

Environmental Audit for Environmental Improvement and Protection

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Abstract: *Environmental audit is a very effective management tool, which is designed and conducted to provide information on practices which differ to the current procedures and to exercise effective manage meant of the established system. The sugar industry plays a very important role in India's national economy. As all stages of sugar production are water intensive and discharging wastewater containing high level of oil, suspended solids, organic matter and chemicals and therefore the sugar industry is one of the most water polluting industries. Therefore conducting 'Environmental Audit' in a sugar factory is no longer an option but a sound precaution and a proactive measure in today's heavily regulated environment. Careful and watchful audit offer prospects for improvement, perfection and achievement of goals. The audit is carried out in four steps and the final report is prepared and suggestions are given. This paper reviews on Environmental Audit programmer in a sugar factory of pune district of Maharashtra (India).*

Keywords: Environmental audit, Environmental management, Environmental Pollution, Case Study

I. INTRODUCTION

Environmental audit investigates all possibilities of material, energy savings, improvement in occupational health and safety of industrial workers. It also helps in communicating the results of this process to the concerned management and suggests corrective steps to be followed at the early stage (Chaudhury, 2002). It aims not only at minimizing potential negative impacts of the company on the environment but also at maximizing the positive impacts of an environmentally sound system of the company activities. Regulatory agencies considered such auditing as an important management technique because it ensures compliance with the environmental requirements and related corporate policies (Manikandan and Than Sekaran, 2006). The gap existing between the development activities generating pollutants and maintenance to a sustainable level need to be narrowed down under present day circumstances (Mehta and Sharma, 1997). Environmental auditing is carried out when a development is already in place, and is used to check on existing practices, assessing the environmental effects of current activities (*ex post*). Environmental auditing therefore provides a 'snap- shot' of looking at what is happening at that point in time in an organization.

II. LITERATURE SURVEY

In this chapter survey of all past researches is DONE. This past researches has guided us in carrying out this INVESTIGATION. Various audit done before and researches carried by experts helps us in this study .

Paper Name: Environmental auditing and assessment

Author: Paul Tomlinson & Samuel F. Atkinson

Abstract: This paper presents a literature review focused on predictive technique audits. Environmental Impact Assessment, Advanced Environmental Impact Assessment, and Remote Sensing, as well as a freshman Introduction to Environmental Science course. The purpose of this research is to present how the environmental audit contributes to t

he assessment and control of environmental information published by the enterprise in relation to the environmental impact of economic activity. We will analyze the field of environmental auditing as a concept and typology, the involvement of financial auditing and the accounting profession in auditing environmental information as well as environmental management systems as possible variants to improve the environmental performance of enterprise.

Paper Name: Environmental Audit for Environmental Improvement and Protection

Author: Dejon Jovanovic (2017)

Abstract: The main purpose of this paper is to explain the ways in which environmental audit contributes to improving and preserving environmental protection, respecting the concept of sustainable development.

Paper Name: Environmental auditing and the role of the accountancy profession

Author: Philippe de Moor 1, Ignace de Beedle (2005)

Abstract: This review of the literature on environmental auditing and the potential role of accountants distinguishes between compliance audits and audits of the environmental management system. After an extensive introduction to the concept, this review focuses on the similarities and differences between an environmental audit and a financial statement audit. The general approach to both types of audits is similar, except that environmental audit are largely unregulated.

III. DIFFERENT APPROACHES OF ENVIRONMENTAL AUDITING

1. **Pre-Audit Activities:** These activities are full of management promises, set overall goals, objectives, scope and priorities and select team to ensure objectivity and professional competence.
2. **On site Activities:** Location of possible leakages, spills and overflow should also be identifies.
3. **Post Audit Activities:** It includes evaluation of finding, reporting with recommendations, preparation of an action plan and a follow up.

IV. ENVIRONMENTAL IMPACT ASSESSMENT (EIA) & ENVIRONMENTAL AUDITING (EA):

EIA Goals: Environmental Impact Assessment is a tool designed to identify and predict the impact of a project on the bio - geophysical environment and on man's health and well- being, to interpret and communicate information about the impact, to analyze site and process alternatives and provide solutions to sift out, or abate/mitigate the negative consequences on man and the environment.

EA Goals: Environmental Auditing (or Audit) is a management tool used by industry to evaluate its environmental performance. Contrary to EIA, an EA is only implemented in processing sites.

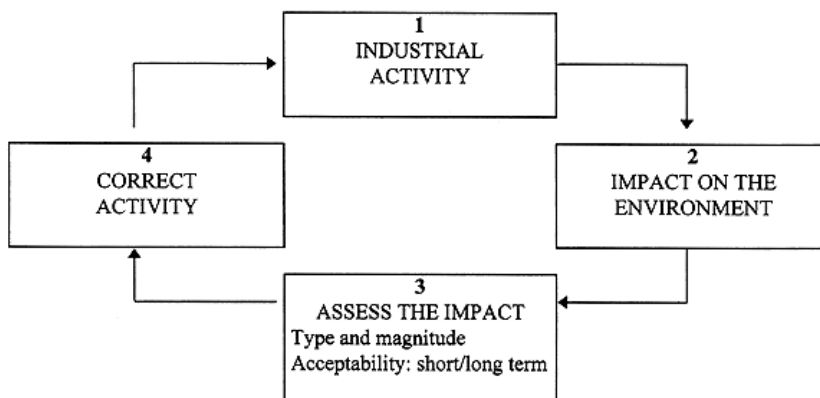


Fig. Industry and Environmental Relationship

V. CASE STUDY

About Industry:

Sant Tukaram sugar factory is located at Dehu road near pune . It is one of the well known sugar Industries in pune. It is also a part of Human Resource Programs Industry . Sant Tukaram sugar factory has 504 as total employee . Mr. Narender Duren is a Managing Director of the factory.



The industry is engaged in the manufacturing of Sugar as main product and Bagasse & Molasses as by-product. The industry has manufactured Sugar @ 99684.6 Metric Tones, Bagasse @ 278292. 6 Metric Tones & Molasses @ 46003. 9 Metric Tones during the financial year 2020 -21. The raw material used is Sugarcane @ 1018640.69 Metric Tones during the financial year 2020- 21.

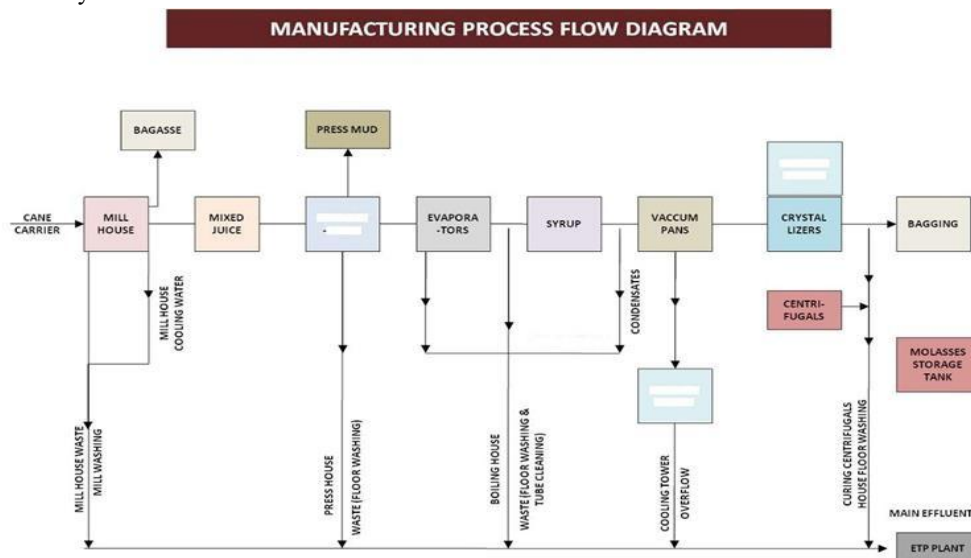


Table 1: Water Consumption by the industry for various purposes.

Year	Process cum/day	Cooling cum/day	Domestic cum /day
2019-20	1800	200	100
2020-21	1800	200	100

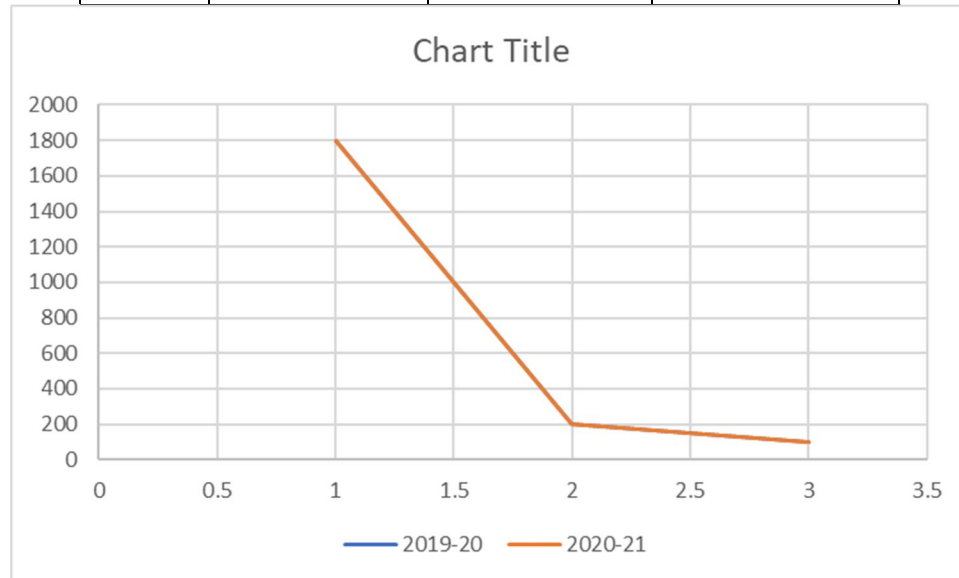


Table 2: Consumption of water for sugar in lit/kg of sugar produced .

Year	Process Water Consumption / Product Output
2019-20	3.53
2020-21	4.02

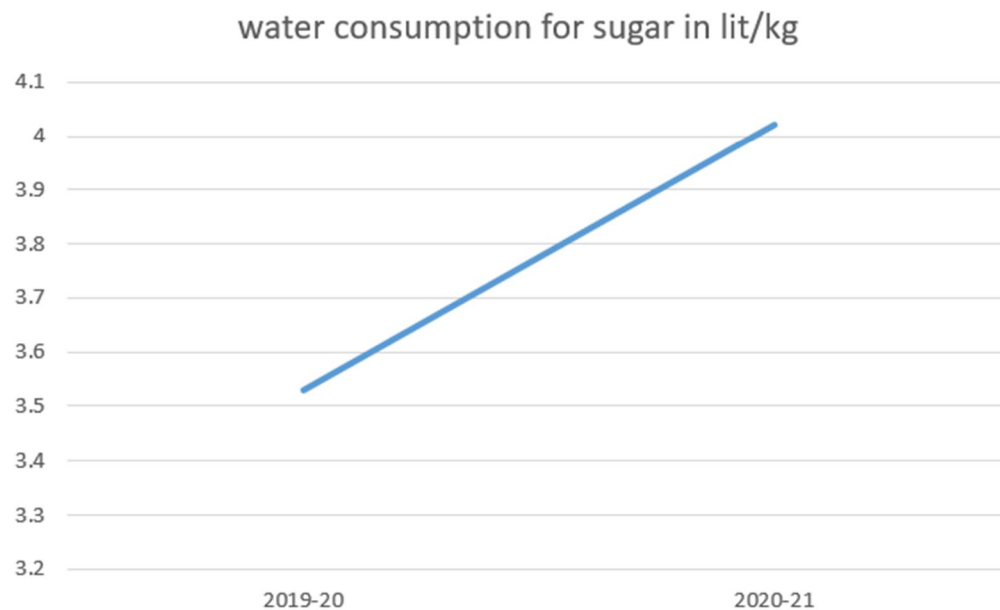


Table 3: Consumption Of Raw Material in kg per MT of crushed sugarcane.

Year	Sugar Cane	Baggage as fuel
2019-20	130.03	251.15
2020-21	127.59	259.49

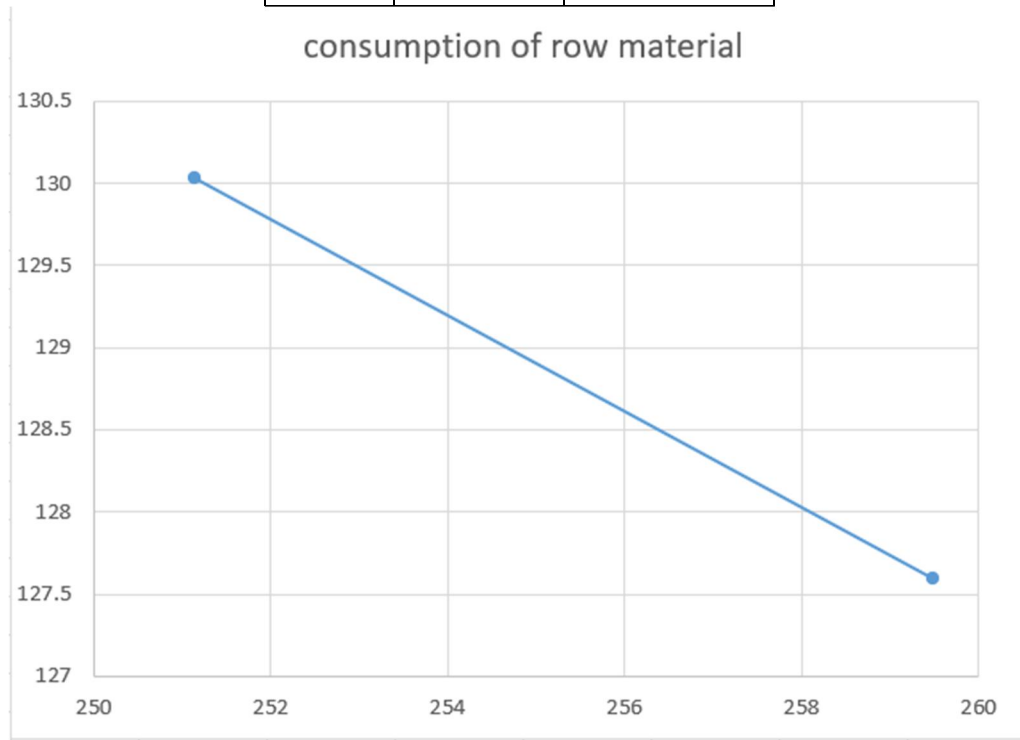
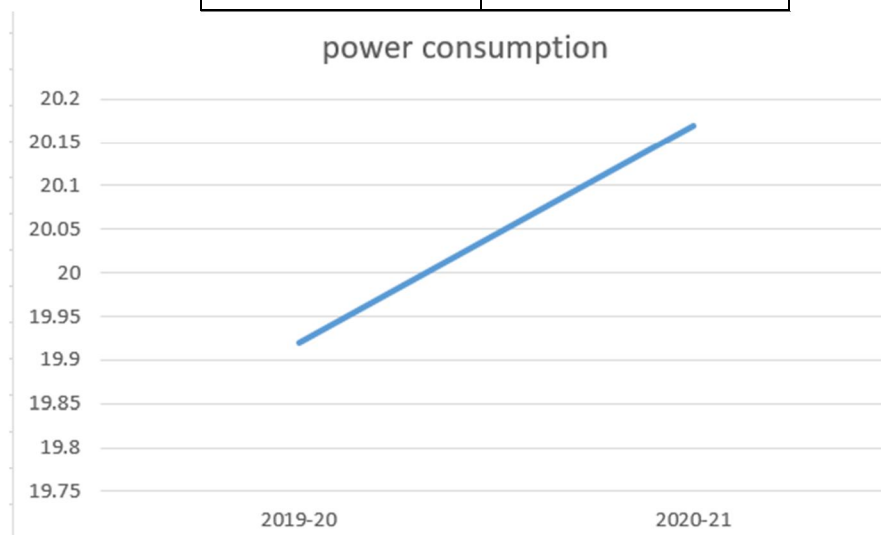


Table 4: Consumption of Power in KW per MT of crushed cane.

Year	Power Consumption
2019-20	19.22
2020-21	20.17





VI. CONCLUSION

Sugar Factory Sant Tukaram Sakhar Karkhana situated near pune is one of the good factories as it has its own distillery in its own premises for production of alcohol from molasses. Ever though the factory is taking care to avoid pollution . Environmental audit conducted at Sant Tukaram Sugar Factory will be effective to reduce energy consumption to reduce the consumption of water & use baggage's as fuel. It saves power and improved environmental protection for sustainable industrial operation. Biogas produced from spent wash as well as compost is the best output toward resource conservation. Thus environmental audit plays important role to have check on pollution control. Further studies on Environmental audit with reference to various types of industries are needed in order to study various process , activities and their positive or negative impact on environment.

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