



NAGALAND POLLUTION CONTROL BOARD

Signal Point, Dimapur – 797112, Nagaland
Tel.: 03862-245727, TeleFax; 03862-245726

Website: www.npcb.nagaland.gov.in e-mail: npcb2@vahoo.com

NPCB/GAR/ 1518

Dated 10/01/2025

To

The Principal
Modern College
Piphema Campus
Pin -797106

Sub: Green Audit Report - reg

Sir,

The Nagaland Pollution Control Board (NPCB) has reviewed the Green Audit Report submitted by Modern College Piphema, Nagaland. The board has also inspected the activities undertaken by the college towards environment conservation on the 11th of December, 2024.

The NPCB extends appreciation towards the performance of the college. It further encourages the college to take up more activities in the field of environment protection.

Encl:

- i) Green Audit Certificate
- ii) Ambient Air Quality Monitoring Report
- iii) Water Analysis Report
- iv) Observations and Recommendations

Yours faithfully,

(K. Hukato Chishi IFS)
Member Secretary

Nagaland Pollution Control Board

Principal
Modern College
Piphema

NAGALAND POLLUTION CONTROL BOARD

GREEN AUDIT

Certificate

NPCB/GAR/2024/06

Dated: 10/01/2025



This is to certify that

**Modern College, Piphema Campus
Piphema - 797106, Nagaland**

has successfully undergone a Green Audit for the year 2024 under the Supervision of Nagaland Pollution Control Board.

The institute has submitted necessary data and credentials for scrutiny. The activities and measures carried out by the college have been physically verified. The efforts taken by the college towards conserving environment and sustainability is appreciated and commendable.


Principal
Modern College
Piphema


(K. HUKATO CHISHI, IFS)
Member Secretary

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REPORT ON AMBIENT AIR QUALITY MONITORING

Nagaland Pollution Control Board monitored the ambient air quality at Modern College, Piphema on 12th December, 2024.

The monitoring was carried out for 24 hours (starting from 06:00 am on 12th December, 2024 till 06:00 am 13th December, 2024) to assess the ambient air quality using instrument namely New Improved Respirable Dust Sampler Envirotech APM 460 NL.

Respirable Dust Sampler is used for sampling of Particulate Matter (PM₁₀). PM₁₀ refers to fine particles that are 10 micrometers (µm) or smaller in diameter. This instrument was operated to assess the ambient air quality especially the particulate matter within the campus and its surrounding.

TEST REPORT

Date of Monitoring : 12th December, 2024.
Location : Modern College, Piphema.
Duration : 24 hourly (06:00 AM to 06:00 AM)

MONITORING REPORT:

Time	06:00 AM- 02:00 PM	02:00 PM- 10:00 PM	10:00 PM- 06:00 AM	24 hourly average
RSPM (PM ₁₀)	56.01 µg/m ³	44.78 µg/m ³	31.00 µg/m ³	43.93 µg/m ³

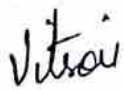
CONCLUSION:


According to National Ambient Air Quality Standards (NAAQS), the prescribed permissible limit for Respirable Suspended Particulate Matter (PM₁₀) for 24 hours is 100 µg/m³. The ambient air quality for Respirable Suspended Particulate Matter (PM₁₀) monitored at Modern College premise for 24 hours was found to be 43.96 µg/m³ which is below the permissible limit.

Therefore, as per the monitoring carried out the ambient air quality of Modern College, Piphema is within the permissible limit as per the National Ambient Air Quality Standards (NAAQS).


(Olivi Chophy)

Senior Scientific Assistant
Nagaland Pollution Control Board
Nagaland : Dimapur


Principal
Modern College
Piphema


(Yanathung Kithan)
Scientist B
Nagaland Pollution Control Board
Nagaland : Dimapur

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Date 08.01.2025

ANALYSIS REPORT OF WATER SAMPLE FROM MODERN COLLEGE PIPIHEMA

Source : Filtered Water & Raw Tap Water
Date of Collection : 11/12/2024
Collected by : NPCB officials
Location : Modern College, Piphema
Physical examination : The water sample appears Clear, Odourless/Agreeable

Sl. No	Parameters	Results		IS (10500:2012) Desirable Limit	Undesirable effect outside the desirable limit	IS (10500:2012) Permissible limit in the absence of alternate source
		Filtered Water	Raw Tap Water			
1.	pH	6.7	6.7	6.5-8.5	Beyond this range the water will affect the mucous membrane and or water supply system	No Relaxation
2.	Conductivity ($\mu\text{S}/\text{cm}$)	58.1	60.1	NS	NS	NS
3.	Turbidity (NTU)	0.1	0.2	1	NS	5
4.	Total Dissolved Solids (ppm)	29	30	500	Beyond this, palatability decreases and may cause gastro-intestinal irritation.	2000
5.	Total Hardness (mg/l)	16	12	200	Encrustation in water supply structure and adverse effects on domestic use	600
6.	Calcium (mg/l)	12	8	<i>Vitrou</i> 75	Encrustation in water supply structure and adverse effects on domestic use	200

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7.	Magnesium Hardness (mg/l)	0.97	0.97	30	Encrustation in water supply structure and adverse effects on domestic use	100
8.	Phenolphthalein Alkalinity	0	0	NS	NS	NS
9.	Total Alkalinity (mg/l)	6.5	6.5	200	Beyond this limit taste becomes unpleasant	600

NOTE :

NS : NOT SPECIFIED

Reference : Bureau of Indian Standards/ Specifications for Drinking Water (BIS 10500:2012)

Limits

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Nagaland : Dimapur

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Date: - 08/01/2025

Analysis Charges of water sample from Modern College, Piphema

Parameters	Analysis Charges (Rs.)	No. of samples	Total (Rs.)
pH	50	2	100
Conductivity (μ S/cm)	50	2	100
Turbidity (NTU)	50	2	100
Total Dissolved Solids (ppm)	100	2	200
Total Hardness (mg/l)	80	2	160
Calcium (mg/l)	80	2	160
Magnesium Hardness (mg/l)	-	-	-
Phenolphthalein Alkalinity	50	2	100
Total Alkalinity (mg/l)	50	2	100
Total Amount			Rs. 1020/-

(Rupees one thousand twenty) only

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Scientist 'B'

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GREEN AUDIT REPORT

OBSERVATIONS AND RECOMMENDATIONS

Nagaland Pollution Control Board has reviewed the responses to Green Audit Questionnaire submitted by Modern College Piphema, Nagaland.

The board has conducted physical verification of the college campus on the 11th of December, 2024. In this regard, NPCB would like to further supplement the following recommendations for up gradation of the college in the field of sustainable development, conservation and protection of the environment:

1. Green Cover and Nature Conservation:

Observation: It has been observed that there is good coverage of plants within the campus. The floral diversity in the college campus is commendable. The diverse flora should be preserved and well maintained.

Recommendation:

- i. Green habitat concept should be adopted for all the building construction activities of the institute in future, which may help a long way in reducing energy usage, increasing aesthetic appeal of the buildings and class rooms, besides reducing carbon foot print. Further, more green spaces should be established all around the campus around larger trees and shades for the benefit of the students.
- ii. Frame long-term eco-restoration programmes with indigenous trees and frame a holistic campus development plan to foresee the future developmental needs.

2. Waste Management:

Observation: It was observed that proper waste management is not practiced in the college campus and in the hostel. Waste was observed to get disposed through the method of burning.

Recommendation:

- i. Propose a system for collection and disposal of waste sorted out as organic (biodegradable) and non-biodegradable on a daily basis. It is suggested to keep two bins (blue colour bins for dry waste and green colour bins for wet waste or in case of non-availability of blue and green colour bins, the bins can be labelled as Dry Waste and Wet Waste in large fonts for visibility to all) in and around the campus to ensure segregation of waste at source. Segregation of waste at source should be strictly maintained and monitored for long run effective management of waste.
- ii. Plastic waste should be segregated and stored which can further be sent to registered recyclers or authorized scarp dealers.
The Ministry of Environment, Forest & Climate Change, Govt. of India, has notified the ban on identified single use plastic items with effect from July 1, 2022 across the

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Country. In this regard, the use of single use plastic items should be strictly prohibited in the college premises and college canteen.

- iii. Practice the 3 R's: Reduce, Reuse, and Recycle in whichever way possible.
- iv. Burning of wastes should be immediately stopped.
- v. E-waste generated from the college should be segregated from other category of wastes and handed over to authorized collection centres. Presently in the state of Nagaland, there are 2 (two) e-waste collection centres namely:

a) **E Circle**

Address: House No. 93, C Khel, Diphupar, Chumoukedima Nagaland
Contact Number: 7005811236/ 8794549067

b) **Karo Sambhav**

Address: House No. 57 4th Mile, opposite TV Centre I-Khel, Chumoukedima Nagaland
Contact Number: 6909865225

3. Water Management:

Observation: It was observed that the main source of water is from the river (Dziimha river) and spring water. On analysis of water samples from the filtered tap water and raw tap water, the parameters were found to be well within the standards.

Recommendation:

- i) Rain water harvesting structures should be constructed at the campus foreseeing future needs of water.
- ii) To eliminate the spillage and over usage of water in washbasins, restrooms, push taps etc. are highly recommended.

4. Energy Management:

Observation: It was observed that solar energy is utilized for the street lights within the campus.

Recommendation:

It is recommended to opt for solar energy within the college classrooms/ staff rooms, staff quarters, hostels etc. to harness the use of clean energy.

5. Carbon Footprint:

Observation: Use of bus and car pooling is observed within the campus.

Recommendation:

Vehicle pooling should further be promoted both among students and faculty.



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6. Ambient Air Quality:

Observation: On monitoring the air quality for 24 hours (6:00 am of 12th Dec. 2024 till 6:00 am of 13th Dec. 2024) to assess Particulate Matter (PM10), it was observed that the ambient air quality for Respirable Suspended Particulate Matter (PM10) was found to be within the permissible limit as per the National Ambient Air Quality Standards.

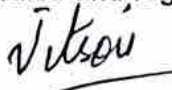
7. Academic Curriculum:

The awareness programmes on environment conducted by the college are highly recommendable and it is further suggested that more awareness activities/programmes on environment should be conducted in the future. On embarking important environment occasions, the students should be instilled with the knowledge of protecting the environment and practice good habits in their day to day lives.

By realizing the need of responsibility towards environment, NAAC has added the concept of environmental audit in accreditation methodologies of universities and colleges.

To nurture environmentally friendly management in academic institutions, following aims and objectives were formulated: -

- To recognise the initiative taken by organisation towards environment.
- To secure the environment and cut down the threats posed to human health.
- To provide baseline information to enable organisation to evaluate and manage environmental change, threat and risk.
- To recognize, diagnose and resolve the environmental problems.
- To recognize the effects of an organization on the environment and vice versa.
- To identify and control the impact of activities of organizations on environment.
- To suggest the best protocols for sustainable development, organization and environment.
- To assess environmental performance and the effectiveness of the measures to achieve the defined objectives and targets.
- To identify the different pressures on organizations to improve their environmental performance.
- To ensure that the natural resources are utilized properly as per national policy of environment.
- To establish the parameters for maintaining health and welfare of the community of the organization.
- To set the procedure for disposal of all types of harmful wastes.
- To reduce energy consumption.
- To give preference to the most energy efficient and environmentally sound appliances.
- To minimize the consumption of water and monitor its quality.
- To identify the risks of hazards and implement the policies for safety of stakeholders.
- To incorporate different aspects of disaster management.
- To train all students and staff of the college and empower them to contribute and participate in the environmental protection.
- To make sure that rules and regulations are taken care to avoid the interruptions in environment.


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To sum up, environmental auditing or Green Audit may be conducted by the College/University Internal Green Audit team annually. The process should not be a one time or one-year activity. It should rather be a process adhering to the sustainability of the environment. The process of Green Auditing should be an ongoing process. College should prepare Green Environmental policy and take efforts for sustainable development on the college campus.


Audited by:

Green Audit External Team:

Name & Designation:

1. Aghali A. Swu (Senior Environmental Engineer)
2. Kevisede Pucho (Assistant Environmental Engineer)
3. Moakumzuk Jamir (Data Entry Operator)
4. Sentinaro (Senior Scientific Assistant)

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10/01/25


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