ensures plants to grow 10 times faster and the resulting plantation will be 30 times denser than usual. It involves planting dozens of native species in the same area, and becomes maintenance-free after the first three years.



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Miyawaki Forest Inside The campus



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World Environment Day Celebrated Inside The campus



Sanitary Napkin Incinerator

To educate and create awareness of use of Sanitary Napkins and provide easy access to Sanitary Napkins by installation Simple Vending Machines in our girls toilet so that Girls/Women get habituated to use this Sanitary Napkins for their better health care. Secondly, to solve the problem of sanitary napkin disposal by installing incinerators which shall reduce spread of infection due to unhygienic disposal of sanitary napkins, reduce environmental pollution due to non-biodegradable sanitary napkins and reduce clogging of public drainage system due to spongy nature of napkins.



Sanitary Napkin Incinerator inside The Campus

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Recommendations

- Review periodically the list of trees planted in the garden, allot numbers to the trees and keep records. Assign scientific names to the trees.
- Promote environmental awareness as a part of course work in various curricular areas, independent research projects, and community service.
- Create awareness of environmental sustainability and take actions to ensure environmental sustainability.
- Establish a College Environmental Committee that will hold responsibility for the enactment, enforcement and review of the Environmental Policy. The
- Environmental Committee shall be the source of advice and guidance to staff and students on how to implement this Policy.
- Ensure that an audit is conducted annually and action is taken on the basis of audit report, recommendation and findings.
- Indoor plantation to inculcate interest in students, Bonsai can be planted in corridor to bond a relation with nature.
- Green library should be established.

Sanitation and Hygiene

Unsafe operation of educational institution can lead to transmission of diseases. It can cause negative impacts to students, their families, institute reputation and overall development. Therefore, good health and sanitation practices are very important especially considering the ongoing Covid'19 pandemic.

The provision of safe water and sanitation facilities is a first step towards a healthy physical learning environment. However, the mere provision of facilities does not make them sustainable or ensure the desired impact. Hygiene practices are employed as preventative measures to reduce the incidence and spreading of disease. Hygiene education aims to promote those practices that will help prevent water and sanitation-related diseases as well as inculcating healthy behaviours in the future generation of adults. Therefore, the combination of facilities, correct behavioural practices and education are meant to have a positive impact on the health and hygiene conditions of the community as a whole, both now and in the future.

1.Drinking water: Clean water as per drinking water standards have been ensured to students through Reverse Osmosis plant. RO plants of different capacity (6 nos.) have been installed.

2.Water Supply: Adequate and clean water supply through Public Water Supply and borewell system has been ensured.

3.Sanitation: Adequate number of urinals/toilets have been operational in main Campus, Hostel, and Other areas. No open and flowing latrines were noticed. Sanitation facilities are found to be proper and adequate.

4.Waste Management: Waste management bins are placed at each block to store and dispose through municipality. During audit, no unattended waste dumping was noticed.

5.Awareness: Hygiene awareness posters especially related to Covid'19 is displayed at various locations in the campus. Overall, campus follows very good sanitation practices.

Green Initiatives and Best Practices

The list of few important green initiatives and good environmental practices adopted by the campus is given below.

- Rainwater harvesting pits are constructed at appropriate locations to improve local ground water table.
- Installed solar Plant to meet partial power requirement of the Campus
- Replaced 60% of CFL lights with LED lights as part of energy conservation measures. Also, some of the old fans were replaced with energy efficient super fans.
- Engagement of authorized paper recycling vendor to manage bulk paper waste generated.
- Establishment of Organic Cultivation
- Celebration Of World Environment Day and creating Environment Awareness to all Students & Staffs
- Restricted movement of vehicles inside the campus. Parking space inside campus is provided for vehicles, however, no movement of vehicles inside campus is encouraged.
- Awareness posters on resource conservation, good sanitation and hygiene drive.
- Strictly follow the Plastic Free zone inside the campus is Encouraged.

Environmental Monitoring

As part of green audit of campus, the Green Audit Assessment Team has carried out the environmental monitoring of campus. This includes Illumination, Noise level, ventilation and indoor Air quality of the class rooms. It was observed that Illumination and Ventilation is adequate considering natural light and air velocity present. Noise level in the campus is well below the limit.

The following surveys were conducted:

1. Ambient air quality by NABL approved air sampler
2. Lux monitoring
3. Noise monitoring
4. Co2 Monitoring

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Ambient Air Quality Monitoring

Ambient air quality monitoring can help in providing a strategic solution towards air purification and help lead a safer life. Also, air quality monitoring in the college campus not only develops trust among the parents but ensures that the administration cares about their Students and Staff.



Ambient Air Quality Monitoring Inside the Campus



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Lux & Noise Monitoring

Illumination is one of the most important environmental factors in the classroom. Many Doctors have discovered that lighting settings have significant impact on students' performance. So Lux monitoring can help in providing a Comfort Vision Environment to Students.

When assessing noise exposure in campus environments, it can be difficult to determine whether the level of sound has reached a point where it interferes with student learning and staff productivity, or worse, becomes a threat to their health and well-being.



Lux & Noise Monitoring Inside The Campus



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CO2 Monitoring

CO2 levels can provide a direct indication of the CFM per person ventilation rate in College classrooms and can provide an ongoing indication if code required ventilation rates are being maintained. It is important to Maintain that CO2 levels a contaminant or pollutant at the levels normally measured in buildings (400 to 2000 ppm). Measurement Based On ASHRAE Standards



Co2 Monitoring Inside The Campus

Conclusion

Green audit is a systematic approach to understand the existing environmental practices and identify areas of improvement for attaining an eco-friendly approach to the sustainable development of the college. The report is prepared based on the site visit observations and information provided by the campus.

Overall, TNPESU has taken many environmentally friendly approaches and campaigns in the area of energy, water, solid waste, sanitation and green cover, which is highly commendable.

.The environmental awareness initiatives taken by the management are substantial. The installation of water recycling plants, paperless work system and Solar & Biogas Plant practices are remarkable. Besides, environmental awareness programmes initiated by the administration prove the campus is going green. Few recommendations are added for waste management and waste reduction using alternate eco-friendly and scientific techniques. This may lead to the prosperous future in context of Green Campus and thus aid in a sustainable environment and community development.

Acknowledgement

We are grateful to the management and committee members of Tamilnadu Physical Education and Sports University to award this prestigious project on green auditing. Further we sincerely thank the college staff for providing us the necessary facilities and co-operation during the audit. This ample co-operation helped us a lot in making this audit possible and successful.

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Regional Office : Pondicherry, Coimbatore & Andra Pradesh

Contact : 8778740104, 9384381615 | Email : igniteengg@gmail.com



9001:2015



AMBIENT AIR MONITORING

Report No	IES-NO-AR-72-155-2023	Report Date:	30.03.2023
Customer Name & Address M/s. TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY CHENNAI		Sample Reference No:	IES-NO-AR-72-155-2023
		Sample Description:	Ambient Air
		Sample Drawn by:	Laboratory
		Sample Collected Date:	28.03.2023
		Qty of sample Received:	Filter Paper(2nos) & Approx 25ml Solution(4nos)
		Sample Received On:	28.03.2023
		Test Commenced On:	28.03.2023
		Test Completed On:	30.03.2023
		Sampling Method:	IES-SOP-ARS-01 to 11
		Sample Mark:	Near to Admin Block

S.No	Name of the Test	Test Method	Units	Results	Max. Annual Average Limits Of NAAQs
1.	Ammonia (as NH ₃)	CPCB Guidelines, Volume I, NAAQMS/36/2012-13	µg/m ³	<5.0	100
2.	Arsenic (as As)	CPCB Guidelines, Volume I, NAAQMS/36/2012-13	µg/m ³	<0.1	6.0
3.	Benzene (as C ₆ H ₆)	IS 5182 (Part 11): 2006 (Reaffirmed 2017)	µg/m ³	<0.5	5.0
4.	Benzo (α) Pyrene (as C ₂₀ H ₁₂)	CPCB Guidelines, Volume I, NAAQMS/36/2012-13	µg/m ³	<0.5	1.0
5.	Carbon Monoxide (as CO)	Instruments Manual Based SOP No.EL-SOP-ARS-17	µg/m ³	<1.2	2.0
6.	Lead (as Pb)	IS 5182 (Part 22): 2004 (Reaffirmed 2014) Clause No.5	µg/m ³	<0.5	0.5
7.	Nickel (as Nil)	CPCB Guidelines, Volume I, NAAQMS/36/2012-13	µg/m ³	<1.0	20
8.	Oxidants (as Ozone O ₃)	IS 5182 (Part IX)- 19747 (Reaffirmed 2014)	µg/m ³	<10.0	100
9.	Oxidants of Nitrogen (as Ozone NO ₂)	IS 5182 (Part 6): 2006 (Reaffirmed 2017)	µg/m ³	18.1	40
10.	Particulate Matter (as PM ₁₀)	IS 5182 (Part 23): 2006 (Reaffirmed 2017)	µg/m ³	32.1	60
11.	Particulate Matter (as PM _{2.5})	EPA 40 CFR Part 50- Appendix L	µg/m ³	25.1	40
12.	Sulphur Dioxide (as SO ₂)	IS 5182 (Part 2): 2001 (Reaffirmed 2017)	µg/m ³	9.3	50

END OF REPORT

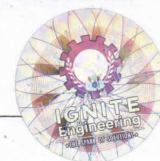
NOTES:

The Concentrations of the parameters tested in the above Location are within the prescribed annual average limits of NAAQs tolerance limits.

Report Confirmed by

FOR IGNITE ENVIRONMENTAL SERVICES

Authorized Signatory



AMBIENT AIR MONITORING

Report No	IES-NO-AR-72-156-2023	Report Date	30.03.2023		
Customer Name & Address M/s TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY CHENNAI		Sample Reference No:	IES-NO-AR-72-155-2023		
		Sample Description:	Ambient Air		
		Sample Drawn by:	Laboratory		
		Sample Collected Date:	28.03.2023		
		Qty of sample Received:	Filter Paper(2nos) & Approx 25ml Solution(4nos)		
		Sample Received On:	28.03.2023		
		Test Commenced On:	28.03.2023		
		Test Completed On:	30.03.2023		
		Sampling Method:	IES-SOP-ARS-01 to 11		
		Sample Mark:	Near to Boys Hostel		
S.No	Name of the Test	Test Method	Units	Results	Max. Annual Average Limits Of NAAQs
1.	Ammonia (as NH ₃)	CPCB Guidelines, Volume I, NAAQMS/36/2012-13	µg/m ³	6.3	100
2.	Arsenic (as As)	CPCB Guidelines, Volume I, NAAQMS/36/2012-13	µg/m ³	<0.1	6.0
3.	Benzene (as C ₆ H ₆)	IS 5182 (Part 11): 2006 (Reaffirmed 2017)	µg/m ³	<0.5	5.0
4.	Benzo (a) Pyrene (as C ₂₀ H ₁₂)	CPCB Guidelines, Volume I, NAAQMS/36/2012-13	µg/m ³	<0.5	1.0
5.	Carbon Monoxide (as CO)	Instruments Manual Based SOP No.EL-SOP-ARS-17	µg/m ³	<1.1	2.0
6.	Lead (as Pb)	IS 5182 (Part 22): 2004 (Reaffirmed 2014) Clause No.5	µg/m ³	<0.5	0.5
7.	Nickel (as Nil)	CPCB Guidelines, Volume I, NAAQMS/36/2012-13	µg/m ³	<1.0	20
8.	Oxidants (as Ozone O ₃)	IS 5182 (Part IX)- 19747 (Reaffirmed 2014)	µg/m ³	<10.0	100
9.	Oxidants of Nitrogen (as Ozone NO ₂)	IS 5182 (Part 6): 2006 (Reaffirmed 2017)	µg/m ³	24.2	40
10.	Particulate Matter (as PM ₁₀)	IS 5182 (Part 23): 2006 (Reaffirmed 2017)	µg/m ³	42.1	60
11.	Particulate Matter (as PM _{2.5})	EPA 40 CFR Part 50- Appendix L	µg/m ³	21.0	40
12.	Sulphur Dioxide (as SO ₂)	IS 5182 (Part 2): 2001 (Reaffirmed 2017)	µg/m ³	12.3	50

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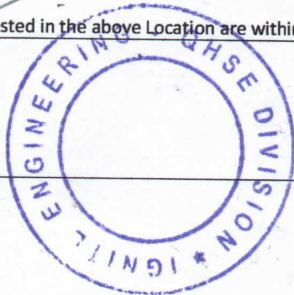
NOTES:

The Concentrations of the parameters tested in the above Location are within the prescribed annual average limits of NAAQs tolerance limits.



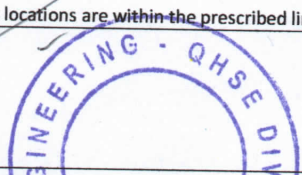

Report Confirmed by

FOR IGNITE ENVIRONMENTAL SERVICES

Authorized Signatory



NOISE MONITORING

Report No	EL-NO-NE-26-755-2023		Report Date:	30.03.2023		
Customer Name & Address M/s. TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY CHENNAI-127			Sample of Reference No:	IES-NO-IN-26-755-2023		
			Sample Description:	Light		
			Monitoring By:	Laboratory		
			Monitoring Date:	30.03.2023		
			Data received On:	30.03.2023		
			Sampling Method:	IS:9989- 1981 (Reaffirmed 2001)		
			Monitoring unit:	Db (A)		
S.no	Name of the Location	Monitoring Distance in m	Monitoring Time	Day Time (6.00 a.m -10.00 p.m)		
				Minimum	Maximum	L Equivalent
1.	Central Library	Site	11 AM –12PM	58.9	59.3	57.3
2.	Office	Site	11 AM –12PM	60.9	65.3	62.1
3.	VC Room	Site	11 AM –12PM	57.0	59.0	55.6
4.	Canteen	Site	11 AM –12PM	59.2	61.5	60.0
5.	Computer Lab	Site	11 AM –12PM	55.1	62.1	57.3
Permissible Limit For Noise as Per The Factories Rules 1950				Maximum 90.0		
<-----End of Report----->						
NOTES:						
The sound levels tested in the above locations are within the prescribed limits of Factories rules 1950 Standard Limits						
Report Confirmed by				FOR IGNITE ENVIRONMENTAL SERVICES		
						
						
				Authorized Signatory		

ILLUMINATION MONITORING

Report No	IES-NO-IN-26-756-2023	Report Date:	30.03.2023			
Customer Name & Address M/s. TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY CHENNAI-127		Sample of Reference No:	IES-NO-IN-26-756-2023			
		Sample Description:	Light			
		Monitoring By:	Laboratory			
		Monitoring Date:	30.03.2023			
		Data Received On:	30.03.2023			
		Sampling Method:	IS:9989- 1981 (Reaffirmed 2001)			
		Monitoring unit:	Db (A)			
S.no	Name of the Location	Monitoring Distance in m	Monitoring Time	Day Time (6.00 a.m -10.00 p.m)		
				Minimum	Maximum	L Equivalent
1.	Central Library	0.9	11 AM -12PM	349	431	409
2.	Office	0.9	11 AM -12PM	228	239	242
3.	VC Room	0.9	11 AM -12PM	304	322	320
4.	Canteen	0.9	11 AM -12PM	561	567	212
5.	Computer Lab	0.9	11 AM -12PM	423	446	434
Permissible Limit For Light as Per The Factories Rules, 1950				Maximum 65		
<-----End of Report----->						
NOTES: The above Location Light levels are fulfill the necessities of Factories Rules 1950 standard.						
Report Confirmed by 				FOR IGNITE ENVIRONMENTAL SERVICES  Authorized Signatory		



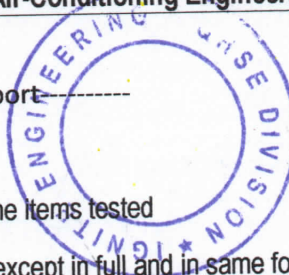
TEST REPORT

Sample Ref No: EES/AS/544/2023	Date of Sampling: 28.03.2023
Issued To:	Report Date/Report No: 30.03.2023
M/s. TAMILNADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY Melakottaiyur Chennai-600127	
Page 1 of 1	
Group : Atmospheric Pollution	Sample Drawn By/Date : IES/28.03.2023
Discipline : Chemical Testing	Received On : 28.03.2023
Sample Description : Indoor Air Quality	Analysis Commenced On : 28.03.2023
Sampling Method : IS 5182, NIOSH & SOP	Analysis Completed On : 30.03.2023

Sl. No	Sampling Location	UNIT	RESULT Carbon-di-oxide (CO ₂)	ASHRAE LIMITS
1	Central Library	ppm	385	1000
2	Office	ppm	415	
3	Principal Room	ppm	488	
4	Canteen	ppm	414	
5	Computer Lab	ppm	377	
6	Biomechanics	ppm	471	
ASHRAE- American Society of Heating Refrigerating and Air-Conditioning Engineers,				



-----End of Report-----



Authorized Signatory

- Note
1. Test result shown in this test report relate only to the items tested
 2. This test Report shall not be reproduce anywhere except in full and in same format without the approval of the Laboratory