



**A STUDY OF EMISSION INVENTORY OF CO<sub>2</sub>e IN  
MANUFACTURING PRINTING COMPANY  
(CASE STUDY: PT. XYZ)**

**UNDERGRADUATE FINAL PROJECT**

**Submitted as one of the requirements to obtain  
Sarjana Teknik**

**By:**

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018201900011**

**FACULTY OF ENGINEERING  
ENVIRONMENTAL ENGINEERING STUDY PROGRAM  
CIKARANG  
AUGUST 2023**

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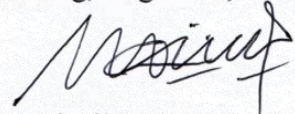
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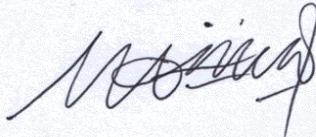
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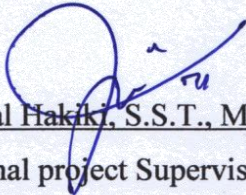
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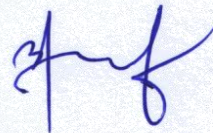
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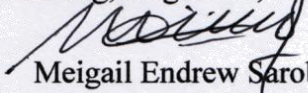
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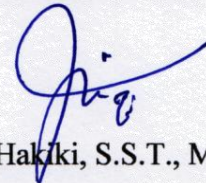
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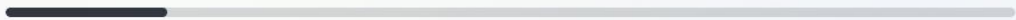
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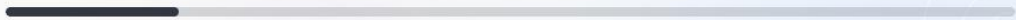
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## ABSTRACT

As one of Indonesia's printing companies, PT XYZ strives to meet consumer demand by producing as many as they can. They consistently give us large quantities of completed goods each day along with huge emissions and trash. Looking at that situation, it is clear that the industrial process might have an effect on the environment. In light of this, the goal of this study is to determine and estimate the possible effects of emissions from the energy supply on the printing manufacturing process and environmental impact on land based on volatile organic compound materials. The method of measuring the amount of emissions is called emission inventory. ReCiPe 2016 is a method that will use to analyse the impact through manual calculation based on Green House Gases Protocol. Based on the above data it can be concluded that the total emissions produced by PT. XYZ in 2021 and 2022 are 1,616 tons of CO<sub>2</sub>e and 1,722 tons of CO<sub>2</sub>e based on electricity purchases paid annually by PT. XYZ. However, calculations from the emission inventory modeling carried out show that the total emissions produced by PT. XYZ in 2021 and 2022 is 1,405 tons of CO<sub>2</sub>e and 1,389 tons of CO<sub>2</sub>e.

**Keywords:** *Printing Process, Emission Inventory, Volatile Organic Compunds, Green House Gases Protocol.*

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The author is aware that this Final project is far from faultless. I'm hoping that this Final project will be helpful in the future.

Cikarang, August 10, 2023



Meigail Endrew Saroba

018201900011

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