

Khwaja Moinuddin Chishti Language University

Lucknow, U.P.

Environmental Audit Report

2019 - 2020

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AUDITED BY

Prof. Entesham Ahmad

Dr. Prof. Samban Sayeed

*ई० आशुतोष कुमार श्रीवास्तव
मण्डल अभियन्ता
पूर्वोत्तर रेलवे वरेली*

Independent Auditor Er. Ashutosh Kumar Srivastava

Bmisha

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LUCKNOW

Environmental Audit

1. Environmental Audit

Environment auditing involves the systematic assessment of an institution's practices to ascertain their eco-friendliness and sustainability. While historically we have been proficient in resource utilization, there has been a tendency towards excessive consumption of resources such as energy, water, and chemicals, particularly in communal spaces. It has become imperative to scrutinize whether our processes are consuming more resources than necessary and whether waste management practices are being handled with due care. Indeed, contemporary perspectives suggest that there is no such thing as waste, highlighting the importance of environmental audit in regulating resource utilization efficiently.

In the face of climate change and dwindling resources, there is a pressing need to evaluate our processes and transition towards greener and cleaner practices. Environmental audit serves as a guiding framework in this endeavor, facilitating the conversion of outdated practices into environmentally responsible ones. Moreover, it fosters a heightened sense of consciousness and awareness among individuals within institutions regarding environmental stewardship.

The Government of India, through its National Environment Policy in 2006, has mandated the conduct of green audits or environmental audits by every organization. This directive underscores the importance of ensuring a clean and healthy environment both within and outside organizational boundaries.

1.1 Goals of the Environment Audit

The Environment Audit, along with other audits previously conducted at Khwaja Moinuddin Chishti Language University, was undertaken with specific objectives in mind:

- Evaluate various waste management facilities.
- Prioritize utilization of all waste in line with the Waste to Wealth policy.
- Foster environmental awareness campus-wide.
- Document and recognize green practices implemented by the university.
- Identify both strengths and weaknesses in current green initiatives.
- Conduct surveys to gauge the actual implementation of green practices.
- Analyze survey data to propose solutions for identified issues.
- Identify and assess environmental risks.
- Establish short-term objectives for the environmental audit program.
- Establish long-term objectives focused on gathering baseline environmental data and addressing environmental concerns.
- Encourage both staff and students to adopt sustainable practices for optimal resource utilization.

1.2 Benefits of Environment Audit to an Educational Institute

The Environment audit offers numerous advantages to an Educational Institute:

- Protection of the environment in and around the campus.
- Empowerment of the organization to enhance its environmental performance.

- Improved efficiency in resource management.
- Facilitation of waste management by reducing waste generation and handling solid waste effectively.
- Promotion of a plastic-free campus and cultivation of health consciousness among stakeholders.
- Recognition of cost-saving methods through waste minimization and management.
- Assurance of compliance with relevant laws and regulations.
- Enhancement of awareness regarding environmental guidelines and responsibilities.
- Provision of environmental education through a systematic environmental management approach, thus elevating environmental standards.
- Establishment of benchmarks for environmental protection initiatives.
- Cultivation of a sense of ownership and social responsibility towards the University and its environment.
- Fostering the development of environmental ethics and value systems among young individuals.
- Building a positive impression through green initiatives in anticipation of upcoming NAAC visits.

1.3 Water Audit

Water, a vital natural resource, is available in a finite quantity nationally. Unfortunately, its availability is dwindling due to factors such as population growth and increasing standards of living, which escalate the demand for fresh water. Industrialization and urbanization further compound this issue by intensifying the pressure on water resources. Moreover, the uncontrolled discharge of industrial effluents into water bodies further degrades their quality. Recognizing the severity of this situation, Honorable Prime Minister Narendra Modi declared the 'Jal Shakti Abhiyan' as a national mission on water conservation. This initiative calls upon all citizens to collectively tackle water scarcity by conserving every drop of water and advocating for water audits across all sectors.

A water audit involves both qualitative and quantitative analysis of water consumption aimed at identifying opportunities for reducing, reusing, and recycling water. Essentially, it serves as a crucial tool for minimizing losses, optimizing usage, and fostering significant water conservation across various sectors such as irrigation, domestic, power, and industry.

Accurately measuring water losses stemming from different usage sources within a system or utility is imperative for implementing effective water conservation measures. By conducting water audits, establishments can take proactive steps towards preserving this invaluable resource for future generations.

1.4 Water Audit Process

The process of conducting a water audit are:

- **Data Collection**
- **Site Assessment**
- **Measurement and Monitoring**
- **Data Analysis**
- **Identify Opportunities**
- **Develop Action Plan**
- **Implementation**

- Monitoring and Evaluation
- Documentation and Reporting
- Continual Improvement

1.5 Water Quality Test

Primary water quality criteria are established to ensure the suitability of water for various uses, taking into account factors like environmental conditions and human activities. One of the most stringent criteria, termed as "Designated Best Use," sets the highest standard for water quality within a specific stretch of a water body. For organized outdoor bathing, the following primary water quality criteria are defined:

Fecal Coliform MPN/100 ml and Fecal Streptococci MPN/100 ml: These parameters measure microbial contamination, particularly from sewage sources, aiming to maintain low levels of contamination to safeguard public health.

pH: Falling within the range of 6.5 to 8.5, pH levels ensure a balance conducive to skin and organ protection during bathing activities.

Dissolved Oxygen: Maintaining a concentration of 5 mg/l or higher ensures a sufficient oxygen supply, crucial for preventing the accumulation of anaerobic gases that can arise from organic pollution.

Biochemical Oxygen Demand (BOD) 3-day, 27°C: BOD levels of 100 mg/l or less (desirable) and 500 mg/l or less (maximum permissible) indicate the presence of oxygen-demanding pollutants, which, at lower concentrations, prevent the formation of obnoxious gases and maintain water quality.

1.6 Drinking Water Quality

The Gomti River, a significant waterway in northern India traversing Lucknow city, influences the groundwater quality of the region. The water quality criteria for designated best use are outlined as follows:

- A. Drinking Water Source without conventional treatment but after disinfection:
 - Total Coliforms Organism MPN/100ml: 50 or less
 - pH: between 6.5 and 8.5
 - Dissolved Oxygen: 6 mg/l or more
 - Biochemical Oxygen Demand 5 days 20°C: 2 mg/l or less
- B. Drinking water source after conventional treatment and disinfection:
 - Total Coliforms Organism MPN/100ml: 500 or less
 - pH: between 6.5 and 8.5
 - Dissolved Oxygen: 5 mg/l or more
 - Biochemical Oxygen Demand 5 days 20°C: 3 mg/l or less
- C. Propagation of Wildlife and Fisheries:
 - Total Coliforms Organism MPN/100ml: 5000 or less
 - pH: between 6 to 9
 - Dissolved Oxygen: 4 mg/l or more
 - Biochemical Oxygen Demand 5 days 20°C: 3 mg/l or less
- D. Irrigation, Industrial Cooling, Controlled Waste disposal:
 - pH: between 6.5 to 8.5

- **Dissolved Oxygen:** 4 mg/l or more
- **Free Ammonia (as N):** 1.2 mg/l or less

E. Other uses:

- **pH:** between 6.0 to 8.5
- **Electrical Conductivity at 25°C micro mhos/cm:** Max. 2250
- **Sodium absorption Ratio:** Max. 26
- **Boron:** Max. 2 mg/l

These criteria serve as benchmarks to assess water quality for various purposes, ensuring the protection of public health, wildlife, and ecosystem integrity while supporting diverse human activities reliant on water resources.

Sr. No.	Locations	Parameters
1.	Admin Building	TDS – 165 ppm EC – 330 μ S/cm pH – 7.28
2.	Library	TDS – 197 ppm EC – 394 μ S/cm pH – 7.35
3.	Academic Building	TDS – 145 ppm EC – 290 μ S/cm pH – 7.33
4.	Girls Hostel	TDS – 175 ppm EC – 354 μ S/cm pH – 7.34
5.	Boys Hostel	TDS – 154 ppm EC – 306 μ S/cm pH – 7.29

Water Consumption in KMC Language University, Lucknow

Details of Water Motor

Sr. No.	Water Motor Location	Pumping Capacity in HP
1.	Academic Block	2 HP
2.	Library	1.5 HP
3.	Girl's Hostel	1.5 HP
4.	Vice Chancellor's House	1.5 HP
5.	Boy's Hostel	1.5 HP
6.	Staff Quarter	7.5 HP
7.	Guest House	20 HP

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Sr. No.	Water Motor Location	Pumping Capacity in HP
8.	Beside the Guest House	1.5 HP
9.	Behind the Admin Block	1.5 HP

Details of Water Motor

Sr. No.	Water Motor Location	No. of water tanks	Capacity (in liter)	Total filling in a day (liter)
1.	Academic Block	21	1000	42000
2.	Admin Block	9	1000	18000
3.	Guest House	9	1000	9000
4.	Gymnasium	2	1000	2000
5.	Library	4	1000	8000
6.	Type – 2 Residence	6	1000	6000
7.	Type – 3 Residence	12	500	6000
8.	Boy's Hostel	9	1000	18000
9.	Girl's Hostel	7	1000	14000
10.	Vice Chancellor's House	2	1000	2000
11.	F. O. House	1	1000	1000
12.	Registrar's House	1	1000	1000
13.	Student's Facility Center	3	1000	3000
14.	RUSA Building	2	10000	20000
15.	Overhead tank	1	200000	200000

2. Waste Management

KMC Language University recognizes the critical importance of sustainable waste management practices to maintain a clean, healthy, and environmentally responsible campus. With a commitment to minimizing our ecological footprint and fostering a culture of environmental stewardship, we have implemented comprehensive waste management strategies aimed at reducing waste generation, promoting recycling and composting, and ensuring proper disposal of hazardous materials.

Waste Reduction Initiatives:

- Awareness Campaigns:** Regular awareness campaigns are conducted to educate students, faculty, and staff about the importance of waste reduction and proper waste disposal techniques. These campaigns emphasize the principles of reduce, reuse, and recycle to encourage behavior change and promote a waste-conscious community.
- Single-Use Plastic Reduction:** KMC Language University has taken proactive steps to reduce the use of single-use plastics on campus. Plastic water bottles, disposable cutlery, and straws have been replaced with sustainable alternatives such as reusable bottles and utensils, reducing plastic waste generation significantly.

3. **Paperless Operations:** Embedding digital processes are gradually transitioning away from paper documentation, and online systems for document generation and conserving resources.

Recycling and Composting Programs:

1. **Recycling Stations:** Conveniently located stations for paper, plastic, glass, and metal recycling. Includes and ongoing education efforts to encourage the separation of recyclable materials from landfill waste.

Hazardous Waste Management:

1. **Proper Disposal Protocols:** Hazardous wastes are managed in accordance with regulations to prevent contamination and protect the environment. Includes ensuring the safe handling and disposal of toxic materials.

Community Engagement and Partnerships:

1. **Collaboration with Local Authorities:** Partner with local government authorities, waste management agencies, and environmental organizations to adopt best practices, leverage resources, and promote sustainable waste management at the local level.
2. **Student-Led Initiatives:** Students are involved in waste reduction and environmental education through recycling competitions, awareness campaigns, and community service projects, fostering a sense of ownership and environmental responsibility.

B. Mishra

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خواجہ میمن الدین چشتی اردو، عربی-فارسی یونیورسٹی
खواجہ مسیم الدین چشتی اردو، عربی-فارسی یونیورسٹی، لکھنؤ
Khwaja Moinuddin Chishti Urdu, Arabi-Farsi University, Lucknow
U.P. STATE GOVERNMENT UNIVERSITY

दिनांक: 10/07/2018

कार्यालय इनाप

विश्वविद्यालय द्वारा माननीय कुलपति जी के आदेशानुसार विश्वविद्यालय में पर्यावरण लेखा
परीक्षा सिमित (Environmental Audit Committee) का गठन तीन वर्षों अथवा
अग्रिम आदेशों तक किया जाता है जिसका विवरण निम्नवत् है—

1. प्रौद्योगिकी विभाग (व्यवसाय प्रबंधन विभाग)
2. डॉ सौबान सईद (उर्दू विभाग)
3. डॉ नलिनी मिश्रा (शिक्षाशास्त्र विभाग)
4. श्री शबीह हैदर (लेखाकार, वित्त कार्यालय)
5. श्री आशुतोष श्रीवास्तव (मंडल अभियंता, पूर्वोत्तर रेलवे बरेली)

(अशोक कुमार अरविन्द)
कुलसचिव

Bmisha

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KHWAJA MOINUDDIN CHISHTI
LANGUAGE UNIVERSITY,
LUCKNOW