

# PHD CHAMBER ENVIRONMENT COMMITTEE HELP DESK

## Areas of Working

### **1. Environmentally sound Solutions to the Hazardous and Non Hazardous Waste problems of the Industry**

There is generation of logged Hazardous waste in the Indian Industry to the extent of **8.04 Million tons. 40 Million Tons per annum** of Municipal Solid Waste with around **300 Million Tons per annum** of agricultural waste. These are increasing at the same rate at which the country GDP grows.

To take care of these the Federal and State Authorities have identified various TSDFs all over the country. But their capacity falls short of the requirement thus leaving a large volume unattended or dumped or incinerated while generating toxics dangerous for the health of the population around. This gap is ever increasing and the unattended material dumps also keep growing at alarming rates.

The absolute quantities are enormous. A very simple calculation for Hazardous waste for the last 25 years with a proper discharge at even 33% (which is a very optimistic figure) and an average rate of production at 6 Million Tons per annum leaves the Society and the country burdened with an untreated dump size of **75 Million tons and still growing.**

But solutions are available with the high energy intensive industries that can take care of these in an environmentally efficient manner. And more TSDFs are coming up and the policy of providing an environmentally safe haven for the industrial waste by the industry is the responsibility that needs to be addressed and its cost dovetailed into the product.

Just like the disposal cost of tyres and cars are dovetailed into the purchase price of cars and tyres abroad.

Any industry has any problem materials, then they can approach this help desk and we shall guide you on how to go about providing an environmentally safe method of taking care of the same, how so ever difficult the waste may be including Cyanide waste, POPS and PCBs.

Approach us and we shall help you find a simple and an environmentally friendly solution.

### **2. Green Buildings**

**‘A Green building should create delight when entered, serenity and health when occupied and regret when departed’** – Perhaps this is one of the most inspiring definitions of a Green building, articulated in the book ‘Natural Capitalism’.

About one third of worldwide greenhouse gas emissions come from energy used in buildings, and two recent articles portray India and Europe as opposing poles in the struggle to rein in these environmental costs. The situation in India defies not just environmental sanity but seemingly all economic logic. The nation faces an ongoing electricity crisis, as booming development stresses an already rickety power system. In the suburb of Gurgaon, supply lags demand by 20%.

When the pre historic man constructed a hut for the first time using bamboo trees and coconut leaves to protect himself from sun and rain, he was starting to exploit nature for his humble needs. Apart from killing the trees he also disturbed the natural habitat of the insects and birds in those trees and interfered in the cycles of nature. That was a beginning. Now, it is beyond imagination, how much damage has been inflicted on earth by the construction of various types of buildings using sand and water from the rivers, stones from the mountains, cement manufactured from the ingredients dug from the land. In addition, carbon emission from the buildings and manufacture of construction materials warm up the air and space.

But, after getting conscious about the environment and after feeling the environmental responsibilities, the way our people try to address this problem is wonderful. **One of the intelligent initiatives is the concept of “Green Buildings”.**

The concept of Green Buildings envision a new approach to save water, energy and material resources in the construction and maintenance of the buildings and can reduce or eliminate the adverse impact of buildings on the environment and occupants. Some of the salient features of a Green Building are:

- Minimal disturbance to landscapes and site condition
- Use of Recycled and Environmental Friendly Building Materials
- Use of Non-Toxic and recycled/recyclable Materials
- Efficient use of Water and Water Recycling
- Use of Energy Efficient and Eco-Friendly Equipment
- Use of Renewable Energy
- Indoor Air Quality for Human Safety and Comfort
- Effective Controls and Building Management Systems

With the growing awareness on green buildings, the green building movement is well poised to reach greater heights. The penetration of green building concepts and the quantum jump in the green building footprints offers many challenges and at the same time presents tremendous opportunities. In our country the stakeholders of the construction industry need to be well equipped to measure up to these opportunities. As more green building activities are being initiated to further green the movement, the country is well positioned to emerge as one of the world leaders in green buildings.

### **3. Air Pollution EN/IN Environment**

A clean air supply is essential to our own health and that of the environment. But since the industrial revolution, the quality of the air we breathe has deteriorated considerably - mainly as a result of human activities. Rising industrial and energy production, the burning of fossil fuels and the dramatic rise in traffic on our roads all contribute to air pollution in our towns and cities which, in turn, can lead to serious health problems.

Smog hanging over cities is the most familiar and obvious form of air pollution. But there are different kinds of pollution—some visible, some invisible—that contribute to **Global Warming**. Generally any substance that people introduce into the atmosphere that has damaging effects on living things and the environment is considered air pollution.

Carbon dioxide, a greenhouse gas, is the main pollutant that is warming Earth. Though living things emit carbon dioxide when they breathe, carbon dioxide is widely considered to be a pollutant when associated with cars, planes, power plants, and other human activities that involve the burning of fossil fuels such as gasoline and natural gas. In the past 150 years, such activities have pumped enough carbon dioxide into the atmosphere to raise its levels higher than they have been for hundreds of thousands of years. Other greenhouse gases include methane—which

comes from such sources as swamps and gas emitted by livestock—and chlorofluorocarbons (CFCs), which were used in refrigerants and aerosol propellants until they were banned because of their deteriorating effect on Earth's ozone layer.

Industrialized countries have worked to reduce levels of sulfur dioxide, smog, and smoke in order to improve people's health. But a result, not predicted until recently, is that the lower sulfur dioxide levels may actually make global warming worse. Just as sulfur dioxide from volcanoes can cool the planet by blocking sunlight, cutting the amount of the compound in the atmosphere lets more sunlight through, warming the Earth. This effect is exaggerated when elevated levels of other greenhouse gases in the atmosphere trap the additional heat.

Most people agree that to curb global warming, a variety of measures need to be taken. On a personal level, driving and flying less, recycling, and conservation reduces a person's "**carbon footprint**"—the amount of carbon dioxide a person is responsible for putting into the atmosphere.

On a larger scale, governments are taking measures to limit emissions of carbon dioxide and other greenhouse gases. One way is through the Kyoto Protocol, an agreement between countries that they will cut back on carbon dioxide emissions. Another method is to put taxes on carbon emissions or higher taxes on gasoline, so that people and companies will have greater incentives to conserve energy and pollute less.

#### **4 Regulatory Guidelines : Salient Features of Prominent Rules/ Laws are:**

##### ***( I ) Consent to Establish (popularly known as NOC) and EIA conducted for Environment Clearance***

Filing of Application to State Pollution Control Board after getting Environment Clearance from **MoEF or SEIAA.**

##### ***( II ) Consent to Operate under Water (Prevention & Control of Pollution) Act- 1974 & Amendments***

Under section-25 ,Consent to operate is to be obtained for proposed industrial activities. Implementation and monitoring of conditions imposed in Consent especially complying standards for discharge of effluent.

##### ***( III ) Consent to operate under Air (Prevention & Control of Pollution )Act -1981 & Amendments***

Under section 21 consent is to be obtained for which Board can put conditions for control of Pollution which include fugitive emissions, stack emissions and ambient air quality. These conditions are to be complied

##### ***( IV ) Water (Prevention & Control of Pollution ) Cess Act 1977 & Amendments***

Industry to furnish returns on water consumption and to fix meters for purpose of measuring water consumption. Industry to pay Cess on water consumption as per rates as prescribed for different categories of consumption. .Industry to get rebate if there is compliance of conditions of consent under Water Act.

***( V ) Compliance Under Manufacture, Storage & Import of Hazardous Chemicals Rules- 1989 & Amendments***

Under these rules Occupier has some responsibilities which should to be complied , prominent amongst those are under:-

- Notification of Major Accidents to be given to concerned authorities.
- To submit information of site, carrying activities involving Hazardous Chemicals
- To prepare and submit Safety and Safety Audit reports, On Site & Off Site Emergency Plans.

***( VI ) Compliance Under Hazardous Waste ( Management & Handling ) Rules- & 1989 & Amendments***

Responsibilities of Occupier handling Hazardous Waste are to apply and obtain Grant of Authorization and for it's compliance requirements are as under:-

- Provision of properly designed Storage, Treatment, Transportation & Disposal facilities.
- Adopting reuse, recycling and reprocessing practices resulting in minimization of waste
- Following of prescribed procedures for identifying, packaging & labeling before transporting, importing, exporting hazardous wastes.
- Maintaining of records.

***( VII ) Compliance Under EPA for preparation & submission of Environment Statement***

This is an Audit in the form of comparative statement (yearly basis ) with regards to consumption of raw materials, power, water and quantum of discharge of pollutants ( in terms of pollution load of water / air / solid & hazardous wastes )

***( VIII ) Compliance of Noise Pollution***

Noise pollution can be defined as undesired sound without value and of unconcerned , obnoxious and disturbing nature. Excess noise pollution is harmful to human physical & mental health, organisms & eco system as well as disruptive to environmental quality.

Keeping this under consideration MoEF has defined Guide lines under EPA which cover Noise standards for Ambient Air Quality, Work Place and Sources ( Automobiles / D G Sets / Compressors / Blowers and other machines). Acoustic enclosures and noise suppressors are to be provided to maintain prescribed standards.

***( IX ) Compliance Under Public Liability Insurance Act***

It covers liabilities of industry in case of damage caused by accidents, toxic release etc. due to malfunctioning or negligence at industrial activities.

**( X ) Factory Act**

Broadly it is concerned with work environment, safety and health of employees and people in the vicinity

**5. Water and Waste water Treatment and abatement of Water and Air Pollution**

Prominent areas of coverage are:-

- (I) Monitoring and Operation of Water treatment plant for drinking & process ( including Boiler Feed /Cooling Towers etc.) purposes.**
- (II) Monitoring & Operation of Industrial waste water treatment plants attached to following production / process plants**

- Vanaspati & Refined Oil
- Chlor- Alkali
- Stable Bleaching Powder
- Thermal Power
- Super Phosphate
- Active Earth & Alum
- Sulfuric Acid
- Sugar and Distillery
- Pulp & Paper
- Tanneries
- Plywood

**( III ) Designing / Auditing / Operating Physico- Chemical cum Biological Treatment plants for various sectors**

**( IV ) Designing / Minimising waste/ Attaining Zero Discharge status ( For some select sectors ) and preparation of Adequacy Reports of (a) ETPs (b)Air Pollution Control Systems ( Fugitive / Ambient Air Quality / Stack Emissions )and (c ) Noise Pollution Control systems ( DG SETS / Blowers etc. ) for following sectors**

- Dyeing ( Textile )
- Metal Fabrication / Metal Finishing ( Pickling , Anodizing / Heat Treatment / Electro – Plating )
- Foam Rubber
- Plastic
- Pharmaceuticals
- Hotel & Restaurants
- Automobile Service Stations

**( V )Operation and Auditing of CETPs ( Common Effluent Treatment Plants ) and Domestic Waste Water Treatment Plants.**

**( VI ) Environment Monitoring Laboratory for water and air discharges as well as for R &D Activities wrt Optimisation of Chemical Treatments**

## **6. Solid Waste Management**

1. Objective to create awareness among stake holders
2. Create the data base of various organizations involved – Institutions, recyclers, m/c manf., Bin and bag manufacturers
3. To place copy of various notifications related to solid waste management in the web
4. To consolidate the FAQs on solid waste management in the web
5. To arrange programmes in co ordination with such organizations who are already doing
6. To keep few standard presentations for ready reference
7. To keep various press clippings, information thru internet on the issues elsewhere in the world
8. To keep linkages of Envis site and other sites which can provide information on SWM.
9. To keep the calendar of events on SWM for the year with a brief note on the same

## **7 ENERGY AUDIT**

The efficient usage of energy is one of the top objectives of the national policy on energy security and reduction of green house gas emissions. The Energy Conservation Act 2001 is for efficient use of energy and its conservation and the matters connected therewith or incidental thereto. The energy audit provides a detail account of energy consumption against different energy usages. As per the Act, Energy Audit is defined as, “the verification, monitoring and analysis of use of energy including submission of technical report containing recommendations for improving energy efficiency with cost benefit analysis and an action plan to reduce consumption”. The energy audit determines the ways to reduce energy consumption by adopting energy conservation measures identified with suitable technologies, by deciding an appropriate energy mix, by exploring the feasibility of using renewable energy resources and by chalking out an action plan, in the order of priority, for implementation. The scope of energy audit depends upon the type of industrial or commercial building facility, the record of monthly energy bills and by setting a goal of energy saving by drawing a comparison between energy consumption and a bench mark, as applicable to the type of facility. The energy cost saving is one of the benefits that would be achieved after implementation of energy conservation measures. In the process, other benefits such as conservation of natural resources and reduction in carbon emissions are also realized. For recognition of the achievement of energy saving, the facility owners may apply, for energy star rating (presently available for certain categories of commercial buildings) or for, National Energy Conservation Award, from Bureau of Energy Efficiency.

There is a growing concern among the members towards energy savings. The simple walk through surveys to identify and implement low cost measures may no longer be available for a particular facility. However, there is need to explore every opportunity for saving energy and that requires significant effort. The members are encouraged to conduct energy audit either departmentally or through a professional external agency. The members may contact PHD Chamber of Commerce & Industry for any help to start with energy audit and to set an energy saving goal.

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