



Productivity Acceleration and Wastage Reduction Recycling the Unnoticed Materials

Harisharan Aggarwal^{#1}, Sukhjinder Singh^{#2}, Atul Goyal^{#3}
Guru Kashi University, Talwandi Sabo
India

Abstract:-The given below paper with the sub-title Recycling the un noticed materials focuses its main discussion on the motor vehicles standing inside the campus of police station for years and years and thus get rusted away and ultimately gets mixed with the soil. Government should enforce some law regarding this that if a vehicle caught on some illegal grounds by a cop is not retrieved back within a fixed period of time then the owner of the vehicle would have no more ownership over the vehicle. In this way we can recycle the motor vehicle and increase our production with reducing waste.

Keywords: Waste Reduction, Waste Management, Waste Assessment, Recycle Waste, Scope.

I. INTRODUCTION

The single most important environmental issue today is over-consumerism, which leads to excess waste. We buy too much. We think we always need new and better stuff. Will we ever be satisfied? There will always be something better or cooler on the market. Because we live in a capitalistic consumer culture. Do we actually need all that we buy? Could we survive efficiently, even happily, without making so many shopping centre runs? Couldn't we survive efficiently, even happily without making so many shopping centres run? It is wise to not contribute anymore to consumerism and waste increase by buying used items. Perhaps we should only buy new things to supplement our needs not our momentarily thirst. Three simple solutions are pre-cycling, re-cycling, and re-using.

II. WASTAGE REDUCTION

The term wastage reduction [1] refers to the ways or methods used to reduce or lessen the amount of waste produced by a person or community. It involves the effort to minimize resource and energy used during production. The waste produced by one can be used as a raw material for production for the other if wise waste management is done.

III. WASTAGE MANAGEMENT

Waste management [2] is the collection, transport, processing or disposal, managing and monitoring of waste materials. The term usually relates to materials produced by human activity, and the process is generally undertaken to reduce their effect on health, the environment or aesthetics. Waste management is a distinct practice from resource recovery which focuses on delaying the rate of consumption of natural resources. All wastes materials, whether they are solid, liquid, gaseous or radioactive fall within the remit of waste management.

IV. ECOLOGIST vs ECONOMIST

Humanity's destiny is debated by two opposing views in the recycling world. The Ecologist and the Economist [3]. The ecologist argues the safety of the living and its predecessors, while the economist argues the nonexistence to begin with of the concern being argued. Of course, it is not all laid out in black and white, there are numerous valid points argued by each side. The truth is, we must acknowledge that both sides have some truth in their messages, but no one really knows every effect of our actions. One cannot say for sure "in ten years we are all going to be dead", or "we're all going to live for thousands and thousands of years". For all we know, the Earth could be struck by a meteor tomorrow. Just because we have vast resources that do not mean we should use them all up, nor does it mean that we should halt advancements and not use any.

V. WASTE ASSESMENT

Regardless of the size or type of business or organization we have, there will always be waste and / or recyclables to contend with. A waste assessment is a visual analysis of your facility that should identify 4 types of information that are vital to your operations: 1) the quantity and type of waste that is found in the facility; 2) the main types of waste; 3) the current systems in place to deal with waste on-site and 4) how it leaves your facility.

The first step of a waste assessment is to measure your facility's waste. How can you effectively manage something that is not measured? You can't. Which is why it is important to do a visual assessment prior to waste removal pickup? A bin needs to be set up at various places throughout the facility so you know the areas in which your company or household waste is being generated. . It's when you see and take note of the types of waste in each bin that you know if the bins are set up in the appropriate places throughout the facility. And, when you know what waste is being tossed you can move onto the next step.

The second step is to figure out ways to reduce the amount of waste that is being carried to the landfill. This includes following the four R's of any waste management program; reduce, reuse, recycle, and re-purpose.

Reduce – Taking a look at your waste is there a way to reduce, eliminate some of what has ended up in the bin? The less waste you produce the less waste you have to dispose of. When you avoid making garbage in the first place, you don't have to worry about disposing of waste or recycling it later. Changing your habits is the key — think about ways you can reduce your waste when you shop, work and play. There's a ton of ways for you to reduce waste, save yourself some time and money, and be good to the Earth at the same time. Waste reduction or prevention is the preferred approach to waste management because waste that never gets created doesn't have waste management costs.

An example of waste reduction is reducing unnecessary packaging from manufactured products and produce. If this excess packaging could be avoided, no one would have to be concerned with the cost and effort of collecting the excess packaging, separating it for recycling, breaking it down, transporting it to manufacturers, and then integrating the recycled materials back into the manufacturing process.

Waste reduction also helps conserve resources for future generations and contributes to a cleaner environment

Reuse –The shortest definition of reuse can be stated as “Reintroduction [4] of a by-product or waste management as an input into a manufacturing process usually without any physical or chemical change”.

Are there other businesses or organizations who may have use for your waste material. If your waste can be used by another company it will not end up in the landfill, thus having less effect on the environment and by passing/donating your reusable waste, you may be giving a company/foundation items that they may not have the resources to acquire on their own. To reuse is to use an item again after it has been used. Recycle – This determines which articles of waste can be targeted for recycling. Many recycled products are separated into specific materials and by changing their physical properties can be made into new products. Recycling is processing used materials (waste) into new products to prevent waste of potentially useful materials, reduce the consumption of fresh raw materials, reduce energy usage, reduce air pollution (from incineration) and water pollution (from land filling) by reducing the need for "conventional" waste disposal, and lower greenhouse gas emissions as compared to virgin production. Recycling is a key component of modern waste reduction and is the third component of the "Reduce, Reuse, and Recycle" waste hierarchy [5]. A third step of increase supply of recirculates is to ban the disposal of certain materials as waste, often including used oil, old batteries, tires and garden waste. One aim of this method is to create a viable economy for proper disposal of banned products. Care must be taken that enough of these recycling services exist, or such bans simply lead to increased illegal dumping. Legislation has also been used to increase and maintain a demand for recycled materials. Four methods of such legislation exist: minimum recycled content mandates, utilization rates, and procurement policies, recycled product labelling. Governments have used their own purchasing power to increase recycling demand through what are called "procurement policies." These policies are either "set-asides," which earmark a certain amount of spending solely towards recycled products, or "price preference" programs which provide a larger budget when recycled items are purchased. Additional regulations can target specific cases: in the United States, for example, the Environmental Protection Agency mandates the purchase of oil, paper, tires and building insulation from recycled or re-refined sources whenever possible. The final government regulation towards increased demand is recycled product labelling. When producers are required to label their packaging with amount of recycled material in the product including the packaging, consumers are better able to make educated choices. Consumers with sufficient buying power can then choose more environmentally conscious options, prompt producers to increase the amount of recycled material in their products, and indirectly increase demand. Standardized recycling labelling can also have a positive effect on supply of recirculates if the labelling includes information on how and where the product can be recycled.

VI. COMMONLY RECYCLED MATERIAL

Batteries, Plastic, Paper, Glass, Aluminium, Steel, Motor Oil, Tires, Toxics, Refrigerators, Computer Printers, False Claims, and Curb side Recycling Tips :-

Plastic, Grocery sacks, produce bags, and other packaging, Glass, Steel, Aluminium Cans and Foil, Aseptic Packaging (Drink boxes, soy-milk containers) ,Paper ,White Office Paper ,Corrugated Cardboard, Newspapers, Mixed Paper, Old refrigerators, Heat Pumps & Air Conditioners, Single Use Batteries (Alkaline, Heavy Duty), Rechargeable Batteries (other than car batteries), Motor Oil, Tires and Car Batteries, Compost [6].

VII. RECYCLING OF MOTOVEHICLES STANDING IN THE COMPOUND OF POLICE STATIONS IN INDIA

On seeing the use and the necessity of recycling the old and unused component present around us my attention went to the motor cars, motorbikes, heavy vehicles etc standing inside the police station campus and waiting for the registered case to be solved so that they can again run freely on the road . Years passes out and the case running on the vehicle is not solved thus the vehicle gets decomposed to the soil with the time . According to the survey made in the year 2008 there are 13,412 POLICE STATION'S in India, if we consider an average of 65 motorbikes,5 heavy vehicles including car caught in one POLICE STATION. We should notice the amount of iron scrap we would get from one police station if the FIR lodged vehicle is been sold as scrap after the elapse of the given time period. One motorbike weighs 110 kg approx in which if we remove extra material 30 kg also then we have 80 kg of iron scrap [7] from one bike. Similarly if we see in the case of motor cars or trucks or buses imagine the amount of iron scrap which could be collected from a single POLICE STATION now multiply with the total number of police station in India the we can see the amount of scrap that can be collected for recycling process which can be used for building railway tracks bridges and etc. At present

the situation is this that the vehicles once caught for illegal activity are imposed so high penalty that the owner find its better to leave it on the police station on rare cases the vehicles are auctioned in maximum cases the vehicles need to get rusted away and mix with soil. Thus this practice makes the land barren and also pollutes the environment. In urban cities a big ground area is specially kept for the illegal vehicles so can be said punished vehicles which have to suffer a whole life imprisonment. Why not government build a law so that the large of scrap generated gets wasted can be used in better way for construction purposes, for the development of the country.

VIII. STEPS TO BE FOLLOWED FOR WASTAGE REDUCTION AND INCREMENT IN PRODUCTION

1. Realize that the commitment level of senior management plays a huge role in the success of a recycling program. And, the overall success of a recycling program depends on everyone's co-operation from the top down. A good start is for management and employees to work together on crafting a 'mission statement' for the recycling program.
2. Designate a waste recycling manager or coordinator who will oversee the collection of information, the evaluation of data, and the implementation of the recycling program.
3. Create a waste recycling task force that will be in charge of overseeing the day to day activities of the recycling program.
4. Conduct a thorough waste audit which can provide valuable information about the profile of waste stream and the most logical materials that should be considered for recycling, based on volume, market conditions (for the particular recyclables in question) and other factors that can help make the recycling program be more effective. As part of the waste audit try to identify potential waste reduction opportunities.
6. Evaluate material waste exchanges. Waste materials from one company are usually needed by other companies. Markets for recyclables are growing rapidly, however there are several factors that can impact the value of the recyclables such as: The market demand, the condition of the recyclable, the availability of bales and bale size and proximity to markets. Start with the easy recyclables first. Packaging materials usually provides the easiest reduction opportunities.
7. When deciding what materials to recycle consider contamination aspects, volume, loading and transportation requirements, storage space, separation requirements, estimated revenues, estimated maintenance and other costs including any consumables (such as baling wire).
8. Devise collection systems that are convenient to use. Consider things like space availability, labour needs, equipment / container requirements and physical layout.
9. Promote the program in order to maximize participation and ensure compliance with the program requirements.
10. Re-evaluate the program on a routine basis in order to monitor its effectiveness and efficiency. Feedback on the program can be obtained from a variety of sources such as: (a) custodial staff, for input regarding material quality and handling practices, (b) employees or customers, for opinions concerning convenience and (c) waste hauler or recycler, for data concerning the type and amount of material recycled.
12. Create milestones and track your company's waste and recycling related progress and accomplishments (such as percentage of waste being recycled).
13. Track your waste processing cost reductions and overall savings. In addition to actual costs also consider avoided costs.
14. As part of the waste recycling program, encourage the use of products that reduce waste and reuse waste.
15. Promote the expansion of recyclables markets by 'Buying Recycled'.
16. Provide proper recycling bins for the various recyclables that have been chosen to be recycled.
18. Make sure that bins in public areas are well-marked. For these areas, it is best to choose bins with custom openings, such as a hole for cans or a slot for newspapers etc. It is also important to place bins at the location where the materials are generated.
19. Depending on the physical layout of the building(s) and other factors, determine the best way for trash to be processed based on the addition of the recycling program. Keep in mind that any waste that is considered hazardous (such as red-bag waste for medical facilities) must be processed according to regulations and there is no lee-way in this area
20. Where possible try to organize your various waste streams according to different categories. For example package wastes (waste from the packaging of your suppliers products sold to you etc) or process wastes (waste produced while producing products for others etc), office trash, food service areas, staff lounges, manufacturing areas and any other areas that are applicable.
21. Perform a walk-through of each work area within your facility and note what type of trash is generated from each area. A walk-through will not only reveal important information but it will also help you understand the types of containers and placement of containers that will be needed.
22. After evaluating the different types of waste streams within your facility in more detail, other decisions may be more obvious. For example, if your office generates huge amounts of paper waste, determine whether a mixed paper program would be preferable to a 'white paper / newspaper / computer paper' program. Knowing your facility will help you to decide which program best suits your needs. As much as 93% of all office waste is paper, most of it recyclable.
23. Be sure that regular waste is not being mixed with any hazardous waste [8]. Educate staff members about what does and does not belong in the regular trash bins. Also, make sure that any food waste is separated or that it goes down the garbage disposal.

25. Once the process has been refined, send a memo out to all involved explaining the process and specific separation and sorting procedures that have been decided upon. For example, remind everyone to keep food waste out of recycling containers and trash. Food waste should go down the garbage disposal or be handled separately from trash and recyclables. Be specific about what items get placed where, such as cans from XYZ company get recycled, but the ABC company containers go into the trash.
26. Make up a "Dos and Don'ts" list for recycling and post it on the bulletin board or at work stations.
27. In self-serve restaurants, post signs about your recycling efforts and clearly indicate where they should dispose of their recyclable materials. Recycling bins should be convenient for the customer's disposal and collection by employees.
28. Set up some basic internal and external controls. For example, carefully track the volume and types of recyclables that are being processed at your facility. Not only does this serve as a check and balance for the compensation you are to receive but it will also prompt you to sudden changes in data.
30. Clearly describe and differentiate the responsibilities of all who are involved from management to the recycling coordinator to the task force to the employees.
32. Once policies have been implemented continue to refine the processes and routines by encouraging feedback from your employees, especially those who are most involved in the waste processing operations.
36. The larger the quantity of a specific recyclable (such as card board) that is being generated, the more it becomes necessary to evaluate things in much greater detail.
37. Where large amounts of a particular recyclable are involved determine whether or not there is an opportunity to reuse some of that waste stream. For example, consider the reuse of cardboard waste by donating or selling cardboard containers to other firms. Oftentimes boxes can be given away depending upon their quality and size. For example, Gaylord boxes (4' x 4' x 4') that are used to store bulky materials are very popular.
39. Depending upon the materials that you have isolated for recycling, consider special equipment such as balers, shredders and glass crushers that can help reduce the volume of your recyclable material.

IX. CONCLUSION

While going through the whole paper we come to this conclusion that there are several materials present nearby us we just need to open up our eyes and see the future consequences if proper measures and steps are not taken to reduce the wastes produced by us on our daily life on different work fields. If we start taking proper waste management steps within short span on years we would have control over the waste generated but for this we need all individual efforts.

On the case study of waste produced in POLICE STATION which people notice's I found that if government take proper steps by imposing new law regarding the daily caught vehicles for breaking some of the traffic rules or for causing accident, can be used for civil development purpose. The law should be like this that a certain period of time should be given to the owner that before this time limit the ownership of the vehicle is there in the hands of the owner after which the ownership would be transferred to the POLICE department so that the police department can sell those as scrap by calling a tender notice in this way waste material would be reused beforehand and wastage can be reduced. The future scope of this would be that more and more recycle methods would be adopted in India also like other western countries .The common peoples would also be motivated to reduce, recycle and reuse the waste in their daily life. At present the situation is that only 4 to 5 % (no official data) of India thinks about recycling waste and increasing production the reason is that government is not taking any proper innovative methods to motivate the people.

Using the scrap metals government can make use of it in making rail tracks, benches to be placed in garden and many other useful things for the development of country.

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