

# Green Audit Report

## OBJECTIVES:-

- Energy Audit helps to identify uses of energy for various equipments.
- To check indoor air quality.
- To Manage and Reduce solid waste.
- To dispose hazardous material properly.
- To dispose laboratory waste properly.
- To minimized mold (fungus) growth by proper management of cleaning of campus.
- To prevent loss of water, to conserve water
- To store poisonous pest at safe place.
- To keep campus and ground clean.

## Benefits of a Green Institute Program:

A green institute program is good to protect everyone from environmental risks; it can help save money and increase efficiency. Institute that make environmentally healthy practices as top priority can realize many of the following benefits:-

- Save money through reduced consumption of goods and energy savings.
- Increase efficiency of operations and use of resources.
- Create favourable learning and teaching conditions.
- Generate community goodwill.
- Avoid future liability problems.
- Educate the next generation on the value of caring for the environment.

## 1. Basic Information

Date of energy audit:	2014-2015
Building/Area covered:	All
Persons conducting audit:	Prof. A.G. Gaddamwar, Prof. A. T. Bathe, Prof. D. M. Londe
Normal occupancy hours of building:	8 Hrs
Cleaning times:	8 am to 5 pm

The **Green Audit** has been conducted into several categories including:

1. Energy use
2. Indoor Air Quality
3. Solid Waste
4. Hazardous Materials
5. Laboratory Waste
6. Mold( fungus) Growth
7. Water Consumption
8. Purchasing
9. Pest Management
10. Grounds keeping

## 1. Energy use

Sr. No.	Particular	Yes/No	Remark
1.	Building systems (e.g. Light, fan, exhaust and pumps) are operating efficiently	Yes	
2.	Use LED/CFL Bulbs instead of fluorescent bulbs	Yes	
3.	Lights and fixtures are clean	Yes	
4.	Institute is take advantage of natural light or day lighting.	Yes	
5.	High intensity discharge lights (e.g., high pressure sodium) are used instead of standard fluorescent lights for outdoor areas.	Yes	
6.	Double pane windows and/or windows with a low-emission coating is Installed	Yes	
7.	Lights in unoccupied rooms and machines during non-use hours Turn off	Yes	
8.	Variable speed drives for fans and pumps is installed	Yes	
9.	Use of solar energy	Yes	

## 2. Indoor Air Quality

Sr. No.	Particular	Yes/No	Remark
1.	Ventilation equipment air filters Inspecting regularly and replace as needed.	Yes	
2.	Specify maintenance supplies (paints, finishes, cleaners, caulks, sealants) that are low emitters of potential indoor air contaminants.	Yes	
3.	Spills Clean promptly.	Yes	
4.	Ventilation system is clean and that an adequate amount of outdoor air is supplied to occupied areas.	Yes	
5.	Air intakes of ventilating systems are not in an area where cars or buses idle.	Yes	
6.	Canteen's cooking odours or smoke controlled efficiently.	Yes	
7.	Recessed grills, "walk off" mats and other techniques are used to reduce the amount of dirt entering the building.	Yes	

## 3. Solid Waste

Sr. No.	Particular	Yes/No	Remark
1.	Practice that reduce the waste paper is followed in the institute (e.g., proofing documents on the computer screen before printing; storing final documents on disk rather than making final copies; making two sided copies; printing letters and reports on both sides of the page; and reusing paper that is clean on one side for in-house drafts and message pads).	Yes	
2.	Electronic mail is used to send messages instead of written memos, whenever possible. Encourage employees to save e-mail documents electronically.	Yes	
3.	Researcher refers on-line research material rather than ordering written materials at libraries	Yes	

4.	Share periodicals with associates instead of receiving multiple copies.	Yes	
5.	Donate old or outdated equipment, books or furniture to local community organizations	Yes	
6.	Rechargeable batteries and solar calculators are use	Yes	
7.	Save and reuse boxes for shipping and other uses.	Yes	
8.	Post minutes or other hand-outs on an Intranet site, or circulate them electronically after the meeting	Yes	
9.	Students answer questions on scrap paper.	Yes	
10.	Students bring their lunch in reusable containers	Yes	
11.	Environmentally friendly guidelines Establish for all purchases, including: products made from recycled materials, with minimal packaging; that can be recharged, refilled, or reused; have longer lifetimes; or can be easily repaired	Yes	

#### 4. Hazardous Materials

Sr. No.	Particular	Yes/No	Remark
1.	Raw material is Inspected upon receipt from suppliers	Yes	
2.	Chemicals Store properly to avoid unauthorized use or spills.	Yes	
3.	Purchase only the needed amounts of chemical supplies to avoid disposing of extra, unused materials.	Yes	
4.	Keep lids on containers of liquids to reduce evaporation	--	
5.	"first-in, first-out" policy adopted for expendable materials to keep them from becoming outdated.	Yes	
6.	All purchases have dated, and legible labels	Yes	
7.	Containers are Stack in a way that minimizes the chance for tipping, puncturing or breaking.	Yes	
8.	Do not mix chemical and hazardous wastes with everyday trash, pour them down the drain, or dump them on the ground.	Yes	
9.	Keep storage and work areas clean and well organized	Yes	
10.	Cover waste disposal areas and recycling bins to avoid rainwater infiltration.	---	

#### 5. Laboratory Waste

Sr. No.	Particular	Yes/No	Remark
1.	Conduct a chemical inventory to help eliminate over-purchasing and reduce disposal costs of unneeded, out-of-date chemicals	Yes	
2.	Purchase chemicals in smaller lots and quantities. Delegate purchasing responsibility to one person or a single point of contact	Yes	
3.	Computer simulations, videos, etc. are used for actual experiments.	Yes	
4.	Purchase lab specimens in non-formaldehyde preservatives, whenever possible.	Yes	

5.	A standard labelling procedure is adopted for chemicals and waste	Yes	
6.	Chemicals are Store according to their chemical family, not alphabetically	Yes	
7.	Expired material is returned to supplier/ disposed	Yes	
8.	Periodically inspect stored chemicals for signs of leakage, rusting, peeled labels, poor storage practices, or any other problems.	Yes	

## 6. Mold( fungus) Growth

Sr. No.	Particular	Yes/No	Remark
1.	A regular schedule is establish for inspecting roofs, ceilings, walls, floors and carpeting for water leakage, stains or discoloration, and mold growth or odours.	Yes	
2.	Source of the water problem or leak is fixed to prevent mold growth.	Yes	
3.	Building materials like wood, porous insulation, paper and fabric are Keep dry.	Yes	
4.	Adequate ventilation is Provided to maintain indoor humidity levels.	Yes	
5.	Exhaust fans is Use in cooking, dishwashing and cleaning in food service areas.	Yes	
6.	Standing water in ventilation systems, air conditioning or refrigerator drip pans is avoided	Yes	
7.	Bathrooms (especially around and under sinks) inspecting regularly for signs of standing water, water stains or mold	Yes	
8.	Periodically clean all water storage tanks/reservoirs	Yes	

## 7. Water Consumption

Sr. No.	Particular	Yes/No	Remark
1.	Employee monitor the water uses	Yes	
2.	Students and teachers are encourages to report water leaks to the maintenance staff.	Yes	
3.	Leaks in toilets, taps and pipes is fixright away	Yes	
4.	Equipment and areas, is clean using dry methods (scraping, sweeping and shoveling)whenever possible	Yes	
5.	For washing, high pressure, low volume washing equipment with minimal or no detergents is used.	No	
6.	Water during cooler parts of the day (before 10:00 A.M and after 5:00 P.M.) to minimize evaporation loss.	No	
7.	Drip and other high efficiency irrigation devices is used in lieu of sprinklers.	Yes	
8.	Collect rainwater for irrigating or other non-potable uses	Yes	

## 9. Purchasing

Sr. No.	Particular	Yes/No	Remark
1.	Purchase Energy Star™ copiers, fax machines, computers and printers that power down when not in use.	Yes	
2.	Use vegetable oil or water-based ink for printing	Yes	
3.	Purchase supplies and equipment made with recycled content materials (i.e., paper products, engine oil, paints, office products, carpeting, building materials and outdoor benches/tables).	Yes	
4.	Buy products with less packaging or in returnable containers.	--	
5.	Remanufactured items, such as recharged toner cartridges, re-formatted computer disks and returnable office equipment is purchase	Yes	
6.	Use water-based paints, and non/less-toxic floor cleaners and desk cleaners.	Yes	
7.	Arrange for an expert training by vendors for new, complex equipment.	Yes	
8.	Inspect deliveries on arrival.	---	

## 10. Pest Management

Sr. No.	Particular	Yes/No	Remark
1.	Practice good sanitation and proper maintenance of structure and grounds	Yes	
2.	Check and seal structural cracks where pests can enter	Yes	
3.	Keep lockers and the building clean and dry	Yes	
4.	Fix plumbing leaks and other moisture problems	Yes	
5.	Monitor frequently for signs of pests and keep records of pest populations.	Yes	
6.	Apply the proper amount of product required and wear protective equipment	Yes	
7.	Store pesticides in leak-proof containers in a secure place.	Yes	

## 11. Grounds keeping

Sr. No.	Particular	Yes/No	Remark
1.	Cut grass on regular basis and remove no more than one-third of the grass blade at any one time to maintain good root growth.	Yes	
2.	Keep lawn mower/ cutter blades sharp	Yes	
3.	Increase water penetration into soil by aerating every 2-3 years	Yes	
4.	Preserve local vegetation in place, especially mature trees.	Yes	
5.	Choose trees, bushes and shrubs that require minimal cutting.	Yes	