

Pollution Control Engineering

Pollution in its general terms is introduction of foreign matter which are encapsulated form of natural elements, into the environmental components which will not get merged, decomposed or become inert by reactions easily, but deprive the quality of environmental components and hinder its further connectivity causing hazards to the creations using them for their living. From this definition, we will be able to find, the pollutants are due to human activities when they try to get a better living with comfort and sophistication , try to separate the molecular and atomic elements to form new composition specific to the use as plastics, nuclear products and so on. Nothing is artificial, nothing is man made, and everything comes from natural elements only, that every element is organic, only thing that matters is their decay time. Radioactive components have half life period, which are for several years and give out radiation and do harm when not shielded and the technology is dangerous always though they find use in medical treatment.

There are enzymes and hormones in creations which are useful for growth that have half life period in terms of hours, that make their use reach the benefactors if taken within that half life period. Hence in pollution control , it is to be perceived that we can not control pollution once it gets emitted into the environment and the concepts and technologies must be towards pollution prevention and there should remain a deep understanding on the basic concepts to conserve resources and serve the purpose which can happen with simplicity, the attitude of awareness, knowledge, spirit to help, honesty and sincerity which is easy for the target group as against what we follow right from family to governance through administration as simplistic which is ignorance, inattention, laziness, deception which is easy for those who provide the facility. Only with simplistic nature comes the authority and dominance, which is spoiling the global progression towards peace.

The environmental components are interconnected with each other and it is simply in the understanding of flux, the transport, the dispersion and dilution.



Once the environment, the ecosystem becomes closed and fragmented, the reach and dilution of the pollutants is limited within a fragmented part and that is only giving problem and not the pollutants. Except recalcitrant, toxic chemicals and metals that deprive the immediate natural processes, no other waste can be problematic and many times contributing to the processes if seen to be approached with lean concepts that is eliminating wastes and adding value to the product.

The environmental components as land, water and air are continuous within themselves and interact with each other components to form an ecosystem and which gives it a holistic nature as environment which is something more than the cumulative effects of individual traits of all the natural components, which makes the nature responsible for itself. It remains connected always in several different forms in natural cycles of transformation, human activities and so on and we find the problems with degradation of the waste matter and progressive environment for the human development only when the human activities are against nature and the same will not be a problem if all the processes for the livelihood of human are with nature , with the perfect understanding of how the same gives us resources, indicates us of the consequences and help us live better.

It is not the pollution control after the waste gets emitted into the atmosphere, but the pollution prevention which must be from the source when the manufacturing processes focus on the lean concepts to produce user friendly products with longevity and absolutely necessary for their better living. Competitive and growth strategies must be progressive only for the concerned industry and there is no need for the concern on competition if the quality products are made available at exact ethical pricing benefiting all involved. This is possible only if the procedures involved to the core of licensing are transparent and there must be tax exemption to the core of service tax to promote customer focused technologies to the purpose.

There must be ban for the wrappers and containers spoiling the environment and must promote retail selling with due control on quality by



groomed self ethics. The consumer care activities must be immediate and down to the availability of any one with simple procedures that the quality products are assured even on retail selling. Simplicity must be enforced in everything and the misconception as creativity lies in complexity with the modern concepts, is giving out its color with post modern thoughts, to come back to live with nature and that gives us hope for better living progressively.

The modern art, pop and jazz music in the modern days gave different meaning to different observers for the complete meaning is not known to the creator even, and that make the process complex in the act of making the same interesting. The people came out of straining much for understanding and they wish to be communicated directly of the meaning which one is willing to communicate and ready to appreciate the content and that forms the basic of post modern community. The virtual communication makes it happen and the same makes it possible with the reversal of engineering and pricing that we can lead a peaceful life without complicating ourselves.

Making the understanding tough is with the modern concepts, whereas making the furthering possible with simplicity are the post modern concepts. This only is dealt in lean concepts, whose components are

1. Specify value from the standpoint of the end customer
2. Identify all the steps in the value stream
3. Make the value creating steps flow toward the customer
4. Let customers pull value from the next upstream activity
5. Pursue perfection

This is not only for production, manufacturing, but in carrying life too as every aspect of life if viewed with lean concepts will certainly lead to perfection and is being viewed as post modern way of living where the aspirations of individual with his own efforts are absolutely possible. The long felt impossibility of individual specific governance and design is possible now with the advent of lean concepts and virtual space to offer service with simplicity focusing on errors,



excess inventory, waiting, doing unnecessary things, underutilized people, excess people motion, over production, excess transportation and doing away the wastes to add value to living that there will be global progression.

It is in the technologies and consumerism, the ecological balance lies and no stringent measures as rules will serve the pollution control, the same must be executed at the stage of license to any product coming to the market that the pollution control boards must integrate with industrial registration agencies. It is not the right of the manufacturer to choose a manufacturing and operational strategy but the right of the common civic to claim for the clean environment. The occupational hygiene and safety should not only be for the industry and its employees but to the surroundings as well. Environmental impact assessments must be practical and holistic which is on experience and should not require a factual proof for the establishment of the concern. The health aspects of the employees must be the primary concern including the stress free work environment even in organisations and government sector that pollution is any disturbance beyond the bearable limit spoiling the individual dignity in the name of authority. A family, relationship and society are not the exceptions. Thus again a meta thinking on pollution concepts lead to individual comfort to assure him of his designed environment where the advertisements reaching them too is a crime through media as they pay only to watch programmes and not to watch the advertisements. The sole discretion of the media to insert advertisement is against the basic code of business to serve exactly what the consumer wants. Anything that is given out with self oriented approach and without inclusion of the receiving spectrum, stinks and is true from waste to emotions. It cannot be justified for it adds to fiscal reserves. For a collaborative environment, the cooperation from mind and not from brain is essential which is lacking to the core from governance to individual that instilling humanity is the way, getting to live with the nature is the way. It is to be understood that nothing is polluting, the same is in still usable form, but thrown as wastes makes pollution. Any resource is completely usable to the finest fraction of it, it becomes zero. A part of the resource lies with human utilization which we call as product and rest with nature which we say as waste, but practically there is no waste at all, the best bet is to



use everything mindfully that there is no waste at all. It is in creating the network that the resources benefits to human living by every way in its every fraction. It depends on the understanding to the finest element and that is where the advanced technology and modern science should find application, which is now into making complex elements to give out rapid products less manageable both by human and nature and there is where the pollution problems arises.

Zero discharge and zero emission are expensive and add to wastes that have been converted to other form which remains in the premises or the treatment cost added to the product depreciating its value from the user side. The zero emission and zero discharge strategies focus on converting the process wastes into the original form by separation that is against nature and costs much. If this process wastes are recycled for the same use, there is no need for the treatment to convert the waste to pure resources which saves every efforts of reserves spent towards the conversion of waste to the purest form. The best bet in dealing with pollution control is on prevention by using the resources to the fullest and mostly in the form in which it occurs naturally to improve the longevity and use. For example protecting the wood with a varnish is progressive, making particle board with wood waste is progressive and the final form of the waste goes as fuel which is also progressive. The problem arises when the product before its life time is given out as waste in the capsulated form to the atmosphere and when we try to live with authority burdening others.

Anything can be brought back to easily digestible form as carbon and that is the easiest volume reduction which had not been in practice for it is felt the air atmosphere will be polluted. But the extent of air atmosphere is unknown and that is advantageous for the dilution and hence the waste can be burnt simply letting out the smoke to the atmosphere which will get into natural carbon sequestration process and for the credit of carbon being the one that can be easily assimilated from among the organic elements, we bring in nature to accommodate pollution. The core lies in understanding the nature and we had been gifted with natural components to make use of them completely.



THREADS

1. Water pollution is not for the disposal of organic wastes into water but for the inadequate dilution of the same? Discuss on the factors that will induce more of dilution?
2. What do you understand about the dissolved oxygen content?
3. How do you look upon BOD, COD and related terms? Do you feel they are necessary to discuss upon the oxidation of waste waters?
4. The derivation as critical oxygen deficit, the critical distance and the safe point of uptake of water are misleading in the context of waste water disposal to water courses. Do you need this complexity? The understanding on the waste mixing will do the needful. Comment on this after going through those concepts.
5. Discuss on zero emission technologies.
6. How do you relate the dispersal of pollutants in air with the atmospheric factors? Discuss in detail how you could find a favorable dispersal to use the best of continuous transport of pollutants.
7. Discuss on the air pollution control equipment used at the source. What modifications you could do in them to achieve best of efficiency.
8. Discuss on the spray towers and stripping. How effective are they in air pollution control.
9. Effects of pollutants on human health, plants, and animals are due to the close proximity to them by occupational needs and by ordinary situations, they don't do harm to the habitat and living beings for they have natural selection and adaptation by physical structure. Discuss on this.
10. Solid waste management is an opportunity to provide continuity to atmospheric dispersion by burning the solid wastes simply in incinerators. Discuss on it.

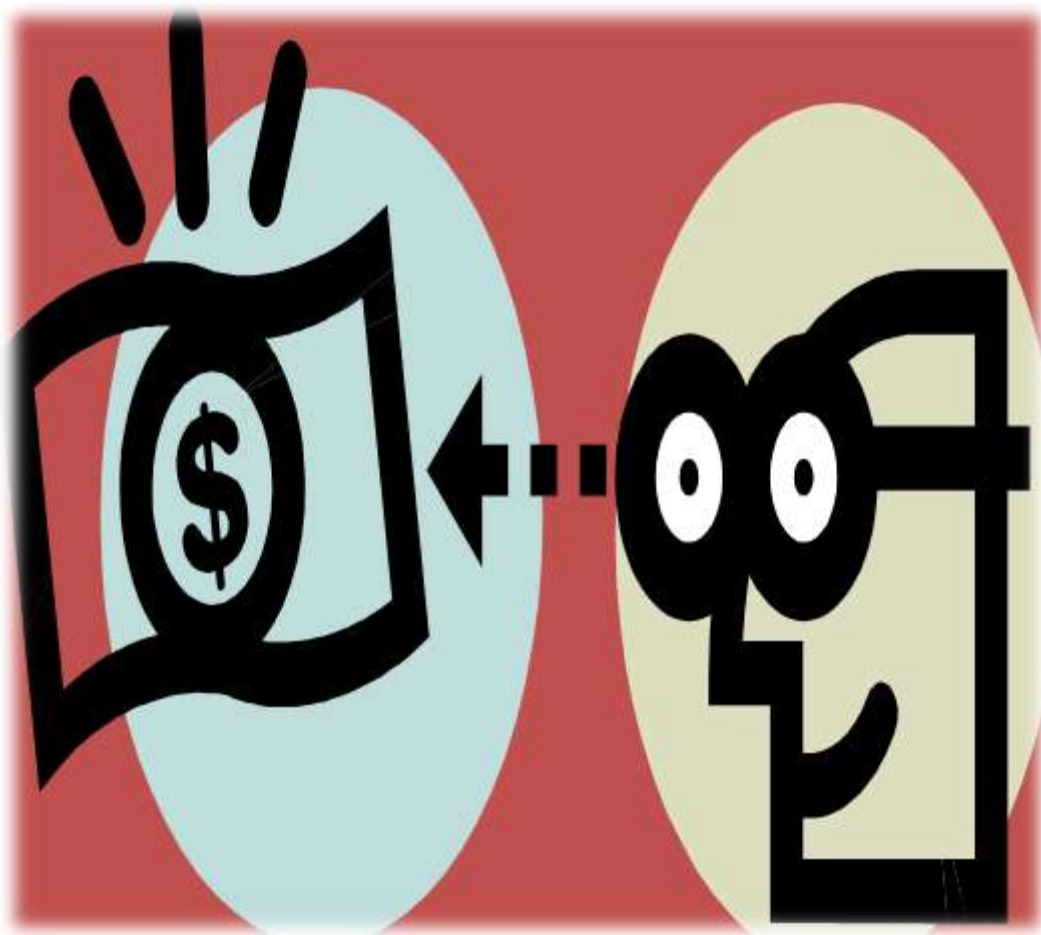


11. Burnt ash promotes more plant growth than the compost for its high carbon content needed for plant growth. The ash is simply the humus and there are more added advantages for the same. Conduct a detailed study on the same and comment on this concept with your observation.
12. The conventional concepts as quantity, quality, type, the flow chart of solid waste management are practically less efficient and misleading the efficacy. Discuss on them with your own exposure.
13. Hazardous wastes are human induced and without the activities generating them, the life is possible. Discuss each of the hazardous waste generation and comment how they can be avoided to the core by simple living.
14. Living with the nature gives the better understanding of nature. Discuss on food chain, pyramids and webs as part of ecosystem.
15. Biodiversity is region specific which is characteristic for the natives of the region and the same is becoming commons for the artificial environment made favorable for any species to grow.UAE has rose gardens now. Discuss on this possibility.
16. Discuss on the values of biodiversity. It is the Ecopsychology, ecoresponsibility and not the eco anxiety that protects the ecological balance. Discuss on this.
17. Discuss on the threats to biodiversity as ethical dilemma of human beings, mindless consumerism, greedy capitalism, and lack of conceptual thinking as every co creature is inclusive in the living.
18. Discuss on the strategies of conservation of biodiversity.
19. Occupational safety is the need to fight against diseases. Mention the simple means of vector control measures adopted in the recent times locally, regionally and globally.
20. Discuss on the causes and control measures of vector borne diseases faced by human in the recent times.



21. Milk contains most of the growth inducing enzymes in its raw form whose decay time are almost less than four hours. Buying milk from the local vendors helps get all the enzymes in their active state. Discuss on the pasteurization methods and how they help in preventing the decay of enzymes.
22. Discuss on the kitchen, restaurant sanitation measures with your own observation.
23. How do you achieve pollution control with your holistic approach in the existing scenario?

GREEDY CAPITALISM IS THE SOURCE FOR ALL GLOBAL CALAMITIES



**CONSUMERISM MUST BE NEED BASED AND INDIVIDUAL SPECIFIC TO APPLY
LEAN CONCEPTS**

