



# Green Audit Assessment Report

of

## Asian Educational Institute

located at

Sirhind Road, Tehsil and Distt. Patiala



Prepared By:

**M/s. Advance Environ Solution, Patiala**



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## 1.0 About the Institute:

Asian Educational Institute was established in the year 2010 and the institute was affiliated with Punjabi University, Patiala. The institute is a multidisciplinary college rendering educational programs in the field as diverse as Science, Commerce, Humanities, Library and Information Science, Management, Economics, Statistics, Computer Science and Bio-Sciences etc. The institute started its first session for the session year 2010-11.

The management of the institute envisions an institute that fosters students attentiveness towards academics, sports and socio-cultural arena; caters to the pursuit of professional fulfilment via training and placement cell, tech fests and job fairs; makes quality education affordable and accessible to urban, sub-urban and downtrodden students. The college aspires to be a premier institute of scholarship and teaching; to equip students with specialized knowledge in the area of their chosen study with hands-on experience in well-equipped labs, digital library, smart classes, etc. It inspired students for meaningful lives accomplished with common good.

The Management of the institute is very keen to keep the institute clean and green to have no adverse impact on the environment and to ensure the statutory compliance of the environmental laws. In order to ensure same, the Management has constituted an internal Green Audit Team headed by the Principal. The team is emphasizing on the following thematic areas:

1. Waste Minimization and recycling
2. Energy conservation
3. Greening
4. Water Conservation
5. Clean Air
6. General Practices
7. Environmental Legislation
8. Animal Welfare



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The institute is spread over an area of 8.0 acres, the out of which 1.5 acres area is under the green belt, 5.0 acres is covered area with building roads and other utilities and 1.5 acres land area under agricultural use.

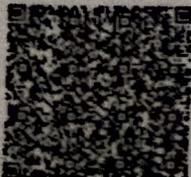
## 2.0 External Green/Environmental Audit:

The institute engaged the services of M/s. Advance Environ Solution, Patiala to carry out environmental/green audit of the institute especially for the various thematic areas related to the environment.

In order to get information about the status of the environmental aspects of the institute and their status of compliance, the site of the institute was visited by Er.S.S.Matharu, Managing Partner of M/s. Advance Environ Solution, Patiala. Discussions were held Dr. Meenu Singh Sachan, who is Principal of the institute as well as head of the Green Audit Team.

The salient features informed by him are as under:

- a. The total sanctioned strength of the students for the different courses being offered by the institute is 650 nos.
- b. At present, about 600 no. of students are studying in the institute in various courses
- c. There is one hostel having 10 rooms and each room is meant for 3 students. Therefore, in the hostel only 30 students can be accommodated.
- d. There is one canteen
- e. 2 no. building blocks having class rooms, different laboratories, seminar/conference hall, administrative office, staff rooms, washrooms and Library etc.
- f. There is one Multipurpose Hall having capacity to accommodate 450 no. of students.
- g. 2 no. septic tanks for treatment of sewage
- h. 1 no. pit for converting solid waste to compost



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- i. One library
- j. 1 no. Tubewell for supplying water for various activities of the institute

### 3.0 Status of Compliance of Thematic Areas:

As per discussions held with Principal of the Institute, the status of compliance of various thematic areas is given as under:

#### 3.1 Waste Minimization and Recycling:

Waste minimization is the need of the hour, which mainly includes the minimization of the waste at source by adopting 5R technique i.e refuse, reduce, reuse, repurpose and lastly recycle to reduce the over burden due to disposal of the wastes. This technique is explained below:

- **Refuse**

Refuse means restraining the use of items, which have potential impact on the environment.

MoEF&CC, Govt. of India has made amendment in the Plastic Waste Management, 2016 vide notification no. GSR 571 (E) Dated 1208.2021 to the effect that manufacture, import, stocking, distribution, sale and use of following single-use plastic, including polystyrene and expanded polystyrene, commodities shall be prohibited with effect from the 1st July, 2022:

- a. ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene (Thermocol) for decoration;
- b. plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation cards, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers.



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Besides above, the State of Punjab has imposed ban on manufacture, import, stocking, distribution, sale and use of Plastic Carry Bags wef 01.04.2016 vide Notification 18.02.2016.

- **Action Taken by the Institute:**

In order to ensure the compliance of above, the institute hold the meetings from time to time with students and staff to make them aware the prohibition imposed on the use of Plastic Carry Bags and Single Use Plastic and their impact on the environment and living beings. Therefore, the institute has completely prohibited:

- The use Plastic Carry Bags wef 01.04.2016.
- The use single-use plastic including polystyrene and expanded polystyrene, commodities wef 01.07.2022.

As informed by the Principal of the institute, as of now, no student is allowed to use plastic carry bags and plastic packaging items and Single Use Plastic items to ensure the compliance of the provisions of the Plastic Waste Management Rules,2016 and imposition of ban imposed by the State Govt. and MoEF&CC.

- **Reduce**

Reduce means reduction in the use of harmful, wasteful, and non-recyclable products. Reducing dependency on these kinds of products results in less waste materials ending up in landfill and the associated negative environmental impacts. So, it is recommended to minimize the use to avoid unnecessary waste i.e print double-sided to cut your waste output in half. Other commonly used items on which focus can be done to reduce are single-use plastics, plastic packaging, organic waste and Styrofoam cups.

In addition focus and emphasis can be given to reduce the following wastes:



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- a. Generation of Used Oil covered under category 5.1 and residue containing oil covered under category 5.2 of Schedule-I of the Hazardous & Other Wastes (Management and Transboundary Movement) Rules,2016
- b. E-Waste covered under the E-Waste Management Rules,2016
- c. Plastic Waste covered under the Plastic Waste Management Rules,2016
- d. C&D Waste Management Rules,2016.

● **Action Taken by the Institute:**

- Judicious use of DG set is ensured, which has resulted in the reduction of frequency of servicing of DG set ,thereby, reduction in the generation of used oil and residue containing in a year.These wastes are handled and managed as per the provisions of the the Hazardous & Other Wastes (Management and Transboundary Movement) Rules,2016 to ensure on impact on the environment, soil and living beings.
- As far as possible the items covered under the E-Waste covered under the E-Waste Management Rules,2016 are not thrown away till these can be used by refurbishing/minor repair work.
- The plastic items not banned by the State Govt./MoEF&CC are minimum used wherever the use is inevitable.
- Since the institute is in operation ,as such, generated of C&D waste is negligible.

● **Reuse**

Single-use plastics have created a "throw-away" culture by normalizing consumer behaviour of using materials once and then throwing them away. The rate at which



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we consume plastics has become unimaginable and the plastic crisis has become one of the world's greatest environmental challenges. In an effort to reduce waste, reuse items throughout the workplace instead of buying new ones. Replace all of the single-use eating utensils, Styrofoam cups, water bottles and paper plates with compostable or reusable alternatives.

- **Action Taken by the Institute:**

- The students and staff are encouraged to use the plastic items rather than throwing away by way of repairing/refurbishing.
- used Judicious use
- Every possibility is explored to reuse the items covered under the E-Waste covered under the E-Waste Management Rules,2016.
- The plastic items not banned by the State Govt./MoEF&CC are minimum used wherever the use is inevitable.

- **Repurpose**

For every item that can't be refused, reduced or reused, try repurposing it. This is also known as up-cycling. If we look into the matter carefully and meticulously, many common office products can serve more than one purpose. Sometimes it requires using some creativity, but the possibilities are endless. Try using wasted printer paper for scrap paper, cardboard boxes for storing supplies, binder clips to hold power cords and chargers in place and even mason jars, coffee mugs and tin cans for holding pens and pencils. Some of the best places to start with this is collecting any packaging such as cardboard boxes and packaging material to keep for storing other items from the worksite. Designate an area of the institute as an Upcycle Station for



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collecting and storing supplies. The students must be encouraged to add items to such created station for their repurpose.

- **Action Taken by the Institute:**

The students and staff are encouraged to use the waste items for their other intended use for which the same is fit to use rather than making them a part of the waste.

- **Recycle**

Last but definitely not least: recycle. Once you've gone through all of the other R's, recycling is the most environmentally friendly waste disposal method

- **Action Taken by the Institute:**

The students and staff are encouraged to collect the entire recyclable materials, which includes cardboard, paper, plastics, glass and organics and with campaign the institute is able to become as green institute.

### 3.2.1 Energy conservation

To achieve conservation of energy, appropriate design of a building is of paramount importance. Accordingly, there is need to incorporate the guidelines of Punjab Energy Conservation Building Code, for the building structures.

- **Action Taken by the Institute:**

Effective measures have been incorporated to minimize the energy consumption in following manners:

- Extensive use of LED based lighting
- Putting fire pumps on terrace (to reduce power rating)
- Use of high efficiency motors
- Solar Energy based lighting in the outer area of the institute



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## Suggestions:

Although the institute has made efforts to conserve the energy, but the institute has been advised to replace the internal lighting with LED and to use solar lighting in the outer area of the campus to save the energy produced with fossil fuel, to the extent possible.

## 3.3 Greening

The total area of the institute is 8.0 acres, out of which 1.5 acres of land area has been developed as land scaping and remaining 1.5 acres is presently being used for agriculture purposes. Besides, trees have been planted along the boundary wall, which are now fully grown. Therefore, the institute has developed 37.5% of the total area as green belt, which is as per norms fixed by the Development Authorities of the State. The green belt helps to attenuate noise as well as air pollution being generated in the campus of the institute due to various activities.

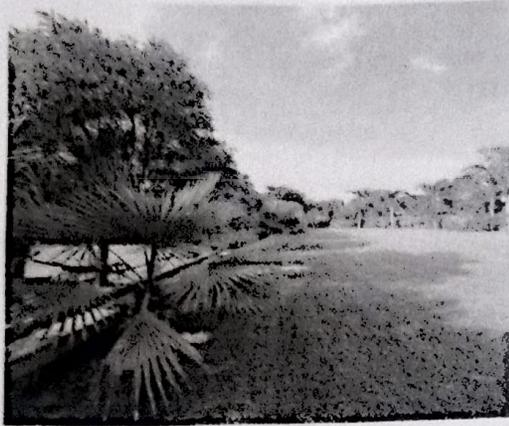
The site plan showing the green area is attached herewith as Annexure-I. Photograph of green area is given as under:



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### 3.4 Water Conservation

For meeting the water requirement, the institute has installed 1 no. submersible tubewell. The total sanctioned strength of the students for the different courses being offered by the institute is 650 nos, but at present, about 600 no. of students are studying in the institute in various courses. There is one hostel having 10 rooms and each room is meant for 3 students. Therefore, in the hostel only 30 students can be accommodated. The water consumption calculated based on the various factors, is given in Table-I.



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**Table-I**

| Sr. No.      | Description                 | Water Consumption Rate (Litres/ Capita/day)                 | Total Water Consumption (KLD)                        |  |
|--------------|-----------------------------|---|--|--|
|              |                             |   | Full Strength  | Present Strength                                 |
| 1.           | Campus Day scholar Students | 45  | 620X45<br>=27900lts/day<br>=27.9KLD                  | 600X45<br>=27000lts/day<br>=27KLD                |
| 2.           | Hostler Students            | 135   | 30x135<br>=4050lts/day<br>=4.05KLD                   | 30x135=4050lts/day<br>=4.05KLD                   |
| 3.           | Canteen                     | 70  | 124x70<br>=8680lts/day<br>=8.68KLD                   | 120x70=8400 ltr/day<br>=8.4 KLD                  |
| 4.           | Irrigation of Green Area    | 5.5lt/m <sup>2</sup> /day in summer season (Highest demand) | 6210 sqm(1.5 acre)x5.5<br>=34155lts/day<br>=34.15KLD | 6210 sqm(1.5 acre)x5.5<br>=34155lts<br>=34.15KLD |
| <b>Total</b> |                             |   | <b>74.78 KLD</b>                                     | <b>73.6KLD</b>                                   |

The total water consumption as of now is 73.6KLD and at the full strength it becomes 74.78KLD.

Measures to be adopted for minimization of water consumption:

- Low flow and push type taps installed.
- Adequate no. of urinals for urination with auto cleaning system.
- Regular checking and repairing of taps and complete water supply system to rule out the possibility of water leakages.
- Auto start and stopping system for the water pump for rule out the possibility of overflow of water from the overhead water storage tank.

**Suggestions:**

- Replacing the conventional type Urinals with waterless Green Urinals.



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- II. Use of low water closet, which requires only 12 lt/day for one time defecation and five times urination, in place of conventional water closet to save 30lt/day of water for one person.
- III. The institute is required to install water meter on the tubewell and to maintain the daily record of the readings of the same to ascertain the actual quantity of water pumped from the ground.

### 3.5 Sewage Generation, its Treatment and Disposal Arrangements:

#### 3.5.1 Sources of Wastewater Generation and Quantification of wastewater:

The sources of generation of sewage are enumerated as under:

- Water consumed by the students & staff
- Use of water in the canteen
- Use of water in the hostel etc.

The quantification of generation of sewage is done in Table-II:

Table-II

| Sr. No.      | Description                 | Total Wastewater Generation (KLD)   |                                    |
|--------------|-----------------------------|-------------------------------------|------------------------------------|
|              |                             | Full Strength                       | Present Strength                   |
| 1.           | Campus Day scholar Students | $27.9 \times 0.8 = 22.32\text{KLD}$ | $27 \times 0.8 = 21.6\text{KLD}$   |
| 2.           | Hostler Students            | $4.05 \times 0.8 = 3.24\text{KLD}$  | $4.05 \times 0.8 = 3.24\text{KLD}$ |
| 3.           | Canteen                     | $8.68 \times 0.8 = 6.94\text{KLD}$  | $8.4 \times 0.8 = 6.72\text{KLD}$  |
| <b>Total</b> |                             | <b>32.5KLD</b>                      | <b>31.56KLD</b>                    |

The maximum generation of sewage at full strength will be to the tune of 32.5 KLD, but actual generation of wastewater as of now is 31.56KLD.

#### 3.5.2 Treatment System Provided and Disposal Mechanism of Treated Wastewater:

The institute has provided two septic tanks to treat the sewage and the treated sewage is discharged for irrigation of green area.



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### 3.5.3 Characteristics of Sewage as per CPHEEO manual

In the manual prepared by Central Public Health and Environmental Engineering Organization (CPHEEO), the characteristics of the untreated sewage has been discussed, which is given in Table-III:

Table-III

| Sr. No.                            | Parameters   |                                   | Range                        |                                  |
|------------------------------------|--|-----------------------------------|------------------------------|----------------------------------|
| 1                                  | Biochemical oxygen demand, BOD                       |                                   | 45-54gm/capita/day           |                                  |
| 2                                  | Chemical oxygen demand, COD                          |                                   | 1.6-1.9 times BOD            |                                  |
| 3                                  | Total organic carbon, TOC                            |                                   | 0.6-1.0 times BOD            |                                  |
| 4                                  | Total solids, TS                                     |                                   | 170-220 mg/l                 |                                  |
| 5                                  | Suspended solids, SS                                 |                                   | 70-145 mg/l                  |                                  |
| 6                                  | Grit (inorganic, 0.2 mm and above)                   |                                   | 5-15 mg/l                    |                                  |
| 7                                  | Grease   |                                   | 10-30 mg/l                   |                                  |
| 8                                  | Alkalinity as calcium carbonate (CaCO <sub>3</sub> ) |                                   | 20-30 mg/l                   |                                  |
| 9                                  | Chlorides  |                                   | 4-8 mg/l                     |                                  |
| 10                                 | Total nitrogen N                                     |                                   | 6-12 mg/l                    |                                  |
| 11                                 | Organic nitrogen                                     |                                   | 0.4 mg/l as total N          |                                  |
| 12                                 | Free ammonia   |                                   | 0.6 mg/l as total N          |                                  |
| 13                                 | Nitrate  |                                   | 0.0-0.5 mg/l as total N      |                                  |
| 14                                 | Total phosphorus                                     |                                   | 0.6-5 mg/l                   |                                  |
| 15                                 | Organic phosphorus                                   |                                   | 0.3 mg/l as total P          |                                  |
| 16                                 | Inorganic (ortho- and poly-phosphates)               |                                   | 0.7 mg/l as total P          |                                  |
| 17                                 | Potassium (as potassium oxide K <sub>2</sub> O)      |                                   | 2.0-6.0 mg/l                 |                                  |
| Microorganisms in 100 ml of sewage |  |                                   |                              |                                  |
| 18                                 | Total bacteria                                       | 10 <sup>9</sup> -10 <sup>10</sup> | Protozoan cysts              | Up to 10 <sup>6</sup>            |
| 19                                 | Coliforms  | 10 <sup>6</sup> -10 <sup>8</sup>  | Helminthic eggs              | Up to 10 <sup>3</sup>            |
| 20                                 | Faecal   | 10 <sup>5</sup> -10 <sup>6</sup>  | Virus (plaque forming units) | 10 <sup>2</sup> -10 <sup>4</sup> |
| 21                                 | Salmonella   | 10 <sup>1</sup> -10 <sup>4</sup>  |                              |                                  |



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### 3.5.4 Standards of Treated Sewage laid Down by MoEF&CC and WHO

- **MoEF&CC Standards**

The MoEF&CC vide notification no. GSR 1265 (E) dated 13.10.2017 has laid down standards for discharge of treated domestic wastewater, which are given in Table-IV:

Table-IV

| Sr. No. | Parameter       | Standards for New STPs/ Effluent Characteristics at the final outlet of the STP |
|---------|-----------------|---|
| 1.      | pH              | 6.5 to 9.0  |
| 2.      | BOD             | 30mg/l  |
| 3.      | TSS             | 100mg/l   |
| 4.      | Faecal Coliform | 1000 MPN/100 ml   |

- **WHO standards**

WHO has laid down standards, in the year 1989, in respect of F.Coli for use of treated wastewater for agriculture purpose for the crops likely to be eaten uncooked, sports fields and public parks. The prescribed standards for this parameter is 1000 MPN/100 ml in case of wastewater is to be used for above mentioned intended use.

**Suggestions:**

1. Although the institute has installed 2 no. septic tanks for treatment of the sewage, but in order to get good quality of treated sewage, there is need to install Anaerobic Baffled Reactor (ABR) as it has merits over the conventional type septic tank. The treated sewage after collection in a collection tank can be utilized for irrigation of horticulture area as well as agriculture purposes. Thereby, reducing the usage of fresh water as calculated in Table-I.



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2. Had the institute provided dual plumbing, the treated sewage would have been used for flushing purpose?

### 3.6 Clean Air

The main source of air pollution is the movement of vehicles through which transportation of students and staff is facilitated. However, there is no other major source of air pollution except use of 1 no. DG set of 460 KVA during failure of power supply of PSPCL. This DG set is fitted with a proper canopy to contain the sound pressure level within the prescribed limits and with proper silencer. In the canteen only LPG is used as fuel. Therefore, there is insignificant impact on the air environment.

#### Suggestions:

In order to control the generation of vehicular exhaust emissions/DG set gases, it is suggested to take the following mitigation measures:

- The roads within the premises of the institute will be cleaned on regular basis.
- All transportation vehicles shall carry a valid PUC (Pollution Under Control) certificate.
- Timely and proper servicing & maintenance of vehicles shall be carried out.
- Timely servicing of the DG set and use of low sulphur fuel.
- Maintaining adequate green belt to attenuate the air pollution.

### 3.7 Solid Waste:

The solid waste being generated by the institute is required to be handled as per the provisions of the Solid Waste Management Rules, 2016. The definitions given in rule 3 of the said rules relevant to the institute are given as under:

**"biodegradable waste "** means any organic material that can be degraded by micro-organisms into simpler stable compounds;



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"composting" means a controlled process involving microbial decomposition of organic matter;

"non-biodegradable waste" means any waste that cannot be degraded by micro organisms into simpler stable compounds;

"segregation" means sorting and separate storage of various components of solid waste namely wet waste including agriculture and dairy waste, dry waste including recyclable waste, non-recyclable combustible waste, sanitary waste and non-recyclable inert waste, special care waste, and construction and demolition waste

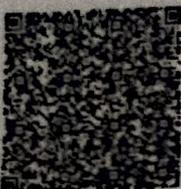
"bulk waste generator" covers the entities, given below, if they satisfy at least one of the following criterion; (i) buildings with floor area of 20,000 sq.m. or above; or (ii) water consumption of 40000 litres per day; or (iii) solid waste generation of 100 kg per day, namely:

(a) Institutional users including buildings occupied by the:

- (i) Central Government departments or undertakings, State government departments or undertakings;
- (ii) local bodies;
- (iii) public sector undertakings or private companies;
- (iv) schools, colleges, universities, other educational institutions; and
- (v) community places or like;

(b) Commercial users including,-

- (i) commercial establishments including railways, bus stations or depots, airports, ports;
- (ii) industrial units and industrial areas;
- (iii) malls, multiplexes;
- (iv) hotels;
- (vi) hospitals, nursing homes;



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- (vi) hostels;
- (vii) wholesale markets, including "Mandis", for agricultural and horticultural produce, fish and meat;
- (viii) Stadium, sports complexes;
- (ix) Community halls, convention halls, auditorium;
- (x) Marriage or banquet halls;
- (xi) conference centres, Expo centres, exhibition areas; and
- (xii) tourist spots.

(c) Residential societies.

The solid waste is generated from the different activities of the institute has been calculated based on inventory of actual generation, which are enumerated in Table-V

Table-V

| Sr. No. | Source of generation                     | Total Generation of Solid Waste | Total Generation of Solid Waste |
|---------|--|---------------------------------|---------------------------------|
|         |  | Full Strength                   | Present Strength                |
| 1.      | Used Papers                              | 5 Kg/day                        | 5 Kg/day                        |
| 2.      | Left over of the eating from the canteen | 5 Kg/day                        | 5 Kg/day                        |
| 3.      | Dry leaves                               | 4kg/10 days                     | 4kg/10 days                     |
| 4.      | Cutting Grass                            | 25kg/month                      | 25kg/month                      |

The institute has provided one pit of size 6'x6'x5' for conversion of solid waste into compost.

The compost so produced is used in the green area.

**Suggestions:**

- I. There is need to construct 2 no. honey combed pits of size 6'x6'x5' made of brick masonry for aerobic digestion of the solid waste in a better way and to use the compost in the green area. The pit should be constructed under the shed to avoid entry of rain water



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resulting into generation of leachate. The floor of the pits should be pukka one for collection of leachate in a small pit. The leachate should be sprayed on the waste to enhance the digestion activity. The systematic construction of honey combed aerobic pits is shown in Figure-I.

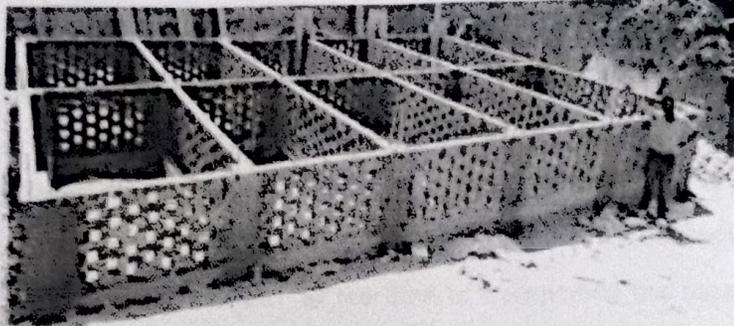


Figure-I

- II. There is need to maintain C:N to the tune of 30, but in no case it should not be below 20 for proper aerobic digestion of the waste in the shortest period.

### 3.8 Hazardous Waste:

DG set has been installed to meet the power requirement only during the failure of power supply of PSPCL, which happens only few hours in a year. Therefore, the DG set is operated only as and when needed to meet the power requirement. From the servicing of the DG set, which is based on its operation hours, used oil is generated which is covered under category 5.1 of the Hazardous & Other Wastes(Management and Transboundary Movement) Rules,2016.As informed to the consultancy firm, the used oil as and when generated is kept in a separate earmarked room. This oil is sold out only to the registered recyclers having valid statutory clearances required under the Environmental Laws. However, there is no record of generation of hazardous waste of category 5.2.



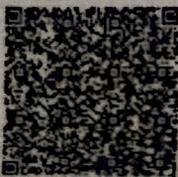
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**Suggestions:**

- a. The used oil pertaining to category 5.1 and residue containing oil covered under category 5.2 of Schedule-I of the Hazardous & Other Wastes (Management and Transboundary Movement) Rules,2016 of the Hazardous & Other Wastes(Management and Transboundary Movement) Rules,2016 as and when generated, should be stored in a leakproof container marked with a slip mentioning the date of its generated, approximate quantity and category of waste.
- b. The institute shall maintain record of the manifest form issued by the registered recycler/operator of common TSDF at the time of transporting the hazardous waste, date of generation of waste and its quantity.
- c. The institute shall sell the used oil only to the registered recyclers having valid statutory clearances required under the Environmental Laws.
- d. A 'Danger' sign must be affixed outside the dedicated room in which the used oil is stored.
- e. The institute shall maintain records of hazardous waste generated in Form-3 as required under rule 6(5) Hazardous & Other Wastes (Management and Transboundary Movement) Rules,2016.
- f. The institute shall file annual returns of hazardous waste generated in Form-4 as required under rule 6(5) Hazardous & Other Wastes (Management and Transboundary Movement) Rules,2016, to the PPCB before 30<sup>th</sup> June following the financial year.
- g. The institute shall affix environmental data board of size 6'x4' outside the main gate, for indicating environmental data. The environmental data board is given in **Table-VI**.



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### 3.9 E waste:

As per Rule 3(c) of the E-Waste Management Rules,2022,bulk consumer' means any entity which has used at least one thousand units of electrical and electronic equipment listed in Schedule I, at any point of time in the particular Financial Year and includes e-retailer. Therefore, the institute is not covered under the definition of bulk waste generator, however, the institute is required to comply with the provisions of rule 9 of the E-Waste Management Rules,2016.

As informed to the consultancy firm, E-waste as and when generated, is given to the E-waste collection Centre/facility.



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**Suggestions:**

The institute shall maintain records of e-waste generated.

**3.10 Construction and Demolition Waste:**

The Construction and Demolition Waste is reused for the intended use to avoid any environmental impact to comply with the provisions of the Construction and Demolition Waste Management Rules,2016.

**3.11 Plastic Waste:**

The plastic waste generated in the institute is required be handled as per the provisions of the Plastic Waste Management Rules,2016.The State Govt. has imposed ban on the manufacture, usages, sale and use of plastic carry bags wef 01.04.2016. Therefore, the institute is required not to allow any student and staff to use plastic carry bags. However, the compostable carry bags of any thickness can be used as per mandate of the said rules. MoEF&CC, Govt. of India has made amendment in the Plastic Waste Management,2016 on 12.08.2021 to the effect that manufacture, import, stocking, distribution, sale and use of following single-use plastic, including polystyrene and expanded polystyrene, commodities shall be prohibited with effect from the 1st July, 2022.Some of the definitions relevant to the institute as defined in rule 3 of the Plastic Waste Management Rules,2016 are given as under:

3(b) "brand owner" means a person or company who sells any commodity under a registered brand label;

3(e) "compostable plastics" mean plastic that undergoes degradation by biological processes during composting to yield CO<sub>2</sub>, water, inorganic compounds and biomass at a rate consistent with other known compostable materials, excluding conventional petro-based plastics, and does not leave visible, distinguishable or toxic residue;



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- 3(h) "extended producer's responsibility" means the responsibility of a producer for the environmentally sound management of the product until the end of its life;
- 3(k) "importer" means a person who imports or intends to import and holds an Importer - Exporter Code number, unless otherwise specifically exempted.
- 3(l) "institutional waste generator" means and includes occupier of the institutional buildings such as building occupied by Central Government Departments, State Government Departments, public or private sector companies, hospitals, schools, colleges, universities or other places of education, organisation, academy, hotels, restaurants, malls and shopping complexes;
- 3(n) "multi-layered packaging" means any material used or to be used for packaging and having at least one layer of plastic as the main ingredients in combination with one or more layers of materials such as paper, paper board, polymeric materials, metalized layers or aluminium foil, either in the form of a laminate or co-extruded structure;
- 3(s) "producer" means persons engaged in manufacture or import of carry bags or multilayered packaging or plastic sheets or like, and includes industries or individuals using plastic sheets or like or covers made of plastic sheets or multi-layered packaging for packaging or wrapping the commodity;
- 3(va) "Single-use plastic commodity" mean a plastic item intended to be used once for the same purpose before being disposed of or recycled"

#### Suggestions

- a. The institute shall ensure not to allow any student and staff to use plastic carry bags banned by the Govt. of Punjab wef 01.04.2016.
- b. The institute may encourage the use of the compostable carry bags of any thickness admissible under the Plastic Waste Management Rules,2016.



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- c. The institute may encourage the use of carry bags made from clothes/recycled paper.
- d. The institute is required to ensure the ban on single use plastic item wef 01.07.2022 as per amendment made 12.08.2021 in the Plastic Waste Management Rules,2016.
- e. The multi layered plastic/plastic sheet waste generated in the institute should be given to the brand owner/producer/importer for its environmentally sound disposal.

**3.12 Statutory Clearances:**

The detail of the statutory clearance required to be obtained under the various environmental laws/rules and their present status, is given in Table-VII.

**Table-VII**

| Sr. No. | Description  |
|---------|--|
| 1.      | Consent u/s 25/26 of the Water Act,1974  |
| 2.      | Consent u/s 21 of the Air Act,1974   |
| 3.      | Environmental Audit Report rule 14 of the Environment Protection Rules,1986  |
| 4.      | Authorization under the Hazardous & Other Wastes (Management and Transboundary Movement) Rules,2016  |
| 5.      | Maintaining records of hazardous waste generated in Form-3 as required under rule 6(5) Hazardous & Other Wastes (Management and Transboundary Movement) Rules,2016 |
| 6.      | Filing of annual returns of hazardous waste generated in Form-4 as required under rule 6(5) Hazardous & Other Wastes (Management and                               |



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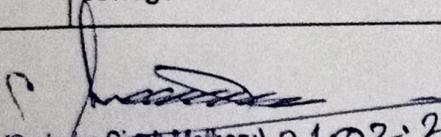
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|    |   |
|----|---|
|    | Transboundary Movement) Rules,2016, to the PPCB before 30 <sup>th</sup> June following the financial year   |
| 7. | Maintaining records of e-waste generated in Form-2 as required under rule 9(2) of the E-Waste Management Rules,2016   |
| 8. | Filing of annual returns of e-waste generated in Form-3 as required under rule 9(3) of the E-Waste Management Rules,2016, to the PPCB before 30 <sup>th</sup> June following the financial year |
| 9. | Ensure the compliance of prescribed standards for discharge of treated sewage   |

  
(Surinder Singh Matharu) 21.02.2026  
Managing Partner  
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