

# **ZHONGZE BAGS INDUSTRY COMPANY LIMITED**

## **Initial Environmental Examination**

### **MANUFACTURING OF VARIOUS KINDS OF BAGS ON CMP BASIS**

Prepared by:



**MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED**

**Date: 14-Feb-24**



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## Commitment

Date: 14.2.2024

Initial Environmental Examination (IEE) Report in respect of the Manufacturing of Various kinds of Bags on CMP Basis by Zhongze Bags Industry Company Limited

IEE report describes the environmental condition of a project, including significant impact, formulation of mitigation measures and preparation of institutional requirements and environmental monitoring.

Myanwei Environmental Solutions Company Limited has prepared this report with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking into account of the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

We strongly commit that this report was prepared in compliance with Myanmar Environmental Laws and Regulations.

The signature block consists of a blue ink signature above a rectangular stamp. The stamp contains the text "LIN HTEI SEIN DIRECTOR MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED." in blue capital letters. Above the signature is a circular blue stamp with the text "MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED" around the perimeter and a star at the bottom. Inside the circle, there are fields for "No....." and "Date.....".

# ZHONGZE BAGS INDUSTRY COMPANY LIMITED

Plot No.142, Myay Taing Block No. Industrial Zone (2), Dagon Myo Thit Seik Kan Township, Yangon Region.

## Commitment of Zhongze Bags Industry Company Limited

Date: 14. 2. 2024

We refer to the captioned IEE report, which has been prepared by Myanwei Environmental Solutions Co., Ltd. (Third-Party Consultant) in compliance with EIA procedure (2015) and other related laws/rules.

We believe, to the best of our knowledge at the time of writing, that;

- The IEE report is accurate and complete
- The IEE report has been prepared in strict compliance with all applicable laws, rules, regulations and procedures in force.
- The existing law of the Union Republic; regulations, Procedures, Environmental protection law, Rules, Producers, Environmental Impact Assessment Producers and National Environmental Quality (Emissions) Guideline will be followed.
- Zhongze Bags Industry Company Limited will at all times comply fully with all commitment and obligations in the IEE report, and also environmental conservation law, environmental conservation rules, environmental impact assessment procedure, instructions to be issued from time to time, including business-related law, rules and procedure. If Zhongze Bags Industry Company Limited fails to comply with the law and regulations, we promise to accept actions in accordance with the existing law and rules.

We acknowledge and understand that



**Mr. Lai ZhenJian**

**Director**

**Zhongze Bags Industry Co., Ltd.**

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## Lists of Abbreviation

1. CEMP = Construction Environmental Management Plan
2. CSR = Corporate Social Responsibility
3. EMP = Environmental Management Plan
4. EIA = Environmental Impact Assessment
5. ECD = Environmental Conservation Department
6. ECC = Environmental Compliance Certificate
7. EMoP = Environmental Monitoring Plan
8. GIIP = Good International Industry Practices
9. HSE = Health, Safety and Environment
10. IEE = Initial Environmental Examination
11. IFC = International Finance Corporation
12. NEQG = National Environmental Quality (Emission) Guidelines
13. MIC = Myanmar Investment Commission
14. MOECAF = Ministry of Environmental Conservation and Forestry
15. MONREC = Ministry of Natural Resources and Environmental Conservation
16. OEMP = Operation Environmental Management Plan
17. OSHA = Occupational Safety and Health Administration
18. PPE = Personal Protective Equipment
19. WHO = World Health Organization
20. YCDC = Yangon City Development Committee
21. YESB = Yangon City Electricity Supply Board
22. YCDC = Yangon City Development Committee
23. ENV Team = Environmental Team
24. IND Team = Industrial Solution Team
25. Sq meter = Square meter
26. % = Percentage
27. °C = Degree Celsius
28. BOD = Biochemical Oxygen Demand
29. COD = Chemical Oxygen Demand
30. CO = Carbon Monoxide
31. CO<sub>2</sub> = Carbon Dioxide
32. NO<sub>2</sub> = Nitrogen Dioxide
33. VOC = Volatile Organic Compound
34. O<sub>3</sub> = Ozone
35. dB (A) = Decibel Unit
36. MT = Metric Ton
37. Kt = Kilo Ton
38. kWh = Kilo Watt Hour
39. km = Kilo Meter
40. PM = Particulate Matter
41. ppm = Part Per Million

## အစီရင်ခံစာအကျဉ်းချုပ်

### နိဒါန်း

ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းဆိုင်ရာ အစီရင်ခံစာသည် Zhongze Bags Industry Company Limited ၏ အိတ်အမျိုးမျိုးထုတ်လုပ်ခြင်းလုပ်ငန်းအတွက် ပြည်ပသို့ရောက်ရှိရန်အတွက် တင်ပို့ခြင်း လုပ်ငန်းမှ ပတ်ဝန်းကျင်အပေါ် အဓိက ထိခိုက်မှု များကို လေ့လာဆန်းစစ်ပြီး လျှော့ချရေး အစီအစဉ်များ၊ ကာကွယ်ထိန်းသိမ်းရေး အစီအစဉ်များကို အဓိပ္ပာယ်သတ်မှတ်ထားခြင်း ဖြစ်သည်။

Zhongze Bags Industry Company Limited သည် မြေကွက်အမှတ် ၁၄၂၊ မြေတိုင်းရပ်ကွက်အမှတ် စက်မှုဇုန် (၂)၊ ဒဂုံမြို့သစ်(ဆိပ်ကမ်း) မြို့နယ်၊ရန်ကုန်တိုင်းဒေသကြီးတွင် တည်ရှိသော စုစုပေါင်း မြေဧရိယာ(၁.၈၅) ဧက ပေါ်တွင် အိတ်အမျိုးမျိုး ထုတ်လုပ်၍ ပြည်ပသို့ရောက်ရှိရန်အတွက် တင်ပို့ခြင်းလုပ်ငန်းအား ၂၀၁၉ ခုနှစ်၊ ဖေဖော်ဝါရီလ၊ ၂၁ ရက်နေ့တွင် (အတည်ပြုမိန့်အမှတ် ရကတ - ၁၆၂/၂၀၁၉) ဖြင့် ရရှိပြီးဖြစ်ပါသည်။ လုပ်ငန်းလည်ပတ်ရန်အတွက် မြန်မာနိုင်ငံ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဝန်ကြီးဌာန (MONREC) ၏ အတည်ပြုချက် ရယူရန်လိုအပ်ကြောင်း ကော်မရှင်မှ မှာကြားခဲ့ပါသည်။ ထို့ကြောင့် မြန်မာနိုင်ငံပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂) အရ၊ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း Initial Environmental Examination (IEE) ပြုလုပ်ရန် လိုအပ်ကြောင်း ၂၀၁၉ ခုနှစ်၊ ဧပြီလ၊ ၁၂ ရက်နေ့ရက်စွဲပါ စာအမှတ်၊ရက-၁/၃/၄ (အီးအိုင်အေ)(၆၂၃/၂၀၁၉)ဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန ရန်ကုန်တိုင်းဒေသကြီးမှ သဘောထားမှတ်ချက် ရရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဦးစီးဌာန (ECD)၏ ထုတ်ပြန်ထားသော ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်း (EIA Procedure) ၂၀၁၅ အတိုင်း Zhongze Bags Industry Company Limited စက်ရုံအတွက် IEE အစီအရင်ခံစာ ရေးဆွဲခဲ့ပါသည်။ IEE အစီအရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော Myanwei Environmental Solutions Company Limited တာဝန်ယူရေးဆွဲခဲ့ပါသည်။ စက်ရုံတွင် ကျန်းမာရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ အဖွဲ့အစည်းတစ်ခုထားရှိပြီး လျှော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို အကောင်အထည်ဖော်သွားမည်ဖြစ်သည်။

စက်ရုံအကျယ်အဝန်းမှာ စက်ရုံအကျယ်အဝန်းမှာ ၁.၈၅ ဧက (၇,၄၈၆.၆၈၄ စတုဂံမီတာ) ပေါ်ရှိ (ပေ ၄၃၂ × ပေ ၁၀၀) ပတ်လည်ရှိသော စက်ရုံအဆောက်အအုံ (၁) လုံး နှင့် (ပေ ၁၄ × ပေ ၁၀) ပတ်လည်ရှိသော ရုံးခန်းအဆောက်အအုံ (၁) လုံး၊ စုစုပေါင်းအဆောက်အအုံ (၂) လုံးအား ငှားရမ်း၍ လုပ်ငန်းဆောင်ရွက်သွားမည်ဖြစ်သည်။ တည်ဆောက်ပြုပြင်မွန်းမံချိန်(Construction phase)ကို ဖေဖော်ဝါရီလ၊ ၂၀၁၉ ခုနှစ် တွင် စတင်ခဲ့ပြီး စီးပွားဖြစ်စတင်ချိန် (Commercial Running Stage) မှာ ၂၀၂၀ ခုနှစ်၊ ဇွန်နာဝါရီလ တွင် စတင်မည်ဖြစ်သည်။ ကနဦးရင်းနှီးမြုပ်နှံမှုကာလမှာ (၂၈) နှစ် သက်တမ်းဖြစ်ပြီး ကနဦးရင်းနှီးမြုပ်နှံမှုကာလမှာ(၈)နှစ် နှင့် သက်တမ်းတိုး (၁၀)နှစ် နှစ်ကြိမ်သက်တမ်း တိုးခွင့်သတ်မှတ်ထားပါသည်။

## ဥပဒေနှင့် မူဝါဒဆိုင်ရာ အချက်အလက်များ

စက်ရုံနှင့် ဆက်စပ်သက်ဆိုင်နေပြီး လိုက်နာရမည့် ဥပဒေနှင့် နည်းဥပဒေများ၊ MONREC မှ ထုတ်ပြန်ထားသည့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများ၊ အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ၊ စက်ရုံနှင့်သက်ဆိုင်သည့် ဒေသတွင်း သို့မဟုတ် အပြည်ပြည်ဆိုင်ရာ သဘာဝပတ်ဝန်းကျင်နှင့် လူမှုပတ်ဝန်းကျင်ဆိုင်ရာ မူဝါဒများ၊ ဆက်စပ်နေသည့် နိုင်ငံတကာ သဘောတူချက်များကို အကျဉ်းချုပ်ရေးသားဖော်ပြထားပါသည်။

1. Environmental Conservation Law (2012)
2. Environmental Conservation Rules (2012)
3. Environmental Impact Assessment Procedure (2015)
4. National Environmental Quality (Emission) Guidelines (NEQG) (2015)
5. National Environmental Policy of Myanmar (2019)
6. Myanmar Investment Law (2016)
7. Myanmar Investment Rule (2017)
8. Myanmar Insurance Law (1993)
9. The Myanmar Fire Force Law (2015)
10. Public Health Law (1972)
11. The Prevention of Hazard from Chemical and Related Substances Law (2016)
12. The Labor Organization Law (2011)
13. Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)
14. The Employment and Skills Development Law (2013)
15. The Minimum Wage Law (2013)
16. Payment of Wages Law (2016)
17. The Leave and Holidays Rules (1951, partially revised in 2018)
18. The Amended Law for Factories Act, 1951, partially revised in 2018
19. The Worker's Compensation Act (1923)
20. The Export and Import Law (2012)
21. The Law on Standardization (2014)
22. Underground Water Act (21<sup>st</sup> June 1930)
23. Myanmar Engineering Council Law (2013)
24. The Commercial Tax Law (1990 Amended 2014)
25. Preventing of Hazard from Chemical and Related Substances Law, (2013)
26. The Social Security Law (2012)

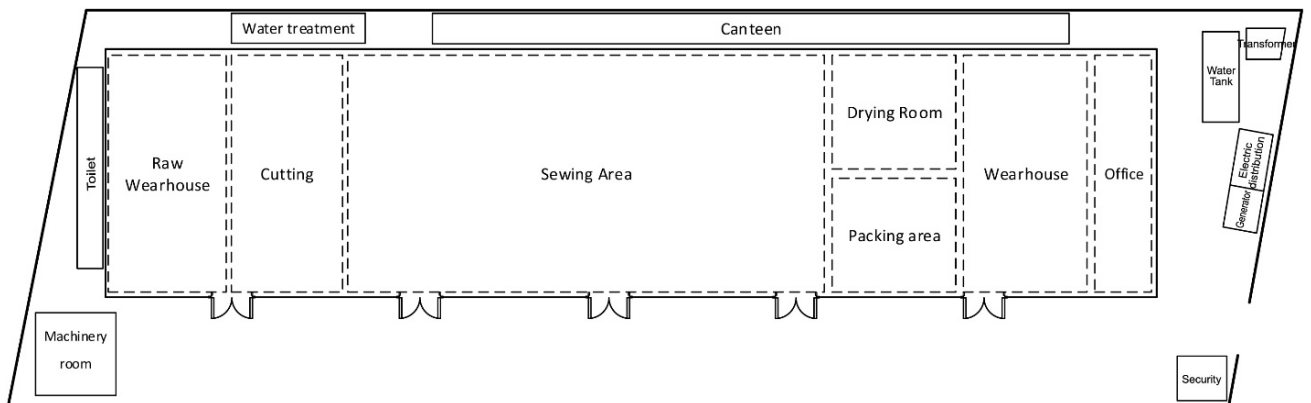
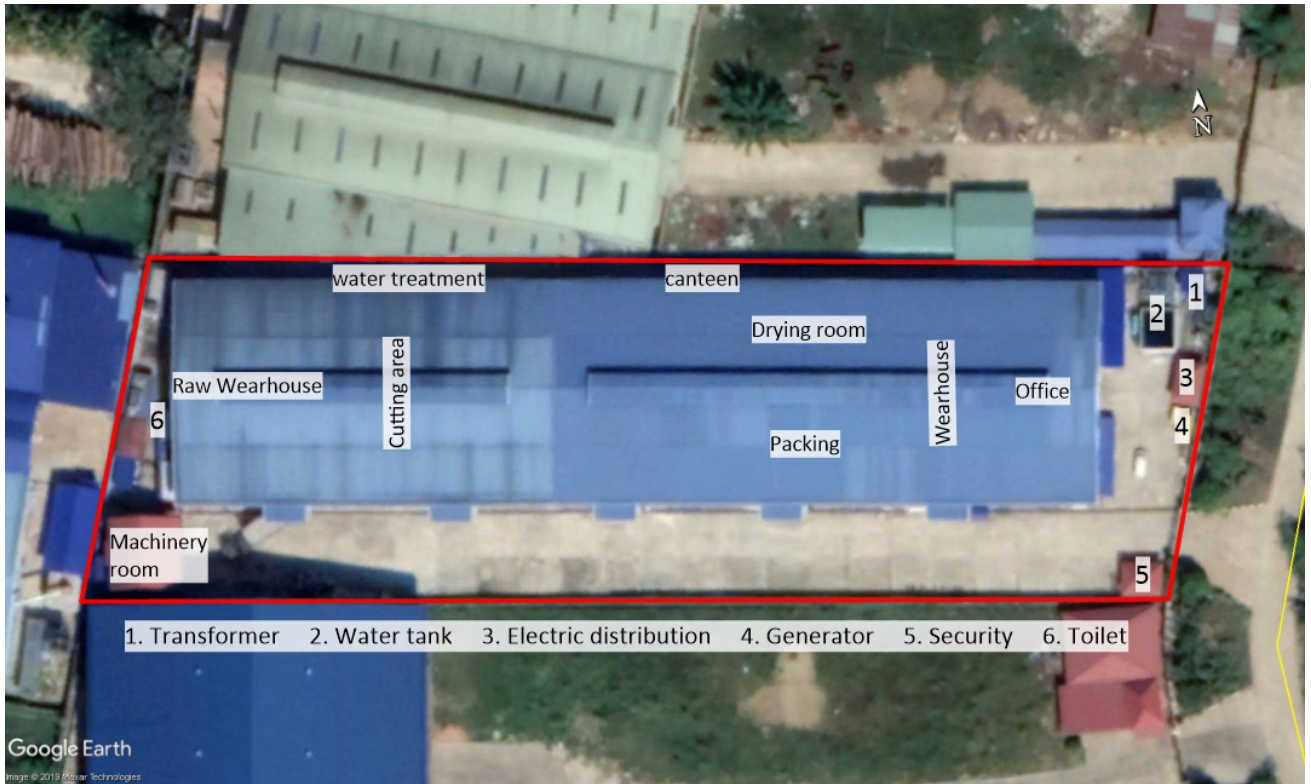
27. The Ethnic Rights Protection Law (24<sup>th</sup> February 2015)
28. Occupational Safety and Health Law 2019
29. Myanmar Fire Brigade Law (2015)
30. The Electricity Law (2014)
31. Vehicle Safety and Motor Vehicle Management Law (2020)
32. National Land Use Policy (2014 October)

### စီမံကိန်းဆိုင်ရာအချက်အလက်

Zhongze Bags Industry Company Limited သည် လတ္တီတွဒ် 16°50'44.5"N နှင့် လောင်ဂျီတွဒ် 16°50'44.5"N ၊ မြေကွက်အမှတ် (၆၀၊ ၆၁၊ ၆၂၊ ၆၉၊ ၇၀၊ ၇၁) အနက်မှ မြေတိုင်းရပ်ကွက်အမှတ်-(၆၉)၊ စက်မှုဇုန် (၂)၊ ဒဂုံဆိပ်ကမ်းမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး တည်ရှိသည်။



စက်ရုံတည်နေရာ



**စက်ရုံတည်ဆောက်မှု ပုံစံ**

**အနီးပတ်ဝန်းကျင် အခြေအနေ**

ကနဦးစစ်တမ်းကောက်ယူခြင်းနှင့် ဒေသဆိုင်ရာမှ အချက်အလက်များရယူခြင်းသည် အလွန်အရေးကြီးပါသည်။ ပတ်ဝန်းကျင်အရည်အသွေး တိုင်းတာခြင်းကဲ့သို့သော ကနဦး စစ်တမ်း ကောက်ယူခြင်းသည် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာတွင် အရေးပါသောအခန်းအဖြစ် တည်ရှိနေသည်။ ကွင်းဆင်းလေ့လာထားသည် အချက်အလက်များကို သက်ဆိုင်ရာခေါင်းစဉ်အလိုက် အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များနှင့် နှိုင်းယှဉ်၍ ဖော်ပြထားပါသည်။ ထိုနည်းတူ လျှော့ချရမည့်နည်းလမ်းများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။ စီမံကိန်းတည်ရှိရာဒေသရှိ ရာသီဥတု၊ မိုးရေချိန်၊ လူမှုစီးပွားရေးဆိုင်ရာအချက်အလက်များကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။

အခြေခံစစ်တမ်းများကောက်ယူခြင်းကို ၇ ရက်၊ နိုဝင်ဘာလ ၂၀၁၉ တွင်ဆောင်ရွက်ခဲ့၍ လေအရေအသွေး၊ အပူချိန်၊ စိုထိုင်းဆ၊ ဆူညံသံ နှင့် ညစ်ညမ်းမှုကို တိုင်းတာ ၍ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး ထုတ်လွှတ်မှု လမ်းညွှန်ချက်များ နှင့် နှိုင်းယှဉ်ဖော်ပြထားပါသည်။ စီမံကိန်းကြောင့် သက်ရောက်မှုများကို လျော့ချရန် နှင့် ထိန်းသိမ်းရေးများပြုလုပ်ရန် ဖော်ပြထားပါသည်။ လေအရည်အသွေး၊ ရေအရည်အသွေး၊ မြေဆီလွှာ နှင့် ဆူညံသံများ၏ အခြေအနေ အကျဉ်းချုပ်ကိုလည်း ဖော်ပြထားပါသည်။

အမျိုးအမည်	တိုင်းတာမှုများ
လေထု	(1) PM <sub>2.5</sub> , (2) PM <sub>10</sub> , (3) Sulfur dioxide (SO <sub>2</sub> ), (4) Nitrogen dioxide (NO <sub>2</sub> ), (5) Ozone (O <sub>3</sub> )
ဆူညံသံ	ဆူညံမှု အတိုင်းအတာ
အလင်းရောင်	အလင်းရောင်ရရှိမှုတိုင်းတာခြင်း

တိုင်းတာတွေ့ရှိချက်အရ ပါရာမီတာများသည် အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာထုတ်လွှတ်မှု အရည်အသွေး လမ်းညွှန်မှု လမ်းညွှန်မှုအောက်တွင်ရှိကြောင်းတွေ့ရသည်။ ဆူညံသံသည်လည်း အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ ထုတ်လွှတ်မှု အရည်အသွေး လမ်းညွှန်မှု နှင့် ကိုက်ညီမှုရှိနေကြောင်းတွေ့ရသည်။ အလင်းရောင်တိုင်းတာမှုသည်လည်း ကောင်းမွန်ကြောင်းတွေ့ရသည်။

**အဆိုပြုလုပ်ငန်း၏စစ်တမ်းကောက်ယူမှု**

အမျိုးအစား	ရလဒ်
<b>ဆူညံသံထွက်ရှိမှု</b>	
ချုပ်လုပ်ခြင်းဧရိယာ	74.9 dBA
ဖြတ်တောက်ခြင်းဧရိယာ	73 dBA
<b>လေအရည်အသွေး</b>	
PM <sub>10</sub>	25.2 µg/m <sup>3</sup>
PM <sub>2.5</sub>	19.9 µg/m <sup>3</sup>
O <sub>3</sub>	81.8 µg/m <sup>3</sup>
NO <sub>2</sub>	51.9 µg/m <sup>3</sup>
SO <sub>2</sub>	40.9 µg/m <sup>3</sup>
<b>အလင်းရောင်ရရှိမှု</b>	
ချုပ်လုပ်ခြင်းဧရိယာ ၁	1219 Lux
ချုပ်လုပ်ခြင်းဧရိယာ ၂	1186 Lux
ဖြတ်တောက်ခြင်းဧရိယာ	1437 Lux
အရည်အသွေးစစ်ဆေးခြင်းဧရိယာ	1134 Lux
ထုပ်ပိုးခြင်းဧရိယာ	783 Lux



<b>အမျိုးအစား</b>	<b>ရလဒ်</b>
အခြောက်ခံခြင်းဧရိယာ	205 Lux

**ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့် လျော့ချရေး အစီအစဉ်**

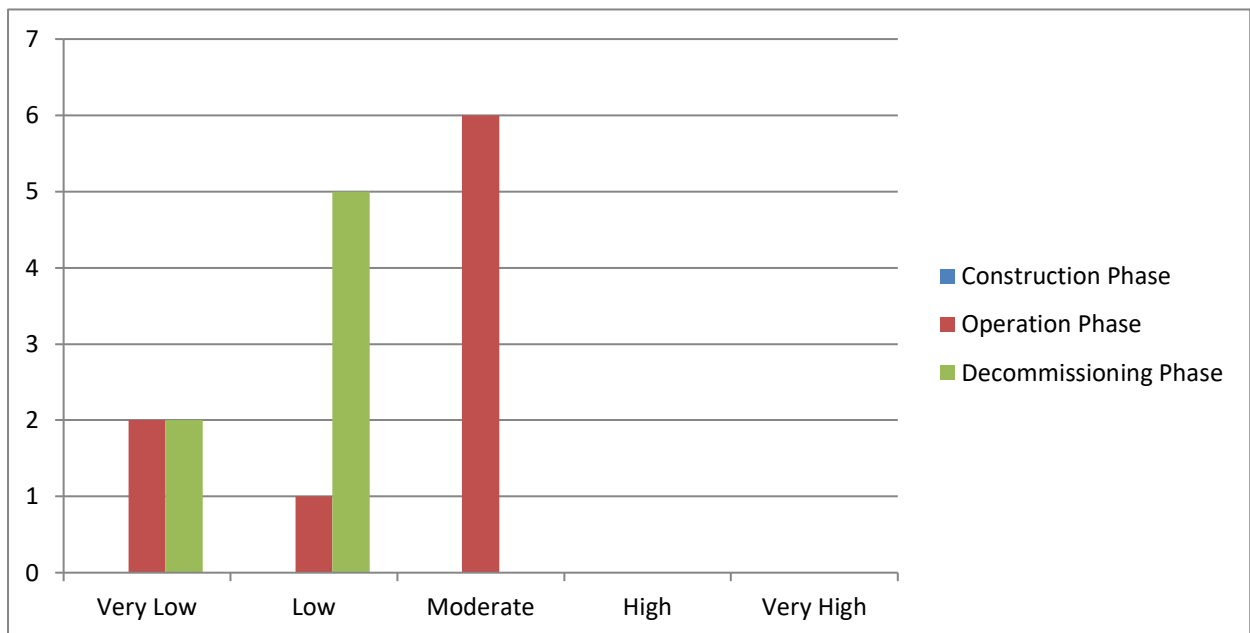
စီမံကိန်းဆောင်ရွက်ချက်များကြောင့် ပတ်ဝန်းကျင်ဆိုင်ရာအရင်းအမြစ်များ၊ ဂေဟဆိုင်ရာ အရင်းအမြစ်များ၊ လူ့စွမ်းအားအရင်းအမြစ်များနှင့် စွန့်ပစ်ပစ္စည်းများစွန့်ပစ်ခြင်း စသည့် ဖြစ်လာနိုင်သည့်ထိခိုက်မှုများကို ခွဲခြားသတ်မှတ်ပြီး ၎င်းတို့၏ ရလဒ်များကို ထိခိုက်မှုဆန်းစစ်သည့် နည်းလမ်းများကို အသုံးပြု၍ သတ်မှတ်ခဲ့ပါသည်။ စီမံကိန်းအား ထိခိုက်မှုများကို အပိုင်းသုံးပိုင်းခွဲ၍ သတ်မှတ်ထားသည်။ အမျိုးအစားမှာ တည်ဆောက်သည့်ကာလ၊ လုပ်ငန်းလည်ပတ်သည့်ကာလ နှင့် လုပ်ငန်းဖျက်သိမ်းသည့်ကာလများ ဖြစ်ပါသည်။ ပတ်ဝန်းကျင်ထိ ခိုက်မှု လျော့ပါးစေရေး နည်းလမ်းများကိုလဲထည့်သွင်းဖော်ပြထားပါသည်။ ပတ်ဝန်းကျင်ထိခိုက်မှုကို လေ့လာဆန်းစစ်ရာ တွင် စီမံကိန်းကာလအတွင်း ထိခိုက်မှုတစ်ခုချင်းစီ၏ ပမာဏ၊ ကြာမြင့်ချိန်၊ ကျယ်ပြန့်မှုနှင့် ဖြစ်နိုင်ခြေတို့အား ဖော်ပြထားပါသည်။ စီမံကိန်းကာလအတွင်း ထိခိုက်မှုပမာဏ အသင့်အတင့်ရှိ (၁)ခု၊ အနည်းငယ် (၄)ခု နှင့် အလွန်နည်းသောပမာဏ (၂)ခုတို့ဖြင့် လေ့လာတွေ့ရှိခဲ့ပါသည်။ ပတ်ဝန်းကျင်နှင့် လူထုအပေါ် ထိခိုက်မှုနှင့် လျော့ချရမည့်အစီအစဉ်ကို အောက်ဖော်ပြပါဇယားတွင် ဖော်ပြထားပါသည်။

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
<p><b>တည်ဆောက်ရေးကာလ။ ။ပတ်ဝန်းကျင်ထိခိုက်မှုလေ့လာချိန်တွင် စက်ရုံတည်ဆောက်ပြီး လုပ်ငန်းလည်ပတ်နေချိန်ဖြစ်သော်ကြောင့် ဤကာလကိုထည့်သွင်း မစဉ်းစားတော့ပါ။</b></p> <p><b>လုပ်ငန်းလည်ပတ်ခြင်းကာလ</b></p>			
လေထုညစ်ညမ်းမှု	<ul style="list-style-type: none"> <li>သယ်ယူပို့ဆောင်ရေးသုံး မော်တော်ယာဉ်တို့ကြောင့် ဖုန်မှုနှင့် ဖန်လုံအိမ်ဓါတ်ငွေ့ထွက်ခြင်း</li> <li>လုပ်ငန်းခွင်အတွင်းဖုန်မှုထွက်ခြင်း</li> <li>မီးဖိုမှ မီးခိုးထွက်ခြင်း</li> <li>အရေးပေါ်သုံးမီးစက်မှာ စွန့်ထုတ်အခိုးအငွေ့ ထွက်ခြင်း</li> </ul>	အသင့်တင့်	<ul style="list-style-type: none"> <li>မီးစက် တို့တွင် မီးခိုးခေါင်းတိုင် တပ်ဆင်ခြင်းဖြင့် အခိုးအ ငွေ့ ကြောင့် ပတ်ဝန်းကျင် ထိခိုက်မှုကို လျော့ချခြင်း၊</li> <li>စက်ရုံအတွင်းနှင့် အနီး အနားတွင် သစ်ပင်ပန်းမံ စိုက်ပျိုးခြင်းဖြင့် carbon ထွက်ရှိမှုကို လျော့ချပေးခြင်း၊</li> <li>NOx ထွက်ရှိမှုနည်းသော နည်းပညာဖြင့် စက်ပစ္စည်း များသုံးခြင်း၊</li> <li>စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။</li> </ul>
ရေ	<ul style="list-style-type: none"> <li>မိလ္လာစွန့်ထုတ်ရေ</li> <li>စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း</li> </ul>	အနည်းငယ်	<ul style="list-style-type: none"> <li>လက်ရှိရေဆိုးစွန့်ပစ်မှုပုံစံဖြစ်သော မိလ္လာစနစ်ကို ပုံမှန်စစ်ဆေးပေးခြင်း၊</li> </ul>



			<ul style="list-style-type: none"> <li>မိလ္လာကန်နှင့် မိလ္လာ စနစ်ကို လူဦးရေနှင့် သင့်တင့်သည့် ပမာဏ ရှိရန် စီစဉ်ထားခြင်း။</li> <li>ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း။</li> <li>စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။</li> </ul>
မြေဆီလွှာညစ်ညမ်းမှု	<ul style="list-style-type: none"> <li>မတော်တစ စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း</li> </ul>	အလွန်နည်း	<ul style="list-style-type: none"> <li>စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။</li> <li>မတော်တစမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။</li> </ul>
ဆူညံသံ	<ul style="list-style-type: none"> <li>မီးစက်၊ လေမှုတ်စက် နှင့် မော်တော် ယာဉ် အသုံးပြုမှုကြောင့် ပတ်ဝန်းကျင် ဆူညံမှု</li> </ul>	အသင့်တင့်	<ul style="list-style-type: none"> <li>ဆူညံသံထွက်သောနေရာများကို အကာအကွယ် ဖြင့်ထားရှိခြင်း</li> <li>စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ပေးခြင်း</li> </ul>
မီးဘေးအန္တရာယ်	<ul style="list-style-type: none"> <li>ကုန်ကြမ်းသိုလှောင်မှု နှင့် လျှပ်စစ်သုံးစွဲ ပေါ့လျော့မှု</li> </ul>	အသင့်တင့်	<ul style="list-style-type: none"> <li>ကုန်ကြမ်းများအား သီးသန့်ထားရှိခြင်း</li> <li>လျှပ်စစ်သုံးစွဲမှုများအား စနစ်တကျ အသုံးပြုစေခြင်း</li> </ul>
စွန့်ပစ်အမှိုက်	<ul style="list-style-type: none"> <li>ထုတ်လုပ်ရာတွင် ကျန်ရှိသော ပိတ်စ အပိုင်းအစများ။ မီးဖိုချောင်နှင့် ရုံးတွင်းစွန့်ပစ်ပစ္စည်းများ</li> </ul>	အသင့်တင့်	<ul style="list-style-type: none"> <li>စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း</li> </ul>
စွန့်ပစ်အရည်	<ul style="list-style-type: none"> <li>နေအိမ်၊ စားသောက်ဆောင် တို့မှစွန့်ထုတ်ရေ။ မိလ္လာကန်စနစ်</li> </ul>	အသင့်တင့်	<ul style="list-style-type: none"> <li>စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း</li> </ul>
အန္တရာယ်ရှိအမှိုက်	<ul style="list-style-type: none"> <li>စက်များမှ ဆီယိုဖိတ်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိန်းသိမ်းမှုက ထွက်ရှိသည့်အမှိုက်များ</li> </ul>	အလွန်နည်း	<ul style="list-style-type: none"> <li>စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း။ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း</li> </ul>
လူမှုစီးပွားဘဝ	<ul style="list-style-type: none"> <li>ဒေသခံပြည်သူများအတွက် အလုပ်အကိုင်အခွင့်အလမ်းများ ရရှိစေခြင်း</li> </ul>		ကောင်းမွန်သောသက်ရောက်မှု
<b>လုပ်ငန်းပိတ်သိမ်းခြင်းကာလ</b>			
လေထုညစ်ညမ်းမှု	<ul style="list-style-type: none"> <li>အဆောက်အဦများ ဖြိုချမှုများ</li> <li>ဖြိုချပစ္စည်းများ သယ်ယူမှုများ</li> </ul>	အနည်းငယ်	<ul style="list-style-type: none"> <li>NOx ထွက်ရှိမှုနည်းသော နည်းပညာဖြင့် စက်ပစ္စည်းများသုံးခြင်း။</li> <li>စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။</li> </ul>

ရေ	<ul style="list-style-type: none"> <li>• ဖြိုချပစ္စည်းများနှင့် မိလ္လာဖျက်ဆီးမှုများ</li> </ul>	အနည်းငယ်	<ul style="list-style-type: none"> <li>• ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း။</li> <li>• စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။</li> </ul>
မြေဆီလွှာညစ်ညမ်းမှု	<ul style="list-style-type: none"> <li>• အဆောက်အဦးနှင့် ဆက်စပ်ပစ္စည်းများ</li> <li>• ဖြိုချပစ္စည်းများ သယ်ယူမှုများ</li> </ul>	အနည်းငယ်	<ul style="list-style-type: none"> <li>• မတော်တစမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။</li> </ul>
အမှိုက်စွန့်ပစ်မှု	<ul style="list-style-type: none"> <li>• အဆောက်အဦးများ</li> <li>• ဖြိုချပစ္စည်းများ သယ်ယူမှုများ</li> </ul>	အလွန်နည်း	<ul style="list-style-type: none"> <li>• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း</li> </ul>
အန္တရာယ်ရှိအမှိုက်	<ul style="list-style-type: none"> <li>• စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိန်းသိမ်းမှုက ထွက်ရှိသည့်အမှိုက်များ</li> <li>• ဖြိုချပစ္စည်းများ သယ်ယူမှုများ</li> </ul>	အလွန်နည်း	<ul style="list-style-type: none"> <li>• စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း</li> </ul>
မတော်တစထိခိုက်မှုများ	<ul style="list-style-type: none"> <li>• အဆောက်အဦးများ ဖြိုချမှုများ</li> <li>• ဖြိုချပစ္စည်းများ သယ်ယူမှုများ</li> </ul>	အနည်းငယ်	<ul style="list-style-type: none"> <li>• မတော်တစမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။</li> </ul>
လူမှုစီးပွားဘဝ	<ul style="list-style-type: none"> <li>• ဒေသခံပြည်သူများအတွက်အလုပ်အကိုင် ခေတ္တရရှိခြင်း</li> </ul>		ကောင်းမွန်သောသက်ရောက်မှု



စက်ရုံ၏လုပ်ဆောင်မှုများကြောင့် ဖြစ်ပေါ်လာနိုင်သည့် ပတ်ဝန်းကျင်ဆိုင်ရာထိခိုက်နိုင်မှုများ တွင်-

- ၁။ အရေးပေါ်အသုံးပြုသော ဒီဇယ်သုံးဂျင်နရေတာနှင့် စက်ရုံသုံး မော်တော်ယာဉ်မှထွက်ရှိသော ဓာတ်ငွေ့ထုတ်လွှတ်မှု၊

- ၂။ စက်ရုံသုံးစက်ပစ္စည်းများ၊ အရေးပေါ်အသုံးပြုသော ဒီဇယ်သုံးဂျင်နရေတာနှင့် မော်တင်ယာဉ်များမှ ထွက်ရှိသော ဆူညံသံ၊
- ၃။ ရုံးအသုံးပြုမှုမှထွက်သော ညစ်ညမ်းရေးထွက်ရှိမှုနှင့် အဝတ်လျှော်ရာမှ ထွက်သော ရေဆိုးများ
- ၄။ စွန့်ပစ်အမှိုက်များအဖြစ် ကုန်ကြမ်းထုတ်ပိုးလာသော အိတ်များ၊ ဝန်ထမ်းအသုံးပြုပြီး အမှိုက်များနှင့် တခြားရုံးသုံး အမှိုက်များ

**ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ် လုပ်ဆောင်ချက်**

အဆိုပြုလုပ်ငန်း၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အတွက် Plan-Do-Check-Act (P D C A) စက်ဝိုင်းဖြင့် အစီအစဉ်တကျ ပြုလုပ်သွားမည်ဖြစ်ပါသည်။ အစီအစဉ်တွင် စက်ရုံကြောင့် ဖြစ်ပေါ်စေနိုင်သော ပတ်ဝန်းကျင်နှင့် လူမှုဘဝအပေါ် ဆိုးကျိုးသက်ရောက်မှုများကို လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစရှိသည့် အစီအစဉ်များ ပါဝင်ပါသည်။ ၎င်း EMP အစီအစဉ်များကို အကောင်အထည်ဖော်ရန်အတွက်သည် စက်ရုံတွင် ကျန်းမားရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ အဖွဲ့အစည်းတစ်ခုထားရှိပြီး လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို အကောင်အထည် ဖော်သွားမည်ဖြစ်ပါသည်။ အဆိုပါစက်ရုံ၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ရေရှည်ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်သော ပတ်ဝန်းကျင် အဖြစ် အကောင်အထည်ဖော်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို လျော့နည်းစေရန် စီမံခန့်ခွဲမှုအစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်များကို အောက်ပါအတိုင်းပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအရာတစ်ခုချင်းစီအလိုက် ခွဲခြားမှု ပြုလုပ်ထားပါသည်။

- ၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
  - လေထုညစ်ညမ်းမှုအား ခြောက်လတစ် ကြိမ် တိုင်းတာစောင့် ကြပ် ကြည့် ရှု ခြင်း
  - လေထုညစ်ညမ်းမှုနှင့် ကာဘွန်ထွက်ရှိမှုကို လျော့ချရန် သစ်ပင်များစိုက်ပျိုးခြင်း
  - ဖုံထူထပ်သောနေရာများတွင် အလုပ်သမားများကို တစ်ကိုယ်ရေသုံး အကာအကွယ်ပစ္စည်းများ အသုံးပြုစေခြင်း
  - တစ်နှစ်လျှင် ခန့်မှန်းကုန်ကျစရိတ် ၁၅၀၀၀၀၀ ကျပ်
- ၂။ ဆူညံမှုထိန်းခြင်းဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
  - ဆူညံသံထွက်ရှိမှုအားအား ခြောက်လတစ် ကြိမ် တိုင်းတာစောင့် ကြပ် ကြည့် ရှု ခြင်း
  - မီးစက်ခန်းများတွင် ဆူညံသံထိန်းချုပ်ကိရိယာများတပ်ဆင်ခြင်း
  - လုံလောက်သော တစ်ကိုယ်ရေကာကွယ်ရေးပစ္စည်းများအသုံးပြုစေခြင်း
  - ဆူညံသော နေရာများတွင် အလုပ်လုပ်သော အလုပ်သမားများအတွက် တစ်ကိုယ်ရေသုံး ကာကွယ်ရေးပစ္စည်းများကို အသုံးပြုစေခြင်း
  - တစ်နှစ်လျှင် ခန့်မှန်းကုန်ကျစရိတ် ၅၀၀၀၀၀ ကျပ်
- ၃။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- စွန့်ပစ်အစိုင်အခဲများကို အစိုအခြောက်ခွဲခြား၍ သီးခြားစွန့်ပစ်စေခြင်း
- နေ့စဉ်ထွက်စွန့်ပစ်ပစ္စည်းများကို ရန်ကုန်စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက်စွန့်ပစ်ခြင်း
- တစ်နှစ် ခန့်မှန်းကုန်ကျစရိတ် ၅၀၀၀၀ ကျပ်

၄။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- စက်ရုံမြောင်း ရေစီးရေလာကောင်းစေရန် ထိန်းချုပ်ခြင်း နှင့်
- မိလ္လာစနစ်ကို စစ်ဆေးခြင်း
- စက်ရုံရေမြောင်းများ ပိတ်ဆို့ခြင်းမဖြစ်စေရန် စစ်ဆေးခြင်း
- တစ်နှစ်လျှင် ခန့်မှန်းကုန်ကျစရိတ် ၈၀၀၀၀၀ ကျပ်

၅။ ဘေးအန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- ဘေးအန္တရာယ်ရှိ ပစ္စည်းများဝယ်ယူရာတွင် Material Safety Data Sheet (MSDS) များ ပါဝင်ရမည်
- တစ်နှစ် ခန့်မှန်းကုန်ကျစရိတ် ၅၀၀၀၀၀ ကျပ်

၆။ မီးဘေးအန္တရာယ်ဆိုင်ရာ စီမံခန့်ခွဲမှုအစီအစဉ်

- လက်ရှိမီးငြိမ်းသတ်ကိရိယာများကို ပုံမှန်စစ်ဆေးခြင်း ပြုလုပ်ရမည်။ မီးလောင်မှု အရေးပေါ်အခြေအနေမျိုးတွင် မီးဘေးအန္တရာယ်အတွက် ရေသိုလှောင်ကန်ထားရှိပါသည်။
- မီးလောင်မှုဖြစ်ပွားပါက အလုပ်သမားများအား သတိပေးရန်အတွက် စက်ရုံတွင် အရေးပေါ်မီးသတိပေးစနစ်များကို တပ်ဆင်ထားပါသည်။
- စက်ရုံ၏ အရေးပေါ်အခြေအနေများအတွက် အဓိကဝင်ပေါက်များနှင့် လမ်းကြောင်းများကို မီးဘေးအရေးပေါ်အခြေအနေများအတွက် ပစ္စည်းများ သို့မဟုတ် စက်များဖြင့် ပိတ်ဆို့ထားခြင်း မပြုရပါ။
- တစ်နှစ်ခန့်မှန်းကုန်ကျစရိတ် ၁၂၀၀၀၀၀ ကျပ်

၇။ စွမ်းအင်အသုံးပြုမှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- စွမ်းအင်အသုံးပြုမှုလျော့ချရေးစနစ်ကို အသုံးပြုခြင်း
- မလိုအပ်သော နေရာများတွင် လျှပ်စစ်အသုံးပြုခြင်း၊ မီးထွန်းထားခြင်း စသည်တို့ကို ကြည့်ရှုထိန်းသိမ်းခြင်း
- တစ်နှစ်လျှင် ခန့်မှန်းကုန်ကျစရိတ် ၁၀၀၀၀၀ ကျပ်

၈။ ရေအသုံးပြုမှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- ရေအသုံးပြုမှုကို သိရှိနိုင်ရန် water meter အသုံးပြုခြင်း
- ရေအသုံးပြုမှုကို ထိန်းသိမ်းမှုများ ပြုလုပ်နိုင်စေရန် ဝန်ထမ်းများကို သင်ကြားပေးခြင်း
- တစ်နှစ်လျှင် ခန့်မှန်းကုန်ကျစရိတ် ၅၀၀၀၀၀ ကျပ်

၉။ အရေးပေါ်တုံ့ပြန်ရေး အစီအစဉ်

- မီးသတ်စနစ်များကို ကောင်းမွန်အောင်ပြုလုပ်ခြင်း
- အရေးပေါ်စနစ်ထားရှိခြင်း (ဥပမာ- အရေးပေါ်ထွက်ပေါက်)
- ငလျင်နှင့် တခြားသော အရေးပေါ်ကိစ္စရပ်အများအတွက် ဆေးဝါး၊ ကြက်ခြေနီ သင်တန်းများထားရှိခြင်း
- မီးသတ်တပ်ဖွဲ့များ၊ ကယ်ဆယ်ရေးတပ်ဖွဲ့များ ဖွဲ့စည်းခြင်း၊ လုံခြုံရေးအတွက် စက်ရုံဝန်ထမ်းများကို သင်တန်းပေးခြင်း။
- ၁၅၀၀၀၀၀ ကျပ်

၁၀။ လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan

- စာသင်ကျောင်းများ - ၀.၅%
- သင်တန်းပို့ချမှု - ၁%
- ဝန်ထမ်းများကျန်းမာရေးစောင့်ရှောက်မှု - ၀.၅%

လုပ်ငန်းဆောင်ရွက်နေစဉ်အတွင်း စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
<b>Operation Phase</b>					
Air quality	PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub>	Once in every six month	Outdoor of proposed project (16°50'43.66"N 96°17'31.49"E) Indoor of proposed project (16°50'44.5"N 96°17'30.4"E)	1,500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Noise quality	Noise level in decibel (dBA)	Once in every six month	Two points in production area (Sewing Area - 16°50'44.53"N 96°17'29.55"E) (Cutting Area - 16°50'44.66"N 96°17'28.14"E)	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Solid Waste Generation	-	Weekly	Recycle house and waste house and at the factory office	50,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
Liquid Waste Generation	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate	Once in every six months	Sewage and drainage (Wastewater treatment System - 16°50'45.19"N 96°17'28.14"E)	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Hazardous Waste Generation	-	Weekly	Recycle house and temporary storage area at the factory office	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	The whole factory (16°50'44.5"N 96°17'29.6"E)	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Light intensity	Illuminance	Monthly	At the production line (Cutting area - 16°50'44.66"N 96°17'28.14"E) (Quality Control - 16°50'44.45"N 96°17'30.53"E)	20,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Crisis Situation and Occupational Safety and Health	Loss of property and injuries	Monthly	The whole factory (16°50'44.5"N 96°17'29.6"E)	1,500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
<b>Decommissioning Phase</b>					
Air quality	PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub>	One time during this phase	One point in the production area	1,000,000 Kyats	Project Proponent
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	1,000,000 Kyats	Project Proponent

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
Solid Waste	-	One time during this phase	Temporary waste storage area	500,000 Kyats	Project Proponent
Liquid Waste	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate	One time during this phase	Wastewater Treatment System	300,000 Kyats	Project Proponent
Ground Water	pH, Turbidity, Total Solids, Chloride, Hardness, Free cyanide, Arsenic, Copper, Iron, Lead, Manganese, Zinc	One time after this phase	Tube well	200,000 Kyats	Project Proponent
Occupational Health and Safety	-	During this phase	All decommissioning area	500,000 Kyats	Project Proponent
Rehabilitation	Recovering and Revegetation	After this phase	All decommissioning area	500,000 Kyats	Project Proponent

**သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း**

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း အစီအစဉ်တွင် စက်ရုံ၏ IEE အစီရင်ခံစာ အကြောင်းကို ရှင်းလင်းတင်ပြခြင်းဖြစ်သည်။ တွေ့ဆုံပွဲကို ၂၈ ရက်၊ ဇန်နဝါရီလ၊ ၂၀၂၀ ခုနှစ်တွင် ဒဂုံဆိပ်ကမ်းမြို့နယ်၊ စက်မှုဇုန်ကော်မတီရုံး၊ အစည်းအဝေးခန်းမတွင် ပြုလုပ်ခဲ့ပါသည်။ တွေ့ဆုံပွဲတွင် စက်ရုံ၏သက်ဆိုင်ရာပုဂ္ဂိုလ်များ၊ အစိုးရအဖွဲ့၊ ရုံးများဖြစ်သော ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန၊ စက်မှုကြီးကြပ်နှင့် စစ်ဆေးရေး ဦးစီးဌာန၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနှင့် သန့်ရှင်းရေးဌာန အစရှိသော သက်ဆိုင်ရာဌာနများ၏ တာဝန်ရှိပုဂ္ဂိုလ်များ၊ စက်မှုဇုန်စီမံခန့်ခွဲမှု ကော်မတီ၏ တာဝန်ရှိပုဂ္ဂိုလ်များမှ လိုအပ်သည်များကို အကြံပေးခြင်း၊ စီမံကိန်း၏ အစီရင်ခံစာတွင် လိုအပ်သည်များကို ဖြည့်စွက်ပေးရန် အကြံပြုချက်များပေးခဲ့ပါသည်။ ပြုလုပ်ခဲ့သည့် အစီအစဉ်အကျဉ်းကိုပါ ထည့်သွင်းဖော်ပြထားပါသည်။

နေ့ရက်	၂၀၂၀ ခုနှစ်၊ ဇန်နဝါရီလ၊ ၂၈ ရက်နေ့
နေရာ	စက်မှုဇုန်ကော်မတီရုံး၊ ကနောင်ခန်းမ၊ ဒဂုံဆိပ်ကမ်းမြို့နယ်၊ ရန်ကုန်မြို့။
အစီအစဉ်အကျဉ်း	<ul style="list-style-type: none"> <li>• စက်ရုံနောက်ခံအကြောင်း</li> <li>• စက်ရုံလုပ်ငန်းအကြောင်း</li> <li>• ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့် လျော့ချရေးအစီအစဉ်</li> <li>• ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်နှင့် စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်</li> <li>• အမေးအဖြေကဏ္ဍ</li> </ul>

**နိဂုံးနှင့် အကြံပြုချက်**

အကျဉ်းချုပ်အားဖြင့် ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒလမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ကျင့်သုံးရန်တာဝန်များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် ဖော်ပြရှင်းလင်းတင်ပြထားပါသည်။ စီမံကိန်းနှင့် သက်ဆိုင်သူများအား စီမံကိန်းဆိုင်ရာ အကြောင်းအရာများ ရှင်းလင်းတင်ပြခြင်း၊ အကြံပြုချက်များနှင့် ဆွေးနွေးတင်ပြလာသည့် သဘောထား အကြံဉာဏ်များကိုရယူပြီး အစီအရင်ခံစာတွင် ဖော်ပြထားပါသည်။

**အကြံပြုချက်များအရ-**

- အစီရင်ခံစာတွင် ဖော်ပြထားသည့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်နှင့် ကတိကဝတ်များကို စီမံကိန်း၏ သက်တမ်းတလျှောက်တွင် အကောင်အထည်ဖော် ဆောင်ရွက်ရမည်။
- အစီအစဉ်နှင့် အရည် စွန့်ပစ်ပစ္စည်းများကိုရန်ကုန် မြို့တော် စည်ပင်သာယာရေး၏ စည်းကမ်းများအတိုင်း စွန့်ပစ်ရမည်။
- အလုပ်သမားများအား သင့်တော်သော သင်တန်းများပေးခြင်း၊ လုပ်ငန်းခွင်အတွင်း တစ်ကိုယ်ရည် ကာကွယ်ရေး ပစ္စည်းများ အသုံးပြုစေခြင်းများ ဆောင်ရွက်ရမည်။
- ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်များကို နေ့စဉ်၊ လစဉ်နှင့် နှစ်စဉ် လုပ်ငန်းခွင်အတွင်း လုပ်ဆောင်ရမည်။
- ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ် မှတ်တမ်းများကို သေချာသိမ်းဆည်း၍ တတိယအဖွဲ့အစည်း သို့ တင်ပြရမည်။
- ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒ လမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ရ မည်။

အချုပ်အားဖြင့်ဆိုသော် အဆိုပြုသူသည် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာနမှ ညွှန်ကြားလာသော အဆိုပြုချက်များ၊ အကြံပြုချက်များကို လိုက်နာဆောင်ရွက်ရမည်။ ထိရောက်သော ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုကို အဆိုပြုသူမှ ဆောင်ရွက်ရမည်။ အဆိုပြုသူသည် ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊



ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒ  
လမ်းညွှန်ချက်များအတိုင်း လိုက်နာဆောင်ရွက်ရမည်။

## EXECUTIVE SUMMARY

### **Introduction**

This report describes the findings of the Initial Environmental Examination (IEE) for the Manufacturing of Various Kinds of Bags on CMP Basis by Zhongze Bags Industry Company Limited. The main objective of this report is to identify the major environmental impacts due to implementation of the project along with the effective measures to mitigate the potential adverse impacts.

The project approved for the investment endorsement from the Yangon Region Investment Committee (YRIC) Endorsement No. 162/2019 on 21, February 2019 (**Appendix A**). The Yangon Region Investment Committee announce for the environmental approval and comments of the Ministry of the Natural Resources and Environmental Conservation (MONREC) on the proposed project and had approved the proposal for investment in manufacturing of various kind of bags under the name of Zhongze Bags Industry Company Limited as a solely owned foreign investment from the China. According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), the said project requires an Environmental Management Plan (EMP) to meet the environmental assessment according to requirements of Notification No. YaKa-1/3/4 (EIA) (623/2019) on April 12, 2019. Therefore, Zhongze Bags Industry Company Limited commissioned Myanwei Consulting Company Limited for IEE report study.

The proposed factory is the 100% foreign investment by Zhongze Bags Industry Company Limited with an estimated authorized capital of USD (0.672) million. The proposed factory is located at Land Plot No. 142, Myay Taing Block No. Industrial Zone (2), Dagon Myo Thit (Seik Kan) Township, Yangon Region and the total land area 1.85 acres. The factory aims to manufacture various kinds of bag products by using semiautomatic process control system with production process. The construction phase of the proposed factory initiated in February 2019 and then commercial running operation stage is January 2020. The proposed duration of the investment shall be 28 years and extendable 10 years periods two times. The term of the Lease shall be initial 8 years commencing from the date of signing of the Lease Agreement between landowner and Zhongze Bags Industry Company Limited for proposed project site for 1.85 acres of land and extendable for 10 years in 2 times recommended by the Yangon Region Government.

### **Policy, Legal and Institutional Framework**

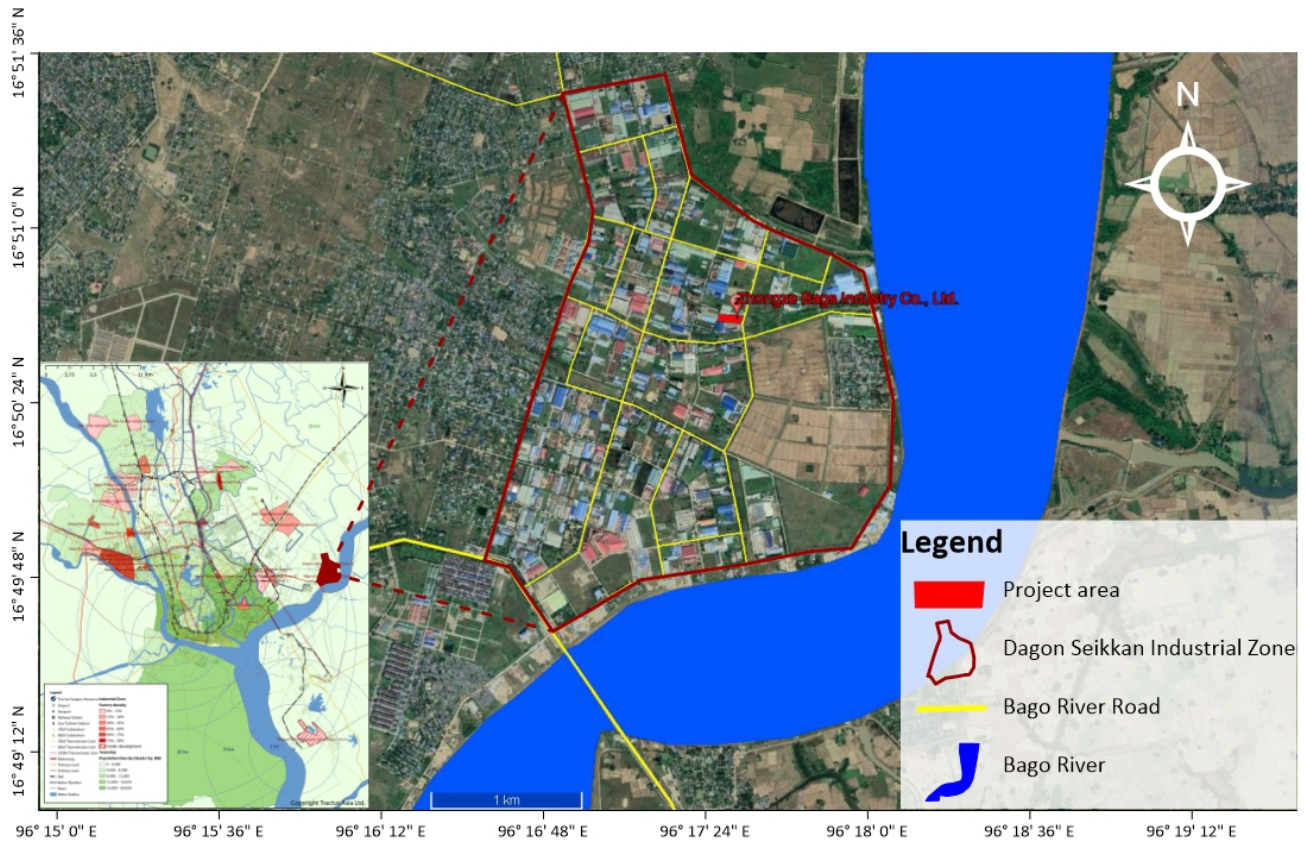
The brief summary of relevant national environmental legislations such as Environmental Impact Assessment Procedure (2015) and National Environmental Quality (emission) Guidelines, established by the Ministry of Natural Resources and Environmental Conservation (MONREC) and overview of current local and international environmental and social policies including related international or regional convention for the proposed project.

33. Environmental Conservation Law (2012)
34. Environmental Conservation Rules (2012)
35. Environmental Impact Assessment Procedure (2015)

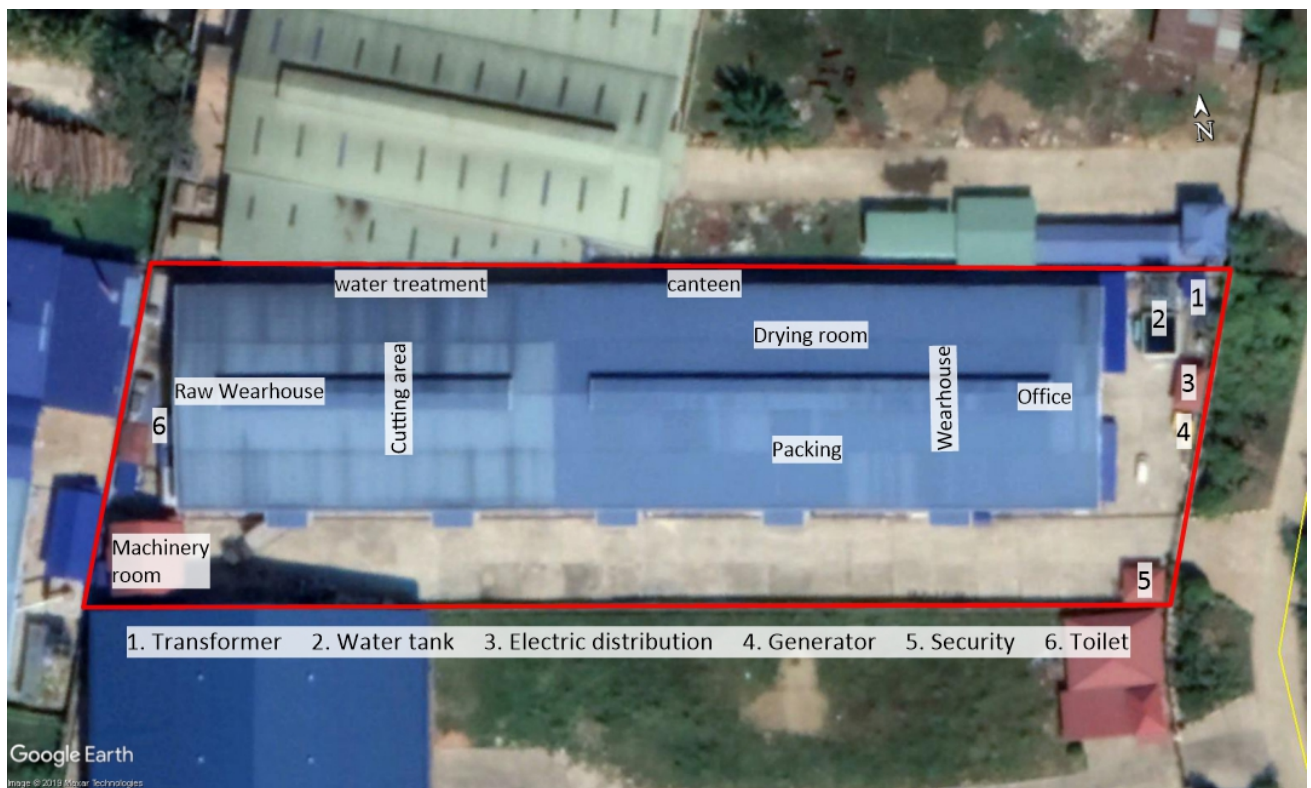
36. National Environmental Quality (Emission) Guidelines (NEQG) (2015)
37. National Environmental Policy of Myanmar (2019)
38. Myanmar Investment Law (2016)
39. Myanmar Investment Rule (2017)
40. Myanmar Insurance Law (1993)
41. The Myanmar Fire Force Law (2015)
42. Public Health Law (1972)
43. The Prevention of Hazard from Chemical and Related Substances Law (2016)
44. The Labor Organization Law (2011)
45. Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)
46. The Employment and Skills Development Law (2013)
47. The Minimum Wage Law (2013)
48. Payment of Wages Law (2016)
49. The Leave and Holidays Rules (1951, partially revised in 2018)
50. The Amended Law for Factories Act, 1951, partially revised in 2018
51. The Worker's Compensation Act (1923)
52. The Export and Import Law (2012)
53. The Law on Standardization (2014)
54. Underground Water Act (21<sup>st</sup> June 1930)
55. Myanmar Engineering Council Law (2013)
56. The Commercial Tax Law (1990 Amended 2014)
57. Preventing of Hazard from Chemical and Related Substances Law, (2013)
58. The Social Security Law (2012)
59. The Ethnic Rights Protection Law (24<sup>th</sup> February 2015)
60. Occupational Safety and Health Law 2019
61. Myanmar Fire Brigade Law (2015)
62. The Electricity Law (2014)
63. Vehicle Safety and Motor Vehicle Management Law (2020)
64. National Land Use Policy (2014 October)

### **Project Description**

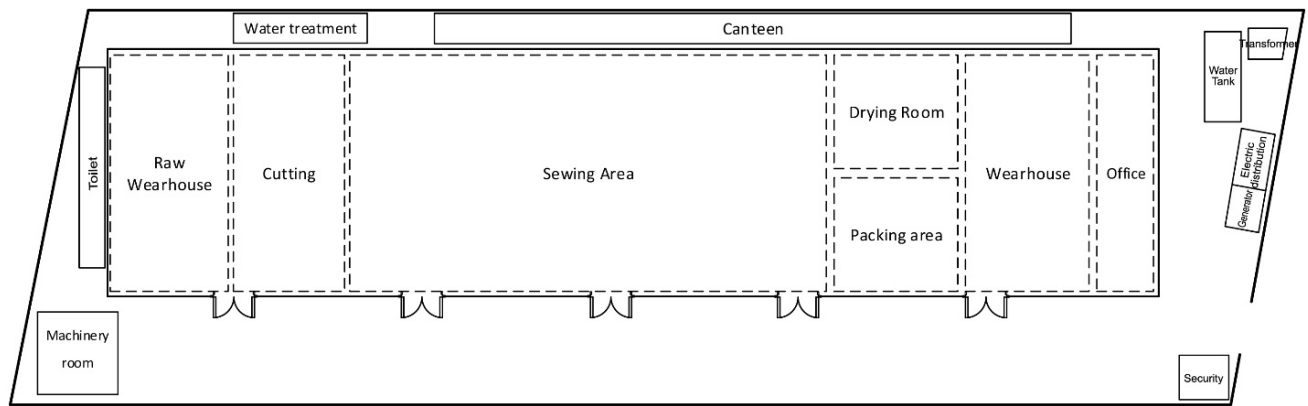
Zhongze Bags Industry Company Limited is located between 16°50'44.5"N and East Longitude 96°17'29.6"E at Land Plot No. 142, Myay Taing Block No. Industrial Zone (2), Dagon Myo Thit (Seik Kan) Twonship, Yangon Region, the Republic of the Union of Myanmar. The total area of project site is 1.85 Acres.



Location Map of the project



Site layout drawing (Google drawing)



**Site layout drawing**

**Brief Description of Surrounding Environment**

Primary data and secondary data collections are very important to assess environmental impacts. Primary data collections (environmental quality measurements and monitoring) play an important role for conducting EMP. Therefore, Myanwei Consulting Group Limited conducted air quality, temperature and humidity, noise level measurement and light pollution measurement and compared with the National Environmental Quality (Emission) Guidelines and also described how to reduce the impact and how to maintain the pollutions. Also described the weather conditions, rainfalls and socio-economic component of the proposed project.

The baseline environmental quality at the Project Site and its immediate surroundings was established by groundwater, wastewater, ambient air quality samples, noise and indoor temperature and humidity measurements at immediate surrounding areas. To determine the existing baseline environmental quality within the project site on 7 November 2019. The overall conditions of air quality, water quality, soil quality, and noise levels are quoted from the project.

Item	Parameter
Air quality	(1) PM <sub>2.5</sub> , (2) PM <sub>10</sub> , (3) Sulfur dioxide (SO <sub>2</sub> ), (4) Nitrogen dioxide (NO <sub>2</sub> ), (5) Ozone (O <sub>3</sub> )
Noise level	Sound level (LAeq)
Light	Light Intensity

According to the resulting of monitoring, all parameters are within the guideline limit. Noise is normal the acceptable level of the guideline limit. Light measurement is in good condition and at the acceptable level of standard.

**Survey Result in Proposed Project**

Type	Result
<b>Noise level</b>	
Operation Area (1) (Sewing Section)	74.9 dBA
Operation Area (2) (Cutting Section)	73 dBA
<b>Air Quality</b>	
PM <sub>10</sub>	25.2 µg/m <sup>3</sup>
PM <sub>2.5</sub>	19.9 µg/m <sup>3</sup>
O <sub>3</sub>	81.8 µg/m <sup>3</sup>

Type	Result
NO <sub>2</sub>	51.9 µg/m <sup>3</sup>
SO <sub>2</sub>	40.9 µg/m <sup>3</sup>
<b>Light Quality</b>	
Sewing Section 1	1219 Lux
Sewing Section 2	1186 Lux
Cutting Section	1437 Lux
Quality Control	1134 Lux
Packing Section	783 Lux
Drying Room	205 Lux

### Risk Assessment and Mitigation Measures

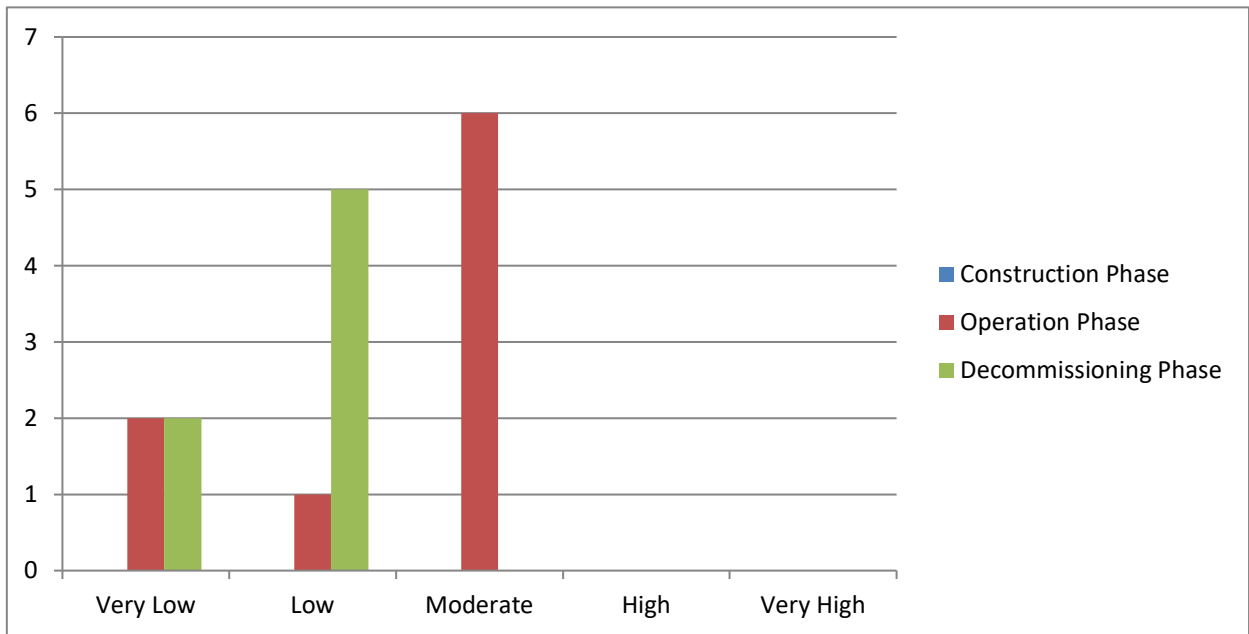
The assessment of each impact is based on consideration of the magnitude, duration, extent and probability of activities, which are going to be carried out during operation phases. In operation phase, there are 1 moderate significance impact on environment and human such as impact of electricity consumption. 4 low significant impacts on environment and human such as impact of wastewater effluents and occupational health and safety of employees, workers and 2 very low significant impact on environment and human such as impact on aquatic lives, air pollution and noise. Significance impacts on environmental and human and detail impact assessment for operation phases can be seen in Table. All of the impacts during operation phases can be minimized by using mitigation measures and implementing Environmental Management Plan.

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
<b>Construction Phase; It is not assessed in this phase, because of construction is already completed during IEE preparation.</b>							
<b>Operation Phase</b>							
Air pollution	<ul style="list-style-type: none"> <li>Dust and GHGs emission from vehicles used for transporting raw materials and final products</li> <li>Particulate matters emission from the activities of production process</li> <li>Emission of smoke from kitchen</li> <li>Emission from emergency diesel generator</li> </ul>	3	4	2	4	36	Moderate
Water pollution	<ul style="list-style-type: none"> <li>Sewage disposed of from the toilets</li> <li>Oil spill and grease leaks from transporting vehicles and machinery equipment used in operation phase</li> </ul>	2	4	2	3	24	Low
Soil Contamination	<ul style="list-style-type: none"> <li>Accidental spillage of oil used by vehicles operating</li> </ul>	1	4	1	2	12	Very low
Noise Pollution	<ul style="list-style-type: none"> <li>Generating noise from the production machinery</li> <li>Noise from the generating of the emergency generators</li> </ul>	3	4	1	4	32	Moderate



Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Fire Hazard	<ul style="list-style-type: none"> <li>Poor electrical installations</li> <li>waste disposed area</li> <li>Raw materials storage</li> <li>Diesel storage area</li> </ul>	3	5	2	4	40	Moderate
Solid waste	<ul style="list-style-type: none"> <li>residual pieces of fabric scraps from the production lines</li> <li>Waste from packaging materials</li> <li>Waste from kitchen, dormitory and office.</li> </ul>	3	4	1	4	32	Moderate
Liquid waste	<ul style="list-style-type: none"> <li>Septic system and sewage.</li> <li>Domestic liquid waste disposal from office, kitchen and dormitory.</li> </ul>	2	4	2	4	32	Moderate
Hazardous waste	<ul style="list-style-type: none"> <li>Engine oil leaks, spills at diesel storage and during fuel refueling.</li> <li>Used oil and lubricant discharged from the maintenance of vehicles and machines.</li> </ul>	2	4	1	2	14	Very Low
Occupational Health and Safety (Accidents, Injuries)	<ul style="list-style-type: none"> <li>Accidental cases cause by operating machines.</li> <li>Electricity and emergency diesel generators.</li> <li>Unloading, mixing, cutting, pressing and packaging activities.</li> <li>Accidental cases of thermic fluid heater</li> </ul>	3	4	1	4	32	Moderate
Social-economic Condition	<ul style="list-style-type: none"> <li>Job opportunities for local people</li> </ul>	-	-	-	-	-	Positive Impact
<b>Decommissioning Phase</b>							
Air pollution	<ul style="list-style-type: none"> <li>Decommissioning of buildings and related materials</li> <li>Transportation of demolished materials</li> </ul>	3	1	1	4	20	Low
Water pollution	<ul style="list-style-type: none"> <li>Sewage form decommissioning workers</li> <li>Demolition machinery equipment</li> </ul>	3	1	1	3	15	Low
Soil Contamination	<ul style="list-style-type: none"> <li>Decommissioning of buildings and related materials</li> <li>Transportation of demolished materials</li> </ul>	3	1	1	3	15	Low
Noise Pollution	<ul style="list-style-type: none"> <li>Decommission activities</li> <li>Transportation of demolished materials</li> </ul>	3	1	1	3	15	Low
Waste disposal	<ul style="list-style-type: none"> <li>Sewage system</li> <li>Demolished debris such as bricks, concrete materials</li> </ul>	2	1	1	3	12	Very Low

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Hazardous waste	<ul style="list-style-type: none"> <li>Used lubricants from decommissioning vehicles and machines</li> </ul>	2	1	1	3	12	Very Low
Occupational Health and Safety (Accidents, Injuries)	<ul style="list-style-type: none"> <li>Decommissioning activities</li> <li>Transportation of demolished materials</li> </ul>	3	1	2	3	18	Low
Social-economic Condition	<ul style="list-style-type: none"> <li>Temporary job opportunities for local people</li> </ul>	-	-	-	-	-	Positive Impact



1. Negative impacts and mitigation measures of the proposed factory were taken into consideration during the study. Gases emission from operation of emergency used of diesel generator and vehicle movements
2. Noise pollution due to the operation of production machines at production area and vehicle movements
3. Wastewater discharge from domestic wastewater discharged from office facilities
4. Produced of Solid waste such as cloth scraps, packaging materials from production area and paper, plastic waste and other general office waste etc.
5. Potential impact of occupational health and safety hazards such as exposure of exposure of noise and electrical hazards will be caused by working at the operation phase

**Environmental Management Action**

The proposed project of environmental management plan, which need to made the PDCA plan especially Plan-Do-Check-Act cycle. In that plan, it includes not only reducing to the



environmental and social-economic impact but also includes the environmental management plan and the monitoring plan. In this EMP to implement the health, safety and occupational for the industry, they need to create a team and to must be implemented that. The EMP for SCG has been prepared to address potential issues based upon discussion with factory management, workers, local community's view, stakeholder consultation and from the site visit of experts. The EMP is additional to and compliments the factory's safety management system. Environmental related works about the project is responsible by HSE manager. The following environmental issues that require environmental management plans based upon the potential impacts of activities by for SCG are as follows:

1. Air pollution/Dust Management Plan
  - Monitoring air quality once in every six months
  - The Factory has Planted Trees to reduce the carbon and minimize the air pollution
  - Workers are provided mask during working in any dusty area
  - 1,500,000 kyat per year
2. Noise Management
  - Monitoring noise level once in every six months
  - Building noise insulated generator room
  - Provide sufficient personal protective equipment (PPE) at the work place
  - All the related personal will be provided proper training about the relevant issues and ensure PPE wear during working in noisy area.
  - 500,000 kyat per year
3. Solid waste Management Plan
  - The solid wastes are stored properly and separately in a certain in proper manner
  - The daily domestic waste of workers hands over to YCDC waste collector to collect every day
  - All related personal is provided proper training about the relevant issues.
  - 50,000 kyat per month
4. Wastewater Management Plan
  - Ensure that drainage lines and sewage system of factory and the nearest public drainage are watertight and sufficient capacity
  - Regular check and maintain sewerage facility
  - Clean the Factory's drainage to avoid odor emission and to avoid the block of water flow
  - 800,000 kyat per year
5. Hazardous Waste Management Plan
  - Any hazardous materials purchased should include a Material Safety Data Sheet (MSDS), otherwise known as a Safety Data Sheet (SDS) or Product Safety Data Sheet (PSDS)
  - 500,000 Kyat per year
6. Fire Management Plan
  - Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening.
  - The emergency fire alarms are installed at the factory for alerting the workers in case of fire.

- The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases.
  - 1,200,000 Kyat per year
7. Energy Management Plan
- Used of energy saving devices must be installed
  - Ensure that good housekeeping measures such as turning off equipment and lights when not in use
  - 100,000 kyats per year
8. Water Consumption Management Plan
- Install water meter for internal control of water consumption
  - All staff trains and makes aware conservation practices and proper methods of water use must be place in toilets and other areas of water consumption
  - Trees plantation surrounding the factory
  - 500000 kyats per year
9. Emergency Response Plan
- Provision and inspection of firefighting equipment and fire hydrant system in all the sections
  - A detail evaluation plan (fire exist, emergency exit door, etc.) is established and communicated with workers
  - Workers are informed about what to do in earthquake and physics hazards. A medical team has been prepared for primary treatment (First Aid)
  - Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management
  - 1500000 Kyats
10. Corporate Social Responsible (CSR) Plan
- Public School– 0.5%
  - Nonprofit training– 1%
  - Employee Healthcare – 0.5%

**Environmental Monitoring Plan**

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
<b>Operation Phase</b>					
Air quality	PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub>	Once in every six month	Outdoor of proposed project (16°50'43.66"N 96°17'31.49"E) Indoor of proposed project (16°50'44.5"N 96°17'30.4"E)	1,500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Noise quality	Noise level in decibel (dBA)	Once in every six month	Two points in production area (Sewing Area - 16°50'44.53"N 96°17'29.55"E) (Cutting Area -	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
			16°50'44.66"N 96°17'28.14"E)		Company Limited
Solid Waste Generation	-	Weekly	Recycle house and waste house and at the factory office	50,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Liquid Waste Generation	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate	Once in every six months	Sewage and drainage (Wastewater treatment System - 16°50'45.19"N 96°17'28.14"E)	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Hazardous Waste Generation	-	Weekly	Recycle house and temporary storage area at the factory office	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	The whole factory (16°50'44.5"N 96°17'29.6"E)	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Light intensity	Illuminance	Monthly	At the production line (Cutting area - 16°50'44.66"N 96°17'28.14"E) (Quality Control - 16°50'44.45"N 96°17'30.53"E)	20,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
Crisis Situation and Occupational Safety and Health	Loss of property and injuries	Monthly	The whole factory (16°50'44.5"N 96°17'29.6"E)	1,500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
<b>Decommissioning Phase</b>					
Air quality	PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub>	One time during this phase	One point in the production area	1,000,000 Kyats	Project Proponent
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	1,000,000 Kyats	Project Proponent
Solid Waste	-	One time during this phase	Temporary waste storage area	500,000 Kyats	Project Proponent
Liquid Waste	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate	One time during this phase	Wastewater Treatment System	300,000 Kyats	Project Proponent
Ground Water	pH, Turbidity, Total Solids, Chloride, Hardness, Free cyanide, Arsenic, Copper, Iron, Lead, Manganese, Zinc	One time after this phase	Tube well	200,000 Kyats	Project Proponent
Occupational Health and Safety	-	During this phase	All decommissioning area	500,000 Kyats	Project Proponent
Rehabilitation	Recovering and Revegetation	After this phase	All decommissioning area	500,000 Kyats	Project Proponent

### **Public Consulting Meeting**

This chapter presents results of public consultation and information disclosure conducted for the Zhongze Bags factory. Public participation can be considered as the required element of the IEE process. In this study various stakeholder's participation were made. Public consultation during preparation of IEE report was conducted on January 28, 2020 following the EIA procedure. The project's stakeholders in this category are key officials or representatives of the regional and local authorities who have direct responsibilities for the administration of the EMP process for environmental and social clearance and issuing operation permits for proposed development projects. For this factory, relevant key offices at the national level are Environmental Conservation Department (ECD) and Industry Supervision and Inspection Department. Relevant key office at the regional level is Yangon City Development Committee (YCDC), General Administrative Department, Fire Department, Factories and General Labor Law Inspection Department, Public Health Department, Industrial Supervision and Inspection Department.

Time and Date	January 28, 2020  10:30-12:30
Venue	Industrial Zone Committee, Ka Naung Hall, Dagon Seikkan Township, Yangon.
Agenda	<ul style="list-style-type: none"> <li>• Presentation on the Background Information of Project,</li> <li>• Project Description,</li> <li>• Impact Assessment, Environmental Mitigation</li> <li>• Environmental Management Plan and Monitoring Plan</li> <li>• Site survey and performances of Zhongze Bags Industry factory</li> <li>• Received and Answer from feedback of participants</li> </ul>

### **Conclusion and Recommendation**

In Conclusion, the environmental management practices, procedures and responsibilities are defined here in to get full compliance with the existing environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar. All the feed backs, desired and needs of local public recorded in public consultation meetings are well addressed and incorporated in formulation of IEE. It has been figured out that, the proposed garment factory is going to generate local employment opportunities and enhance capabilities and working skills of employees. Consequently, their socio-economic standard is expected to be improved and undertaking corporate social responsibilities (CSR) as recommended. The study further concluded that positive impacts will be of immense benefit to the local community and national development as well.

This is recommended that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory

- Solid wastes and liquid wastes need to dispose according to Yangon municipal rules and regulation
- Workers should be provided proper training and it should be ensured that workers use PPE during factory operation area.
- Daily, monthly and annual action plan shall be formulated based on this IEE and practiced at operation level.
- Keep full records of environmental management activities and present to annual independent third party environment audit.
- Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

Finally, the proponent should follow the comments and suggestions made by ECD after reviewing this IEE report. Once concerned authorities approve IEE, effective implementation of IEE by the project proponent is essential. The proponent should abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

## 1. INTRODUCTION

Everyone wants to live in a place that's clean and healthy. That is why one of the world's primary concerns is the environment. As sad as it is, the world today is dying. The environment is slowly decaying, and it's all because of human negligence. Environmental Management Plan is required for ensuring sustainable development. It should not affect the surrounding environment adversely. The management plan presented. Which needs to be implemented by the proposed expansion of Zhongze Bags Industry Company Limited. The Initial Environmental Examination aims at controlling pollution at source with available and affordable technology followed by treatment measures. Waste minimization and waste recycling measures are emphasized. In addition to the industry specific control measures, the proposed industry should adopt following guidelines.

### 1.1. AIM OF INITIAL ENVIRONMENTAL EXAMINATION

- Provide environmental management plan that minimize the environmental impact of the works and identify those responsible for its implementation.
- Define the monitoring program, which assess the implementation.

### 1.2. PROJECT BACKGROUND

The project is new investment for manufacturing of various kinds of bags on CMP basis from Myanmar. The Yangon Region Investment Committee (YRIC) issues the project on 21<sup>st</sup>, February 2019 with the Endorsement No.(YGN-162/2019).

This report describes the findings of the Initial Environmental Examination (IEE) for the Manufacturing of various kinds of bags on CMP basis by Zhongze Bags Industry Company Limited. The main objective of this report is to identify the major environmental impacts due to implementation of the project along with the effective measures to mitigate the potential adverse impacts.

According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), the said project requires an Initial Environmental Examination (IEE) to meet the environmental assessment requirements of Notification No. YaKa-1/3/4 (EIA) (623/2019) on 12nd, April 2019. Therefore, Zhongze Bags Industry Company Limited commissioned Myanwei Consulting Company Limited for IEE report study.

### 1.3. PROJECT PROPONENT PROFILE

The proposed factory is the 100% foreign investment by Zhongze Bags Industry Company Limited with an estimated authorized capital of USD (0.672) million. The proposed factory is located at Land Plot No. 142, Myay Taing Block No. Industrial Zone (2), Dagon Myo Thit (Seik Kan) Township, Yangon Region and the total land area are 1.85 Acres. The factory aims to manufacture of various kinds of bags on CMP basis by using semi-automatic making production process. The construction phase of the proposed factory initiated in February 2019 and then commercial running operation stage is January 2020. The proposed duration of the investment shall be 28 years extendable 10 years periods two times. The term of the Lease shall be initial 8 years commencing from the date of signing of the Lease Agreement between landowner and Zhongze Bags Industry Company Limited for

proposed project site for 1.85 acres of land and extendable for 10 years in 2 times recommended by the Yangon Region Government.

**Table 1-1 Information of Investor**

Investor Name:	Mr. Lai Zhenjian
Citizenship:	Chinese
Company ID No./ Passport No	E85921819
Address of Registration office:	Unit 601, Building 5, Xiang Yang New City, Guang Chang Country, FuZhou City, Jiang Xi Province, China.

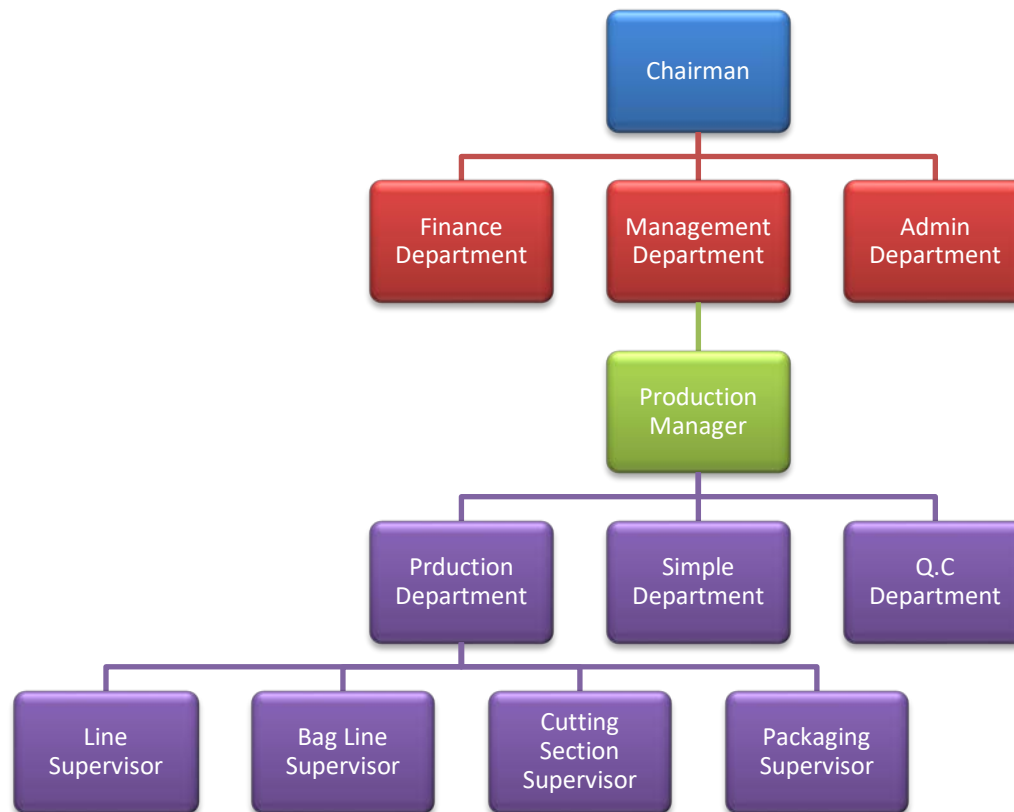
**Table 1-2 Director List**

Name	Type	Nationality	Share Percentage
May Sun International Enterprise Limited. Representative By; Mr. Lai Zhen Jian	Director	Hong Kong  Chinese	100 %

**Table 1-3 Salient features of the project**

Type of Proposed Business:	Manufacturing of Various Kinds of Bags on CMP Basis
Type of investment :	100% Foreign Investment
Type of Share :	Ordinary Share
Type of land :	Industrial Land
Total land area :	1.85 Acres
Total building area :	Production building (7,486.684 square meter)
Land lease year :	28 years
Construction period :	One year
Address:	Land Plot No. 142, Myay Taing Block No. Industrial Zone (2), Dagon Myo Thit (Seik Kan) Township, Yangon Region.
Contact Person:	09-972209915





**Figure 1-1 Organization Chart of Zhongze Bags Industry Company Limited**

## 1.4. ENVIRONMENTAL CONSULTANT PROFILE

### 1.4.1. Scope of IEE Study

The IEE study firstly established baseline environmental setting within 100 meters of the project area, including existing conditions of air quality, water quality, noise, weather and local climate, waste, landscape and social assessment. The field studies were carried out by Myanwei Consulting farm conducted field survey, assessment activities, and prepared the report.

A reconnaissance study was performed on the proposed project site and baseline environmental data were also collected from possible sources using the appropriate measuring devices. Data interpretation and analysis were made based on those collected data for the present and potential future conditions. Suitable measures were proposed for the impacts to be mitigated to reduce to acceptable ones.

### 1.4.2. The specific objectives of the IEE study are as follows:

- To conduct preliminary examination of the environmental consequences of the project
- To describe the existing environmental condition of the proposed project site
- To collect detailed information about used of process, technology, equipment and machinery for proposed project
- To assess the potential environmental impacts of the proposed project
- To develop environmental management plan (EMP) with site specific environmental mitigation measures and monitoring standards guidelines for the proposed project
- To carry our public consultants to address any issues in concern with implementation of this project

## 1.5. IDENTIFICATION OF IEE STUDY TEAM

Myanwei Environmental Solutions Company Limited prepares the Initial Environmental Examination (IEE) with the Environmental Management Plan (EMP) for the proposed project. The environmental study was carried out by the study team and the following is a summary of team member 's responsibilities during the study period.

Myanwei Environmental Solutions Company Limited	No. (28), Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar.	09 777 922 169, 09 421 127 569 env@myanweiconsulting.com www.myanwweiconsulting.com.
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**Table 1-4 Member of IEE study team**

Team	Name	License Number	Role	Responsibility
Management Team	Mr. Lin Htet Sein	EIA-AC 053/2023	Team Leader	Report Review
Management Team	Dr. Hein Lynn Aung	EIA-AC 052/2023	Advisor	Advice
Technical Team	Mr. Htun Lin Kyaw	EIA-AC 051/2023	Member	Report Writing (Introduction and Environmental

Team	Name	License Number	Role	Responsibility
				Management Plan), Participating and Presentation of Public Consultation and Public Disclose, Baseline Environmental Quality Monitoring
Technical Team	Mr. Saw Yan Naung	EIA-AC 054/2023	Member	Report Writing (Introduction and Environmental Management Plan, Participating and Presentation of Public Consultation Meeting and Public Disclose)
Technical Team	Mr. Kaung Sett Lwin	EIA-AC 055/2023	Member	Report Writing (Policy, Legal and Institutional Framework, Description of Surrounding Environment), Baseline Environmental Quality Monitoring
Technical Team	Mr. Lynn Than Thaug		Member	Report Writing (Impact Assessment and Mitigation Measures), Baseline Environmental Quality Monitoring, Biodiversity Survey
Technical Team	Mr. Si Yan Hein		Member	Baseline Environmental Quality Survey & Public Consultation
Technical Team	Mr. Aung Ye Thaw		Member	Baseline Environmental Quality Survey
Technical Team	Ms. Su Myat Hlaing	လျှောက်ထားဆဲ	Member	Report Writing (Project Description and Alternative), Participating of Public Consultation Meeting, Baseline Environmental Quality Monitoring
Technical Team	Ms. Pyae Phyto Win		Member	Biodiversity Survey
Technical Team	Ms. Haymar Htet Naing		Member	Participating of Social Survey and Public Consultation Meeting
Technical Team	Ms. Wint Zar Ni Mg Mg		Member	Baseline Environmental Quality Monitoring
Technical Team	Ms. No No Shee Sho		Member	Baseline Environmental Quality Monitoring
Technical Team	Mr. Min Tu Kyaw		Member	Description of Surrounding Environment

## 2. POLICY, LEGAL AND INSTITUTIONAL FRAME WORK

This section provides a brief summary of relevant national environmental legislations established by the MONREC and overview of current local and international environmental and social policies including related international or regional convention for the proposed project.

### 2.1. MYANMAR REGULATORY FRAMWORK

The Ministry of Environmental Conservation and Forestry (MOECAAF) was reformed as the Ministry of Natural Resources and Environmental Conservation (MONREC) in April 2016 to be the focal point and coordinating agency for environmental management.

The Environmental Conservation Department (ECD) was established in October 2012 based on Environmental Conservation Law. ECD is responsible for managing the EIA process in Myanmar

#### 2.1.1. Fundamental Laws and Regulations Related to Environmental and Social Considerations

The fundamental laws and regulations related to the environmental and social considerations and health in Myanmar and major international agreements and treaties that the Myanmar government has ratified related to the environmental and social considerations are shown in below:

#### 2.1.2. National Environmental Policy of Myanmar, (Notification No. 26/94 dated 5 December 1994)

Purpose: To achieve harmony and balance between socioeconomic, natural resources and environment through the integration of environmental considerations into the development process enhancing the quality of the life of all its citizens.

#### 2.1.3. Environmental Conservation Law, 30 March 2012

Objectives	to contract a healthy and clean environmental and to conserve natural and cultural heritage for the benefit of present and future generations; to maintain the sustainable development through effective management of natural resources and to enable to promote international, regional and bilateral cooperation in the matters of environmental conversation.
Chapter IV Provisions of Duties and Powers relating to the Environmental Conservation of the Ministry: Section 7	(d) prescribing environmental quality standards including standards on emissions, effluents, solid wastes, production procedures, processes and products for conservation and enhancement of environmental quality;
Chapter VI Environmental Quality Standards: Section10	The Ministry may, with the approval of the Union Government and the Committee, stipulate the following environmental quality standards: (a) suitable surface water quality standards in the usage in rivers, streams, canals, springs, marshes, swamps, lakes, reservoirs and other inland water sources of the public; (b) water quality standards for coastal and estuarine areas; (c) underground water quality standards; (d) atmospheric quality standards; (e) noise and vibration standards; (f) emissions standards;

	(g) effluent standards; (h) solid wastes standards; (i) other environmental quality standards stipulated by the Union Government.
Section 14	A person causing a point source of pollution shall treat, emit, discharge and deposit the substances which cause pollution in the environment in accord with stipulated environmental quality standards.
Section 15	The owner or occupier of any business, material or place which causes a point source of pollution shall install or use an on-site facility or controlling equipment in order to monitor, control, manage, reduce or eliminate environmental pollution. If it is impracticable, it shall be arranged to dispose the wastes in accord with environmentally sound methods.
Chapter X Prior Permission Section 24	The Ministry may, in issuing the prior permission, stipulate terms and conditions relating to environmental conservation. It may conduct inspection whether or not it is performed in conformity with such terms and conditions or inform the relevant Government departments, Government organizations to carry out inspections.
Chapter XIII Offences and Penalties Section 32	Whoever violates any prohibition contained in the rules, notifications, orders, directives and procedures issued under this Law shall, on conviction, be punished with imprisonment for a term not exceeding one year, or with fine, or with both.

#### 2.1.4. Environmental Conservation Rules, 2014

Chapter XIII Prohibitions Section 69	(a) Any person shall not emit, cause to emit, dispose, cause to dispose, pile and cause to pile, by any means, the pollutants to environment and the hazardous waste or hazardous material stipulated by notification under the Law and any of these rules at any place which may affect the public directly or indirectly.  (b) Any person shall not carry out the actions which can be damaged to natural environment which is changing due to ecosystem and such system, except the permission of the relevant Ministry in order to the interest of the public.
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#### 2.1.5. Environmental Impact Assessment Procedure, December 2015

CHAPTER VIII. Responsibility for all Adverse Impacts Section 102	The Project Proponent shall bear full legal and financial responsibility for: a) all of the Project Proponent's actions and omissions and those of its contractors, subcontractors, officers, employees, agents, representatives, and consultants employed, hired, or authorized by the Project acting for or on behalf of the Project, in carrying out work on the Project; and b) PAPs until they have achieved socio-economic stability at a level not lower than that in effect prior to the commencement of the Project, and shall support programs for livelihood restoration and resettlement in consultation with the PAPs, related government agencies, and organizations and other concerned persons for all Adverse Impacts.
Section 103	The Project Proponent shall fully implement the EMP, all Project commitments, and conditions, and is liable to ensure that all contractors and subcontractors of the Project comply fully with all applicable Laws, the Rules, this Procedure, the EMP Project commitments and conditions when providing services to the Project.
Section 104	The Project Proponent shall be responsible for, and shall fully and effectively implement, all requirements set forth in the ECC, applicable Laws, the Rules, this Procedure and standards.
Section 105	The Project Proponent shall timely notify and identify in writing to the Ministry, providing detailed information as to the proposed Project's potential Adverse Impacts.

<p>CHAPTER IX. Monitoring Section 106</p>	<p>The Project Proponent shall, during all phases of the Project (pre-construction, construction, operation, decommissioning, closure and post-closure), engage in continuous, proactive and comprehensive self-monitoring of the Project and activities related thereto, all Adverse Impacts, and compliance with applicable laws, the Rules, this Procedure, standards, the ECC, and the EMP.</p>
<p>Section 107</p>	<p>The Project Proponent shall notify and identify in writing to the Ministry any breaches of its obligations or other performance failures or violations of the ECC and the EMP as soon as reasonably possible and in any event, in respect of any breach which would have a serious impact or where the urgent attention of the Ministry is or maybe required, within not later than twenty-four (24) hours, and in all other cases within seven (7) days of the Project Proponent becoming aware of such incident.</p>
<p>Section 108</p>	<p>The Project Proponent shall submit monitoring reports to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP, or periodically as prescribed by the Ministry.</p>
<p>Section 109</p>	<p>The monitoring reports shall include:</p> <ul style="list-style-type: none"> <li>a) documentation of compliance with all conditions;</li> <li>b) progress made to date on implementation of the EMP against the submitted implementation schedule;</li> <li>c) difficulties encountered in implementing the EMP and recommendations for remedying those difficulties and steps proposed to prevent or avoid similar future difficulties;</li> <li>d) number and type of non-compliance with the EMP and proposed remedial measures and timelines for completion of remediation;</li> <li>e) accidents or incidents relating to the occupational and community health and safety, and the environment; and</li> <li>f) Monitoring data of environmental parameters and conditions as committed in the EMP or otherwise required.</li> </ul>
<p>Section 110</p>	<p>Within ten (10) days of completing a monitoring report as contemplated in Article 108 and Article 109 in accordance with the EMP schedule, the Project Proponent shall make such report (except as may relate to National Security concerns) publicly available on the Project's website, at public meeting places (e.g. libraries, community halls) and at the Project offices. Any organization or person may request a digital copy of a monitoring report and the Project shall, within ten (10) days of receiving such request, submit a digital copy via email or as may otherwise be agreed upon with the requestor.</p>
<p>Section 113</p>	<p>For purposes of monitoring and inspection, the Project Proponent:</p> <ul style="list-style-type: none"> <li>a) shall grant to the Ministry and/or its representatives, at any time during normal working hours, access to the Project's offices and to the Project site and any other location at which the Project activities or activities related to the Project are performed; and</li> <li>b) from time to time as and when the Ministry may reasonably require, shall grant the Ministry access to the Project's offices and to the Project site and any other location at which the Project activities or activities related to the Project are performed.</li> </ul>
<p>Section 115</p>	<p>In the event of an emergency, or where, in the opinion of the Ministry, there is or may exist a violation or risk of violation of the compliance by the Project with all applicable environmental and social requirements, the Project shall grant full and immediate access to the Ministry at any time as may be required by the Ministry.</p>
<p>Section 117</p>	<p>The Project Proponent shall further ensure that the Ministry's rights of access hereunder shall extend to access by the Ministry to the Project's contractors and sub-contractors.</p>

### 2.1.6. National Environmental Policy of Myanmar (2019)

National Environmental Policy Vision & mission	<p><u>Vision</u>                  A clean environment, with healthy and functioning ecosystem, that ensures includes development and wellbeing for all people in Myanmar.</p> <p><u>Mission</u>                  To establish national environmental policy principle for guiding environmental protection and sustainable development and for mainstreaming environmental consideration into all polices, laws, regulation, plans, strategic, programmes and projects in Myanmar.</p>
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### 2.1.7. Myanmar Investment Law, 2016 (Amendment 2019)

Chapter XII Rights to be used land Section 50	(d)The investor shall register the land lease contract at the Office of Registry of Deeds in accordance with the Registration Act.
Chapter XIII Employment of Staff and Workers Section 51	<p>The investor:</p> <p>(a) may appoint of any citizen who is a qualified person as senior manager, technical and operational expert, and advisor in his investment within the Union in accordance with the Laws;</p> <p>(b) shall appoint them to replace, after providing for capacity building programs in order to be able to appoint citizens to different level positions of management, technical and operational experts, and advisors;</p> <p>(c) shall appoint only citizens for works which does not require skill;</p> <p>(d) shall appoint skilled citizen and foreign workers, technicians, and staff by signing an employment contract between employer and employee in accordance with the labor laws and rules;</p> <p>(e) shall ensure to obtain the entitlements and rights in the labor laws and rules, including minimum wages and salary, leave, holiday, overtime fee, damages, compensation of the workman, social welfare, and other insurance relating to workers in stipulating the rights and duties of employers and employees and occupational terms and conditions in the employment contract;</p> <p>(f) shall settle disputes arising among employers, among workers, between employers and workers, and technicians or staff in the investment in accordance with the applicable laws.</p>
Chapter XVI Responsibilities of Investors Section 65	<p>The Investor:</p> <p>(f) shall not make any significant alteration of topography or elevation of the land on which he is entitled to lease or to use, without the approval of the Commission;</p> <p>(g) shall abide by applicable laws, rules, procedures and best standards practiced internationally for this investment so as not to cause damage, pollution, and loss to the natural and social environment and not to cause damage to cultural heritage;</p> <p>(i) shall close and discontinue the investment only after payment of compensation to employees in accordance with applicable laws for any breach of employment contracts, closure of investment, sale and transfer of investment, discontinuation of investment, or reduction of workforce;</p> <p>(j) shall pay wages and salaries to employees in accordance with applicable laws, rules, procedures, directives and so forth during the period of suspension of investment for a credible reason;</p> <p>(k) shall pay compensation and indemnification in accordance with applicable laws to the relevant employee or his successor for injury, disability, disease and death due to the work;</p>

	(l) shall supervise foreign experts, supervisors and their families, who employ in their investment, to abide by the applicable laws, rules, orders and directives, and the culture and traditions of Myanmar;
Chapter XVII Insurance Section 73	The investor shall ensure the types of insurance stipulated in the provision of the rules at any insurance enterprise which is entitled to carry out insurance businesses within the Union.

### 2.1.8. Myanmar Investment Rules, 2017

Rule 202	The project proponent has to comply with the conditions of the permit issued by the MIC and applicable laws when making the investment
Rule 206.	The project proponent has to submit the passport, expert evidence or document of degree and profile to the MIC office for approval if decide to appoint a foreigner as senior management, technician expert or consultant according to subsection (a) of section 51 of Myanmar Investment Law
Rule 212	The investor obtained the permit or tax exemption or relief shall insure the relevant insurance out of the following types of the insurance at any insurance business entitled to carry out insurance business within the Union based on the nature of the business: (a) Property and Business Interruption Insurance; (b) Engineering Insurance; (c) Professional Liability Insurance; (d) Bodily Injury Insurance; (e) Marine Insurance; or (f) Workmen Compensation Insurance.

### 2.1.9. Myanmar Insurance Law (1993)

Chapter II Establishment and Aim Section 4	The Myanmar Insurance is established with the following aims: - social and economic losses which the people may encounter, due to common perils; (b) to promote the habit of savings individually by effecting life assurance, thus contributing to the accumulation of resource, of the State; (c) to win the trust and confidence of the people in the insurance system by providing effective insurance safeguards which may become necessary in view of the social and economic developments.
Chapter VI Effecting Insurance and Granting of Benefits Section 15	Owners of motor vehicles shall effect compulsory Third-Party Liability Insurance with the Myanmar Insurance.
Section 16	An entrepreneur or an organization operating an enterprise which may cause loss to State-owned property or which may cause damage to the life and property of the public or which may cause pollution to the environment shall affect compulsory General Liability Insurance with the Myanmar Insurance.

### 2.1.10. The Myanmar Fire Force Law (2015)

Purpose	To ensure to prevent the fire, to provide the precautionary material and apparatuses, if the fire caused in the project area to be defeated because the project is business in which electricity and any inflammable materials such as petroleum are used. So, the project owner has to institute the specific fire service in line with the above law.
Section 25	The project proponent has to institute the specific fire services. The project owner has to provide materials and apparatuses for fire precaution and prevention.



**2.1.11. The Private Industrial Enterprise Law, 1990**

<p>Chapter III                  Registration of Private Industrial Enterprises                  Section 4</p>	<p>(a) Any person desirous of conducting any private industrial enterprise;                  (b) Any person conducting any private industrial enterprise on the day this Law is enacted; by using any type of power which is three horsepower and above or manpower of ten wage-earning workers and above shall register under this Law.</p>
<p>Chapter VI                  Duties and Rights of the Entrepreneur                  Section 13</p>	<p>The duties of the entrepreneur are as follows: -                  (b) shall abide by the terms and conditions of the registration certificate;                  (l) shall shift the place of enterprise, change the nature of enterprise, amalgamate enterprises and split up enterprises only with the approval of the Directorate;                  (g) shall abide by the orders and directives issued from time to time by the Ministry and the Directorate;</p>
<p>Section 15</p>	<p>The entrepreneur has the right to carry out the followings:                  (a) appointing foreign exports and technicians with the approval of the Ministry;                  (b) Carrying out change of the name of enterprise, transfer of ownership, temporary suspension or permanent closing down of the enterprise in the manner prescribed and with the approval of the Directorate.</p>

**2.1.12. Public Health Law (1972)**

<p>အခန်း(၂)                  ပြည်သူ့တို့၏ကျန်းမာရေးကိုကာကွယ်ခြင်း                  ဥပဒေပုဒ်မ (၃)</p>	<p>အခြားတည်ဆဲတရားဥပဒေများတွင်မည်သို့ပင်ပါရှိစေကာမူအစိုးရသည်လုပ်သားပြည်သူတို့၏ကျန်းမာရေးကိုပိုမိုတိုးတက်ကောင်းမွန်လာစေရန်လည်းကောင်း၊ လုပ်သားပြည်သူတို့၏ကျန်းမာရေးကိုထိခိုက်ခြင်းမှကာကွယ်ရန်လည်းကောင်းအောက်တွင်ဖော်ပြသောကျန်းမာရေးဆိုင်ရာကိစ္စရပ်များကိုအကြံပေးခြင်း၊ စစ်ဆေးခြင်း၊ ကြီးကြပ်ခြင်း၊ ပြုပြင်ခြင်း၊ တားမြစ်ခြင်းစသည့်လုပ်ငန်းတို့ကိုလုပ်ဆောင်ရမည်။</p> <p>(၁) ပတ်ဝန်းကျင်ကျန်းမာရေးဆိုင်ရာလုပ်ငန်းများ</p> <p>(က) လူအများနေထိုင်ရာပတ်ဝန်းကျင်တွင်အမှိုက်သရိုက်၊ အညစ်အကြေးများကိုသိမ်းဆည်းစွန့်ပစ်ခြင်း</p> <p>(ခ) လူအများအတွက်သောက်သုံးသောရေများကိုအပြည့်ပြည့်ဆိုင်ရာစံချိန်မှီသတ်မှတ်ခြင်းနှင့်ကာကွယ်စောင့်ရှောက်ခြင်း</p> <p>(ဂ) လူအများနေထိုင်ရာ ပတ်ဝန်းကျင်လေထုတွင် လူတို့ကို ဘေးအန္တရာယ်ဖြစ်စေမည့် အခိုးအငွေ့၊ အနံ့အသက်၊ အမှုန့်အမွှား၊ အသံပလံနှင့် ဓါတ်ရောင်ခြည်များကြောင့် ညစ်ညမ်းခြင်းမှ ကာကွယ်ခြင်း။</p> <p>(ဃ) မြို့ရွာစည်ပင်သာယာရေး၊ အိမ်ယာဆောက်လုပ်ရေးနှင့် လုပ်သားပြည်သူတို့ သွားလာနေထိုင်အသုံးပြုသည့် အဆောက်အဦး၊ သို့မဟုတ် နေရာများ၏ ကျန်းမာသန့်ရှင်းရေးအတွက် ဆောင်ရွက်ခြင်း။</p> <p>(၂) လုပ်သားပြည်သူတို့ထုတ်လုပ်ရောင်းချသောအစားအသောက်နှင့်ပတ်သက်သည့်ကိစ္စများ</p> <p>(က) အစားအသောက်ထုတ်လုပ်ရောင်းချသည့် အလုပ်ရုံ၊ စက်ရုံလုပ်ငန်းဌာနများကို မှတ်ပုံတင်ခြင်း၊ မှတ်ပုံတင်ခြင်းမှ ပယ်ဖျက်ခြင်းနှင့် ပြန်လည်မှတ်ပုံတင်ခြင်း။</p> <p>(ခ) လုပ်သားပြည်သူတို့ရောင်းချသောအစားအသောက်တို့ကိုကျန်းမာသန့်ရှင်းစေခြင်း</p> <p>(ဂ) လုပ်သားပြည်သူတို့ ရောင်းချသော အစားအသောက်များကို အတုအပြုလုပ်ခြင်း၊ အခြားယုတ်ညံ့သောပစ္စည်းများနှင့် ရောစပ်ခြင်း၊ အစားအသောက်ထဲတွင် ရှိယင်းစွဲ ဝတ္ထုပစ္စည်းများ အားထုတ်နှုတ်ခြင်းတို့မှ ကာကွယ်ခြင်း</p> <p>(ဃ) အစားအသောက်ထုတ်လုပ်ရောင်းချသော အလုပ်ရုံ၊ စက်ရုံလုပ်ငန်းဌာနတို့ကို ကျန်းမာသန့်ရှင်းစေခြင်း</p> <p>(င) အစားအသောက်ရောင်းချသော ဥပစာအဆောက်အဦးများကို ကျန်းမာသန့်ရှင်းစေခြင်း။</p> <p>(စ) လုပ်သားပြည်သူတို့ ရောင်းချသော အစားအသောက်များ ထုတ်လုပ်ရောင်းချသည့်နေရာများတွင် ကူးစက်ရောဂါရှိသူများ ဝင်ရောက်အမှုထမ်းခြင်းမှ ကာကွယ်ခြင်း</p>
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	<p>(ဆ) ဘေးအန္တရာယ်ဖြစ်စေသော အစားအသောက်များကို သိမ်းဆည်းဖျက်ဆီးခြင်း၊</p> <p>(ဇ) အစားအသောက်နှင့် ပတ်သက်သည့်ကိစ္စရပ်များကို စစ်ဆေးကြည့်ရှု လိုအပ်လျှင် အစိုးရဓာတ်ခွဲခန်းများသို့ ပို့၍စစ်ဆေးခြင်း</p> <p>(ဈ) အစားအသောက်များကို အစိုးရကအခါအားလျော်စွာ သတ်မှတ်ပေးသောစံချိန်နှင့် ကိုက်ညီစေရန်ဆောင်ရွက်ခြင်း</p> <p>(ည) လုပ်သားပြည်သူများအတွက်အသုံးပြုရန်ဖြစ်သောနေအိမ်သုံးပစ္စည်းများနှင့်အလှူကုန်ပစ္စည်းများနှင့်ပတ်သက်သည့်ကိစ္စများ</p> <p>(က) နေအိမ်သုံးပစ္စည်းများနှင့် အလှူကုန်ပစ္စည်းများ ထုတ်လုပ်သော အလုပ်ရုံ ၁၀၀ရုံများမှတ်ပုံတင်ခြင်း၊ မှတ်ပုံတင်မပယ်ဖျက်ခြင်းနှင့် ပြန်လည်မှတ်ပုံတင်ခြင်း</p> <p>(ခ) ထုတ်လုပ်သောနေ အိမ်သုံးပစ္စည်းများနှင့် အလှူကုန်ပစ္စည်းများသည် လုပ်သားပြည်သူတို့အတွက် ဘေးအန္တရာယ် ဖြစ်ပွားနိုင်လျှင်သော်လည်းကောင်း၊ အဆိပ်အတောက် ဖြစ်စေနိုင်လျှင်သော်လည်းကောင်း၊ ဘေးအန္တရာယ် ဖြစ်စေတတ်သော ဓါတ်ရောင်ခြည်ပါရှိလျှင်သော်လည်းကောင်း ၎င်းကုန်ထုတ်လုပ်ခြင်းကိုတားမြစ်ခြင်း။</p> <p>(ဂ) ဘေးအန္တရာယ်ရှိသော ထုတ်လုပ်ပြီးသည့် နေအိမ်သုံးပစ္စည်းများနှင့် အလှူကုန်ပစ္စည်းများနှင့် အလှူကုန်ပစ္စည်းများကို လုပ်သားပြည်သူများအား ဘေးအန္တရာယ်မရှိစေသော နည်းဖျက်ဆီးခြင်း</p> <p>(ဃ) ကုန်ရောင်းဆိုင်များမှ ဘေးအန္တရာယ်ရှိစေသော နေအိမ်သုံးပစ္စည်းများနှင့် အလှူကုန်ပစ္စည်းများကို သိမ်းဆည်း ဖျက်ဆီးခြင်း</p> <p>(င) နေအိမ်သုံးပစ္စည်းများနှင့် အလှူကုန်ပစ္စည်းများကို အစိုးရက အခါအားလျော်စွာ သတ်မှတ်ပေးသောစံချိန်နှင့် ကိုက်ညီစေရန်ဆောင်ရွက်ခြင်း။</p>
<p>ဥပဒေပုဒ်မ (၅)</p>	<p>ကိုယ်ပိုင်ဆေးကုဂေဟာများနှင့်ပတ်သက်သည့်ကိစ္စများ</p> <p>(က) ကိုယ်ပိုင်ဆေးကုဂေဟာများနှင့်ပတ်သက်၍လိုအပ်သည့်စည်းကမ်းချက်များကိုသတ်မှတ်ခြင်း</p> <p>(ခ) ကိုယ်ပိုင်ဆေးကုဂေဟာအားလုံးကိုမှတ်ပုံတင်ခြင်း၊မှတ်ပုံတင်မပယ်ဖျက်ခြင်းနှင့်ပြန်လည်မှတ်ပုံတင်ခြင်း။</p>

**2.1.13. Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)**

<p>Chapter 2 Prevention and Response Section 3</p>	<p>(a) In order to prevent the outbreak of communicable diseases, the Department of Health shall implement the following activities systematically under the guidance of the Ministry of Health:</p> <p>(i) immunization of children by injection or orally;</p> <p>(ii) immunization of those who have attained eligible target group including adult by injection or orally, when necessary;</p> <p>(iii) carrying out health education activities relating to communicable disease;</p> <p>(iv) carrying out the activities of surveillance, prevention and control concerning communicable disease;</p> <p>(v) carrying out the activities of medical examination for prevention of communicable disease in cross-border entrance and exit of the country, international airport, seaport, other necessary airport, seaport and bus terminal;</p> <p>(vi) prohibition or restriction of movements at home, hotel, motel and guest house;</p> <p>(vii) isolation of infected person of communicable disease or suspect of being infected there with;</p> <p>(viii) carrying out the activities of spraying, immunization by injection or orally and environmental sanitation necessary for prevention and control according to communicable diseases;</p> <p>(ix) giving advice to and coordinating with relevant Government departments, organizations and non-governmental organizations for</p>
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	<p>construction of healthy housing, obtaining safe drinking water and fresh water for use, proper waste disposal in order to prevent occurrence of communicable disease for workers who are carrying out activities of social and economic development;</p> <p>(x) carrying out other functions prescribed by the Ministry of Health, from time to time.</p>
Section 4	The public shall comply with the measures undertaken by the Ministry of Health and the Department of Health under section 3 in respect of prevention of the occurrence and spread of communicable disease and control thereof."
Section 9	<p>Sub-sections (d) and (e) contained in section 11 of the Prevention and Control of Communicable Diseases Law shall be substituted as follows:</p> <p>"(d) other necessary investigation;</p> <p>(e) prohibition of the right of movement of the vehicle carrying animal or animal product suspected of having epidemic disease."</p>
Section 11	<p>After sub-section (e) of section 14 of the Prevention and Control of Communicable Diseases Law, sub-section (f) shall be inserted as follows:</p> <p>"(f) right of movement of the vehicle carrying animal or animal product suspected of having epidemic disease."</p>

#### 2.1.14. The Labor Organization Law (2011)

<p>Chapter V                  Rights and Responsibilities of the Labour Organization                  Section 17</p>	<p>The labour organizations shall have the right to carry out freely in drawing up their constitution and rules, in electing their representatives, in organizing their administration and activities or in formulating their programmes. The Labour Organizations have the right to negotiate and settle with the employer if the workers are unable to obtain and enjoy the rights of the workers contained in the labour laws and to submit demands to the employer and claim in accord with the relevant law if the agreement cannot be reached.</p>
Section 18	The labour organization has the right to demand the relevant employer to re-appoint a worker if such worker is dismissed by the employer and if there is cause to believe that the reasons of such dismissal were based on labour organization membership or activities, or were not in conformity with the labour laws.
Section 19	The labour organizations have the right to send representatives to the Conciliation Body in settling a dispute between the employer and the worker. Similarly, they have the right to send representatives to the Conciliation Tribunals formed with the representatives from the various levels of labour organizations.
Section 20	In discussing with the Government, the employer and the complaining workers in respect of worker's rights or interests contained in the labour laws, the representatives of the labour organization also have the right to participate and discuss.
Section 21	The labour organizations have the right to participate in solving the collective bargains of the workers in accord with the labour laws.
Section 22	The labour organizations shall carry out peacefully in carrying out holding of meetings, going on strike and carrying out other collective activities in accord with their procedures, regulations, by-laws and any directives prescribed by the relevant Labour Federation.

#### 2.1.15. Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)

This law was enacted for safeguarding the right of workers or having good relationship between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. It stipulates that employer in which more than 30 workers are employed

shall form the workplace coordinating committee consisting of the representatives of workers and the representatives of employer.	
Section 38	No employer shall fail to negotiate and coordinate in respect of the complaint within the prescribed period without sufficient cause.
Section 39	No employer shall alter the conditions of service relating to workers concerned in such dispute at the consecutive period before commencing the dispute within the period under investigation of the dispute before the Arbitration Body or Tribunal, to affect the interest of such workers immediately.
Section 40	The project proponent has to not close the work without negotiation, discussion on dispute in accord with this law, decision by Tribunal
Section 51	The project proponent has to pay the compensation decided by Tribunal if violates any act or any omission to damage the interest of labour by reducing of product without efficient cause.

### 2.1.16. The Employment and Skills Development Law (2013)

This law was enacted for safeguarding the right of workers or having skillful of workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. Employer shall conduct occupational training to enhance the skills of workers.	
Chapter (3) Making Contract of Employment Section 5	(a)(1) After the employer has employed a worker for any job, he shall within 30 days of so doing, sign a Contract of Employment with the worker. This clause however shall not apply to permanent workers of government departments and organizations.  (2) If prior to employment, the worker is required to attend any per-employment training for a period or appointed on probation for a period, sub-section (1) shall not apply for that period.  (c) The workplace rules in the Employment Contract shall conform to the rules made under existing laws and the rights of the workers in the Contract shall not be less than those in existing laws.
Chapter (5) Implementing Training Programs and Skills Development of Workers Section 14	Employer shall conduct occupational training to enhance the skills of workers who are to be employed as well as workers who are presently employed in accordance with the requirements of the enterprise and the policy of the Skills Development Agency.
Chapter (8) Establishing and Utilizing Workers' Skills Development Fund Section 30	(a) The employers of Industrial and Service Enterprises shall pay contribution to the fund every month without fail amounting to not less than below 0.5% of the payroll of his workers up to the level of supervisors of the workers.  (b) The employer shall not deduct the contribution paid under sub-section (a) to the fund from the wages of the workers.

### 2.1.17. The Minimum Wage Law (2013)

The minimum wage law, passed in March 2013, was replaced the 1949 Minimum Wage Act. The law provides a framework for minimum wage determination: the presidential office establishing a tripartite minimum wage committee shall decide minimum wage with industrial variation based on a survey on living costs of workers possibly every two years. This also stipulates equal payment.	
Chapter VII The Duties of the Employee Section 12	The employer:  (a) shall not pay wage to the worker less than the minimum wage stipulated under this Law (b) may pay more than the minimum wage stipulated under this Law; (c) shall not have the right to deduct any other wage except the wage for which it has the right to deduct as stipulated in the notification issued under this Law; (d) Shall pay the minimum wage to the workers working in the commercial, production and service business in cash. Moreover, if the specific, benefits, interests or opportunities are

	<p>to be paid, it may be paid in cash and partly in property, with prevailing regional price, jointly according to the desire of the worker;</p> <p>(e) In paying minimum wage to the workers working in the agricultural and livestock business, some cash and some property at prevailing regional price may be paid jointly according to local customer desire of the majority of workers or collective agreement. Such payment shall be for any personal use and benefit to the worker and his family and the value shall also be considerable and fair.</p>
Section 13	<p>The employer:</p> <p>(a) shall inform the workers the rates of minimum wage relating to the business among the rates of minimum wage stipulated under this Law and advertise it at the workplace to enable to be seen by the relevant workers;</p> <p>(b) shall prepare and maintain the lists, schedules, documents and wages of the workers correctly;</p> <p>(c) shall report the lists, schedules and documents prepared and maintained under subsection (b) to the relevant department in accord with the stipulations;</p> <p>(d) Shall accept the inspection when summoned by the inspection officer. Moreover, he shall produce the said lists and documents upon asking to submit;</p> <p>(e) shall allow the entry and inspection of the inspection officer to the commercial, production and service businesses, agricultural and livestock breeding workplaces and give necessary assistances;</p> <p>(f) if the workers cannot work due to sickness, shall give them holiday for medical treatment in accord with the stipulations;</p> <p>(g) if the funeral matter of the member of the family of worker or his parent occurs, shall give holiday without deducting from the minimum wage, in accord with the stipulations.</p>
Chapter I X Assigning Duty to the Inspection Officer, Inspection and Taking Action Section 18	<p>The inspection officer:</p> <p>(a) has the right to enter and inspect the relevant commercial, production and service work places, agricultural and livestock breeding workplaces and inspect whether or not they comply with and carryout in accord with the rules, notifications, orders, directives and procedures under this Law, whether or not the lists, schedules and documents, wages relating to the workers are prepared correctly, and whether or not such lists, schedules and documents are reported to the Department in accord with the stipulations;</p> <p>(b) May summon, inspect the relevant persons under the assignment of duty by the Department, asking and copying for the relevant lists, schedules and documents.</p> <p>(c) if there are outside workers at employer, has the right to inspect information relating to such outside workers, their names and addresses and the right to ask for and copy their lists and documents and lists relating to minimum wage;</p> <p>(d) in carrying out under sub-section (a), (b) and (c) relating to inspection, if required by the employer to produce the document, shall show the civil service identify car disused by the relevant department;</p> <p>(e) report to the Department in accord with the stipulations relating to the finding under sub-sections (a), (b) and (c), and documents and papers called for.</p>

### 2.1.18. Payment of Wages Law (2016)

<p>The Payment of Wage Act defines the payment obligation to the workers employed in the factories or railway administration. It stipulates the method of payment stating that the payment should be made in cash on a regular payday, and allows legal action against delayed payment or un-agreeable deduction.</p>	
Chapter II Methods and Time of Payment of Wages Section 3	<p>The employer:</p> <p>(a) shall pay wages to the workers employing in his business in local currency or foreign currencies stipulated by the Central Bank of Myanmar. Such payment may be paid in cash or cheque or deposit into the bank account of the worker with the agreement between the employer and the worker.</p> <p>(b) In paying such wages:</p> <p>(i) if it is necessary to pay particular benefit, profits and opportunities for workers working in commerce, production and service businesses, it may be paid in cash or</p>

	<p>some in cash and some in things set up by local price on own volition of workers in accordance with the stipulations.</p> <p>(ii) For workers employing in agriculture and livestock breeding business, it may be paid some wage in cash and something set up by local price according to custom, or on the volition of majority of worker or by collective agreement. In paying so, it shall be for personal use and the interest of his family, and shall be appropriate and equitable.</p> <p>(c) If any worker is conscripted under the Public Military Service Law, the (60) days of wages shall be paid as a special right</p>
Section 4	<p>The employer:</p> <p>(a) shall pay wages at the end of the work or at the time agreed to pay to the worker for hourly, daily, weekly or other part time work, or temporary or piece work;</p> <p>(b) shall not exceed one month than the period agreed with the worker under sub-section (a) to pay wages;</p> <p>(c) shall pay the wages for the permanent work monthly. In making such payment:</p> <p>(i) if workers are not more than 100, wages shall be paid at the end of the period for payment of wage;</p> <p>(ii) If workers are more than 100, it shall be paid no later than five days after the end of the period for payment of wage;</p> <p>(d) shall pay the due wages within two working days from the date of termination, if a worker is terminated;</p> <p>(e) shall pay the wages at the end of the period for payment of wages, if a worker resigns on his own volition by sending prior written notice of resignation;</p> <p>(f) shall pay the due wages to a legal heir within two working days after the decease, if a worker is deceased;</p> <p>(g) shall pay all wages on a working day</p>
Section 5	<p>If an employer encounters difficulty to make payment under sub-section(c) of the Section 4 due to any unexpected condition, including natural disaster, the employer shall submit that which date has been altered for the payment of wages with the consent of the workers to the Department on reasonable ground.</p>
Chapter III Deduction from Wages Section 13	<p>The employer:</p> <p>(a) may deduct from wages, except leaves which are entitled wages under the relevant law and public holidays, for the absent period from work;</p> <p>(b) may deduct expenses which are allowance accommodation and ferry service are arranged by the employer, meal allowance, electricity charges, water service charges and income taxes liable to be paid by worker and cash paid in excess under a mistake, which are not included in the expression of wages under this Law;</p> <p>(c) may deduct advance payment or reimburse or savings for the worker or any contribution under any law demanded by a worker from wages;</p> <p>(d) may deduct from the wages of the worker under a decision of a Court or Arbitration Council or Arbitration Body.</p>
Chapter IV Overtime Wages Section 14	<p>The worker has the right to enjoy overtime wages stipulated by the law if he works over time.</p>

### 2.1.19. The Leave and Holidays Rules (1951, partially revised in 2018)

<p>This act has been used as the basic framework for leaves and holidays for workers with minor amendment in 2006 and 2014. This defines the public holidays that every employee shall be granted with full payment. It also defines the rules of leaves for workers including medical leave, earned leave and maternity leave.</p>	
Chapter (3) Leave Section 23	<p>A worker has the right to take leave with respective wages or with respective salary according to the type of leave and designated period set-up by the law.</p>

	However, workers are entitled to take earned leave with respective average wages or average salary.
Section 24	Workers have the right to take casual leave, medical leave or maternity leave within the probation period.
Section 25	For days in which a worker is not in the workplace after the end of a period of leave, such days shall not be counted as leave.
Section 26	If there are holidays just before or right after one's leave commences, these days cannot be counted as part of the leave period.
Section 27	Subjecting a worker to relocation, suspension of duty, reduction of salary or termination within their leave period is not allowed.
Chapter (4) Duties and Responsibilities of Worker Section 49	<p>The worker</p> <p>(a) must ask for leave from the employer or the manager or from an authorized person with Form</p> <p>(1) within the normal working hours.</p> <p>(b) must report to the employer or to the manager or to an authorized person when the worker is back in the workplace after taking leave.</p> <p>(c) must inform employer or manager or authorized person, by phone or any other method, if the worker is unable to return to the workplace from their current location by the end of leave due to natural disaster or unforeseen happenings or accident occurring within the leave period.</p>
Chapter (5) Duties and Responsibilities of an Employer Section 50	<p>The employer</p> <p>(a) must provide the worker casual leave, medical leave and maternity leave with respective wages or salary. Moreover, must allow the worker earned leave with respective average wages or average salary. If the employer normally pays the cost of living, then the cost of living must also be included.</p> <p>(b) must provide the worker with earned leave starting from the day of entitlement within 12 months, with respective average wages or with average salary, and also must advance the entitled wage prior to the worker taking leave.</p> <p>(c) must announce the number of entitled earned leave calculations within three months starting from the last day of the 12-month period or entitled earned leave. In this way, workers can take leave by turns (alternatively). Moreover, to fix the eligibility period within which workers can take earned leave.</p> <p>(d) if the worker resigns or is terminated or in case of death, has to pay the respective wages/salary within two business/working days starting from the date of incidence.</p> <p>(e) has to pay the eligible wage/salary for earned leave to his/her official representative (if the worker is deceased).</p> <p>(f) has to pay for the respective earned leave period if there is a temporary or permanent shutdown.</p> <p>has to allow eligible earned leave if the nature of work is less than twelve months.</p> <p>(g) is not allowed to suspend, to reduce the salary, to relocate or to terminate a worker due to the worker taking maternity leave or medical leave.</p> <p>(h) has to fill up Form (1), (2), (3), (4), (5) and (6) according to the law. These forms shall be easily accessible from the Inspector. The employer must maintain these documents for up to twelve months' period.</p> <p>(i) has to record the leave taken in Form (7) and submit to the Inspector not later than every seventh day of each month.</p> <p>(j) wants the worker to work on a gazette holiday, the employer must receive consent from the worker. The employer must submit Form (8) to the Inspector for approval.</p>

### 2.1.20. The Amended Law for Factories Act, 1951 (Amended in 2016)

Hygiene in Working Environment: Section 3	Mentions responsibilities of employer and manager regarding waste disposal, ventilation, extreme temperature, dust and gas generation, minimum space for each worker, lighting, portable drinking water and toilets for employees.
Safety in Working Environment: Section 4	States responsibilities of employer and manager concerning with machine guarding, personal protective equipment, housekeeping, aisles and exits, chemical storage and fire protection system to avoid accident.

### 2.1.21. The Workmen's Compensation Act, 1923

It stipulates that employer is required to make payments to employees who become injured or who die in any accidents arising during and in consequence of their employment. Such compensation also must be made for diseases which arise as a direct consequence of employment, such as carpal tunnel syndrome.	
Chapter IV Determining the Categories of Work Section 6	The National Committee shall determine, by notification, commercial, production and service, agricultural and livestock breeding business which shall be applied by the provisions relating to minimum wage contained in this Law, in the whole country or relevant Union, Region or State. Moreover, it may amend the said businesses in accord with the changing situation from time to time.
Chapter VII The Duties of the Employer Section 12	The employer: (a) shall not pay wage to the worker less than the minimum wage stipulated under this Law; (b) may pay more than the minimum wage stipulated under this Law; (c) shall not have the right to deduct any other wage except the wage for which it has the right to deduct as stipulated in the notification issued under this Law; (d) shall pay the minimum wage to the workers working in the commercial, production and service business in cash. Moreover, if the specific benefits, interests or opportunities are to be paid, it may be paid in cash or partly in cash and partly in property, with prevailing regional price, jointly according to the desire of the worker; (e) in paying minimum wage to the workers working in the agricultural and livestock business, some cash and some property at prevailing regional price may be paid jointly according to local custom or desire of the majority of workers or collective agreement. Such payment shall be for any personal use and benefit of the worker and his family and the value shall also be considerable and fair.
Section 13	The employer: (a) shall inform the workers the rates of minimum wage relating to the business among the rates of minimum wage stipulated under this Law and advertise it at the workplace to enable to be seen by the relevant workers; (b) shall prepare and maintain the lists, schedules, documents and wages of the workers correctly; (c) shall report the lists, schedules and documents prepared and maintained under subsection (b) to the relevant department in accord with the stipulations; (d) shall accept the inspection when summoned by the inspection officer. Moreover, he shall produce the said lists and documents upon asking to submit; (e) shall allow the entry and inspection of the inspection officer to the commercial, production and service businesses, agricultural and livestock breeding workplaces and give necessary assistances; (f) if the workers cannot work due to sickness, shall give them holiday for medical treatment in accord with the stipulations;



	(g) if the funeral matter of the member of the family of worker or his parent occurs, shall give holiday without deducting from the minimum wage, in accord with the stipulations.
Chapter IX Assigning Duty to the Inspection Officer, Inspection and Taking Action Section 18	The inspection officer: (a) has the right to enter and inspect the relevant commercial, production and service workplaces, agricultural and livestock breeding workplaces and inspect whether or not they comply with and carry out in accord with the rules, notifications, orders, directives and procedures under this Law, whether or not the lists, schedules and documents, wages relating to the workers are prepared correctly, and whether or not such lists, schedules and documents are reported to the Department in accord with the stipulations; (b) may summon, inspect the relevant persons under the assignment of duty by the Department, asking and copying for the relevant lists, schedules and documents. (c) if there are outside workers at employer, has the right to inspect information relating to such outside workers, their names and addresses and the right to ask for and copy their lists and documents and lists relating to minimum wage; (d) in carrying out under sub-section (a), (b) and (c) relating to inspection, if required by the employer to produce the document, shall show the civil service identify card issued by the relevant department; (e) Report to the Department in accord with the stipulations relating to the finding under sub-sections (a), (b) and (c), and documents and papers called for.

### 2.1.22. The Export and Import Law (2012)

Section 7	A person who obtained any license shall not violate the conditions contained in the license.
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### 2.1.23. The Law on Standardization (2014)

Chapter (IX) Offences and Penalties Section 25	Any person who commits any of the following acts shall, on conviction, be punished with imprisonment for a term not exceeding three years or with fine not more than three million Kyats or with both: (c) advertising, selling or possessing in order to sell any product or advertising or carrying out any service that is not in conformity with mandatory standard prescribed by the Council knowingly or likely to know
Chapter (IX) Offences and Penalties Section 26	If any person who obtained certificate of certification uses standardization mark on the product which is not in conformity with the relevant standard or relating to service shall be punished with imprisonment for a term not exceeding one year or with fine not more than one million Kyats or with both.

### 2.1.24. Underground Water Act (21st June, 1930)

The underground water act enacted on the date of 21st June in 1930 whereas it is expedient to conserve and protect underground sources of water supply in the Union of Burma. This act prohibits sinking of a tube for the purpose of obtaining underground water except under and in accordance with the terms of a license granted by the water officer. Township Officer or sub-divisional officer had power to close a license tube after exercising jurisdiction over the local area concerned and the expense of such closure shall be recoverable from the owner of the tube as if it were an arrear of land-revenue.	
Section 3	No person shall sink a tube for the purpose of obtaining underground water except under and in accordance with the terms of a licence granted by the water officer. Every person owning a tube which was in existence before the extension of this Act to the local area concerned shall apply to the water officer for a licence for the said tube, and such licence shall be granted free of charge.
Section 6	The President of the Union may make rules 1-

	<p>(a) prescribing the conditions subject to which licences may be granted by the water officer under section 3;</p> <p>(b) prescribing the form of and the procedure for granting such licences and the fees payable for the issue thereof;</p> <p>(c) Prescribing the information to be supplied to the water officer under section 5.</p>
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### 2.1.25. Myanmar Engineering Council Law, 2013 (Amendment 2022)

Chapter 2 Objectives Section 3	<p>The Objectives of this law are as follows:</p> <p>(a) to develop the dignity, ethical principles and ability of Myanmar citizen engineers, graduate technologists and technicians who are working in the engineering services</p> <p>(b) to explore beneficial, useful and good methods to research and develop the State's natural resources and human resources with the least environmental impact by a combination of engineering technology and information technology;</p> <p>(c) to guide, control, maintain and take necessary action with regard to specified standards and norms relating to specified subjects, systematic methods, safety and ethical principles and duties in teaching engineering subjects and in technological research and services;</p> <p>(d) to perform engineering and technological activities of the State and tasks assigned by the relevant ministry or organization from time to time;</p>
Chapter 13 Prohibitions and Penalties Section 37	No one shall perform any engineering work and technological work which are specified as being dangerous to the public by a rule enacted under this law without having received a registration certificate issued by the council, except for engineers appointed in a government department or an organization in the performance of their duties.
Section 37	No engineer, graduate technologist and technician shall use, together with his name, a title which is not compatible with his status.
Section 38	No registered engineer, graduate technologist and technician- (a) shall transfer his registration certificate to anyone or allow it to be used by anyone; (b) shall fail to return his registration certificate to the council within 30 days from the day on which a decision is passed, or an administrative action is taken, under this law to cancel the registration certificate.
Section 39	Anyone convicted of having violated the prohibition contained in section 37 shall be punished with imprisonment for not more than 2 years or with a fine or with both.
Section 40	any registered engineer, graduate technologist or technician convicted of having violated the prohibition contained in section 38 shall be punished with imprisonment of not more than 1 year or with a fine or with both.
Section 41	Any registered engineer, graduate technologist or technician convicted of having violated the prohibition contained in 39 shall be punished with imprisonment of not more than 1 year or with a fine or with both.
Section 42	Any registered engineer, graduate technologist or technician convicted of having violated any prohibition under this law shall be punished with imprisonment of not more than 6 months or with a fine or with both.

### 2.1.26. The Commercial Tax Law (1990) Amended 2014

Chapter 5 Registration and Intimation of Commencement of Enterprise	Any Person who commences operation of a goods production enterprise or service enterprise shall furnish letter of intimation on the commencement of the operation as such to the relevant Township Revenue Officer as stipulated by regulations.
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Article 11 (b)	
Chapter 6 Monthly Payment of Tax and Sending of Three-Monthly Return Article 12 (a)	Any person who has taxable proceed of sale or receipt from service within a year, shall pay due monthly tax within ten days after the end of the relevant month. Moreover, a three-monthly return shall be furnished to the relevant Township Revenue Officer within one month after the end of relevant three-month.
Article 12 (b)	The Township Revenue Officer may intimate any person to pay due monthly tax and send three-monthly return if there is cause to consider that he has taxable proceed of sale or receipt from service within a year.
Article 12 (c)	If it is failed to pay tax under sub-section (a) or (b), or if there is cause to consider that the tax paid is less than the tax payable, the Township Revenue Officer may, based on the information received, estimate and claim the tax payable or the additional tax payable.
Article 12 (d)	The tax paid under sub-section (a), (b) or (c) shall be set-off from the tax due in the assessment.
Article 12 (e)	The tax payable on goods imported under sub-section (c) of section 4 of the Law shall be collected together with the customs duties by the Customs Department in accord with the manner of collecting customs duties.

### 2.1.27. The Prevention of Hazard from Chemical and Related Substances Law, 2013

Chapter II Aims Section 3	<p>This law was enacted with the objectives of:</p> <ul style="list-style-type: none"> <li>a. To protect from being damaged the natural environment resources and being hazardous any living beings by chemical and related substances;</li> <li>b. To supervise systematically in performing the chemical and related substances business with permission for being safety;</li> <li>c. To perform the system of obtaining information and to perform widely educative and research for using the chemical and related substance systematically;</li> <li>d. To perform the sustainable development for the occupational safety, health and environmental conservation.</li> </ul> <p>Regarding the chemical management and storage, currently, regulations governing chemicals management are divided between various Acts, mostly dating from colonial times; hence the legislation is in many respects related to the British framework. The Factory Act and the Public Health Act contain the provisions for chemicals management and storage. Some chemicals are likely to require permits.</p>
Section 15	<p>A person who has obtained a licence, before starting the respective chemical and related substances business: -</p> <ul style="list-style-type: none"> <li>(a) shall be inspected for the safety and the power of resistance of the machinery and equipment by the respective Supervisory Board and Board of Inspection;</li> <li>(b) shall be attended the person who serve in the work to the respective foreign trainings or the trainings and the expert trainings on prevention of hazard from the chemical and related substances opened by the government department and the government organizations.</li> </ul>
Section 16	<p>A person who has obtained a licence: -</p> <ul style="list-style-type: none"> <li>(a) shall abide the licence regulations;</li> <li>(b) shall perform to abide strictly the instructions for being safety in using the chemical and related substances by himself and also the persons who serve the work;</li> <li>(c) shall keep the required safety equipment enough in the chemical and related substances businesses, furthermore shall grant the personal protection equipment and dresses free of charge to the working persons;</li> <li>(d) shall make the course of training and study and instruction if necessary to the working persons for using the occupational safety equipment, the personal protection equipment and the dresses systematically in the chemical and related substances business;</li> </ul>

	<p>(e) shall be inspected by the respective Supervisory Board and Boards of Inspection in respect of whether or not the hazard may impact on the Human Being and Animals' health and the environment;</p> <p>(f) shall make medical checkup the working persons who will work in the chemical and related substances business and shall permit to serve in that work after obtaining the recommendation that his health is suitable for that work. This medical checkup records shall be kept systematically;</p> <p>(g) shall send the copy of informative letter of the permission to the respective Department of Township Administration, if the hazardous chemical or related substances are permitted to store;</p> <p>(h) shall acquire in advance the guidance and agreement of the respective Department of Fire Brigade, if the business that is worried to fire hazard is operated by using the fire hazard substances or the explosive substances;</p> <p>(i) shall transport only the permitted amount of the chemical and related substances in accordance with the prescriptive stipulations, if they are transported in local;</p> <p>(j) shall take the permission from the Central Supervisory Board if the chemical and related substance is altered and transferred from one place to any other place which contained in the license;</p> <p>(k) shall abide and perform in accordance with the related environmental laws not to impact and damage to the environment in operating the chemical and related substances business.</p>
Section 17	A person who has obtained a licence, shall put the insurance in accordance with the prescriptive stipulations to be able to pay the compensation, if the impact and damage is occurred on the Human Being and Animals or the environment in respect of the chemical and related substances businesses.
Section 22	A person who has obtained the registration certificate shall abide the regulations consisted in the registration certificate furthermore shall also abide the order and instructions issued occasionally by the Central Supervisory Board.
Chapter IX Hazard Control and Decrease Section 27	<p>A person who has obtained the licence to be complied the following matters to control and decrease the hazard of the chemical and related substances: -</p> <p>(a) classifying the hazard level to protect in advance the hazard according to the properties of the chemical and related substances;</p> <p>(b) expressing the Material Safety Data Sheet and Pictogram;</p> <p>(c) providing the safety equipment, the personal protection equipment to protect and decrease the accident and attending to the training to be used systematically;</p> <p>(d) performing in accordance with the stipulations in respect of transporting, possessing, storing, using, discharging the chemical and related substances;</p>

### 2.1.28. The Social Security Law (2012)

The Social Security Law, enacted in 2012, was amended the Social Security Act in 1954. It stipulates the formation and implementation of social security systems.	
Chapter II Objectives Section 3	<p>The objectives of this Law are as follows:</p> <p>(a) to support the development of the State's economy through the development of production by causing to enjoy more security in social life and health care by the workers who are major productive force of the State by the collective guaranty of the employer, worker and the State;</p> <p>(b) to enjoy more security in social life and medical care by the public by effecting their insurance voluntarily;</p> <p>(c) to raise public confidence upon the social security scheme by providing benefits which are commensurate with the realities;</p> <p>(d) to have the right to draw back some of the contributions paid by the employers and the workers as savings, in accord with the stipulations;</p> <p>(e) to obtain the right to continued medical treatment, family assistance benefit, invalidity benefit, superannuation benefit, survivors' benefit, unemployment benefit, the right to residency and ownership of housing after retirement in addition to health</p>

	care and pecuniary benefit for sickness, maternity, death, employment injury of the workers.
Chapter V Social Security System and Benefits Section 11	(a) The following establishments shall be applied with the provisions for compulsory registration for social security system and benefits contained in this Law if they employ minimum number of workers and above determined by the Ministry of Labour in co-ordination with the Social Security Board: (i) production industries doing business whether or not they utilize mechanical power or a certain kind of power, works of production, repairing or services, or engineering works, mills, warehouses, establishments; (ix) works carried out with foreign investment or citizen investment or joint ventured businesses; (b) Any establishment which is applied with the provisions of compulsory registration under sub-section (a) shall continue to be applied by this Law even though any of the following situations occurs if it continues to carry out such work: (i) carrying out work by employing under stipulated minimum number of workers but more than one worker; (ii) changing the employer or changing the type of business.
Social Security System Section 13	The Social Security Board shall manage and keep the following social security systems in accord with the stipulations that insured persons may enjoy social security benefits: (b) Family Assistance Insurance System: i) education allowance benefit for the children of insured persons who earn below the specified amount of income; ii) health care and aid benefit in time of natural disaster; iii) suitable benefit for dependent family members.
Section 15	(a) The following funds are included in the Social Security Fund: (i) health and social care fund; (ii) family assistance fund; (iii) invalidity benefit, superannuation pension benefit, and survivors' benefit fund; (iv) unemployment benefit fund; (v) other social security fund for social security system of compulsory registration and contribution specified by the Ministry of Labour, in co-ordination with the Social Security Board, according to clause (2) of subsection (e) of section 13; (vi) other social security fund specified as to which contribution may be paid after voluntary according to clause (2) of sub-section (e) of section 13; (vii) fund for Social Security Housing Plan;
Section 18	(b) The employer shall deduct contributions to be paid by worker from his remuneration and pay to the social security fund together with contribution to be paid by him. The employer shall also bear the expenses for such contribution.
Chapter VI Application to Employment Injury Benefit Insurance System, Employment Injury Benefit Fund and Benefits Section 45	The provisions contained in this Law relating to the employment injury benefit insurance system shall apply to the following workers: (a) workers at establishments which are applied to social security system who have registered compulsorily in accord with sub-section (a) of section 16 and contributed to the social security funds contained in clauses (1), (3), (4) and (5) of sub-section (a) of section 15; (b) workers specified as being applied to provisions of compulsory registration for employment injury benefit insurance system by notification of the Ministry of Labour, in co-ordination with the Social Security Board with the approval of the Union Government.
Section 48	(a) The employer shall affect insurance by registering for employment injury benefit insurance system contained in section 45 at the relevant township social security office and pay contribution to employment injury benefit fund in accord with stipulations in order that workers

	<p>applied to provisions of compulsory registration may obtain the employment injury benefits;</p> <p>(b) The employers may affect insurance by registering voluntarily for insurance of the workers who are not applied to provisions of compulsory registration for employment injury benefit insurance system, by paying stipulated contribution to employment injury benefit insurance fund;</p> <p>(c) When registering to effect insurance for employment injury benefit in accord with sub-sections (a) and (b), the worker shall submit medical certificate.</p>
Section 49	<p>Non-application to the Workmen's Compensation Act</p> <p>(a) The employers and insured persons of establishments where the employer had registered compulsorily in accordance with sub-section (a) of section 48 or where the employer had registered voluntarily in accord with sub-section (b) of section 48 who have paid contribution to employment injury benefit fund shall not apply to the provisions contained in the Workmen's Compensation Act as regards the employment injury benefit;</p> <p>(b) The insured persons who has affected insurance for employment injury benefit in accord with sub-sections (a) and (b) of section 48 shall be entitled only to the employment injury insurance benefits contained in this Law.</p>
Section 53	<p>(a) The employers and workers shall co-ordinate with the Social Security Board or insurance agency in respect of keeping plans for safety and health in order to prevent employment injury, contracting disease and decease owing to occupation and in addition to safety and educational work of the workers and accident at the establishment;</p>
Section 75	<p>The employer of establishments applied by this Law:</p> <p>(a) shall prepare and keep the following records and lists correctly and submit to the relevant township social security office in accord with the stipulations:</p> <ul style="list-style-type: none"> <li>i) records and lists of workers' daily attendance;</li> <li>ii) records of appointing new worker, employing worker by changing of work, suspension from work, dismissal from work and resignation from work;</li> <li>iii) records of promotion and paying remuneration;</li> <li>iv) records and lists of employers, managers, and administrators; and records of changes of them;</li> </ul> <p>(b) shall inform the relevant township social security office if the following matters arise:</p> <ul style="list-style-type: none"> <li>i) change in number of workers and address of establishment;</li> <li>ii) change of employer, change of business, suspension from work, and termination of work;</li> <li>iii) employment injury, employment death, and occupational diseases;</li> </ul> <p>(c) shall produce work records and lists on requirement of inspection team or official assigned duty under this Law by the Social Security Head Office and various Regional Social Security Offices.</p>

### 2.1.29. Occupational Safety and Health Law (2019)

Purpose:	To effectively implement measures related to safety and health in every industry and to set occupational safety and health standards;
Section-26 Sub-section (e)	The project proponent has to provide adequate and relevant personal protective equipment to workers free of charge and make them wear it during work so as not to expose workers to any serious occupational diseases or hazards.
Section-26 Sub-section (1)	The project proponent has to arrange and display occupational safety and health instructions, warning signs, notices, posters, and signboards.

Section-30 Sub-section (a)	The worker shall wear or use at all times any protective clothes, equipment and tools provided by the employer for the purpose of safety and health.
Section-30 Sub-section (d)	The worker shall proper and systematic use any equipment and tools, machines, any parts of the machines, vehicles, electricity and other substances being used at the workplace.
Section-30 Sub-section (e)	The worker shall take reasonable care for the safety and health of himself/ herself and of other persons who may be affected by his/ her acts or omissions at work.

### 2.1.30. Myanmar Fire Brigade Law, 2015

Chapter II Objectives Section 3	The objectives of this Law are as follows: (a) to prevent destruction of State-owned property, private property, cultural heritage and the lives and property of the public by fire and other natural disaster; (b) to organize the Fire brigade systematically and to train members of the fire brigade; (c) to carry out extinguishing fire, prevention and search and rescue when fire, other natural disaster, epidemic disease or any kind of sudden disaster occurs; (d) to educate, organize and incite extensively so as to achieve public cooperation when any disaster occurs; (e) to participate and help, if necessary, for the State safety, peace of the public and the rule of law
Chapter VIII Activities for Fire Safety Section 15	The different levels of Fire Safety Body shall: (a) perform the activities for fire safety in accord with the procedures laid down by the Central Body; (b) organize and educate to obtain the cooperation of the public in the activities for fire safety; (c) supervise as may be necessary the participation of all the relevant members of fire brigade in accord with the work programmes laid down by the Central Body when fire hazard, other natural disaster, epidemic disease or sudden disaster occurs; (d) appoint fire safety warning groups in coordination with the relevant administrative organizations.
Section 16	The person-in-charge of the Township Fire Services Department shall: (a) issue, from time to time, the directives on fire safety to be abided by the residents in the city, ward or village - tract; (b) inspect or cause to inspect in accord with the stipulations whether the residents in the city, ward or village - tract abide by the directives issued under sub-section (a) and arrange to enable warning or taking action, as may be necessary, against those who do not abide by.
Chapter XI Prohibitions Section 24	No person shall fail to abide by the directives of fire safety issued under section 16 by the head of the relevant Township Department of Fire Services.
Section 25	The owner or manager of the factory, workshop, bus terminal, airport, port, hotel, motel, lodgings, condominium, market, department, organization or business exposed to fire hazard shall, in accord with the directive of the Department of Fire Services: (a) not fail to form the Reserve Fire Brigade; (b) not fail to provide fire safety equipment.
Section 26	No person shall, knowing that there is no outbreak of fire, report fraudulently the outbreak of fire to the Fire brigade.

Section 25	No person shall, without cause, obstruct, block, disturb, or attack the members of the fire brigade and vehicles which departed to extinguish the fire and direct by any means to the place which is not related to the outbreak of fire.
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### 2.1.31. The Electricity Law (2014)

<p>In 2014, the new Electricity Law, a comprehensive piece of legislation covering licensing, a new regulatory commission, standards, inspection, tariff, and restrictions, replaced the Electricity Law of 1984. The Electricity Law divides projects into “small” (up to 10 MW), “medium” (between 10 MW to 30 MW) and large (upwards of 30 MW); the states and regions can issue permits for small and medium power plants. In case these plants are not connected to the national grid, the Union Government Ministry is not the primary authority involved. The authorities have a legal right to use land for the purpose of power plants under the Electricity Law, and have the right to expand and maintain their facilities. The law also provides that the authorities can build transmission lines in accordance with existing laws.</p>	
Purpose	To ensure compliance with the conditions of permission for productions of in line with the above law.
Section 10 (b)	The project proponent will implement the project with the best practices to reduce the damages on the environment, health and socio-economy also will pay compensation for the damages and will pay the fund for environmental conservation.
Section 18	The project proponent has to take the certificate of electric safety, issued by the chief-inspector, before the commencement of power generation.
Section 21 (a)	The project proponent has to be liable for damages to any person or enterprise by failure to abide by the quality standards or rules, regulation, by-law, order, and a directive issued
Section 22 (a)	The project proponent has to be liable for damages to any person or enterprise by the negligence of project owner.
Section 26 (a, b)	The project owner has to comply with the permission for electric searching and generation.
Section 27	The project proponent will inform promptly to chief-inspector and head officer of related office while occurring of accident in electricity generation.
Section 40	The project proponent will comply with the standards, rules, and procedure. Moreover, will allow the inspection by respected governmental department and organization if it is necessary.
Section 68	The project proponent will pay the compensation to anyone who is injured or caused to death in electric shock or fire caused by the negligence or omitting of the project owner or representative of the project owner.

### 2.1.32. Vehicle Safety and Motor Vehicle Management Law (2020)

Chapter 2 Objectives Section 3	The main objectives of this law are as follows: (a) For the safe driving of motor vehicles in public areas through registration according to official rules and regulations. (b) To provide driving licenses for driving particular types of motorized vehicles after qualification checks. (c) For the easy flow of road users and for the protection against road risks and vehicle perils. (d) To avoid traffic congestion and to use high technology transportation systems efficiently in order to implement protection against road risks and vehicle perils. (e) To reduce environmental pollution caused by motor vehicles.
Chapter (3) Motor vehicle registration Section 4	Every owner of a motor vehicle must register the vehicle with the registration officer.



Section 5	The owner of a motor vehicle must maintain the vehicle in a safe condition equal to the standard condition.
Section 6	The registration officer may not register the motor vehicle if the vehicle is disqualified for failing to comply with safety standards or the engine is broken or if the applicant has failed to disclose previous facts about former registrations of the vehicle.
Section 8	(a) The owner of the vehicle can request the registration officer to issue a temporary registration according to the regulations. (b) The temporary registration according to this section cannot be valid for more than three months. And this law does not allow temporary registration more than one time.
Section 10	The owner of a vehicle must notify the registration officer if the main parts of his/her vehicle needs to be changed or repaired.
Chapter (9) Prohibitions Section 45	No one is allowed to drive, request someone to drive, or park, motor vehicles in public places under the following conditions: (a) The motor vehicle is not registered. (b) The registration has been suspended, revoked or expired; the registration card is not displayed. (c) The registration card has been revoked or is expired.
Section 46	No one is allowed to drive, or allow to drive, motor vehicles in public places without risk insurance for others. This prohibition does not extend to passengers.
Section 47	(a) No one is allowed to drive a motor vehicle in public places without carrying the driving license with him/her. (b) No one is allowed to drive a motor vehicle in public places without a driving license. (c) The owner of, and the person responsible for, a motor vehicle are not allowed to give permission to someone without a driving license to drive in public places.
Section 50	No one is allowed to do the following in public places: (a) Driving above the speed limit or below the minimum speed. (b) Driving a motor vehicle which endangers others. (c) Driving a motor vehicle after the consumption of narcotic drugs or alcohol.
Section 50	No one is allowed: (a) To operate a business of manufacturing, selling or equipping motor vehicles without a business license. (b) To operate a business of maintaining or repairing motor vehicles without a business license.

### 2.1.33. National Land Use Policy, 2014 October

Chapter I Basic Principles of the National Land Use Policy Section 8	In terms of the National Land Use Policy: (a) It shall use the land resources of the State sustainably and systematically by conserving and protecting them for the interest of all peoples of the State; (b) It shall enact the National Land Law which harmonize the existing laws relating to use of land resources and land tenures in the whole country including rural and urban areas and which may be implemented systematically; (c) It shall cause to decide the matters relating to land disputes arisen between the land users and the stakeholders transparently and truly in accord with the National Land Law;
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<p>Section 8</p>	<p>In implementing the continued entry of the foreign direct investments, sustainable economic development, effectiveness of the environmental conservation and protection, social harmonization, firmness of land tenures, immoveable property right and settlement of land dispute:</p> <p>(a) It shall increase responsible undertaking and respect the rule of law;</p> <p>(b) It shall strengthen the clean governance system by carrying out land use management, land tenure management in accord with law systematically and truly;</p> <p>(c) It shall establish modernized systems to enable to have access to correct information relating to land use management and land tenure management;</p> <p>(d) It shall establish the land dispute settlement mechanism which is easily implementable and impartial;</p> <p>(e) It shall arrange and carry out coordination process with the Stakeholder's transparently.</p>
<p>Chapter II                  The Situation of the Existing Land Management Mechanism                  Section 12</p>	<p>The State has arranged and carried out to expand agricultural land use by the State-owned organizations, cooperative societies, associate on, joint ventures, other organizations which acquire agricultural land for businesses and individual agriculturalists after forming the Vacant, Fallow and Virgin Lands Management Central Committee under the Notification 44/91 dated 13<sup>th</sup> November, 1991.</p>

## 2.2. NATIONAL ENVIRONMENTAL QUALITY (EMISSION) GUIDELINES (NEQG) (DECEMBER 2015)

### 2.2.1. Objectives

To provide the basis for regulation and control of noise and vibration, air emissions, and liquid discharges from various sources in order to prevent pollution for purposes of protection of human and ecosystem health.

### 2.2.2. General Guidelines

#### 2.2.2.1. Air Emission

Projects with significant sources of air emissions, and potential for significant impacts to ambient air quality, should prevent or minimize impacts by ensuring that: (i) emissions do not result in concentrations that reach or exceed national ambient quality guidelines and standards, or in their absence current World Health Organization (WHO) Air Quality Guidelines<sup>1</sup> for the most common pollutants as summarized below; and (ii) emissions do not contribute a significant portion to the attainment of relevant ambient air quality guidelines or standards (i.e. not exceeding 25 percent of the applicable air quality standards) to allow additional, future sustainable development in the same air shed. Industry-specific guidelines summarized hereinafter shall be applied by all projects to ensure that air emissions conform to good industry practice. Reference should be made to WHO's Air Quality Guidelines for Europe<sup>2</sup> for air pollutants not included in the following Table 2-1.

**Table 2-1 NEQG's Air Quality Guideline**

Parameter	Averaging Period	Guideline Value
Nitrogen Dioxide	1-year	40
	1-hour	200
Ozone	8-hour	100

Parameter	Averaging Period	Guideline Value
Particulate Matter PM10 <sup>a</sup>	1-year	10
	24-hour	50
Particulate Matter PM2.5 <sup>b</sup>	1-year	10
	24-hour	25
Sulfur dioxide	24-hour	20
	10-minute	500

a Particulate matter 10 micrometers or less in diameter

b Particulate matter 2.5 micrometers or less in diameter

### 2.2.2.2. Noise Levels

Noise prevention and mitigation measures should be taken by all projects where predicted or measured noise impacts from a project facility or operation exceed the applicable noise level guideline at the most sensitive point of reception. Noise impacts should not exceed the levels shown below, or result in a maximum increase in background levels of three decibels at the nearest receptor location off-site.

**Table 2-2 Noise Level Standard of NEQG**

Receptor	One Hour LAeq (dBA)	
	Day Time (7:00-22:00) (10:00-22:00 for public holidays)	Night Time (22:00-7:00) (22:00-10:00 for public holidays)
Residential, Institutional, Educational	55	45
Industrial, Commercial	70	70

### 2.2.2.3. Wastewater

Industry-specific guidelines apply during the operations phase of projects and cover direct or indirect discharge of wastewater to the environment. They are also applicable to industrial discharges to sanitary (domestic) sewers that discharge to the environment without any treatment. Wastewater generated from project operations includes process wastewater, wastewater from utility operations, runoff from process and storage areas, and miscellaneous activities including wastewater from laboratories, and equipment maintenance shops. Projects with the potential to generate process wastewater, sanitary sewage, or storm water should incorporate the necessary precautions to avoid, minimize, and control adverse impacts to human health, safety or the environment. Industry-specific guidelines summarized hereinafter shall be applied by all projects, where applicable, to ensure that effluent emissions conform to good industry practice.

For project types where industry-specific guidelines are not set out in these Guidelines, the following general guideline values, or as stipulated on a case-by-case basis, apply during project operations.

**Table 2-3 Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges (general application)<sup>1</sup>**

Parameter	Unit	Guideline Values
5-day Biochemical oxygen demand	mg/l	50
Ammonia	mg/l	10
Arsenic	mg/l	0.1
Cadmium	mg/l	0.1
Chemical oxygen demand	mg/l	250
Chlorine (total residual)	mg/l	0.2
Chromium (hexavalent)	mg/l	0.1
Chromium (total)	mg/l	0.5
Copper	mg/l	0.5
Cyanide (free)	mg/l	0.1
Cyanide (total)	mg/l	1
Fluoride	mg/l	20
Heavy metals (total)	mg/l	10
Iron	mg/l	3.5
Lead	mg/l	0.1
Mercury	mg/l	0.01
Nickel	mg/l	0.5
Oil and grease	mg/l	10
pH	S.U. <sup>a</sup>	6-9
Phenols	mg/l	0.5
Selenium	mg/l	0.1
Silver	mg/l	0.5
Sulphide	mg/l	1
Temperature increase	°C	<3 <sup>b</sup>
Total coliform bacteria	100 ml	400
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

<sup>a</sup> Standard Unit

<sup>b</sup> At the edge of a scientifically established mixing zone which takes into account ambient water quality, receiving water use, potential receptors and assimilative capacity; when the zone is not defined, use 100 meters from the point of discharge

### 2.3. AUTHORIZED INSTITUTIONS AND RECOMMENDATIONS

The Ministry of Environmental Conservation and Forestry (MOECA) was reformed as the Ministry of Natural Resources and Environmental Conservation (MONREC) on 30th March, 2016 in

<sup>1</sup>Pollution prevention and abatement handbook. 1998. Toward cleaner production. World Bank Group in collaboration with United Nations Environment Programme and the United Nations Industrial Development Organization.

order to undertake both environmental and natural resources conservation and management more effectively. Under Section 3 of the Environmental Impact Assessment Procedure (2015), pursuant to section 21 of the law and Articles 52, 53 and 55 of the Environmental Conservation Rules, all projects and project expansions undertaken by any organization, which may cause impact on environmental quality that, are required to obtain prior permission. This is to be in accordance with section 21 of the Environmental Conservation Law, and Article 62 of the Environmental Conservation Rules, having the potential to cause adverse impacts, that are required to undertake IEE or EIA or to develop an EMP, and to obtain an Environmental Compliance Certificate (ECC) in accordance with this EIA procedure.

### **2.3.1. Scope of Application**

Provisions of the general and applicable industry-specific Guidelines shall be reflected in project environmental management plan (EMP) and environmental compliance certificate (ECC) and together constitute a project's commitment to take necessary measures to avoid, minimize and control adverse impacts to human health and safety, and the environment through reducing the total amount of emissions generation; to adopting process modifications, including waste minimization to lower the load of pollutants requiring treatment; and as necessary, to apply treatment techniques to further reduce the load of contaminants prior to release or discharge.

### **2.3.2. CHAPTER II, Implementation Procedures**

As specified in the EIA Procedure, all projects are obliged to use, comply with and refer to applicable national guidelines or standards or international standards adopted by the Ministry. These Guidelines will henceforth be applied by the Ministry in satisfying this requirement until otherwise modified or succeeded by other guidelines or standards

**Section 10** As specified in the EIA Procedure, following project approval a project shall commence implementation strictly in accordance with the project EMP and any additional requirements set out in the project ECC, which will encompass conditions relating to 3 emissions. In this regard, the Ministry will require that project sad here to general and applicable industry guidelines asset out in Annex 1.

**Section 11** While these Guidelines generally apply to all projects subject to the EIA Procedure, it is the prerogative of the Ministry to decide how the Guidelines should be applied to existing projects as referred to in the EIA Procedure, as distinguished from new projects. At the Ministry's discretion less stringent levels or measures than provided for in these Guidelines may be specified as appropriate, and a timeframe agreed for a project to fully comply with these Guidelines.

**Section 12** As specified in the EIA Procedure, projects shall engage in continuous, proactive and comprehensive self-monitoring of the project and comply with applicable guidelines and standards. For purposes of these Guidelines, projects shall be responsible for the monitoring of their compliance with general and applicable industry-specific Guidelines as specified in the project EMP and ECC.

**Section 13** Air emissions, noise, odor, and liquid /effluent discharges will be sampled and measured at points of compliance as specified in the project EMP and ECC.

## **2.4. APPLICATION OF INTERNATIONAL GUIDELINES**

Based on the Myanmar Environmental Guidelines and International Best Practices, the ultimate Scoping Report for YCP was developed and got approval from ECD. Specifically, the Environmental Impact Assessment for this project will follow not only the national regulations such as the Environmental Conservation Law, Environmental Conservation Rules and relevant regulations of the Government of the Republic of the Union of Myanmar but also International Guidelines such as WHO standards, IFC Environmental Health and Safety Guidelines for environmental and social considerations.

### **2.4.1. IFC Environmental, Health and Safety (EHS) Guidelines (2007)**

The World Bank Group Environmental, Health, and Safety Guidelines (EHS Guidelines) are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). The EHS Guidelines contain the performance levels and measures that are normally acceptable to IFC and that are generally considered to be achievable in new facilities at reasonable costs by existing technology. The General EHS Guideline contains information on crosscutting Environmental, Health, and Safety issues potentially applicable to all industry sectors. It should be used together with the relevant industry sector guideline(s). When the host country (Myanmar) regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent.

### **2.4.2. IFC Guidelines on Water and Sanitation, (2007)**

The EHS Guidelines for Water and Sanitation include information relevant to the operation and maintenance of potable water treatment and distribution systems, and collection of sewage in centralized systems (such as piped sewer collection networks) or decentralized systems (such as septic tanks subsequently serviced by pump trucks) and treatment of collected sewage at centralized facilities.

### **2.4.3. IFC Guidelines on Waste Management Facilities (2007)**

The EHS Guidelines for Waste Management cover facilities or projects dedicated to the management of municipal solid waste and industrial waste, including waste collection and transport; waste receipt, unloading, processing, and storage; landfill disposal; physicochemical and biological treatment; and incineration projects. Industry-specific waste management activities applicable, for example, to medical waste, municipal sewage, cement kilns, and others are covered in the relevant industry-sector EHS Guidelines, as is the minimization and reuse of waste at the source.

### **2.4.4. WHO Guidelines for Drinking Water Quality (2011)**

The WHO guideline on drinking water quality includes:

- Drinking-water safety, including minimum procedures and specific guideline values and how these are intended to be used;
- Approaches used in deriving the guidelines, including guideline values;
- Microbial hazards, which continue to be the primary concern in both developing and developed countries. Experience has shown the value of a systematic approach to securing microbial safety. It also builds on the preventive principles on ensuring the microbial safety of drinking water through a multiple-barrier approach, highlighting the importance of source water protection;

- Climate change, which results in changing the water temperature and rainfall patterns, severe and prolonged drought or increased flooding, and its implications for water quality and water scarcity, recognizing the importance of managing these impacts as part of water management strategies;
- Chemical contaminants in drinking water, including information on chemicals not considered previously, such as pesticides used for vector control in drinking water; revisions of existing chemical fact sheets, taking account of new scientific information; and, in some cases, reduced coverage in the Guidelines where new information suggests a lesser priority;
- Those key chemicals responsible for large-scale health effects through drinking water exposure, including arsenic, fluoride, lead, nitrate, selenium, and uranium, providing guidance on identifying local priorities and management;
- The important roles of many different stakeholders are essential in ensuring drinking-water safety. This edition furthers the discussion introduced in the third edition of the roles and responsibilities of key stakeholders in ensuring drinking-water safety;
- Guidance in situations other than traditional community supplies or managed utilities, such as rainwater harvesting and other non-piped supplies or dual piped systems.

#### **2.4.5. WHO Protecting Groundwater for Health (2006)**

Groundwater is the water contained beneath the surface in rocks and soil and is the water that accumulates underground in aquifers. Groundwater constitutes 97 percent of global freshwater and is an important source of drinking water in many regions of the world. In many parts of the world, groundwater sources are the single most important supply for the production of drinking water, particularly in areas with limited or polluted surface water sources. For many communities, it may be the only economically viable option. This is in part because groundwater is typical of more stable quality and better microbial quality than surface waters. Groundwater often requires little or no treatment to be suitable for drinking whereas surface waters generally need to be treated, often extensively. There are many examples of groundwater being distributed without treatment. It is vital therefore that the quality of groundwater is protected if public health is not to be compromised.

### **2.5. CORPORATE ENVIRONMENTAL AND SOCIAL POLICIES**

The National Environment Policy was drafted in 1994. The excerpts are stated below:

To establish sound environment policies, utilization of water, land, forests, mineral, marine resources and other natural resources in order to conserve the environment and prevent its degradation, the Government of the Union of Myanmar adopts the following policy:

“The wealth of the nation is its people, its cultural heritage, its environment and its natural resources.”

The objective of Myanmar’s environmental policy is to achieve harmony and balance between its people, its cultural heritage, its environment and its natural resources through the integration of environmental considerations into the development process to enhance the quality of the life of all its citizens. Every nation has the sovereign right to utilize its natural resources in accordance with its environmental policies; but great care must be taken not to exceed its jurisdiction or infringe upon the interests of other nations. It is the responsibility of the State and every citizen to preserve its natural resources in the interests of present and future generations.

The development of the environmental policy was followed by the drafting of 'Myanmar Agenda 21' in 1997, which follows a UN framework for a multipronged approach to sustainable development. Agenda 21 is a non-binding, voluntarily implemented action plan of the United Nations with regard to sustainable development. It is a product of the UN Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, in 1992. Agenda 21 – a global program of action for achieving sustainable development to which countries are 'politically committed' rather than legally obligated.

The Myanmar Agenda 21 recognizes the need for Environmental Impact Assessments. Myanmar, in its Agenda 21, calls for integrated management of natural resources and provides a blueprint for achieving sustainable development.

## **2.6. MYANMAR AGENDA 21 (1997)**

Myanmar agenda 21 is a blueprint for all-natural resource management and environment and environmental conservation work and the pursuit of the activities contribute to biodiversity conservation throughout the country.

## **2.7. PROJECT'S ENVIRONMENTAL AND SOCIAL STANDARD**

Principle 17 of the Rio Declaration on Environment and Development stated; 'Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of competent national authority.'

## **2.8. THE EVOLVING SCOPE OF EIA PROCESS AND PRACTICE**

In the early stages of EIA, only the biophysical impacts of proposals were considered (such as effects on air and water quality, flora and fauna, noise levels, climate and hydrological systems). Increasingly EIA processes are used to analyses a range of impact types within a single framework, include social, health, and economic aspects, e.g, social impact assessment (SIA), health impact assessment (HIA) and risk assessment. However, this trend toward integrated assessment for decision-making is by no means universal or uniform. Even in EIA systems where this trend is well established, the degree and extent of integration varies with legal requirements and accepted practice. Despite a lack of internationally consistent practice, integrated impact assessment, linking biophysical and socio-economic effects, is identified as an important priority in Agenda 21.

## **2.9. WORLD BANK CLASSIFICATION**

World Bank Operational Directive on EIA, which is illustrative and provides a framework for screening.

Category A: for projects likely to have significant adverse environmental impacts that are serious (i.e., irreversible, affect vulnerable ethnic minorities, involve involuntary resettlement, or affect cultural heritage sites), diverse, or unprecedented, or that affect an area broader than the sites of facilities subject to physical works. A full EIA is required.

Category B: for projects likely to have adverse environmental impacts that are less significant than those of Category A projects, meaning that few if any of the impacts are likely to be irreversible, that they are site-specific, and that mitigation measures can be designed more readily than for



Category A projects. Normally, a limited EIA will be undertaken to identify suitable mitigation and management measures, and incorporate them into the project.

Category C: for projects that are likely to have minimal or no adverse environmental impacts. No EIA is required.

## **2.10. DIRECTIVE 2011/92/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 13 DECEMBER 2011 ON THE ASSESSMENT OF THE EFFECTS OF CERTAIN PUBLIC AND PRIVATE PROJECTS ON THE ENVIRONMENT**

The EIA Directive (85/337/EEC) has been in force since 1985 and applies to a wide range of defined public and private projects, which also respectively list projects subject to mandatory EIA and non-mandatory EIA.

Usually this kind of major projects, will warrant a full EIA, because they are known or considered to have potentially significant adverse impacts on the environment; for example, on human health and safety, rare or endangered species, protected areas, fragile or valued ecosystems, biological diversity, air and water quality, or the lifestyle and livelihood of local communities.

## **2.11. COMMITMENT OF PROJECT PROPONENT OF ZHONGZE BAGS INDUSTRY CO., LTD.**

Zhongze Bags Industry Co., Ltd shall be responsible for the preservation of the environment at and around the area of project site. In addition to this, it shall carry out as per instructions made by Ministry of Natural Resources and Environmental Conservation (MONREC) in which to conduct an IEE process and an EMP which describe the measure to be taken for preventing, mitigation and monitoring significant environment impacts resulting from the implementation and operation of proposed project or business or activity has to be prepared and submitted and to perform activities in accordance with this EIA and be abided by the environment policy, Environmental Conservation Law and other environmental related rules and procedures. I hereby sign and state that I will comply with the following commitments that can lead to a more sustainable and successful operation, benefiting not only Zhongze Bags Industry Co., Ltd. but also the environment, and surrounding communities -

- To set up welfare plan such as staff medical checkup, training program and Public talk for getting knowledge, risk prevention, bonus and social security services.
- To promote Corporate Social Responsibility- (CSR) with 2% of the net profit for development of safe, economic and social environment
- To carry out fire safety assessment and ensure adequate and appropriate fire safety measures for employees
- To carry out disposing wastes according to Yangon City Development Committee regulations, protect, and preserve the project environment from pollution of air, water and land by following laws and guidelines lay down by MONREC.



**Mr. Lai ZhenJian**

**Director**

**Zhongze Bags Industry Co., Ltd.**

### **3. PROJECT DESCRIPTION**

#### **3.1. LOCATION OF THE PROJECT SITE**

The proposed project factory is located at Land Plot No. 142, Myay Taing Block No. Industrial Zone (2), Dagon Myo Thit (Seik Kan) Township, Yangon Region, the Republic of the Union of Myanmar. The proposed factory falls at the coordinates of North Latitude 16°50'44.5"N and East Longitude 96°17'29.6"E. Location of the proposed project area were shown in Figure 3-1, Figure 3-2 and Figure 3-3.

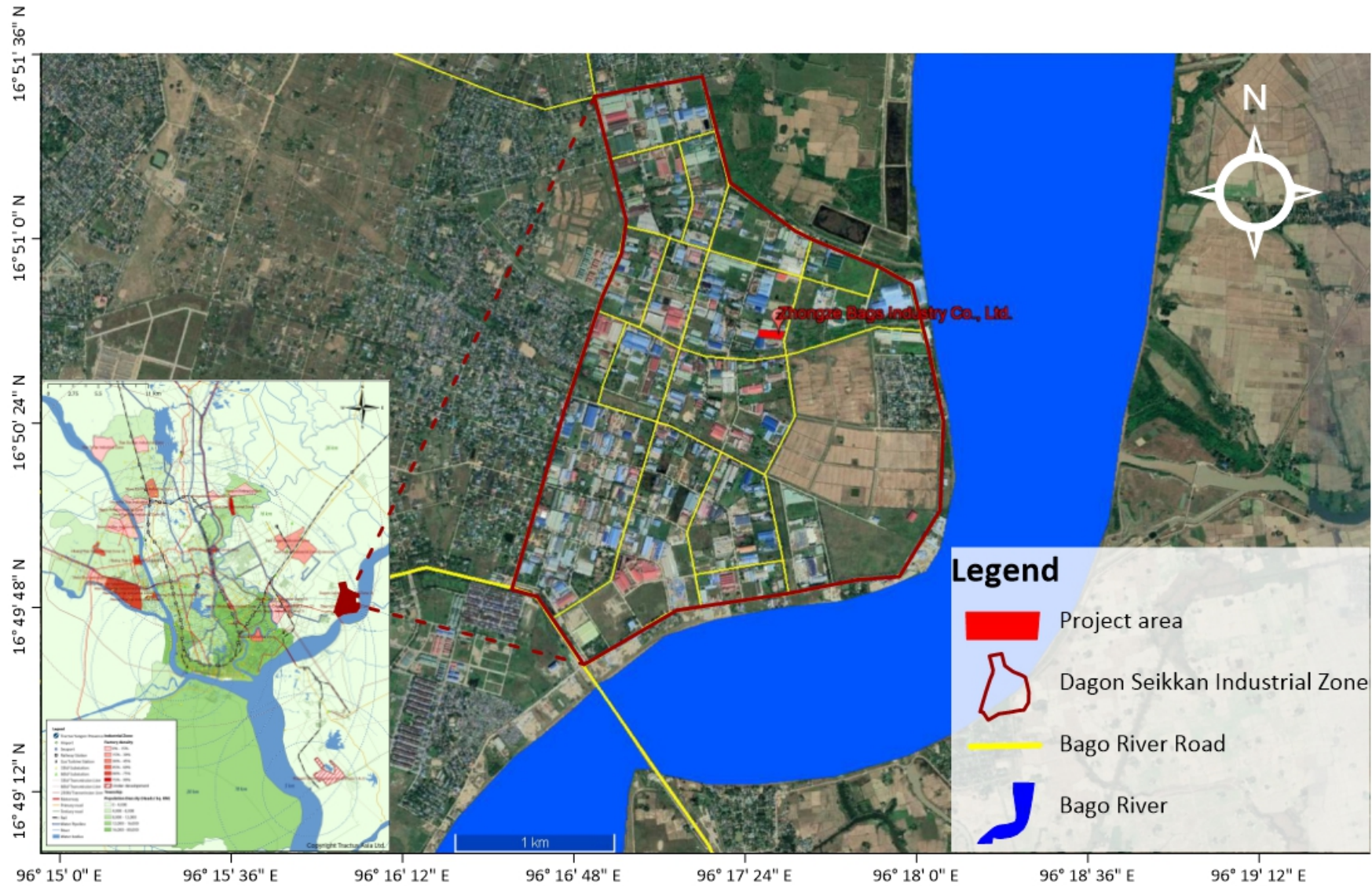


Figure 3-1 Location map of the Project



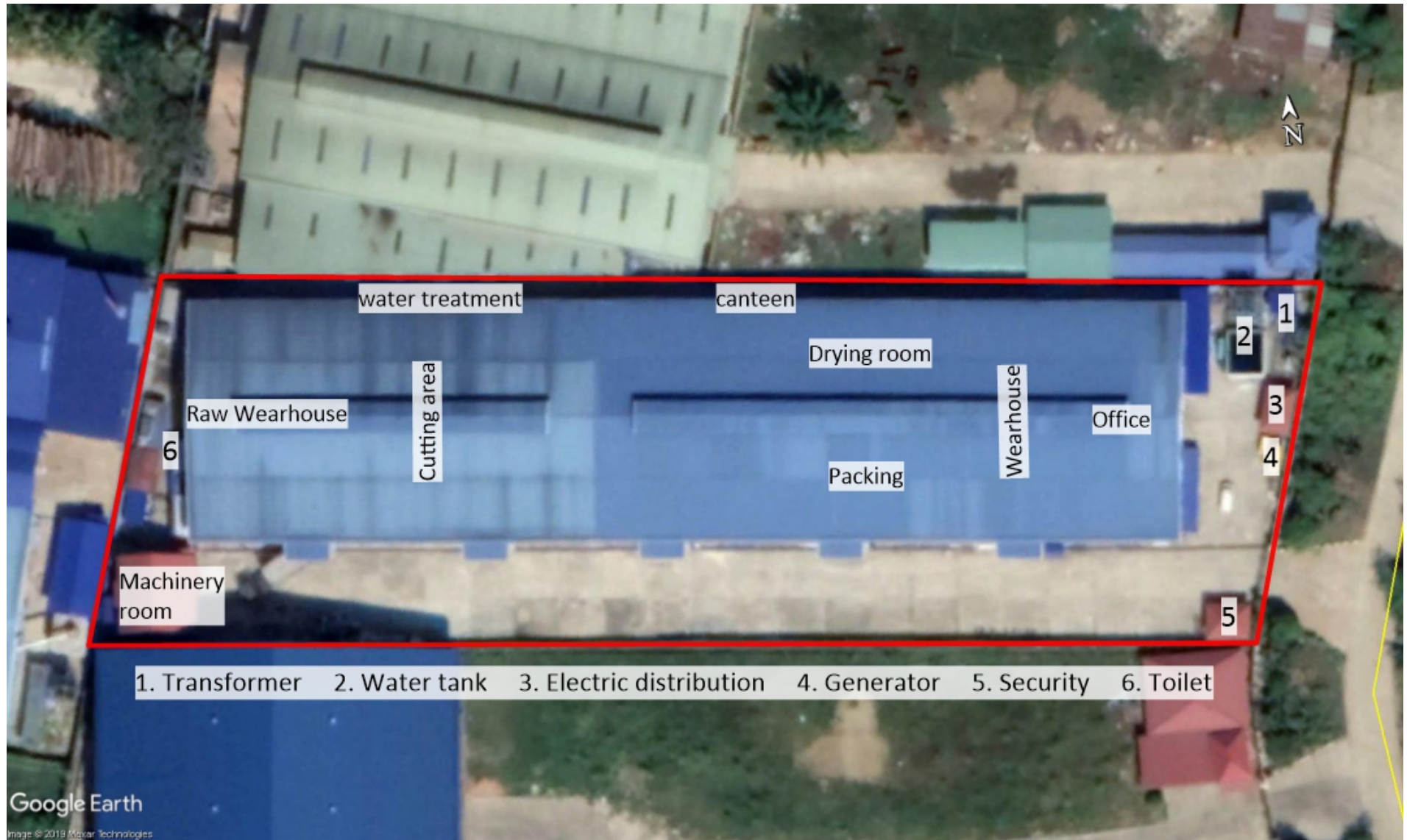


Figure 3-2 Site layout drawing (Google drawing)

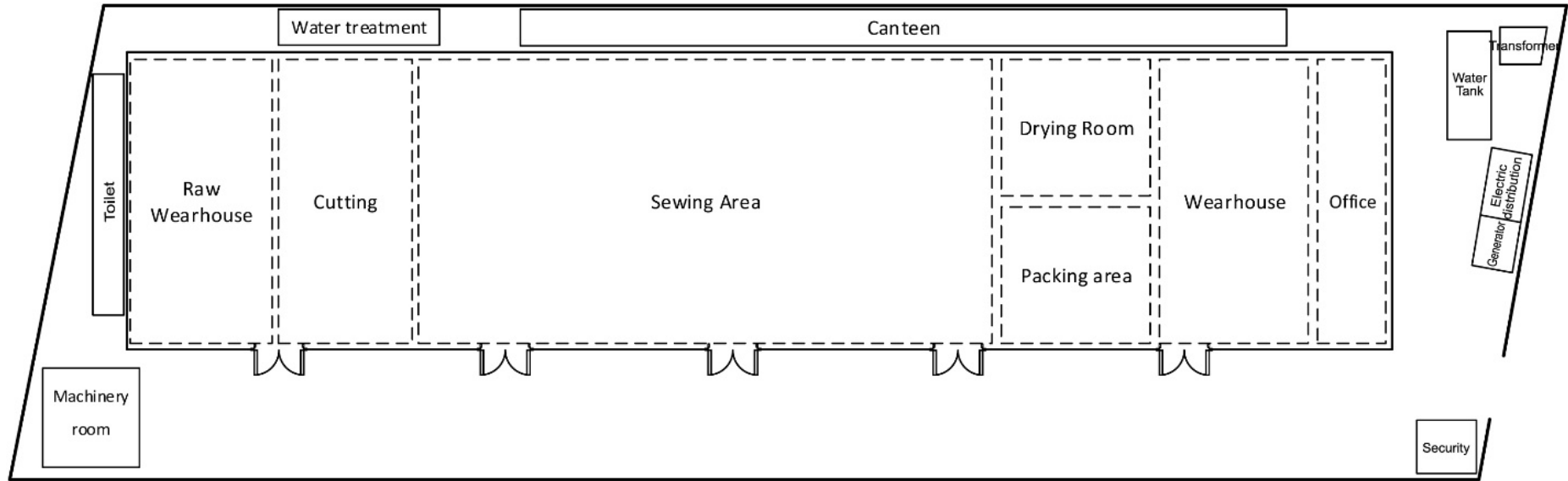


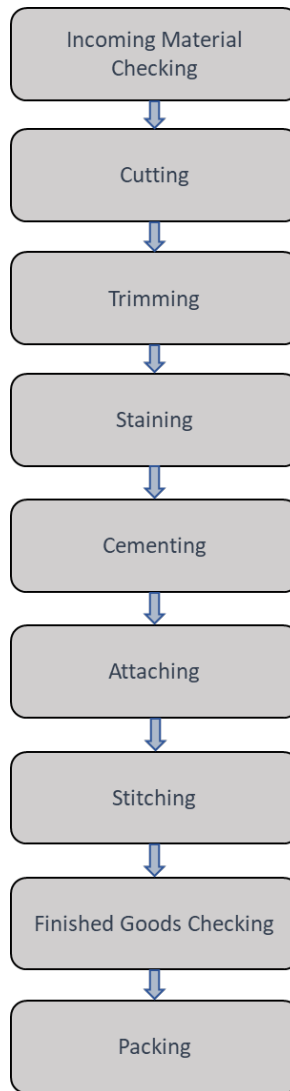
Figure 3-3 Factory Layout drawing

### 3.2. PRODUCTION PROCESS

Trimming was operated first and move to the staining section then pass to the attaching section after the cementing and checked by quality control supervisor on each line. The stitching process is completed after QC process. Then Luggage and Bags packing is completed and prior to shipping to its destinations. Process flow diagram of Zhongze Bags Industry Company Limited is presented in Figure 3-4.

Detail description is provided as following:

- **Design:** the buyer provides Design. After placing an order buyer send the technical sheet and art-work of an order to the merchandiser. Both do this process manually or by using computer.
- **Pattern Making:** By following technical sheet and art-work, pattern of each Luggage and Bags style should be made. It's done by both manually and by using computerized method.
- **Fit Sample Making:** The main target of making a fit sample is to follow the details instruction about that Luggage and Bags style. After making it's sent to the buyer to rectify. It's done by manually.
- **Production Pattern Making:** For bulk production, allowance added here with net dimension. Both do production Pattern Making manually and by using computer.
- **Grading:** During an order confirmation, the buyer suggests about the size ratio of that order. So that order should be graded according to the buyer's instruction. Grading is done by manually or by using computer.
- **Marker Making:** Marker is a very thin paper which contains all the parts of a particular Luggage and Bags. To make the cutting process easy, it's must be needed. Both can do marker making process manually and by using computer.
- **Fabric Spreading:** To cut the fabric properly fabric is spread in lay form. Fabric Spreading is done by manually or by using computerized method.
- **Fabric Cutting:** Fabrics have to cut here according to marker of Luggage and Bags. Fabric Cutting process is done by using manual method or computerized method.
- **Cutting Parts Sorting or Bundling:** Here, cutting parts have to sort out or make bundling to send these easily into the next process. This process is done by manually.
- **Sewing:** All the parts of Luggage and Bags are joined here to make a complete Luggage and Bags. Sewing process is done by manually.
- **Luggage and Bags Inspection:** After completing sewing, inspection should be done here to make fault free Luggage and Bags. Luggage and Bags Inspection is done by using manual method.
- **Final Inspection:** Finally the complete Luggage and Bags are inspected here according to the buyer's specification. Final Inspection is done by manual method.
- **Bags Packing:** Complete Luggage and Bags are packed here by using buyers instructed poly bag. Luggage and Bags packing are done by using manual method.
- **Shipment:** After completing all the required processes it's finally send to the buyer.



**Figure 3-4 Production Flow Diagram**



Fabric Warehouse



Cutting





Cementing Section



Attaching Section



Stitching Section



Quality Control



Packing Section



Finished Goods Warehouse

Figure 3-5 Production process Photo

### 3.2.1. Products

The products of the factory are Fabric Pod Array, Backpack, Luggage, waist Tool Belt, Tool Bag, Tool Case and those products are exported to China and European Countries and so on., presented in Table 3-1 and Figure 3-6.



**Table 3-1 Annual Production Rate**

No	Particular	Unit	Year					
			1	2	3	4	5	6-10
1	Production (Pcs)		1,255,000	1,255,000	1,255,000	1,317,750	1,317,750	1,317,750
1	Tool Bag	Pcs	250,000	250,000	250,000	262,500	262,500	262,500
2	Backpack	Pcs	800,000	800,000	800,000	840,000	840,000	840,000
3	Bag	Pcs	40,000	40,000	40,000	42,000	42,000	42,000
4	Pull Rod Bag	Pcs	30,000	30,000	30,000	31,500	31,500	31,500
5	Mountaineering Bag	Pcs	50,000	50,000	50,000	52,500	52,500	52,500
6	Military Bag	Pcs	50,000	50,000	50,000	52,500	52,500	52,500
7	Car Cushion	Pcs	5,000	5,000	5,000	5,250	5,250	5,250
8	Accessories Bag	Pcs	30,000	30,000	30,000	31,500	31,500	31,500



**Figure 3-6 Products Photos**

**3.3. UTILITIES**

**3.3.1. Raw Material**

The main materials for production of Bags are Fabric, Lining, PU Leather, Miscellaneous cloth, Sandwich Mesh, PVC Composite Mesh, Rhomboid Mesh and Stop-slip Leather, etc., which are imported from China. Annual raw material requires for production process provided in Table 3-2.

**Table 3-2 Annual Raw Material Requirements**

No	Particular	Unit	Year - 1	Year - 2	Year -3	Year -4	Year -5	Year -6-10
1	Fabric	YD	2,676,000	2,676,000	2,676,000	2,809,800	2,809,800	2,809,800
2	Lining	YD	2,19,00	2,19,00	2,19,00	2,119,950	2,119,950	2,119,950
3	PU Leather	YD	16,250	16,250	16,250	17,063	17,063	17,063
4	Miscellaneous cloth	YD	123,750	123,750	123,750	129,938	129,938	129,938
5	Sandwich Mesh	YD	248,000	248,000	248,000	260,400	260,400	260,400
6	PVC Composite Mesh	YD	251,000	251,000	251,000	263,550	263,550	263,550
7	Rhomboid Mesh	YD	251,000	251,000	251,000	263,550	263,550	263,550
8	Stop-slip Leather	YD	12,550	12,550	12,550	13,178	13,178	13,178
9	Transparent PVC	YD	12,550	12,550	12,550	13,178	13,178	13,178
10	PE Cotton	YD	619,000	619,000	619,000	649,950	649,950	649,950
11	PE board	YD	275,500	275,500	275,500	289,275	289,275	289,275
12	Zipper	YD	3,152,000	3,152,000	3,152,000	3,309,600	3,309,600	3,309,600
13	Zipper	PCS	7,940,000	7,940,000	7,940,000	8,337,000	8,337,000	8,337,000
14	Woven Belt	YD	6,397,000	6,397,000	6,397,000	6,716,850	6,716,850	6,716,850
15	Elastic Belt	YD	676,000	676,000	676,000	709,800	709,800	709,800
16	Magic Stickers	YD	503,000	503,000	503,000	528,150	528,150	528,150

No	Particular	Unit	Year - 1	Year - 2	Year -3	Year -4	Year -5	Year -6-10
17	Rubber bone	YD	1,932,000	1,932,000	1,932,000	2,028,600	2,028,600	2,028,600
18	Fasteners	PCS	6,940,000	6,940,000	6,940,000	7,287,000	7,287,000	7,287,000
19	Base	PCS	425,000	425,000	425,000	446,250	446,250	446,250
20	Drop Plastic Label	PCS	2,510,000	2,510,000	2,510,000	2,635,500	2,635,500	2,635,500
21	Weaving mark Mark	PCS	1,255,000	1,255,000	1,255,000	1,317,750	1,317,750	1,317,750

**Table 3-3 Raw Material require for a piece of product and annual requirement**

No	Particular	Unit	Tool Bag	Backpack	Bag	Pull Rod Bag
1	Fabric	YD	2.5	2	2	2.5
2	Lining	YD	1.5	1.6	1.8	2.2
3	PU Leather	YD	0.01	0.01	0.01	0.01
4	Miscellaneous cloth	YD	0.1	0.1	0.1	0.1
5	Sandwich Mesh	YD	0.2	0.2	0.2	0.2
6	PVC Composite Mesh	YD	0.2	0.2	0.2	0.2
7	Rhomboid Mesh	YD	0.2	0.2	0.2	0.2
8	Stop-slip Leather	YD	0.01	0.01	0.01	0.01
9	Transparent PVC	YD	0.01	0.01	0.01	0.01
10	PE Cotton	YD	0.8	0.4	0.6	0.8
11	PE board	YD	0.3	0.2	0.2	0.2
12	Zipper# 1	YD	3	2.5	2.1	2.1
13	Zipper#2	PCS	8	6	6	6
14	Woven Belt	YD	18	1.8	2	2.4
15	Elastic Belt	YD	1.8	0.2	0.2	0.3
16	Magic Stickers	YD	0.5	0.4	0.3	0.3
17	Rubber bone	YD	2.5	1.2	1.8	2
18	Fasteners	PCS	8	4	8	10
19	Base	PCS	1	0	1	1

No	Particular	Unit	Tool Bag	Backpack	Bag	Pull Rod Bag
20	Drop Plastic Label	PCS	2	2	2	2
21	Weaving mark Mark	PCS	1	1	1	1



**Figure 3-7 Raw Material Storage Area**

### 3.3.2. Machinery and Equipment

Automation systems for fully automatic and semiautomatic systems control of each process machine or complete processing line have been implemented. Required machinery and equipment are imported from China. Lists of machinery and equipment required for the proposed factory are listed in Table 3-4.

**Table 3-4 List of Machinery and Equipment**

No	Particular	Brand	Model	Unit	Quantity
1	Electric Generator (300KVA)	Yu Chai	YC6K500- D31	Set	1
2	Electric Generator (50KVA)	Yu Chai	YC4D90Z- D21	Set	1
3	Hydraulic Cutting Machine	Jin Leng	60T	Set	2
4	Industrial Sewing Machine	Fu Te	8B-1A	Set	40
5	Industrial Sewing Machine	Fu Te	388	Set	180
6	Industrial Sewing Machine	Fu Te	872-5	Set	18
7	Industrial Sewing Machine	Fu Te	4420	Set	6
8	Industrial Sewing Machine	Fu Te	35-25	Set	4
9	Industrial Sewing Machine	Fu Te	22-10	Set	4
10	Industrial Sewing Machine	Fu Te	30-20	Set	8

No	Particular	Brand	Model	Unit	Quantity
11	Industrial Sewing Machine	Zuo Qi	9900-5	Set	10
12	Hot Cutting Machine	Hong Da	812	Set	8
13	Electric Blower	Hong Da	813	Set	20
14	Industrial Sewing Machine	Fu Te	916	Set	5
15	Industrial Sewing Machine	Hong Chang	12RF	Set	5
16	Industrial Sewing Machine	Xiong Di	430F	Set	6
17	Industrial Sewing Machine	Fu Te	430D	Set	8
18	Strip Cutting Machine	Chao Jun	CJ170ZM	Set	2
19	Industrial Sewing Machine	Fu Te	110	Set	2
20	Industrial Sewing Machine	Fu Te	170	Set	2
21	Industrial Sewing Machine	Fu Te	801	Set	2
22	Fabric Drilling Machine	Da Yang	-	Set	2
23	Electric Dryer	-	-	Pcs	15
24	Forklift (3 Ton)	He Li	-	Set	1
25	Manual Forklift Truck (1.5 Ton)	-	-	Set	4

### 3.3.3. Human Resource

The proposed Factory of Zhongze Bags Industry Company Limited has the employees more than 80% are local people, who manage the company by their dynamic, enthusiastic, experienced, and cooperative skills. Currently, one shift (8 hours + overtime 2 hours) of production are running or operating. Annual working days is about 278 days. Management and team member detail of human resource is mentioned in Table 3-5.

**Table 3-5 Manpower list of Zhongze Bags Industry Company Limited**

No	Particular	Local	Foreign
1	Factory Manager	-	1
2	Store Supervisor	-	1
3	Technician	-	10
4	Financial Manager	1	-
5	HR Manager	1	-
6	Quality Control	8	-
7	Store Keeper	2	-



No	Particular	Local	Foreign
8	Translator	2	-
9	Skilled Workers	350	-
10	Unskilled Workers	50	-
11	Fire Safety Officer	1	-
12	Security	2	-
13	Cleaner	2	-
<b>Total</b>		<b>431</b>	

### 3.3.4. Water Requirement

The project was use groundwater for domestic use and firefighting. The overhead water stores in the two storage tanks with capacity of 11,327 gallons for domestic use and 28,317 gallons for firefighting. The factory has two separated water distribution systems comprising domestic use system and fire water system. Fire water distribute via main type to distribute water for fire-fighting equipment such as, sprinkler system, fire hose within the factory by firewater pump with capacity of 833 gallon per minute. Domestic use of water are treated by filtration system by oxidation tower, chlorine-dosing system, de-iron filter (FRP), carbon filter, and cartridge filter. Treated water pumps to be stored in the ground tank with 11,327 gallons on the water tank then water distribute to the factory operation area via pipes by gravity. (See in Figure 3-8).



Figure 3-8 Underground water storage tank and water supply

Currently 431 employees are at day shift workers (8:00 am to 5:00 pm). Based on world average, the average daily domestic demands in commercial/industrial settings range between 20 gallons per day (gpd) per employee. Since the factory has a maximum of 431 workers, factory water needs ranged from 8,620 gallons per day.

### 3.3.5. Wastewater Treatment

#### 3.3.5.1. Volume of wastewater

During operation period, total volume of wastewater to be generated from activities of laundry process in the factory has been estimated at maximum 6,896 gallons per day. Wastewater can be calculated at 80% of amount of water use.

#### 3.3.5.2. Wastewater and sewage collection system within the factory

All type of sewage drained from toilet, bathroom and other areas in which there is water usage was collected into underground septic tank. Wastewater pipes from kitchen, dish washing sink and office area to drain into factory drainage channel for further draining into oil and grease trap prior to sending to the silt trap then discharge to the storm water channel.

Wastewater from laundry process in which there is contaminated with color, Total Suspended Solid (TSS), Chemical Oxygen Demand (COD), etc. Outlet pipes from laundry area to drain into the wastewater treatment plant for treated water reuse in operation process.

### 3.3.6. Water Drainage and Flood Protection

Kitchen and dishwashing sink was drainage pipe with 4-inch diameter PVC to drain wastewater from washing area into the concrete channel. Within the factory compound, there was drainage channel with concrete to collect rainwater in the factory area. The factory is located in Dagon Seikkan Industrial Zone. The factory has already provided internal rainwater drainage system in connection with local drainage system outside the factory to drain into industrial drainage through Bago River.







Figure 3-9 Rainwater Drainage in the factory compound

### 3.3.7. Electricity and Fuel Requirement

The proposed project is intended to get required electricity supply form Yangon City Electricity Supply Board (YESB) and distributed by 315 kVA transformer. Another source of energy 65 kVA and 500 kVA generator will also be kept as the emergency generators if normal electricity supply could not provide for the proposed project and about 110 gallons of diesel is used per day for emergency generators. Estimate electricity usage is 120.85 Kilo Watt hour per day (KW.hr/day) (eight working days per week). Annual fuel requirement for proposed factory is about 30,000 gallons and annual electricity consumption is 33,596.3 kWh.



Figure 3-10 Electricity Facilities



### 3.4. GENERATION OF WASTE, EMISSION AND DISTURBANCES

#### 3.4.1. Industrial Wastes

Wastes generated from the various kind of bags on CMP basis manufacturing factory are fabric scraps of 50% from cutting section, 35% from sewing section and 15% from packing section. In addition, packing waste of plastic sheet, carton box and fabric paper tube are generated from cutting line and packing section. Total amount of waste about maximum 653 kg per day are generated from operation process. The waste generated from the production and cutting lines are stored in the warehouse before reusing them.

#### 3.4.2. Human wastes

The number of staff and workers required in the day shift for the factory is maximum 431 persons during operation. Solid waste generated from maximum amount of operators and office staffs with assumption of waste generation rate at 168.09 kg/day was calculated based on solid waste generation rate of kg/person/day<sup>2</sup>.

Domestic wastewater generated by maximum amount of 431 persons with assumption rate 43.1 m<sup>3</sup>/day was calculated based on domestic wastewater generated rate of 0.1 m<sup>3</sup>/person/day<sup>3</sup>. This water will be released in operation hour discharge to septic tank or factory drainage.

The project will be generated mostly solid waste from the operation and solid and liquid waste from domestic usage of the proposed factory. Detail description of waste generation and waste amount are shown in Table 3-6.

**Table 3-6 Waste generation and waste amount**

Waste		Type of wastes	Estimated waste amount	Source of generation
Solid waste	Re-usable	Residual pieces of fabric scraps	10% a roll of fabric (kg)	Production line and cutting line
		Raw material cutting wastes	653 kg / month	Operation process
	Non re-usable	Disposed packaging materials, paper or plastic wrapping	97.95 kg / month	Materials store and supply packaging
	Non re-usable	Food residues, domestic waste	168.09 kg / day*	Canteen, Kitchens, dormitory
Liquid waste		Sanitary discharge water	43.1m <sup>3</sup> /day*	Toilet facility, kitchen and canteen
Hazardous waste		Residual chemicals, use chemical container	-	Chemical usage and store area
		Oil leakage and spills	-	Operation of generator and movements of vehicles

<sup>2</sup> The Yangon City solid waste generation rate as of 2012 is 0.39 kg per person per day (Pollution Control and Cleansing Department, Yangon City Development Committee, 2014).

<sup>3</sup> The domestic wastewater generation was based on typical wastewater generation rate of 0.1 m<sup>3</sup> per person per day (Metcalf & Eddy, 2004)

### **3.5. ALTERNATIVE PROJECT SITE**

No alternative site has been proposed aside from this area since the proposed project area is situated within Land Plot No. 142, Myay Taing Block No. Industrial Zone (2), Dagon Myo Thit (Seik Kan) Township, Yangon Region, which has been designated and already finished the construction phase during IEE study. The factory already has endorsement from Myanmar Investment Commission.

### **3.6. DECOMMISSIONING PHASE**

The proposed project investment duration is 28 years and they will close out the project according to their MIC proposal.

## 4. BRIEF DESCRIPTION OF SURROUNDING ENVIRONMENT

The purpose of this Chapter is to predict how environmental and socio-economic conditions will affect because of the implementation of the proposed Project. This requires a sound understanding of the baseline conditions at the Project Site, which established through desktop study research, site surveys, primary data collection and projections for future developments. Findings provide the current and future characteristics of the Project Site and the value and vulnerability of the key environmental and socio-economic resources and receptors. The following sections provide a description of the environmental and socio-economic aspects of the Project.

### 4.1. METHODOLOGY FOR DATA COLLECTION AND ANALYSIS

The followings are methodologies used for Environmental Management Plan (EMP) for this IEE report preparation;

- Onsite Measurements and Analysis – Baseline parameters such as air quality and noise quality of the existing project site during the operation phase were measured onsite. For water quality parameters was also measured on site and sample raw water and waste were sent to respective laboratories for analysis. The analyzed results are mentioned in this chapter.
- Secondary data collection of proposed project site area – Socio economic condition, physical/biological environment, and weather data are collected from official township data of Dagon Seik Kan Township, Yangon Region.

### 4.2. ENVIRONMENTAL BASELINE STUDY

The field observation for determining the environmental baseline of the proposed project area was undertaken during construction period. The survey team consists of the senior consultant and environmental quality team. The baseline data collected regarding the environmental condition of the project area was conducted in the following section. The environmental setting around the project site and monitoring location point is shown in Table 4-1.

**Table 4-1 Environmental Setting around the Proposed Project Site**

Particulars	Detail
Coordinate Point	16°50'44.5"N and 96°17'30.4"E
Climate Conditions (Department of Meteorology and Hydrology - DMH)	Annual Mean Maximum Temperature: (32.67)°C Annual Mean Minimum Temperature: (22.34)°C Annual Rainfall: 106.3 inches
Wind Speed	3.05 m/s
Present land use at the proposed site	Industrial Land Use Type
Nearest Road	Bago River Road ( 3.1 km) distance from project site
Nearest Water bodies	Bago River (1.1 km) distance from project site
Forest Area	No Exist
Wetlands	No Exist
Protective Area	No Exist

The purpose of this Chapter is to predict how environmental and socio-economic conditions will affect because of the implementation of the proposed Project. This requires a sound understanding of the baseline conditions at the Project Site, which established through desktop study research, site surveys, primary data collection and projections for future developments. Findings provide the current and future characteristics of the Project Site and the value and vulnerability of the key environmental and socio-economic resources and receptors. The following sections provide a description of the environmental and socio-economic aspects of the Project. Site Survey and Environmental Monitoring.

### 4.3. BASELINE ENVIRONMENTAL MONITORING

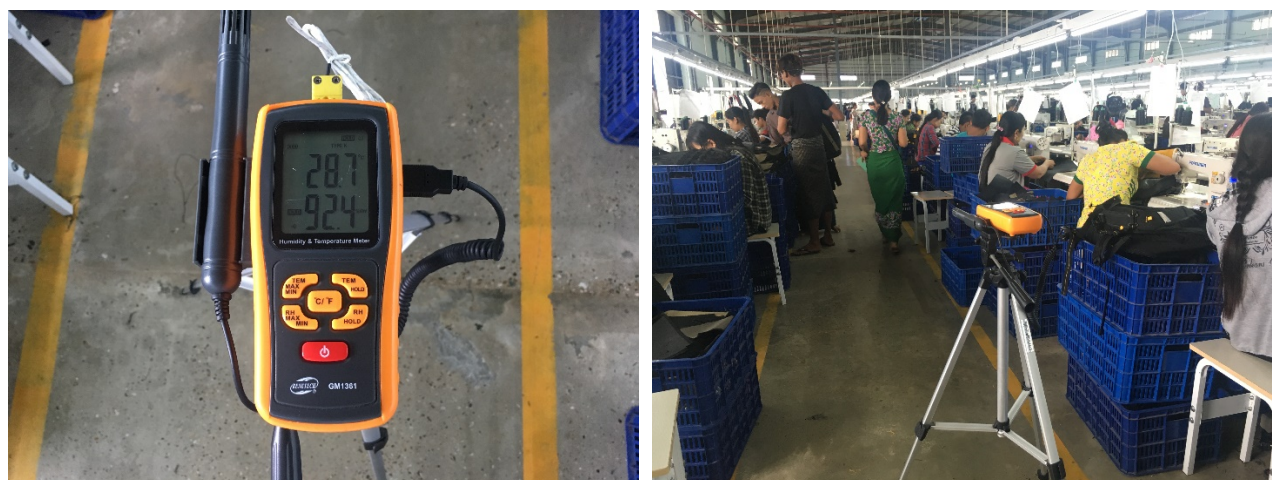
The baseline environmental quality at the Project Site and its immediate surroundings was established by ambient air quality samples, Light measurement and noise level measurements at immediate surrounding areas. To determine the existing baseline environmental quality within the project site on 7<sup>th</sup> November 2019.

#### 4.3.1. Indoor Temperature and Humidity

The indoor temperature and humidity condition during 7 November 2019 shows the average temperature of 29.6 °C while the average humidity is 88.2 % as shown in Table 4-2.

**Table 4-2 Temperature and Humidity Measurement at Factory**

Date and Time	Description	Result value	Environmental parameter air station guideline
7 November 2019 (1:00 pm to 5:00 pm)	Relative Humidity RH %	88.2 (%)	Present condition
	Temperature	29.6 °C	Present condition



**Figure 4-1 Temperature and Humidity Measurement**

#### 4.3.2. Air Quality

To determine the existing baseline ambient air quality status within the project site on 7 November 2019, 8-hours of working period air pollutants level, which include dust PM<sub>10</sub> and PM<sub>2.5</sub> were measured at the selected site using the AQM-09 air monitoring station. To reveal the existing status of baseline air quality, the average ambient air qualities measured were compared with National Environmental Quality (Emission) Guideline. The measurement location point is situated at latitude



16°50'44.5"N and longitude 96°17'30.4"E. It was observed that the air quality of (PM<sub>10</sub>, PM<sub>2.5</sub>) are within the National Environmental Quality (Emission) Guideline.

**Table 4-3 Observed air quality results**

Parameters	Observed value	Guideline value	Unit	Organization	Period
PM <sub>10</sub>	25.2	50	µg/m <sup>3</sup>	NEQG	24 hrs
PM <sub>2.5</sub>	19.9	25	µg/m <sup>3</sup>	NEQG	24 hrs
O <sub>3</sub>	81.8	100	µg/m <sup>3</sup>	NEQG	8 hrs
NO <sub>2</sub>	51.9	200	µg/m <sup>3</sup>	NEQG	1 hr
SO <sub>2</sub>	40.9	500	µg/m <sup>3</sup>	NEQG	10 mins
CO	0	10	µg/m <sup>3</sup>	NEQG	8 hrs

NEQ = National Environmental Quality (Emission) Guideline



**Figure 4-2 Air Quality Measurement Photo**

#### 4.3.3. Light Intensity

Activities of the workers in bags factory are highly dependent on the quality of light. Therefore, the consultant conducted the light measurement in bags factory is presented in Figure 4-3. The illustrates the recommended illumination and limiting glare index applicable to typical works (fairly severe to very severe tasks) in Handbag factory is provided in Table 4-4. Appropriate lighting is the need for every department, irrespective to the task being handled. Although, there are some areas

where focus on maintaining proper illumination is very crucial in a Bags factory, like the inspection points (on-floor and in stores), sampling, cording section, beading section, and the finishing section, as these areas are crucial to the quality of the production. The tasks involved in these areas require high levels of worker focus and accurate lighting ensures lower errors and defects passing on to the next stage. However, according to the result of light measurement at operation area (inside the production sector) is good condition to the acceptable level of standard.

**Table 4-4 Recommended illumination and limiting glare index based on IES Code, 1968**

Visual test	Illumination (lux)	Glare index
Casual seeing	100	28
Rough task with large detail	200	25-28
Ordinary task medium detail	400	25
Fairly severe task, small detail (e.g. drawing office, sewing)	600	19-22
Severe, prolonged task, very small detail (e.g. fine assembly, hand tailoring)	900	16-22
Very severe, prolonged task, very small detail (e.g. gem cutting, hosiery mending, gauging very small parts)	1,300-2,000	13-16

Source: Koenigsberger, et al. 1975



**Figure 4-3 Light quality measurement photo**

**Table 4-5 Light Measurement in proposed factory**

No	Measure area	Unit	Measure value	Standard	Type of Light
1	Sewing Section 1	Lux	1219	900	LED tube light
2	Sewing Section 2	Lux	1186	900	LED tube light
3	Cutting Section	Lux	1437	1300 - 2000	LED tube light
4	Quality Control	Lux	1134	1300 - 2000	LED tube light
5	Packing Section	Lux	783	600	LED tube light
6	Drying Room	Lux	205	200	LED tube light

\* Lighting standards and codes usually provide recommended illuminance ratios between the task area and its surroundings (EN 12464-1 2002) (CIBSE 1997) (IESNA 2000, 676708).



#### 4.3.4. Noise

The Noise level was measured by using Digital Sound Level Meter for working hours on 7 November 2019 (Figure 4-4). The average noise level in the project site area is presented in Table 4-6. Receptor (outside of production area at project site) noise level measurement is dB and within the comfortable range of 40-60 decibel. However, found to be the Noise source monitoring at operation area (inside the production sector) noise level not exceeding the level of National Environmental Quality (Emission) Guideline and outside of production area at the project site is acceptable when compared with National Environmental Quality (Emission) Guideline. Therefore, no obvious influence can be caused occupational health and safety of employees during operation. Moreover, Personal Protective Equipment (PPE) to decrease adverse impact of noise will be provided for employees when necessary.

**Table 4-6 Comparison of Noise level measurement**

Area	GPS point	Average Noise Level (dB)	NEQ Guideline
Sewing Section Area	16°50'44.5"N 96°17'30.1"E	74.9 dB	70 dB
Cutting Section Area	16°50'44.5"N 96°17'30.1"E	73 dB	70 dB



**Figure 4-4 Noise Level Measurement in the factory**

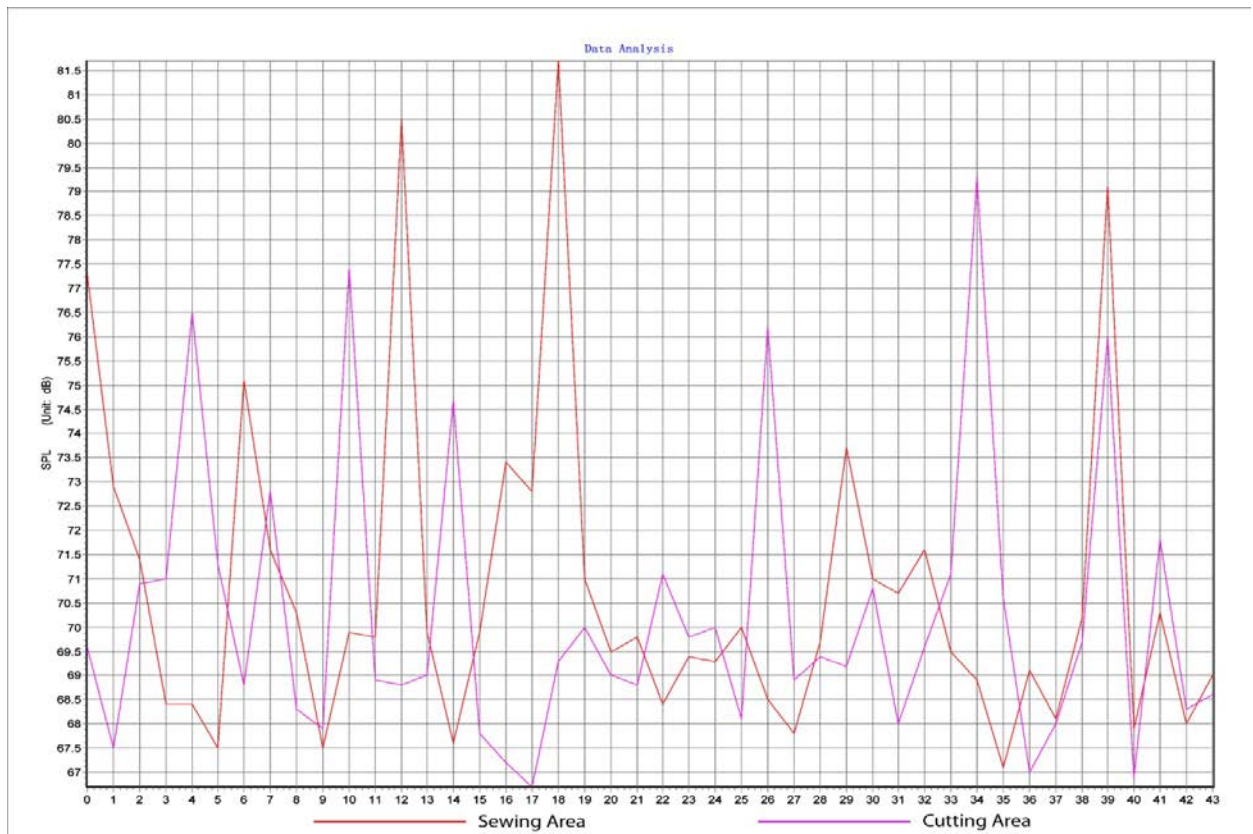


Figure 4-5 Sound Analysis Graph

#### 4.4. PHYSICAL COMPONENT

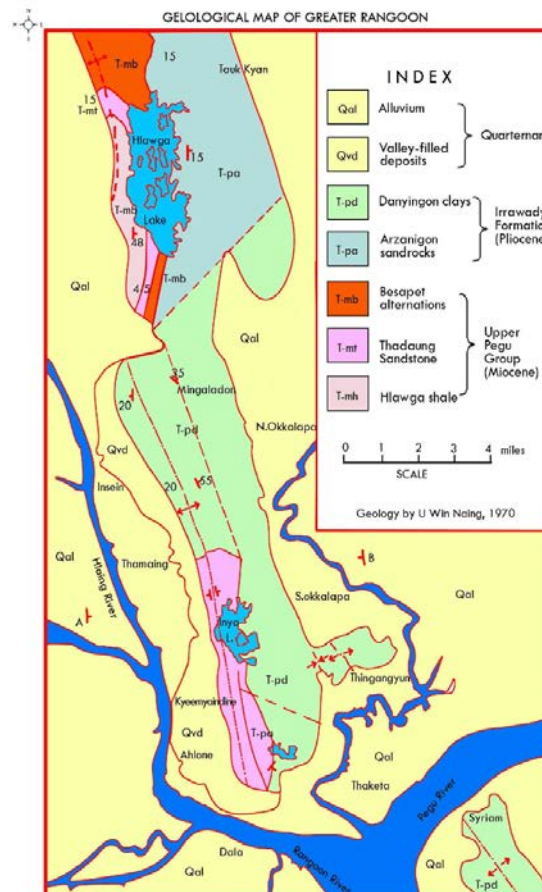
##### 4.4.1. Topography

The proposed project area is situated in Sethmu, Dagon Seikkan Township, and its topographic condition is flat. The proposed project site is primarily agricultural land, but now is initiated into the industrial zone area.

##### 4.4.2. Geology

The Yangon area is underlain by alluvial deposits (Pliocene to Recent), the non-marine fluvial sediments of Irrawaddy formation (Pliocene), and hard, massive sandstone of Pegu series (early-late Miocene). Alluvial deposits are composed of gravel, clay, silts, sands and laterite which lie upon the eroded surface of the Irrawaddy formation at 3-4.6 m above mean sea level (MSL). The rock type in Yangon is mainly soft rocks, which consist of sandstone, shale, limestone and conglomerate. Geological map of Yangon Regional area is shown in Figure 4-6.





**Figure 4-6 Geological Map of the Project Area**

#### 4.4.3. Hydrology

Yangon is rich in groundwater resources conserved by unconsolidated Tertiary-Quaternary deposits. In Yangon, groundwater is mostly extracted from Valley filled deposits and Ayeyarwady sandstones.

**Groundwater:** Groundwater availability is generally based on the distribution of permeable and relatively impermeable rocks. The nature of openings in the rocks determines permeability of rocks. Based on local geological considerations, potential groundwater source of Yangon can be roughly divided into two sub regions, namely the low potential area and high potential area. Low potential areas are areas with those rock units of Hlawga Shale, Thadugan Sandstones and Basepet Alternation of upper Pegu Group (Miocene epoch) and Danyingon Clays of Irrawaddy rocks. These rocks and formations are a dense, massive and consolidated nature and have impervious characteristic. High potential areas are underlain by Pliocene Series and recent Formations. High potential area covers approximately 85 percent of the Yangon city including Pabedan. Stand pipe piezometers were installed at a depth of up to 30 m from the existing ground level while a pumping well was installed upon completion of the soil investigation works. Based on the results recorded up to the 8th of December 2012, stabilized groundwater level was observed to range between 0.49 m MSL to -1.81 m MSL<sup>4</sup>.

**Water Supply:** The Yangon City Development Committee (YCDC) has an overall responsibility for the management and distribution of water for Yangon City. Presently, YCDC's water supply is obtained from two main sources: (1) reservoir (Hlawga, Gyobu, Pugyi and Ngameoyeik

reservoirs) and, (2) groundwater from YCDC's tube wells. Water from these sources is utilized to varying degrees. Areas not supplied with water from the YCDC rely on shallow surface wells and private boreholes. Water supply for the Project Site will be obtained from onsite borewells for both construction and operations due to the poor reliability of municipal supply. Permitting is part of the Planning Consent Application currently underway. The boreholes will be provided and operated by the Developer.

**Hydrology:** The Project Site lies along the catchment of the Pazundaung River which flows east of the site in a southerly direction to converge into the Yangon River. The Yangon River (also known as the Rangoon River or Hlaing River) is formed by the confluence of the Pegu and Myitmaka rivers and flows into the Gulf of Martaban which is part of the larger Andaman Sea. The river flows along a 40 km stretch flowing from southern Myanmar as an outlet of the Ayeyarwady River into the Ayeyarwady delta. A small portion of the Bago River (the estuary) lies within the Yangon Division. The Pazundaung Creek and Bago River joins the Yangon River and from there, flow towards the southwestern direction into Andaman Sea.

#### **4.4.4. Tectonics**

Yangon is situated in the southern part of the Central Lowland which is one of the three major tectonic provinces of Myanmar. The Taungnio Range of the Gyophyu catchments area of Taikkyi District, north of Yangon, through the Thanlyin Ridge, south of Yangon forming a series of isolated hills probably resulted from the progressive deformation of the Upper Miocene rocks as the eastern continuation of the subduction or stretching and compression along the southern part of the Central Basin and regional uplifting of the Pegu Yoma (Aung Lwin 2012).

#### **4.4.5. Soil**

The underlying soil type at the Project Site and its surroundings is characterized as the Meadow and Meadow Alluvial Soil. Meadow Soil is soil which occurs near the river plains exposed to occasional tidal floods, is non-carbonate and usually contains a large amount of salt. Both materials mainly comprise silty clay loam and neutral soil rich in plant nutrient. The upper layers (approximately 0 to 7 m) of the soil at the Project Site comprise largely of cohesive layers with traces of sand and gravel, followed by sand layers with low silt content and trace gravel from 7 to 35 m. The lower layers comprise denser silt layer with traces of sand and gravel from approximately 57 to 70 m. Standard Penetration Test (SPT) results obtained from testing at the Project Site indicate that the soil strength generally increases with depth. The STP results showed that the current soil quality can accommodate the construction of the Project.

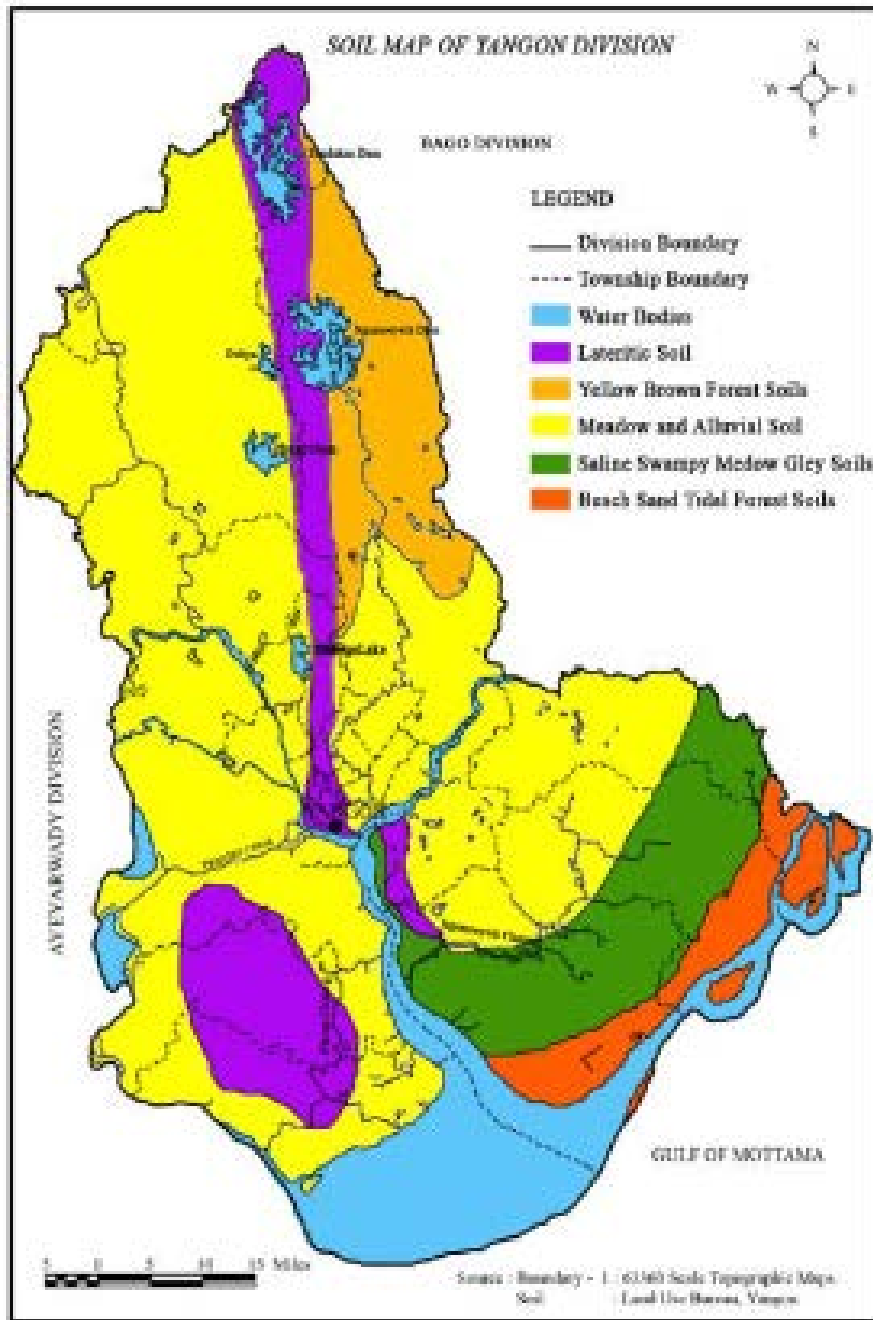
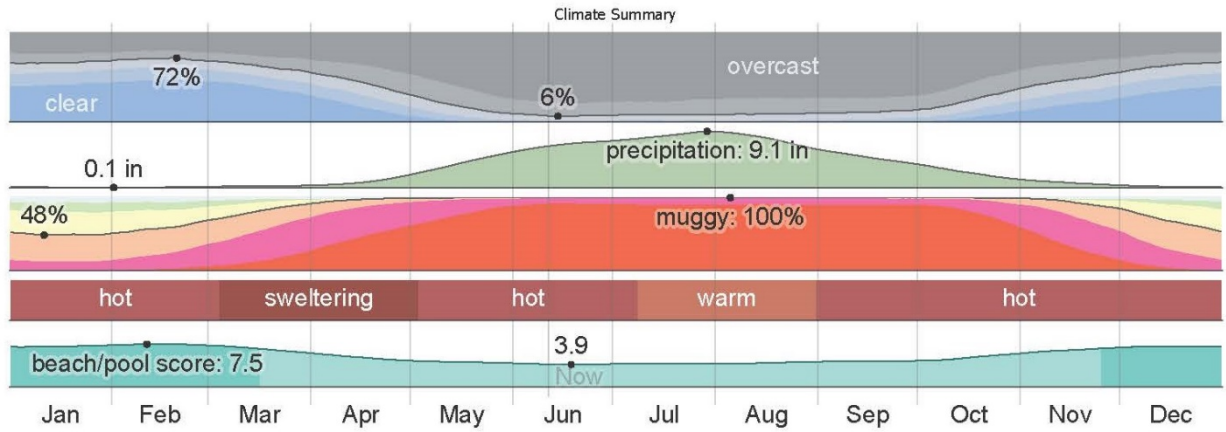


Figure 4-7 Soil map of Yangon (Source: Land use of Bureau of Yangon)

#### 4.4.6. Climate and Meteorology

##### 4.4.6.1. Average weather in Yangon

In Yangon, the wet season is oppressive and overcast, the dry season is muggy and partly cloudy, and it is hot year-round. Over the course of the year, the temperature typically varies from 67 °F to 97 °F and is rarely below 62 °F or above 101 °F.

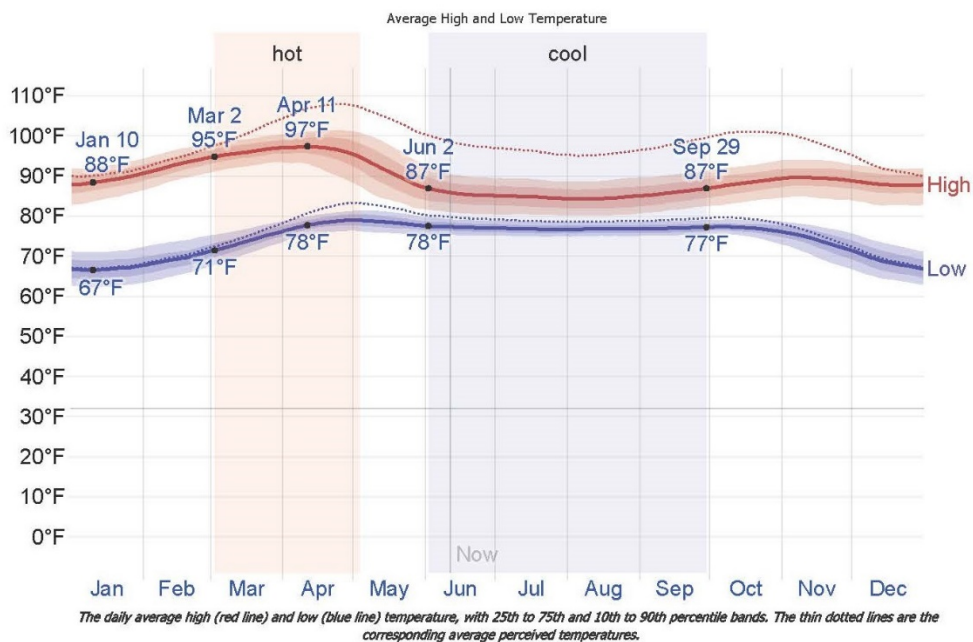


**Figure 4-8 Climate Summary of Yangon Region**

4.4.6.2. Temperature

The hot season lasts for 2.0 months, from March 2 to May 3, with an average daily high temperature above 95 °F. The hottest day of the year is April 11, with an average high of 97 °F and low of 78 °F.

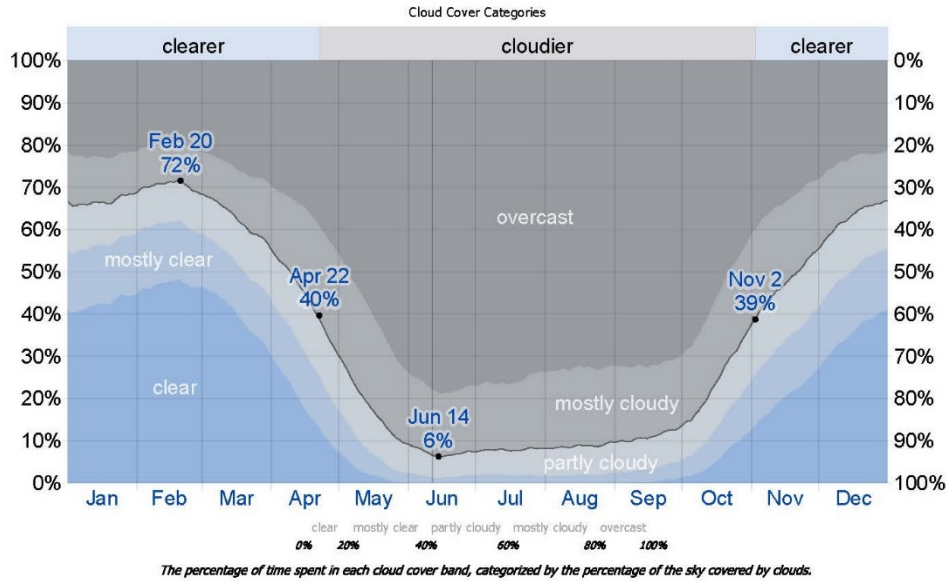
The cool season lasts for 3.9 months, from June 2 to September 29, with an average daily high temperature below 87 °F. The coldest day of the year is January 10, with an average low of 67 °F and high of 88 °F.



**Figure 4-9 Average Temperature of Yangon Region**

4.4.6.3. Clouds

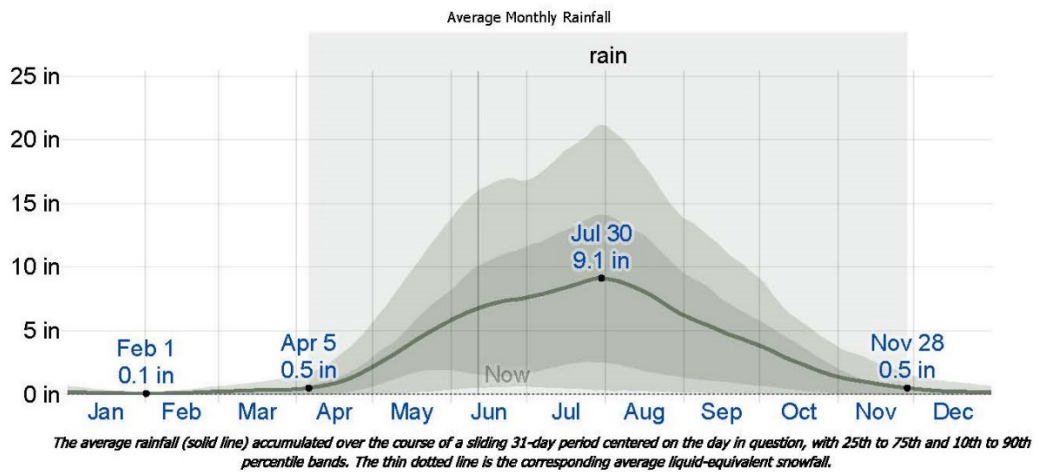
In Yangon, the average percentage of the sky covered by clouds experiences extreme seasonal variation over the course of the year. In clearer part of the year in Yangon begins around November 2 and lasts for 5.6 months, ending around April 22. On February 20, the clearest day of the year, the sky is clear, mostly clear, or partly cloudy 72% of the time, and overcast or mostly cloudy 28% of the time.



**Figure 4-10 Cloud Cover Categories**

4.4.6.4. Rainfall

To show variation within the months and not just the monthly totals, we show the rainfall accumulated over a sliding 31-day period centered around each day of the year. Yangon experiences extreme seasonal variation in monthly rainfall. The rainy period of the year lasts for 7.7 months, from April 5 to November 28, with a sliding 31-days rainfall of at least 0.5 inches. The most rain falls during the 31 days centered around July 30, with an average total accumulation of 9.1 inches. The rainless period of the year lasts for 4.3 months, from November 28 to April 5. The least rain falls around February 1, with an average total accumulation of 0.1 inches.



**Figure 4-11 Average Monthly Rainfall at Yangon Region**

**Table 4-7 Annual Rainfall and Temperature**

Year	Rainfall		Temperature	
	Raining day	Rainfall value (Inches)	Summer season Max (°C)	Winter season Min (°C)
2011	60	170.5	31	18
2012	58	180.2	42	16
2013	65	190.01	45	15



2014	59	187.5	42	18
2015	118	102.5	40	12.5
2016	110	105.27	45	15
2017	80	100.2	31	23

Source: Department of Administrative East Dagon Townships, Regional data (www.gad.gov.mm.com)

#### 4.4.6.5. Humidity

We base the humidity comfort level on the dew point, as it determines whether perspiration will evaporate from the skin, thereby cooling the body. Lower dew points feel drier and higher dew points feel more humid. Unlike temperature, which typically varies significantly between night and day, dew point tends to change more slowly, so while the temperature may drop at night, a muggy day is typically followed by a muggy night.

Yangon experiences extreme seasonal variation in the perceived humidity. The muggier period of the year lasts for 10 months, from February 22 to December 23, during which time the comfort level is muggy, oppressive, or miserable at least 61% of the time. The muggiest day of the year is August 5, with muggy conditions 100% of the time. The least muggy day of the year is January 11, with muggy conditions 48% of the time.

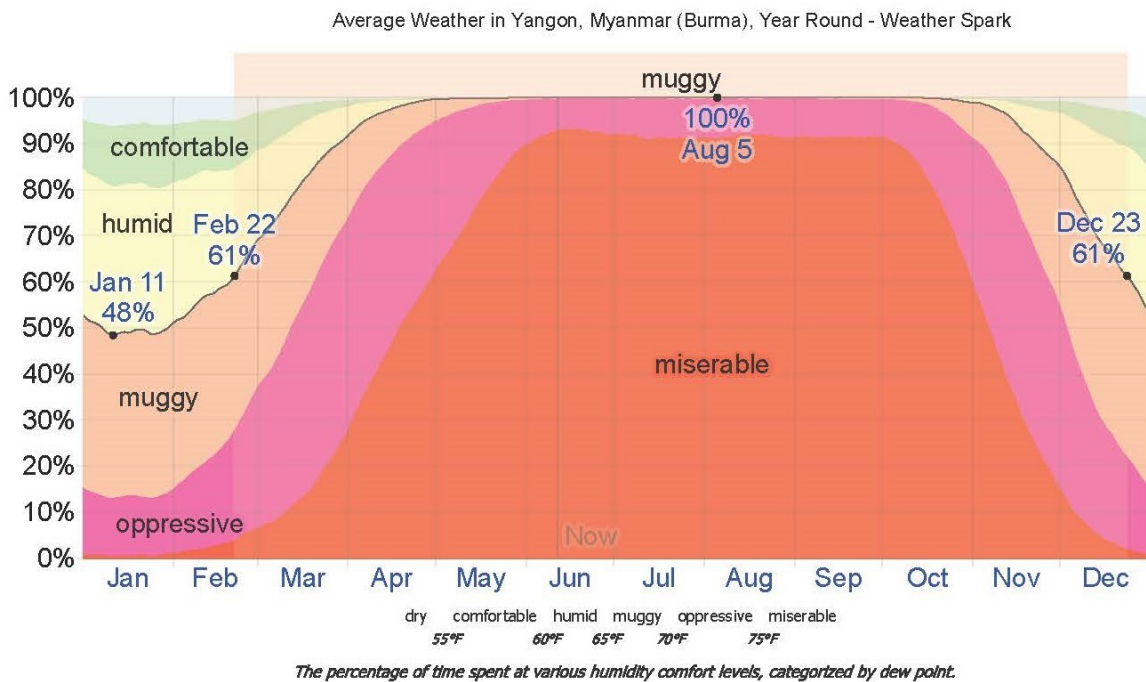


Figure 4-12 Humidity of Yangon

#### 4.4.6.6. Wind

This section discusses the wide-area hourly average wind vector (speed and direction) at 10 meters above the ground. The wind experienced at any given location is highly depended on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages. The average hourly wind speed in Yangon experiences significant seasonal variation over the course of the year. The windier part of the year lasts for 4.1 months, from May 1 to September 4, with average wind speeds of more than 8.2 miles per hour. The windiest day of the year

is June 24, with an average hourly wind speed of 10.6 miles per hour. The calmer time of year lasts for 7.9 months, from September 4 to May 1. The calmest day of the year is January 9, with an average hourly wind speed of 5.8 miles per hour.

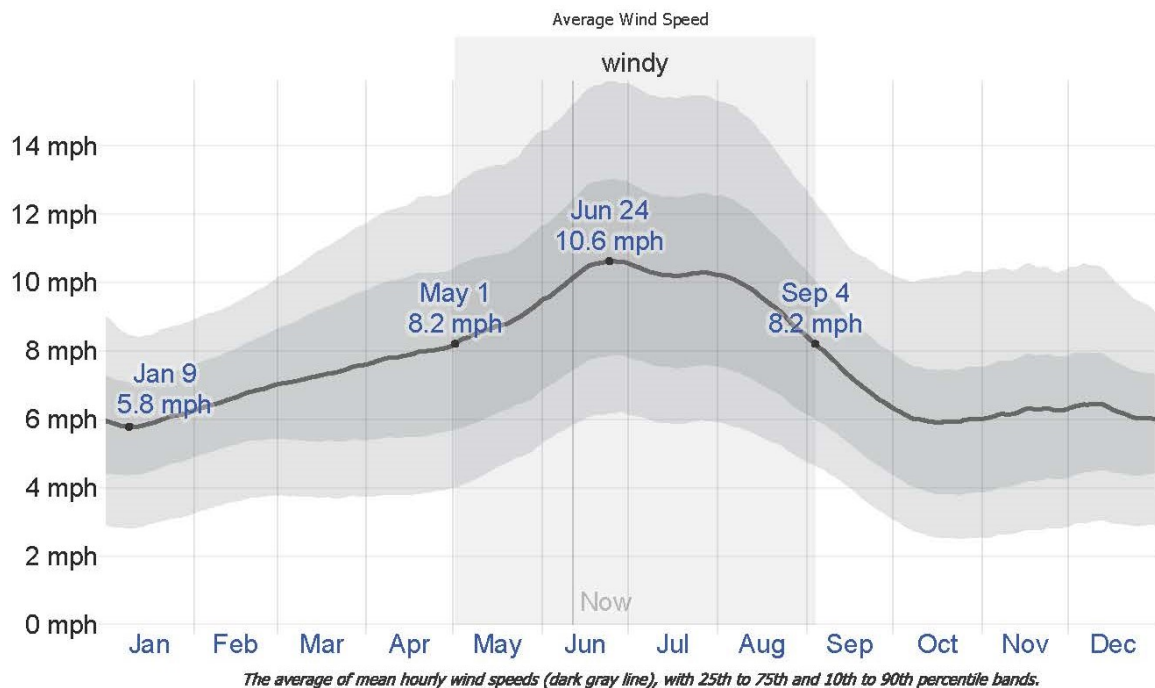


Figure 4-13 Average Windspeed in Yangon

#### 4.5. BIOLOGICAL COMPONENT

The proposed project site is not located in or near a sensitive ecosystem as the proposed project area is situated in the Dagon Seikkan industrial zone. The Project Site is a built-environment and the species of flora surveyed at the site are native species not uncommon to the Yangon area. There were no protected species or species of conservation value identified.

#### 4.6. SOCIO-ECONOMIC COMPONENT

##### 4.6.1. Population

Zhongze Bags Industry factory is located across Dagon Seikkan Township in Yangon Region. In 2017, there are about people 273,721 in Township as shown in Table 4-8.

Table 4-8 Population of Males and Females at Dagon Seikkan Township (2017)

Item	Older 18 year			Younger 18 year			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	47,831	51,149	98,980	28,596	28,731	57,327	76,427	79,880	156,407
Rural	4,836	4,776	9,612	3,204	3,256	6,460	8,040	8,032	16,072
<b>Total</b>	<b>52,667</b>	<b>55,925</b>	<b>10,892</b>	<b>31,800</b>	<b>31,987</b>	<b>63,787</b>	<b>84,467</b>	<b>87,912</b>	<b>172,379</b>

Source: Department of Administrative Dagon Seikkan Townships, Regional data (www.gad.gov.mm.com)

#### 4.6.2. Religion

The different kinds of religion present in Dagon Seikkan Townships are as shown in Table 4-9.

**Table 4-9 Religion in Dagon Seikkan Township (2017)**

Township	Buddhist	Christian	Hindu	Muslim	other	Total
Dagon (Seik kan) Township	162,834	4,646	1,547	2,354	998	172379

Source: Department of Administrative Dagon Seikkan Townships, Regional data (www.gad.gov.mm.com)

#### 4.6.3. Local Economy

Among regional towns, Dagon Seik Kan Township has a variety of businesses and services operating in the community with other businesses/services, based in the region. Most of the sources of livelihood in the Township are employment of factory. Services and facilities available include:

- post office
- beauticians
- butcher
- hairdressers
- furniture and electrical store
- restaurants
- cafes
- shoe and clothing shops
- industrial services
- pharmacy
- veterinarian
- bus service
- gift stores
- music store
- pubs and bars
- florist

#### 4.6.4. Public Infrastructure and Access

##### 4.6.4.1. Communication and Transportation

Major transportation route in Dagon Seik Kan Township are port and car road as presented in Table 4-10. <sup>[1]</sup>

**Table 4-10 Transportation Route**

Name	Transportation Route		Length	No
	From	To		
YBS-2	Yuzuna Garden City	Aung Mingalar Highway Bus station		15
YBS-3	Yuzuna Garden City	Mingalar market		26
YBS-4	Yuzuna Garden City	Maw Tin		88
YBS-5	168 Ward	Bogyoke Rd		28



Name	Transportation Route		Length	No
	From	To		
YBS-6	168 Ward	Dagon Ayeyar Highway Bus Station (Hlaing Tharyar)		27
YBS-8	168 Ward	Shwe Dagon Pagoda		23
YBS-9	87Ward	Tarmwe		16
YBS-71	Thatyat Pin Chaung	Zawana		30
YBS-80	Yadanar Rd	Ahlone		9
City Taxi	Dagon Sekikan	Bo Aung kyaw		25
Road (Bago River Rd)	Dagon Bridge	Ayeyarwaddy Rd	2.4 miles	
Road (Ayeyaewaddy Rd)	Thar Gae ta	Bago River Rd	2.5miles	
Road (kanar Patt Rd)			4.4 miles	
Road (Yadanar Rd)			2.5 miles	
Bridge (Thanlyin Bridge no-2)			4800 ft	
Inland waterway	none	None		
Railways and stations	none	None		

Source: Department of Administrative Dagon Seik Kan Townships, Regional data (www.gad.gov.mm.com)<sup>1</sup>

#### 4.6.4.2. Education

Location of major schools were situated i.e. basic education primary school (B.E.P.S.), basic education middle school (B.E.M.S), basic education high school (B.E.H.S) and university, in the Dagon Seik Kan Township. The name and the located village tract/ ward of schools are described in Table 4-11. <sup>[1]</sup>

**Table 4-11 List of major school in Mingaladon Township**

No.	Name of School	Location
1	Union of Young Nations Ability Improvement Degree Collage	No. 3383, Sittaung Steet, 61 ward
2	Basic Education High School (1)	88 Ward
3	Basic Education High School (2)	94 Ward
4	Basic Education High School (3)	168 Ward
5	Basic Education Middle School (1)	168 Ward
6	Basic Education Middle School (2)	93 Ward
7	Basic Education Middle School (Thatyetpin Chaung)	Thatyetpin Chaung
8	Basic Education Middle School (Nyaung Pin)	Nyaung Pin

Source: Department of Administrative Dagon Seik Kan Townships, Regional data (www.gad.gov.mm.com)

#### 4.6.4.3. Health Status

The diseases of high prevalence reported in 2013 are Tuberculosis (TB), followed by Acute Respiratory Infection (ARI), Diarrhea, TB and snakebites. With reference to the Township Health

Profile 2014 of Dagon Seik Kan Township, no accidental work injuries reported to the township hospital in 2013. The common diseases are shown in Table 4-12 and Table 4-13.

**Table 4-12 Common Diseases in Dagon Seik Kan Township**

Disease	Dagon Myo Thit (Sekikan) Township	
	Morbidity	Mortality
Malaria (Per 100000P)	-	-
ARI(Per 100000<5Children)	-	-
Dysentery	33	-
Diarrhea (Per 100000P)	827	-
TB (Sputum+)(Per 10000P)	334	12
HIV/AIDS (2015-2016)	37	8
(2016-2017)	21	1

**Table 4-13 Lists of hospital in the Dagon Seik Kan Township**

Hospital Name	Beds/Services	Responsible
Township Hospital	25	Government

Source: Department of Administrative (Dagon Seik Kan) Townships, Regional data (www.gad.gov.mm.com)

#### 4.7. CULTURAL AND VISUAL COMPONENTS

Dagon Seik Kan Township is growing into a busy and vibrant community. The population fluctuates; however, there has been steady growth over the last decade. It tends to be a stopover on a journey rather than a destination. It has a number of sites that are interesting; however, there is no main attraction. Visitors to the town are generally visiting for work, investment or family reasons.

## 5. RISK ASSESSMENT AND MITIGATION MEASURE

### 5.1. IMPACT IDENTIFINE

The development of infrastructure for the proposed project likely to happen changes in the local environment in terms of physical, biological and socio-economic aspects along with the perspective on both positive and negative impacts. In this IEE study, the potential environmental impacts brought by various activities of proposed factory project will be identified and judged by site surveying with checklist, meeting with client team, including plant manager and supervisor, representatives from the factory operators and assessing the environmental baseline information for operation and decommissioning phases along with its mitigation measure.

#### 5.1.1. Positive Impact

uring the project implementation, local people can get job opportunities in administrative sectors, office works, transportation sectors, skill and unskilled workers, etc. Due to the implementation of the project, there will be employment opportunities especially for workers from the local community. Employees will also improve more in their professional knowledge and skills. The net effect of job creation is the improvement of the livelihoods and living standards of the beneficiaries and poverty reduction, development of local people's livelihood. Cause of the proposed project is located in Dagon Seik Kan Industrial Zone, there may have business opportunities to local people. Local people can have a market by selling foods, snacks and drinks nearby the factory.

#### 5.1.2. Negative Impact

The following Figure 5-1 briefly described the potential negative impacts of the proposed project. There are four main types of impacts; impact on environmental resources, impact on ecological resource, impact on human and impact of waste generation.

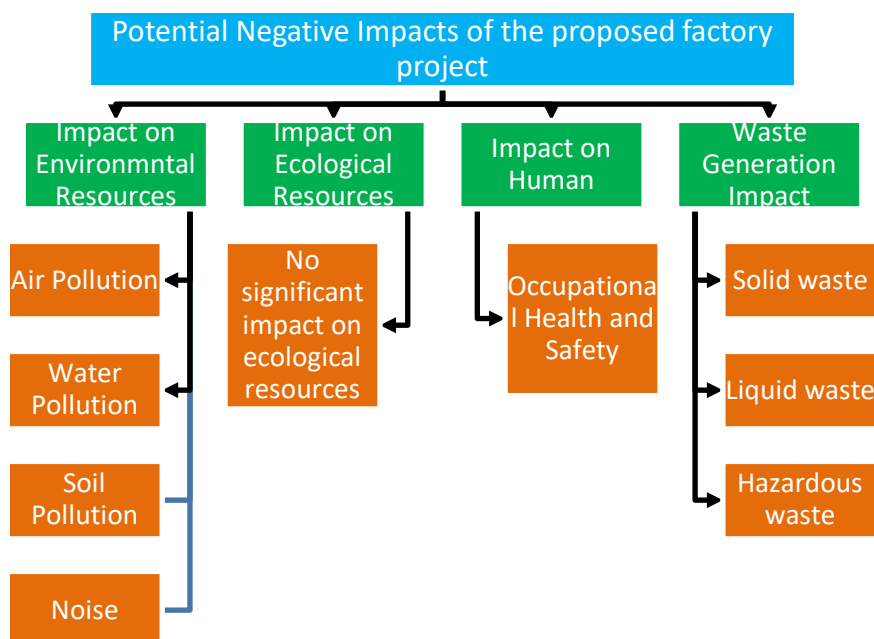


Figure 5-1 Potential Negative Impact Affect from Proposed Factory Project

## 5.2. METHODOLOGY FOR THE ASSESSMENTS

The assessment of each impact based on consideration of the magnitude, duration, spatial and frequency of activities, which are going to carry out during three phases and characteristics of the project site. The assessment is qualitative and the significance of each impact is been classified into five categories in overall.

The following methodology have been applied to assess the environmental impacts of the factory mainly on air, water, land, biodiversity, including human beings. Each source of impact had assessed by four parameters, magnitude, duration, extent and probability and each assess point have five scales as mentioned in Table 5-1:

**Table 5-1 Impact assessment parameters and its scale**

Assessment	Scale				
	1	2	3	4	5
Magnitude (M)	Insignificant	small and will have no effect on working environment	Moderate and will result in minor changes on working environment	High and will result in significant changes on working environment	Very high and will result in permanent changes on working environment
Duration (D)	0 - 1 year	2 - 5 year	6 - 15 year	Life of operation	Post Closure
Extent (E)	Limited to the site	Limited to the local area	Limited to the region	National	International
Probability (P)	Very improbable	Improbable	Probable	Highly probable	Definite

Then, the Significant Point (SP) calculated by following formula.

$$\text{Significant Point (SP)} = (\text{Magnitude} + \text{Duration} + \text{Extent}) \times \text{Probability}$$

Impact Significance: Based on calculated significant point, impact significance is able to categorize as follows:

Significant Point (SP)	Impact Significance
<15	Very Low
15-29	Low
30-44	Moderate
45-59	High
60	Very high

### 5.3. POTENTIAL ENVIRONMENTAL IMPACT DURING CONSTRUCTION AND DECOMMISSIONING PHASE

#### 5.3.1. Impact on Air Quality

In Zhongze Bags Industry factory will be used the semi-automatic process control system. In which assigned person from the operation line will operate each processing step. The major sources of air emission in the Zhongze Bags Industry factory will be defined as below. The project factory is already constructed during environmental assessment study and site visit. During construction phase, dust emission was addressed as potential environmental impact and is expected to be non-significant because the construction phase is a short-term affect. So, we are not assessed potential environmental impact during construction phase.

During the operation phase, there is no emission of smoke from the process of production. Particulate matters are generated during cutting and pressing the raw materials. But that particles amount is low. Dust particles, CO<sub>2</sub> and SO<sub>2</sub> would be emitted from the activities of loading, unloading and transportation of the raw materials and final product. Various activities as cooking from kitchen, using air conditioners in office building, storage of raw materials, vehicles movements, operating diesel generators and boiler combustion would also be a factor slightly affecting to air quality.

**Table 5-2 Air Quality Impact Sources**

Sources	Emission parameters
Electricity consumption and diesel generator and vehicle movements for delivering and transporting of the raw materials and final products	PM, CO, SO <sub>2</sub> and NO <sub>x</sub>

Air impact source of emergency used of generator and vehicle movements and transportation of raw materials may also generate particulate matters CO, SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>. However, these anticipated impacts are in manageable limits to control the air pollution with relevant mitigation measures and the proposed factory will be managed by using their HSE guidelines.

##### 5.3.1.1. Energy Consumption and Related CO<sub>2</sub> (GNG) emission

Though main electricity source for the factory is the national grid line, sound-proof diesel generators will be set-up in case of electricity shortages. So, 500 kVA and 65 kVA of standby generators will be used for both operation and administration appliances. The proposed project will use annually about 30,000 gallons of diesel for vehicles such as transportation vehicle and emergency use of a generator. The following table shows the amount of CO<sub>2</sub> emission coming from the combustion of fuels.

Burning diesel or other fuels creates exhaust gasses. Diesel generators produce carbon dioxide (CO<sub>2</sub>), nitrogen oxide (NO<sub>x</sub>), and particulate matter. These generators release this into the atmosphere and substantially reduce air quality in the nearby regions. Every liter of fuel has 0.73 kg of pure carbon, 2.6 kg of carbon dioxide released per liter of diesel fuel.

**Table 5-3 Category of GHGs Assessment**

Category	Range
Negligible	no GHG assessment necessary
Low	< 20 kt/y CO <sub>2</sub> -equivalent per year

Category	Range
Medium-Low	20 – 100 kt CO <sub>2</sub> - equivalent per year
Medium-High	100 kt – 1 Mt CO <sub>2</sub> - equivalent per year
High	>1 Mt CO <sub>2</sub> -e equivalent per year

Source: EBRD GHG Assessment Methodology, 2010

**Table 5-4 CO<sub>2</sub> Emission by the Uses of Fuel**

No.	Type	Amount (gallon/year)	Equivalent CO <sub>2</sub> emission (Kilotons)	Status
1	Diesel for generator	30,000	0.35	<b>Negligible</b>

According to above conversion, the emission of CO<sub>2</sub> relative to the fuel consumed by the proposed project will not harmfully effect to the environment. However, the proposed Luggage and Bags factory will use a lot of electrical energy mainly for lighting, running of equipment, running of pumping systems for pumping water into the storage tank. Since electricity generation involves utilization of natural resources, excessive electricity consumption will strain the resource and negatively impact on their sustainability.

Furthermore, likewise the construction phase, negative impact on ambient air quality such as emissions of dust particles emission from the movement of vehicles used for carrying decommissioned materials and gaseous emission from these vehicles and machines can be expected during the decommissioning phase of the proposed project after its lifespan.

### 5.3.2. Impact of Noise

During the construction phase, significant impact on noise and vibration to surrounding environment must be generated from the movements of vehicles, operating the machinery, excavation activities and transportation of equipment and construction materials by heavy trucks. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, the proposed project is located in industrial zone and already finished the construction, the potential impact on noise and vibration is not assessed and short-term affect must be caused the construction period is temporary.

During the operation phase, noise impact may be a significant impact for bags production sectors. The significant sources of noise impact activities are the operation of various machinery and equipment listed in for sewing line, cutting line and the emergency used of generator, vehicles and automobile movements (short-term noise) will be noise impacts sources. According to the noise results of 8 hours continuously measurement, at the source of operation area inside the factory and within the factory area are slightly exceeding the noise level of 70 dB of NEQ (emission) guideline. Therefore, no obvious influence can be caused expected to environment.

During the decommissioning phase, the heavy vehicles, machineries and equipment used for decommissioning activities can affect the noise level and vibration of the area.

### **5.3.3. Impact on Water Quality**

#### **5.3.3.1. Water Consumption**

In the operation phase of sweater manufacturing factory, there is no water use for processing purpose. Tube well is the main source of raw water will be treated by passing through into (i) the oxidation tower to remove oxidized materials, (ii) chlorine dosing system, (iii) de-iron filter, (iv) carbon filter and (v) cartridge filter. Then the obtained treated water will be provided for the whole factory use of general office facilities such as canteen, toilets and other general use. Estimated maximum water consumption for the whole factory is 16,760 gallons per day.

#### **5.3.3.2. Water Pollution**

The effluent wastewater will generate from the cleaning of utensil for operational use and domestic wastewater. Water pollution may be caused by domestic wastewater discharge from the canteen, which have Total Solid (TS), Suspended Solid (TSS). Grease and oil that can seriously also affected on water quality. In addition, improper management of wastewater treatment system of industry effluents, laundry wastewater and sewage effluents will effect on ground water and the nearest surface water body.

### **5.3.4. Impact on Soil Quality**

During the construction phase, the excavation works from the construction activities must be the major impact on soil. The soil is compacted by the vehicles and the solid waste disposal improperly by the workers can affect the soil quality. Oil spillage from the vehicles could be also polluted to the soil. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, impact on water quality is not assessed for this project.

During the operational phase, there is no significant impact on soil quality due to bags manufacturing activities because concrete road facilities have been implemented at the whole project site area. However, there may be effect on soil if wastes from the operation period are disposed improperly.

During the decommissioning phase, transportation of decommissioning materials and transferred of heavy machinery may happen oil leakage and lubricants, and thus it can lead to impact on soil. Moreover, hazardous releases of materials or oil utilized in the infrastructure can contaminate the existing soil during the decommissioning phase.

### **5.3.5. Impact on Ecological Resource**

The proposed project is located in the industrial zone. Therefore, there is no wildlife, forests, protected area, coastal resource or mangrove area and rare and endangered species are found around the project area. The nearest water body is Bago River, which is running from north to south and later join into the Yangon River in the south.

### **5.3.6. Impact of Waste Disposal**

Most activities of the bags manufacturing factory will generate the relatively low level of waste. Solid waste from production sector will consists of process waste such as Industrial waste would be generated from operation such as yarn cone, plastic bags, cardboard, paper board, plastic string, etc. and food waste, plastic, paper, glass, metal can, sanitary napkins, tissue paper, garden



waste, etc. However, proposed factory have been implemented the solid waste disposal system by the segregation of waste type such as paper waste, food waste, production waste and hazardous waste according to their environmental health and safety guideline. The required rubbish bins have been provided and regularly checked and monitored by assigned person of proposed factory. Before send to dumping site of Dagon Seikkan Township Development Committee, the proper disposal waste facilities and temporary waste disposal site have been provided in the factory site and they should be followed and monitored the solid waste disposal system with the help of Municipal guidelines. Moreover, for the purpose of hygienic canteen, kitchen facilities and standard septic type of toilets, well-cleaned and well-maintained already provided for the proposed factory site.

#### 5.3.6.1. Solid Waste

During the construction and decommissioning phase, various kinds of solid wastes will be generated. These wastes will be collected and clean every day to avoid any undesirable working condition and environmental impacts. Based on their types (glass, metal, plastic, wood, cement residues, oil spills and paper based), these solid wastes will be collected separately in rubbish bins and regular and proper disposal will be done in accordance with YCDC guidelines.

In the operation phase, major solid wastes of the proposed bags factory may be generated form production lines, cutting and packaging. Factory shall use textile, thread and carton box as raw materials. The residual pieces of the fabric scraps from the production lines and cutting line used carton box, plastic sheet from the packaging are the main source of solid waste. In addition to factory solid waste, canteen, kitchen and dormitory will produce solid wastes mainly personal remnants, household wastes and food residues.

#### 5.3.6.2. Liquid Waste

There may be expected no significant liquid waste from the construction and decommissioning phase. The main source of the liquid waste of these two phases may be from the sanitary wastewater.

During the operation phases, sanitary wastewater from the usage of toilet facilities, kitchen and canteens will be discharged as liquid waste. All of the liquid waste will be collected in septic tanks which are attached with proper sewage treatment tanks (as mentioned in factory site plan) and regular monitoring should be done in cooperation with YCDC and follow the YCDC guidelines for proper disposal.

#### 5.3.6.3. Hazardous Waste

In the operation phase, chemicals can be harmful if they are not handled carefully and be sure to wear protective equipment. Used chemical containers should be carefully pack.

During the decommissioning phase, waste chemical containers shells can be harmful if not disposed of properly.

## **5.4. IMPACT ON HUMAN**

### **5.4.1. Socio-economic Benefit**

The proposed project is the long-term investment in the industrial sector. Most of the impacts of the proposed project on socio-economic environment may be positive. Implementation of proposed project may create temporary employment during construction and decommissioning phases and permanent jobs in the operation phase. Subsequently, socio-economic standards of local people will be increased and eventually it may lead to the economic growth at local and regional level.

### **5.4.2. Occupational Health and Safety**

During the construction phase, significant accidents and injuries like electric shocks, falling from heights, chemical exposure, crushing injury, fire hazards can be occurred due to the construction activities including metal grinding and cutting, concrete work and welding the metals. Moreover, accidents and injuries to workers and local communities could be caused from heavy vehicles movement for the transport of construction materials and equipment. Small injuries due to slips, headache and sickness must be caused of the noise, air pollution and odor could also be affected to the workers and local people. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, impact on water quality is not assessed for this project.

During the operation phase, using the machinery for production process can get injuries. Noise from the generating of the machine and generator may also affect the health of people working in the project area. Fire and explosion hazards are mainly cause from the storage of raw materials and poor management of waste disposal. The usage of fuel must carefully handle because spillage and leakage of oil and grease can cause ignition of fire. Domestic wastewater or grey water produced from canteen, kitchen and toilets will cause enormous breeding of mosquitos, which can lead to diseases like malaria and dengue fever, if not carefully managed.

During the decommissioning phase, activities related with decommissioning process can cause injuries and can affect the health of decommissioning workers.

## **5.5. PROJECT ACTIVITIES AND ITS SIGNIFICANT IMPACTS**

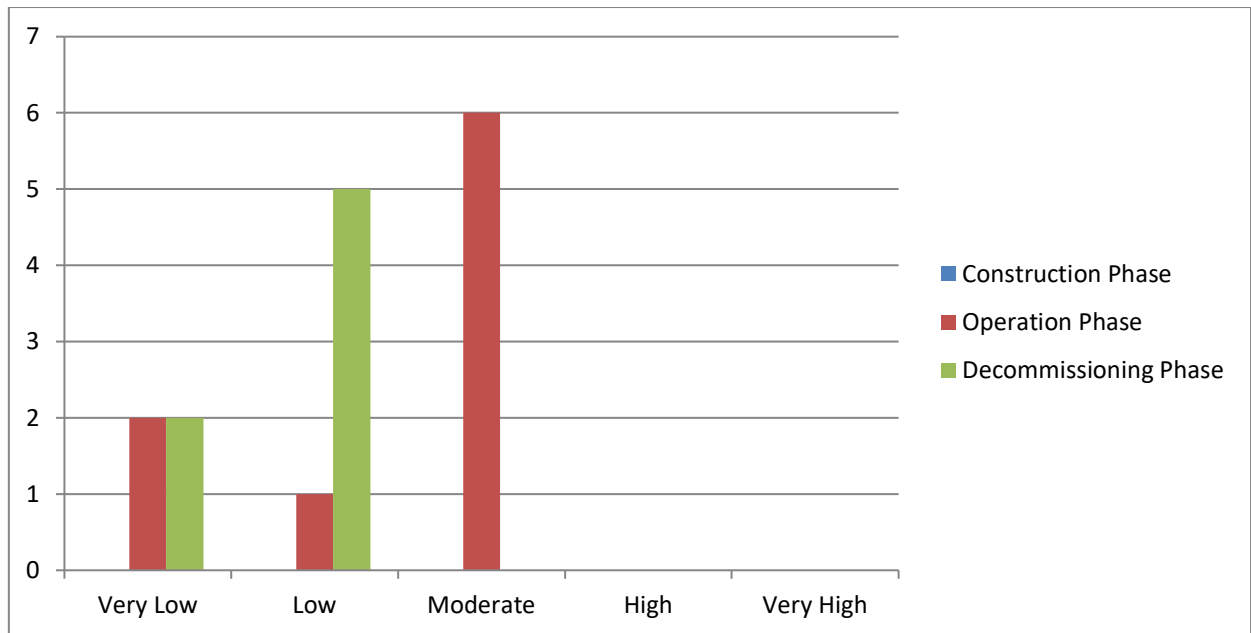
The relative importance of each impact is assessed based on the understanding that general mitigation measures will be integrated into the baseline project. Therefore, when the general mitigation measures reduce impacts to the point of rendering them negligible they are excluded from further analysis. Once the significance of the impact is established as more than negligible, it is described and additional, specific mitigation measures may be proposed to allow optimal integration of the project into the environment.

**Table 5-5 Evaluation and Perdition of Significant Impacts for Operation Phase**

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
<b>Construction Phase; It is not assessed in this phase, because of construction is already completed during IEE preparation.</b>							
<b>Operation Phase</b>							
Air pollution	<ul style="list-style-type: none"> <li>➤ Dust and GHGs emission from vehicles used for transporting raw materials and final products</li> <li>➤ Particulate matters emission from the activities of production process</li> <li>➤ Emission of smoke from steam boiler (rice briquettes) and kitchen</li> <li>➤ Emission from emergency diesel generator</li> </ul>	3	4	2	4	36	Moderate
Water pollution	<ul style="list-style-type: none"> <li>➤ Sewage disposed of from the toilets</li> <li>➤ Oil spill and grease leaks from transporting vehicles and machinery equipment used in operation phase</li> </ul>	2	4	2	3	24	Low
Soil Contamination	<ul style="list-style-type: none"> <li>➤ Accidental spillage of oil used by vehicles operating</li> </ul>	1	4	1	2	12	Very low
Noise Pollution	<ul style="list-style-type: none"> <li>➤ Generating noise from the production machinery</li> <li>➤ Noise from the generating of the emergency generators</li> </ul>	3	4	1	4	32	Moderate
Fire Hazard	<ul style="list-style-type: none"> <li>➤ Poor electrical installations</li> <li>➤ Waste disposed area</li> <li>➤ Raw materials storage</li> </ul>	3	5	2	4	40	Moderate
Solid waste	<ul style="list-style-type: none"> <li>➤ Residual pieces of fabric scraps from the production lines</li> <li>➤ Waste from packaging materials</li> <li>➤ Waste from kitchen, dormitory and office.</li> </ul>	3	5	1	4	36	Moderate
Liquid waste	<ul style="list-style-type: none"> <li>➤ Septic system and sewage.</li> <li>➤ Domestic liquid waste disposal from office, kitchen and dormitory.</li> </ul>	2	4	2	4	32	Moderate
Hazardous waste	<ul style="list-style-type: none"> <li>➤ Engine oil leaks, spills at diesel storage and during fuel refueling.</li> <li>➤ Used oil and lubricant discharged from the maintenance of vehicles and machines.</li> </ul>	2	4	1	2	14	Very Low
Occupational Health and Safety (Accidents, Injuries)	<ul style="list-style-type: none"> <li>➤ Accidental cases cause by operating machines.</li> <li>➤ Electricity and emergency diesel generators.</li> <li>➤ Unloading, mixing, cutting, pressing and packaging activities.</li> </ul>	3	4	1	4	32	Moderate

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
	➤ Accidental cases of thermic fluid heater						
Social-economic Condition	Job opportunities for local people	-	-	-	-	-	Positive Impact
<b>Decommissioning Phase</b>							
Air pollution	<ul style="list-style-type: none"> <li>➤ Decommissioning of buildings and related materials</li> <li>➤ Transportation of demolished materials</li> </ul>	3	1	1	4	20	Low
Water pollution	<ul style="list-style-type: none"> <li>➤ Sewage form decommissioning workers</li> <li>➤ Demolition machinery equipment</li> </ul>	3	1	1	3	15	Low
Soil Contamination	<ul style="list-style-type: none"> <li>➤ Decommissioning of buildings and related materials</li> <li>➤ Transportation of demolished materials</li> </ul>	3	1	1	3	15	Low
Noise Pollution	<ul style="list-style-type: none"> <li>➤ Decommission activities</li> <li>➤ Transportation of demolished materials</li> </ul>	3	1	1	3	15	Low
Waste disposal	<ul style="list-style-type: none"> <li>➤ Sewage system</li> <li>➤ Demolished debris such as bricks, concrete materials</li> </ul>	2	1	1	3	12	Very Low
Hazardous waste	➤ Used lubricants from decommissioning vehicles and machines	2	1	1	3	12	Very Low
Occupational Health and Safety (Accidents, Injuries)	<ul style="list-style-type: none"> <li>➤ Decommissioning activities</li> <li>➤ Transportation of demolished materials</li> </ul>	3	1	2	3	18	Low
Social-economic Condition	Temporary job opportunities for local people	-	-	-	-	-	Positive Impact

According to the result of analysis, it can be concluded that most of the project activities have low significance on environment, in all phases. Project activities that can produce solid waste and liquid waste are moderate significance. Moreover, project activities that emit dust and GHGs and accidental cases are moderately significant. Fire hazard potential of the proposed project and noise pollution are highly significant. But this can be prevented or mitigated by using the following mitigation measures. The following figure shows the impact significance of the proposed project.



**Figure 5-2 Impact Significance of the proposed project**

## 5.6. ENVIRONMENTAL IMPACT MITIGATION MEASURES FOR OPERATION PHASE

The proposed Zhongze Bags Industry Company Limited, bags factory has developed the implementing of environmental management plan, appropriate mitigation measures for potential impact occurred in during operation phase, and additional impact mitigation measures shall be seen in following mitigation measures.

### 5.6.1. Mitigation Measures for Air Quality Impact

The significant sources of gas emission from emergency generator and transportation vehicles will be mitigated by using maintaining system in the operation process.

- Switch off vehicles when not in operation to reduce emissions by drivers
- Adequate stack must be provided as per Industrial guidelines for the proper dispersion of potential pollutants

Moreover, Zhongze Bags Industry Company Limited, bags factory has also implemented canteen facilities, kitchen ventilation system has already installed and operated in order to remove smoke, heat, odors, and steam from cooking.

### 5.6.2. Mitigation Measures for Noise Impact

The following mitigation measures shall be considered to reduce noise levels in the operation phase of the sweater factory.

- I. Low noise equipment should be used where possible
- II. All preventive measures such as regular operation and maintenance of pump motors, and compressor should be carried out and enclosures will be provided to abate noise levels at source
- III. Noisy equipment should not be permitted during night hours as much as possible

#### 5.6.2.1. For Diesel Generator

Used of Generator should be housed in a suitable acoustic enclosure. The acoustic insulation should be designed to meet mandatory standards based on a 25 dB insertion loss.

### 5.7. MITIGATION MEASURES FOR WATER CONSUMPTION AND CONTAMINATION

#### 5.7.1. Water Consumption

In operation phase, according to the estimated water consumption for the whole factory is 16,760 gallons per day for the purpose of general office uses and laundry section. So, the appropriate water conservation plan should be implemented with commensurate with the magnitude and cost of water use. These programs should promote the continuous reduction in water consumption and achieve savings in the water pumping, treatment and disposal costs.

##### Building Facility Operations

- ❖ Regularly maintain plumbing, and identify and repair leaks
- ❖ Shut off water to unused areas
- ❖ Install self-closing taps, automatic shut-off valves, spray nozzles, pressures reducing valves and water conserving fixtures (e.g low flow shower heads, faucets, toilets, urinals and spring loader)
- ❖ Operate dishwashers and laundries on full loads, and only when needed
- ❖ Install water-saving equipment in lavatories, such as low flow toilet
- ❖ Recycling water used from wastewater treatment system

#### 5.7.2. Wastewater Effluents

An effective wastewater treatment system for laundry section that reduced for BOD, COD, total nitrogen and other organic compound shall be used to reduce the impact on aquatic lives and odor.

Currently, practice of the wastewater effluents discharge facilities of sewage for sanitation and septic system. Laundry wastewater effluents discharge facilities for wastewater treatment system. Wastewater treatment process is presented in above Chapter (3) 3.3.5.

#### 5.7.3. Toilet Facilities

Currently toilet facilities have hygienic toilets already provided and categorized by gender, marked distinctly for men and women by signs and symbols. In addition, toilet areas will also be provided with water sinks, necessary toiletries, and hand washing soaps, hand drying facilities, and waste bins.



**Figure 5-3 Toilet Facilities in factory at Zhongze Bags Industry Factory**

#### **5.7.4. Recommended Wastewater Effluents Impact Mitigation Measures**

- ❖ Ensure that liquid waste from the proposed site is directed to the appropriate drains
- ❖ Maintain the equipment, pipelines in good working conditions and drainage system to avoid clogging

#### **5.8. MITIGATION MEASURES FOR WASTE DISPOSAL**

At Zhongze Bags Industry Company Limited, bags factory, waste categorization has been developed into at least four types of waste that includes iron, compost waste, lubricant waste, recycle waste such as polypropylene bags (PP) etc.

All of production waste such as leather scrap; plastic bags, cardboard, wood, plastic string and other non-hazardous waste will be collected by designated garbage bins and then sent to the temporary storage areas of solid waste in the project site area, which include 4 compartments for different kinds of waste categories. In addition, pest control program has also implemented at the entrance of rodents and insects. Zhongze Bags Industry Company Limited also has an agreement services with Dagon Seikkan Township Development Committee for waste disposal facilities to collect the all production waste, office waste and domestic waste. According to the waste management practice, Zhongze Bags Industry Company Limited, bags factory has provided the dedicated dustbins for paper waste, plastic waste, production waste and food waste for the proper disposal of waste. Appropriate recycling methods are in practice to dispose of the wastes in the environmental friendly manner.





Figure 5-4 Solid waste management at Zhongze Bags Industry Factory

## 5.9. MITIGATION MEASURES FOR OCCUPATIONAL HEALTH AND SAFETY

### 5.9.1. Exposure of Noise

The Occupational Safety and Health Administration (OSHA) have recommended permissible noise exposure limit for industrial workers, which is based on 90 dB (A) for 8 hours exposure a day with 5dB trading rates. The limits are mentioned in Table 5-6. According to OSHA, the maximum allowable noise level for workers is 90 dB (A) for 8 hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas, need to provide if actual noise level monitoring results are more than 90 dB (A) at the work site for working time hours for 8 hours.

Table 5-6 Permissible exposure of noise limits

Total Time of Exposure Per Day in Hours	Noise Level dB(A)
8	90
6	92
4	95
3	97
5	100

Total Time of Exposure Per Day in Hours	Noise Level dB(A)
1	105
½	110
¼	115

### 5.9.2. Recommended Mitigation Measures for Occupational Health and Safety

- Consider the provision of personal protective equipment only after all measures for removing or controlling safety hazards have been provided reasonably impractical
- Ensure that sufficient personal protective equipment is provided and that they are readily available for every person who may need to use them.
- The management should ensure that all persons make full and proper use of the personal protective equipment provided
- Provide instruction and training in the proper use and care of any specific protective equipment where necessary
- Ensure that the personal protective equipment is in good condition. Report immediately any damage to the management for replacement. Always keep the personal protective equipment as clean as possible.

Monitoring should be designed and implemented by accredited professionals, as part of an occupational health and safety-monitoring program. Facilities should also maintain a record of occupational accidents and diseases. Projects should try to reduce the number of accidents among project workers (whether directly employed) to a rate of zero, especially accidents that could result in lost work time, different levels of disability, or even fatalities.

### 5.9.3. Material Storage guidelines

Storage practices to reflect the safety of workers are also developed in Zhongze Bags Industry Company Limited. All the shelves in the storage areas are secured, firmly placed and organized to prevent from any collisions that can affect the workers during working. Different materials will be stored separately by type and according to the designed layout.

### 5.9.4. First Aid Guidelines and Facilities

A well organized and proper first aid system is implanted to provide immediate first aid to anyone who is injured in the workplace and had also conducted the first aid training by Myanmar Red Cross Society. Adequate number of first-aid kits are listed and made available at all workplaces and contacts of medical providers, hospitals will be notified. The followings are some of the contents in a sample first aid kit.

- Bandage
- Adhesive Tape
- Antiseptic wipe
- Burn dressing and treatment items
- Cold pack
- CPR barrier
- Sterile wound dressings
- Sterile eye coverings
- Scissors, tweezers, compress



Figure 5-5 First Aid Facilities at Zhongze Bags Industry Factory

## 5.10. POTENTIAL ENVIRONMENTAL IMPACTS OCCURRED DURING DECOMMISSION PHASE

The proposed duration of the investment shall be 28 years. The term of the Lease shall be initial 8 years commencing from the date of signing of the Lease Agreement between Local owner and Zhongze Bags Industry Company Limited for proposed project site for 1.85 acres of land and extendable for ten years in 2 times as recommended by the Yangon Region Government. The project of land and warehouse will be restitution to land owner after decommissioned. Therefore, the IEE study is not assessed for environmental impact during decommission phase.



## 6. ENVIRONMENTAL MANAGEMENT ACTION

The IEE for Zhongze Bags Industry Company Limited has been prepared to address potential issues based upon discussion with factory management, workers, local community view, stakeholder consultation and the site visit. The EMP is additional to and complements the factory's safety management system. The following environmental impact issues which require environmental management plans based upon the potential impacts activities of Zhongze Bags Industry Company Limited are as follows:

### 6.1. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

An Environmental Management System (EMS) is a framework that helps an organization achieve its environmental goals through consistent review, evaluation, and improvement of its environmental performance. The assumption is that this consistent review and evaluation will identify opportunities for improving and implementing the environmental performance of the organization. The EMS itself does not dictate a level of environmental performance that must be achieved; each organization's EMS is tailored to its own individual objectives and targets.

An EMS encourages an organization to continuously improve its environmental performance. The system follows a repeating cycle the organization first commits to an environmental policy, then uses its policy as a basis for establishing a plan, which sets objectives and targets for improving environmental performance. The next step is implementation. After that, the organization evaluates its environmental performance to see whether the objectives and targets are being met. If targets are not being met, corrective action is taken. The results of this evaluation are then reviewed by top management to see if the EMS is working. Management revisits the environmental policy and sets new targets in a revised plan. The cycle repeats, and continuous improvement occurs.

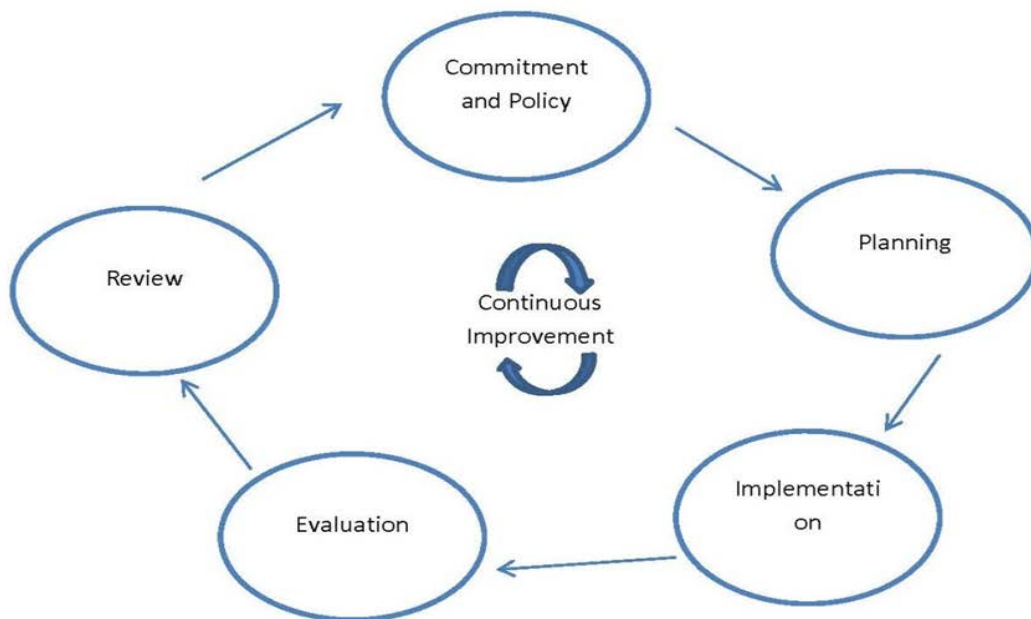


Figure 6-1 Continuous Improvement Circle

- **Commitment and Policy** – Top management commits to environmental improvement and establishes the organization’s environmental policy. The policy is the foundation of the EMS.
- **Planning** – An organization first identifies environmental aspects of its operations. Environmental aspects are those items, such as air pollutants or hazardous waste that can have negative impacts on people and the environment. An organization then determines which aspects are significant by choosing criteria considered most important by the organization. For example, an organization may choose worker health and safety, environmental compliance, and cost as its criteria. Once significant environmental aspects are determined, an organization sets objectives and targets. An objective is an overall environmental goal (e.g., minimize use of chemical X). A target is a detailed, quantified requirement that arises from the objectives (e.g., reduce use of chemical X by 25% by September 1998). The final part of the planning stage is devising an action plan for meeting the targets. This includes designating responsibilities, establishing a schedule, and outlining clearly defined steps to meet the targets.
- **Implementation** – An organization follows through with the action plan using the necessary resources (human, financial, etc.). An important component is employee training and awareness for all employees. Other steps in the implementation stage include documentation, following operating procedures, and setting up internal and external communication lines.
- **Evaluation** – A company monitors its operations to evaluate whether targets are being met. If not, the company takes corrective action.
- **Review** – Top management reviews the results of the evaluation to see if the EMS is working. Management determines whether the original environmental policy is consistent with the organization’s values. The plan is then revised to optimize the effectiveness of the EMS. The review stage creates a loop of continuous improvement for a company.

#### 6.1.1. Institutional Requirement

Zhongze Bags Industry Company Limited will manage the development of the proposed project. The project proponent should appoint Health, Safety and Environment (HSE) issues throughout the duration of the project phases. HSE team is responsible for implementation and monitoring of EMP and Environmental Monitoring Plan (EMP) as well as coordination with local authorities and the nearby communities. The HSE Team also makes regular review of EMP to cover all potential impacts, amendments and modifications.

#### 6.1.2. Responsibilities of the EMP

In order to ensure the sound development and effective implementation of the EMP, it will be necessary to identify and define the responsibilities. The environmental management practices, procedures, and responsibilities are defined herein to get full compliance with the existing environmental policy, laws, rules and regulations of the Republic of the Union of Myanmar. The following entities should be involved in the implementation of this EMP:

**Zhongze Bags Industry Company Limited:** The proponent will be charged with the responsibility for ensuring that the proposed development has been accomplished in an environmentally sound manner. This can be achieved by inclusion of environmental specifications in the tender specifications, selection of environmentally conscious contractors, and supervision to

ensure that the objectives of this IEE are met. The implementation of Environmental Management Plan (EMP) process will prepare and follow up by appointed persons for health, safety, and environmental management under the instruction of management team of Zhongze Bags Industry Company Limited for EMP implementation facilities.

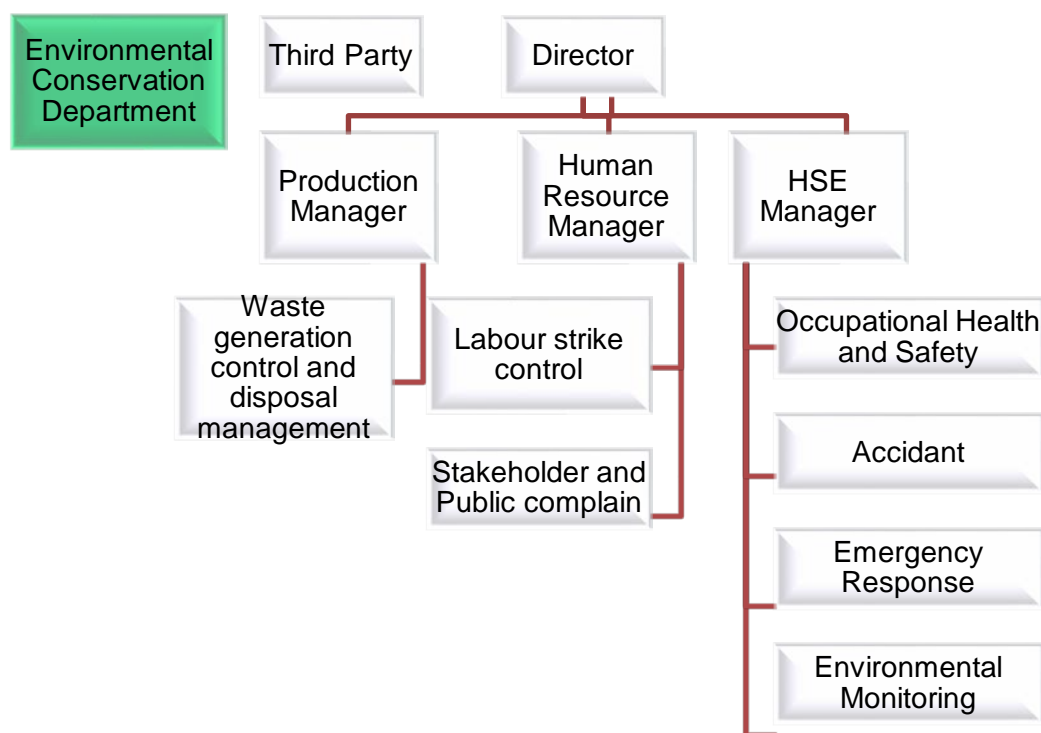
**ECD (Yangon Region):** The responsibility of ECD is to exercise general supervision and coordinating over all matters relating to the environment and to be instrumental in providing guidance for recognized regulatory frameworks.

**Third-Party Environmental Consultant:** The environmental consultant will have to ensure that the proposed EMP is up to date and is being followed properly by the proponent. Periodic audits of the EMP will have to be done to ensure that its performance is as expected, by comparing with operating standards so that any corrective actions can be taken.

### 6.1.3. Structure and Responsibilities for the EMP Development and Implementation

The HSE officer is responsible to the HSE components of the project and on matters relating to the implementation of the EMP throughout operation life. The S&E officer will have responsibilities that include:

- Ensure a monitoring system is in place to track and report all health, safety and environmental incidents;
- Carry out a thorough initial site inspection of environmental controls prior to work commencement;
- Record and provide a written report to the General Manager and production team of non-conformances with the IEE and require the HR supervisor to undertake mitigation measures to avoid or minimize any adverse impacts on environment or report required changes to the EMP.



**Figure 6-2 Organization Structure of Environmental Management Plan**

**Table 6-1 Responsibilities of HSE Members**

Roles	Responsibilities
General Manager	<p>The General Manager will be assisted by the Operations Manager and also the HR and HSE Officer. In terms of environmental protection commitments, the Operation Manager will be the key driving force and will be responsible for:</p> <ul style="list-style-type: none"> <li>• Establishing overall environmental direction and policy</li> <li>• Ensuring the implementation of the EMP</li> <li>• Ensuring investigation of all environmental incidents are reviewed and that reports are submitted on time</li> <li>• Ensuring an effective system of internal and external communication is in place</li> <li>• Providing advice regarding the environmental program</li> </ul>
Operation Manager	<p>The Operation Manager will assist the General Manager in looking into the overall environmental matters during the operational phase of the Project. The Operation Engineer will also be responsible for:</p> <ul style="list-style-type: none"> <li>• Adherence to the overall environmental direction and policy</li> <li>• Ensuring the implementation of the recommended actions in the investigation of all environmental incidents</li> <li>• Managing resources for operation wastes</li> </ul>
HR Manager	<p>The HR Manager will carry out the day-to-day management of workers and social issues in the factory. The HR Manager will be responsible for:</p> <ul style="list-style-type: none"> <li>• Assisting the management in publicising and implementing corporate and local policies, objectives and programs</li> <li>• Maintaining key environmental-related documents and information</li> <li>• Communicating/ liaising with the local authorities on environmental issues</li> </ul>
HSE Officer	<p>The HSE Officer will be the key person in charge of all environmental matters pertaining to the site. The HSE Officer will be responsible for:</p> <ul style="list-style-type: none"> <li>• Coordinating the implementation of environmental programs, including monitoring of the project site environmental performance</li> <li>• Performing periodic internal environmental audits and inspections to ensure compliance with the legal environmental requirements</li> <li>• Ensure a monitoring system is in place to track and report all health, safety and environmental incidents;</li> <li>• Carry out a thorough initial site inspection of environmental controls prior to work commencement;</li> <li>• Record and provide a written report to the General Manager and production team of non-conformances with the EMP and require the HR Manager to undertake mitigation measures to avoid or minimize any adverse impacts on environment or report required changes to the EMP.</li> </ul>

**6.2. AIR POLLUTION/ DUST MANAGEMENT PLAN**

Objectives:	<ul style="list-style-type: none"> <li>➤ To minimize the adverse impact to air quality caused by stack gas emission from generator and also dust management generated from vehicular movement.</li> <li>➤ To comply with relevant government rules</li> </ul>
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Relevant government law and rule	<ul style="list-style-type: none"> <li>➤ National Environmental Quality (Emission) Guidelines (2015)</li> <li>➤ Vehicle Safety and Motor Vehicle Management Law (2020)</li> </ul>	
Time Frame	<ul style="list-style-type: none"> <li>➤ Entire life spans of the factory operation</li> </ul>	
Management Action	<ul style="list-style-type: none"> <li>➤ Must be plant around the proposed project to reduce carbon emission</li> <li>➤ Should be prohibited burning of waste material at the proposed project site</li> <li>➤ Must be control air pollution, the vehicles, generators and machineries have to check and maintain regularly.</li> <li>➤ The factory should use chimney for generator through which the flue gas is emitted for reducing the impact of stack emission on environment.</li> <li>➤ Must be ensuring vehicles, compressor and generator are well maintained.</li> </ul>	
Monitoring & Reporting	Frequency	Once in every six months
	Monitoring Point	Outdoor and Indoor of proposed project
	Parameters	PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub>
Estimated cost	1,500,000 Kyats per year	
Responsibility	Management of the factory; <ul style="list-style-type: none"> <li>➤ Head of maintenance -Total implementation of above of air pollution management plan</li> <li>➤ Production manager -Air quality in the production area is good enough</li> <li>➤ Manager -To hire organization/independent third-party testing air quality</li> <li>➤ EHS officer-Monitor the hygiene of ambient air quality in surrounding of the factory</li> </ul>	

### 6.3. WATER CONSUMPTION MANAGEMENT PLAN

Objectives:	<ul style="list-style-type: none"> <li>➤ The water consumption management is aimed at minimizing ground water use</li> </ul>	
Performance Indicator:	<ul style="list-style-type: none"> <li>➤ Prohibitions on accessing and using underground water without a license</li> <li>➤ Water consumption saving of general water use from groundwater</li> </ul>	
Relevant government law and rule	<ul style="list-style-type: none"> <li>➤ The Underground Water Act (1930)</li> </ul>	
Management Plan	<ul style="list-style-type: none"> <li>➤ Install water meter for internal control of water consumption</li> <li>➤ All staff trains and makes aware conservation practices and proper methods of water use must be place in toilets and other areas of water consumption</li> <li>➤ The contamination of water is avoided by suitable management of oil and fuel used in machineries and vehicles</li> <li>➤ Trees plantation surrounding the factory</li> </ul>	
Monitoring & Reporting	<ul style="list-style-type: none"> <li>➤ Daily visual inspections</li> </ul>	
Time Frame	<ul style="list-style-type: none"> <li>➤ Once in a year throughout the factory life</li> </ul>	
Estimated cost	<ul style="list-style-type: none"> <li>➤ Approximately 500,000 kyats (annually)</li> </ul>	
Responsibility	Manager <ul style="list-style-type: none"> <li>➤ Arrange audit on water usage controls environmental officer</li> </ul>	



#### 6.4. NOISE MANAGEMENT PLAN

Objectives:	<ul style="list-style-type: none"> <li>➤ To avoid nuisance noise to nearby residents generated from generator and other machineries.</li> <li>➤ To comply with noise standard of National Environmental Quality (Emission) Guideline</li> </ul>	
Relevant government law and rule	<ul style="list-style-type: none"> <li>➤ National Environmental Quality (Emission) Guidelines (2015)</li> </ul>	
Time Frame	<ul style="list-style-type: none"> <li>➤ Throughout the project life</li> </ul>	
Management Plan	<ul style="list-style-type: none"> <li>➤ Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment</li> <li>➤ Impose speed limit to track and vehicles at the transportation route.</li> <li>➤ Provide sufficient personal protective equipment (PPE) at the work place</li> <li>➤ All the related personnel will be provided proper training about the relevant issues and ensure PPE wear during working in noisy area.</li> </ul>	
Monitoring & Reporting	Frequency	Once in every six months
	Monitoring Point	Two points in operation area (especially cutting and sewing)
	Parameters	Sound Decibel
Estimated cost	500,000 Kyats per year	
Responsibility	HSE Manager or Environmental Management Team of Zhongze Bags Industry Company Limited	

#### 6.5. SOLID WASTE MANAGEMENT PLAN

Objectives:	<ul style="list-style-type: none"> <li>➤ To minimize waste generation by developing strategies for the management and disposal of all waste in a manner that is sustainable and sensitive to the environment</li> <li>➤ To comply government waste management policy</li> </ul>	
Relevant government law and rule	<ul style="list-style-type: none"> <li>➤ Yangon City Development Committee Law (2018), National Waste Management Strategy and Action Plan (Draft 2018)</li> </ul>	
Time Frame	<ul style="list-style-type: none"> <li>➤ Entire life spans of the factory operation</li> </ul>	
Management Plan	<ul style="list-style-type: none"> <li>➤ Must be provides separate garbage bins at each building.</li> <li>➤ All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area</li> <li>➤ Final wastes should be disposed by using YCDC's service.</li> </ul>	
Monitoring & Reporting	<ul style="list-style-type: none"> <li>➤ Daily wastes have to be collected and hand over to YCDC waste collector</li> <li>➤ The inventory record of waste disposal will be maintained as proof for proper management as designed</li> </ul>	
Estimated cost	50,000 Kyats per month	
Responsibility	Manager (HR)	

	<ul style="list-style-type: none"> <li>➤ Responsible for overall site cleanliness and waste management</li> <li>➤ Regular waste collection to minimize excessive waste storage</li> </ul>
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### 6.6. WASTEWATER MANAGEMENT PLAN

Objectives:	➤ To implementation plan for the management of liquid waste from collection, through treatment and resource recovery, to residual disposal	
Relevant government law and rule	➤ Yangon City Development Committee Law (2018), National Environmental Quality (Emission) Guidelines (2015), Underground Water Act	
Time Frame	➤ Entire life spans of the factory operation	
Management Plan	➤ Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.	
Monitoring & Reporting	Frequency	Once in every six months
	Parameters	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate
	Proper maintenance of drainage and sewerage system will be conducted periodically	
Estimated cost	800,000 Kyats per year	
Responsibility	Manager -To hire organization/independent third-party testing wastewater quality EHS officer-Monitor the condition of factory's drainage and sewerage system	

### 6.7. HAZARDOUS WASTE MANAGEMENT PLAN

Objective	To avoid environmental pollution and adverse health effects due to its improper handling & disposal.	
Relevant Government Law and Rule	Yangon City Development Committee Law (2018), Explosive Ordnance Disposal Law (2018)	
Time Frame	Entire life spans of proposed project	
Management Action	<p>Proper inspection and maintenance in storage of hazardous waste.</p> <p>Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements.</p> <p>The empty chemical containers will hand over to suppliers for recycle or appropriate disposal</p> <p>The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty (e.g. DOWA and YCDC)</p>	
Monitoring and Reporting	Any hazardous materials purchased should include a Material Safety Data Sheet (MSDS), otherwise known as a Safety Data Sheet (SDS) or Product Safety Data Sheet (PSDS). By mandate of the World Health Organization's Inter-Organization Program for the Sound Management of Chemicals (IOMC), all manufacturers of hazardous materials are required to provide a MSDS so that end users can treat the materials properly.	
Estimated Cost	500,000 Kyats per year	
Responsible Person	HSE Manager or Environmental Management Team of Zhongze Bags Industry Company Limited	

### 6.8. FIRE MANAGEMENT PLAN

Objectives:	<ul style="list-style-type: none"> <li>➤ To ensure that fire control practices are implemented on site to minimise the risk of fire from site operations and bush fires</li> </ul>
Relevant government law and rule	<ul style="list-style-type: none"> <li>➤ Myanmar Fire Brigade Law 2015</li> </ul>
Time Frame	<ul style="list-style-type: none"> <li>➤ Entire life spans of proposed project operation</li> </ul>
Management Plan	<ul style="list-style-type: none"> <li>➤ Must be provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases.</li> <li>➤ Must be indicated the emergency exit and assembly point in public area.</li> <li>➤ Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening.</li> <li>➤ The emergency fire alarms are installed at the factory for alerting the workers in case of fire.</li> <li>➤ The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases.</li> </ul>
Monitoring & Reporting	To check monthly Visual inspection, Firefighting equipment (fire extinguish, firefighting hose, portable fire pumps, fire hose reels, fire monitor and firefighting nozzles)
Estimated cost	1,200,000 Kyats per year
Responsibility	HSE Manager, Operation Manager or Environmental Management Team of Zhongze Bags Industry Company Limited

### 6.9. ENERGY MANAGEMENT PLAN

Objectives:	<ul style="list-style-type: none"> <li>➤ To improve energy efficiency, reduce cost, optimize capital investment, reduce environmental and greenhouse gas emissions, and conserve natural resources</li> </ul>
Relevant government law and rule	<ul style="list-style-type: none"> <li>➤ National Energy Management Committee (Myanmar Energy Master Plan 2015)</li> </ul>
Time Frame	Once in a year throughout the factory life
Management Plan	<ul style="list-style-type: none"> <li>➤ Installation of timers and thermostats to control heating and cooling</li> <li>➤ Energy saving light installed in different area of the factory for saving energy</li> <li>➤ Used of energy saving devices must be installed</li> <li>➤ Ensure that good housekeeping measures such as turning off equipment and lights when not in use</li> </ul>
Monitoring & Reporting	Conduct annual energy efficiency of adult to find out the scope for energy saving
Estimated cost	Approximately 100,000 Kyats per year
Responsibility	<p>Manager</p> <ul style="list-style-type: none"> <li>➤ To arrange energy audit technical personnel</li> </ul>

	<ul style="list-style-type: none"> <li>➤ To monitor and record electricity consumption, other related energy issues and take necessary actions if any problem arises</li> </ul>
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### 6.10. EMERGENCY RESPONSE AND MANAGEMENT PLAN

Objectives:	<ul style="list-style-type: none"> <li>➤ To reduce the harmful effects of all hazards, including disasters. The World Health Organization defines an emergency as the state in which normal procedures are interrupted, and immediate measures (management) need to be taken to prevent it from becoming a disaster, which is even harder to recover from.</li> </ul>
Relevant government law and rule	<ul style="list-style-type: none"> <li>➤ The Employment and Skill Development Law (August 2013), ILO guide to Myanmar Labour Law (2017)</li> </ul>
Time Frame	<ul style="list-style-type: none"> <li>➤ Entire life spans of the factory operation</li> </ul>
Management Plan	<ul style="list-style-type: none"> <li>➤ The factory management has taken proper measures to handle any emergency situation like fire, earthquake, flood and storm</li> <li>➤ Provision and inspection of firefighting equipment and fire hydrant system in all the sections</li> <li>➤ A detail evaluation plan (fire exist, emergency exit door, etc.) is established and communicated with workers</li> <li>➤ Periodic inspection of safety relief valve provided with pressure vessels and equipment, preventive maintenance; aware the workers about electric shock by necessary training.</li> <li>➤ Regular fire drill operation is conducted</li> <li>➤ Workers are informed about what to do in earthquake like stay in a safe place such as under table of desk, not to try move outside during earthquake, workers who will be outside during earthquake shall remain stay out of the building, trees, lump post, etc. Other relevant safety instruction of emergency situation it informed to workers by training</li> <li>➤ Workers are aware of dangers from physical hazards such as obstacles covered by floodwater (storm debris, drainage opening, ground erosion) and from displaced reptiles (Snake) or other animals.</li> <li>➤ A medical team has been prepared for primary treatment (First Aid)</li> <li>➤ Prepare an emergency contact directory consisting contact numbers of nearest fire service, local police station, hospitals, etc. and display it in a place that everybody can see it easy.</li> <li>➤ Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management</li> <li>➤ Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety</li> </ul>
Monitoring & Reporting	<p>Weekly check fire extinguishers and water hydrant in position</p> <p>Daily inspect that all fire exist are open</p> <p>Servicing fire extinguisher and records accidents,</p>
Estimated cost	Approximately 1,200,000 Kyats per year
Responsibility	Manager and EHS officer

	<ul style="list-style-type: none"> <li>➤ Arrange firefighting training after every 3 months</li> <li>➤ Responsible for fire control and response</li> <li>➤ Monitoring daily danger warning and bans</li> </ul>
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### 6.11. ENVIRONMENTAL MANAGEMENT PLAN FOR DECOMMISSIONING PHASE

The following environmental issues which require environmental management plans for decommissioning phase are as follows:

#### 6.11.1. Air Pollution/ Dust Management Plan

Objective	➤ To comply with relevant government rules
Relevant Government Law and Rule	<ul style="list-style-type: none"> <li>➤ National Environmental Quality (Emission) Guideline 2015,</li> <li>➤ Vehicle Safety and Motor Vehicle Management Law (2020)</li> </ul>
Time Frame	➤ During the decommissioning phase
Management Action	<ul style="list-style-type: none"> <li>➤ Spraying water to prevent dust from spreading into the air while demolishing buildings and transporting materials.</li> <li>➤ Provision of Personal Protective Equipment (PPE) to employees in the workplace.</li> </ul>
Monitoring and Reporting	Frequency                      One time
	Monitoring Point              At the project area
	Parameters                      PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub>
Estimated Cost	800,000 Kyats
Responsibility	Zhongze Bags Industry Company Limited

#### 6.11.2. Noise Management Plan

Objective	➤ To maintain low noise exposures, such that human health and well-being are protected.
Relevant Government Law and Rule	➤ National Environmental Quality (Emission) Guideline 2015
Time Frame	➤ During the decommissioning phase
Management Action	➤ Provision of Personal Protective Equipment (PPE) to employees in the workplace.
Monitoring and Reporting	Frequency                      One time
	Monitoring Point              At the project area

	Parameters	Noise level
Estimated Cost	250,000 Kyats	
Responsibility	Zhongze Bags Industry Company Limited	

### 6.11.3. Solid Waste Management Plan

Objective	➤ To minimize waste generation by developing strategies for the management and disposal of all waste in a manner that is sustainable and sensitive to the environment	
Relevant Government Law and Rule	➤ National Waste Management Strategy and Master Plan (2018-2030)	
Time Frame	➤ During the decommissioning phase	
Management Action	➤ Some of demolished solid wastes will be stored in dedicated waste storage area in the project site and transferred to Township Municipal.	
Monitoring and Reporting	Frequency	One time
	Monitoring Point	At the project area
	Parameters	Solid waste
Estimated Cost	50,000 Kyats	
Responsibility	Zhongze Bags Industry Company Limited	

### 6.11.4. Occupational Safety And Health Management Plan

Objective	➤ To provide a broad framework for improving standards of workplace health and safety to reduce work-related injury and illness.	
Relevant Government Law and Rule	• Public Health Law (1972), Prevention and Control of Communicable Diseases Law 1995 (Amendment 2011), Occupational Safety and Health Law (2019)	
Time Frame	➤ Entire life spans of proposed project	
Management Action	➤ Personal Protective Equipment (PPE) like earmuffs, safety gloves, helmets and goggles are provided. ➤ To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures. ➤ The maximum allowable noise level for workers is 90dB(A) for 8hours exposure a day in OSHA Standard. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas.	

Monitoring and Reporting	<ul style="list-style-type: none"> <li>➤ Weekly check fire extinguishers and water hydrant in position</li> <li>➤ Servicing fire extinguisher and records accidents</li> </ul>
Estimated Cost	500,000 Kyats per year
Responsible Person	HSE Manager, Operation Manager or Environmental Management Team of Zhongze Bags Industry Company Limited

## 6.12. ENVIRONMENTAL MONITORING SCHEDULE AND REPORTING

The EMP cell members responsible may conduct daily, weekly or monthly general inspections of the project area and facilities. The objectives are to identify non-compliances to EMoP. Table 6-2 is provided the environmental monitoring schedule for proposed factory. The factory submits monitoring report to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP,

**Table 6-2 Environmental monitoring schedule for Zhongze Bags Industry Company Limited**

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
<b>Operation Phase</b>					
Air quality	PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub>	Once in every six month	Outdoor of proposed project (16°50'43.66"N 96°17'31.49"E) Indoor of proposed project (16°50'44.5"N 96°17'30.4"E)	1,500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Noise quality	Noise level in decibel (dBA)	Once in every six month	Two points in production area (Sewing Area - 16°50'44.53"N 96°17'29.55"E) (Cutting Area - 16°50'44.66"N 96°17'28.14"E)	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Solid Waste Generation	-	Weekly	Recycle house and waste house and at the factory office	50,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Liquid Waste Generation	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese,	Once in every six months	Sewage and drainage (Wastewater treatment System -	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry



Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
	COD, BOD, Cyanide, Copper, Zinc, Carbonate		16°50'45.19"N 96°17'28.14"E)		Company Limited
Hazardous Waste Generation	-	Weekly	Recycle house and temporary storage area at the factory office	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	The whole factory (16°50'44.5"N 96°17'29.6"E)	500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Light intensity	Illuminance	Monthly	At the production line (Cutting area - 16°50'44.66"N 96°17'28.14"E) (Quality Control - 16°50'44.45"N 96°17'30.53"E)	20,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
Crisis Situation and Occupational Safety and Health	Loss of property and injuries	Monthly	The whole factory (16°50'44.5"N 96°17'29.6"E)	1,500,000 Kyats	Environmental Management Team's Zhongze Bags Industry Company Limited
<b>Decommissioning Phase</b>					
Air quality	PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub>	One time during this phase	One point in the production area	1,000,000 Kyats	Project Proponent
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	1,000,000 Kyats	Project Proponent
Solid Waste	-	One time during this phase	Temporary waste storage area	500,000 Kyats	Project Proponent

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
Liquid Waste	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate	One time during this phase	Wastewater Treatment System	300,000 Kyats	Project Proponent
Ground Water	pH, Turbidity, Total Solids, Chloride, Hardness, Free cyanide, Arsenic, Copper, Iron, Lead, Manganese, Zinc	One time after this phase	Tube well	200,000 Kyats	Project Proponent
Occupational Health and Safety	-	During this phase	All decommissioning area	500,000 Kyats	Project Proponent
Rehabilitation	Recovering and Revegetation	After this phase	All decommissioning area	500,000 Kyats	Project Proponent

### 6.13. BUDGET PLAN FOR ENVIRONMENTAL MANAGEMENT AND MONITORING

This section describes the budget plans for the environmental management and environmental monitoring by the project proponent. On the other hand, Zhongze Bags Industry Co., Ltd. will take necessary environmental mitigation measures and its expenses for the environmental management not only at the construction and operation phases but also at the closing phase in accordance with their responsibility for the studies of recommendation.

The following table shows the expenditures for the implementation of Environmental Management Plan for operation phase annually. Estimation cost for EMP & EMoP implementation is presented in Table 6-3.

**Table 6-3 Cost Estimation for EMP and Monitoring**

No	Item	Frequency/Times	Estimate Cost (MMK)
<b>Mitigation Plan</b>			
1	Maintenance of wastewater treatment system	Annually	800,000 per year
2	Tree plantation within the area of factory compound	Annually	200,000 per year
3	Solid waste disposal	Monthly	80,000 per month

No	Item	Frequency/Times	Estimate Cost (MMK)	
4	Purchase of Personal Protective Equipment (PPE)	Biannually	300,000 per year	
5	Medical Check-up and Health Insurances	Annually	2,500,000 per year	
<b>Emergency Preparedness</b>				
1	Fire Extinguisher	Biannually	800,000 per year	
2	Fire Alarm System	Annually		
3	First Aid Kits	Biannually		
<b>Monitoring Plan</b>				
1	Air Quality	Every six months	1,500,000 per year	
2	Water Quality (Wastewater)	Every six months	500,000 per year	
3	Noise level	Every six months	500,000 per year	
4	Waste generation	Solid	Monthly	50,000 per month
		Liquid	Weekly	25,000 per month
		Hazardous	Monthly	500,000 per year
5	Occupational health and safety	Monthly	800,000 per year	
6	Environmental compliance auditing	One time	600,000 lump Sum	

#### 6.14. CAPACITY BUILDING AND TRAINING PLAN

The emergency preparedness is vital, as quick and correct response is necessary in case of emergency to reduce injuries, harm and other damage. Care should be given for during processing activities in order to prevent synthetic errors and accidental cases (e.g., electricity shock and fire hazards).

The emergency response plans should be established for handling all foreseeable emergencies in the workplace and must provide the following;

##### 6.14.1. Assignment of Responsibilities

All senior staff such as a line/production manager or safety officer should be assigned to lead the emergency response team and charged with the duties of (1) assessing the emergency and taking necessary actions (2) overseeing the implementation of the emergency response plan (3) organizing regular drill (4) ensuring all emergency equipment is well maintained.

##### 6.14.2. Emergency Procedures

Emergency procedures are operating instructions for employees to follow in emergency case

About work safety in the concerned processing, the management team should

- (a) Identify and list out all possible emergency situations in the workplace
- (b) Assess the effects and impacts of the emergency situations
- (c) Establish emergency response plans
- (d) Provide and maintain emergency equipment and other necessary resources
- (e) Ensure that staff are familiarized with the arrangements in case of emergencies by providing procedural instructions and employee training and organizing drills

### 6.14.3. Training for Emergencies

The type, amount and frequency of training varies, depending upon the task's employees are expected to perform. Although training must be provided to employees at least annually, safety meetings and drills should be conducted at more frequent intervals.

Regardless of the specific type of facility, training should include, though not be limited to the following;

- ✚ Hazard recognition and prevention (fire, explosion, etc.)
- ✚ Proper use of fire extinguishers
- ✚ Emergency reporting procedures
- ✚ Preventive maintenance
- ✚ Hazardous materials spill response
- ✚ First Aid

### 6.14.4. Fire Prevention and Protection

The fire prevention and protection program must address the following topics:

**Prevention;** policies, practices and procedures designed to keep the conditions necessary for a fire from coming together

- Hot work permits
- Lockout/tag out policies
- Design specifications for storage of flammable materials

**Severity reduction;** policies, practices and procedures designed to reduce the spread of fire and end the fire.

- Emergency plans
- Alarm systems
- Portable fire extinguishers
- Fire Protection Equipment

**Cleanup;** policies, practices and procedures designed to return the affected area to an operational level and reduce other losses created by improper cleanup

- First aid
- Removal of debris to an appropriate waste site
- Equipment and facility repair

### 6.14.5. Fire Protection Equipment

1. Explosion Suppression Systems: Explosion suppression systems should be used in unusually hazardous areas such as elevator legs, boots and head, or in areas such as bins, distributors and tanks.
2. Portable Fire Extinguishers: All buildings within a facility must have fully charged and operable portable fire extinguishers. If employees are expected to use portable extinguishers or other firefighting equipment against incipient fires, they must be trained to use the equipment. Training must include the following:
  - Correct type of extinguisher to use on different classes of fire
  - Proper techniques for use of the equipment to extinguish a fire

3. Standpipes and Hoses: All areas within a facility that are above 75 feet from ground level and in which combustible materials other than grain are stored should have wet or dry standpipes and hoses installed.
4. Automatic Sprinkler Systems: Automatic sprinkler systems are recommended in areas containing combustible materials.
5. Fire Hydrants: All grain and feed mill facilities should have adequate public or private fire hydrants on site. Each fire hydrant should have an adequate water supply.

#### 6.14.6. Fire Safety and Evacuation Plan

Fire Evacuation plans should include the following information

- o Emergency escape routes must be clearly shown on floor plans and workplace maps
- o Employers must know that their employees know the emergency escape routes
- o Procedures for employees who must remain to operate critical equipment before evacuating
- o Identification and assignment of personnel responsible for rescue or emergency medical aid

Fire Safety Plans should include the following information:

1. Procedure for reporting a fire or other emergency
2. Site plans indicating the following
  - The Occupancy assembly point
  - The locations of fire hydrants
  - The normal routes of fire department vehicles access
3. Floor Plans identifying the locations of the following
  - Exits
  - Primary evacuation routes
  - Secondary evacuation routes
  - Accessible egress routes
  - Areas of refuge
  - Exterior area for assisted rescue
  - Manual fire alarm boxes
  - Portable fire extinguishers
  - Occupant-use hose stations
  - Fire alarm annunciators and controls

The following American National Fire Fighting Association (NFFA) Standards must be following.

**Table 6-4 American National Fire Fighting Association (NFFA) Standards**

No.	Parameters	Proposed Capacity	Remark
1.	Fire water flow	14 bars	-
2.	Deluging rate	12.0 liters/m <sup>2</sup> /min	-
3.	Foam rate	10.0 liters/m <sup>2</sup> /min	-
4.	Maximum water pressure	190 liters/min	For storage area

**Emergency evacuation Drill:** An exercise performed to train staff and occupants and to evaluate their efficiency and effectiveness in carrying out emergency evacuation procedures

**Employee Training and Response Procedures:** Employee shall be trained in the fire emergency procedure described in their fire evacuation and fire safety plans and training should be based on these plans;

**Frequency:** Employee shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation and at least annually thereafter. Records shall be kept and made available to the fire code official upon request.

**Employee Training Program:** Employee shall be trained in fire prevention, evacuation and fire safety in accordance with the following sections.

**Fire Prevention Training -** Employee shall be apprised of the fire hazards of the materials and processes to which they are exposed. Each employee shall be instructed in the proper procedures for preventing fires in the conduct of their assigned duties

**Evacuation Training –** Employees shall be familiarized with the fire alarm and evacuation signals, their assigned duties in the event of an alarm or emergency, evacuation routes, areas of refuge, exterior assembly areas and procedures for evacuation

**Fire Safety Training –** Employee assigned fire-fighting duties shall be trained to know the locations and proper use of portable fire extinguishers or other manual fire-fighting equipment and the protective clothing or equipment required for its safe and proper use.

#### 6.14.7. Site Fire Control

1. Alert other people through fire alarm
2. If small, control using an extinguisher
3. Contact fire brigade if not under immediate control
4. Attend to human life in immediate danger
5. For electrical fires turn off power before fighting
6. Once out of the building, stay out. Do not allow people to go back into the burning building to collect valuables. While evacuating the building, close doors (but do not lock) to slow down the spread of fire
7. Obey all instructions
8. Proceed to an emergency evacuation area (Muster Point)

#### 6.14.8. Employee Information and Training

Employees must be informed about any operations in their work area where hazardous chemicals or materials are present. They must also be informed about the locations and availability of the hazard communication program, list of chemicals and SDSs. Employees must receive training on the following:

- Methods for detecting the presence or release of a hazardous chemical, such as monitoring devices and the visual
- appearance or odor of the chemical
- Physical and health hazards of chemicals in their work area
- How to protect themselves using work practices, emergency procedures and personal protective equipment

- How to interpret the information on the labels and MSDS of chemical materials

#### 6.14.9. Health and Safety Training Plan for Worker

Health and Safety Training plan currently used and provided in Zhongze Bags Industry Company Limited to all employees and workers by trainings internally and externally. Specific trainings are recommended and conducted according to the health and safety guidelines to enhance worker's health and to prevent all potential risks and hazards might occur in the factory. All required trainings related to health and the respective departments propose safety or operational parts, top management makes decision and HR organizes and conducts the trainings.

**Table 6-5 Training Plan Used in Zhongze Bags Industry Company Limited**

No.	Health and Safety Guidelines	Training needs
1.	Management	General fire and emergency response plan, evacuation. All training materials and procedures covering health and safety for workers and employees
2.	Machine safety and noise management	Training for machine operations to all operators Use of PPE and proper use of any necessary protection Maintenance and Emergency procedures
3.	Environment safety	Understanding and training on recognition and maintenance not to affect environment
4.	Material storage and safety	Safety use of related devices and machines Use of necessary protections in working areas Sanitation work
5.	Fire Safety	Firefighting and evacuating training and practices Firefighting materials/ devices use
6.	First Aid	first aid / CPR/ AED training from providers (Outsource) training on hazard of pathogens

#### 6.14.10. Emergency Contact Number of Dagon Seik Kan Township

Zhongze Bags Industry Company Limited is located at Dagon Seik Kan Township. The Emergency contact number of Dagon Seik Kan Township is presented in Table 6-6

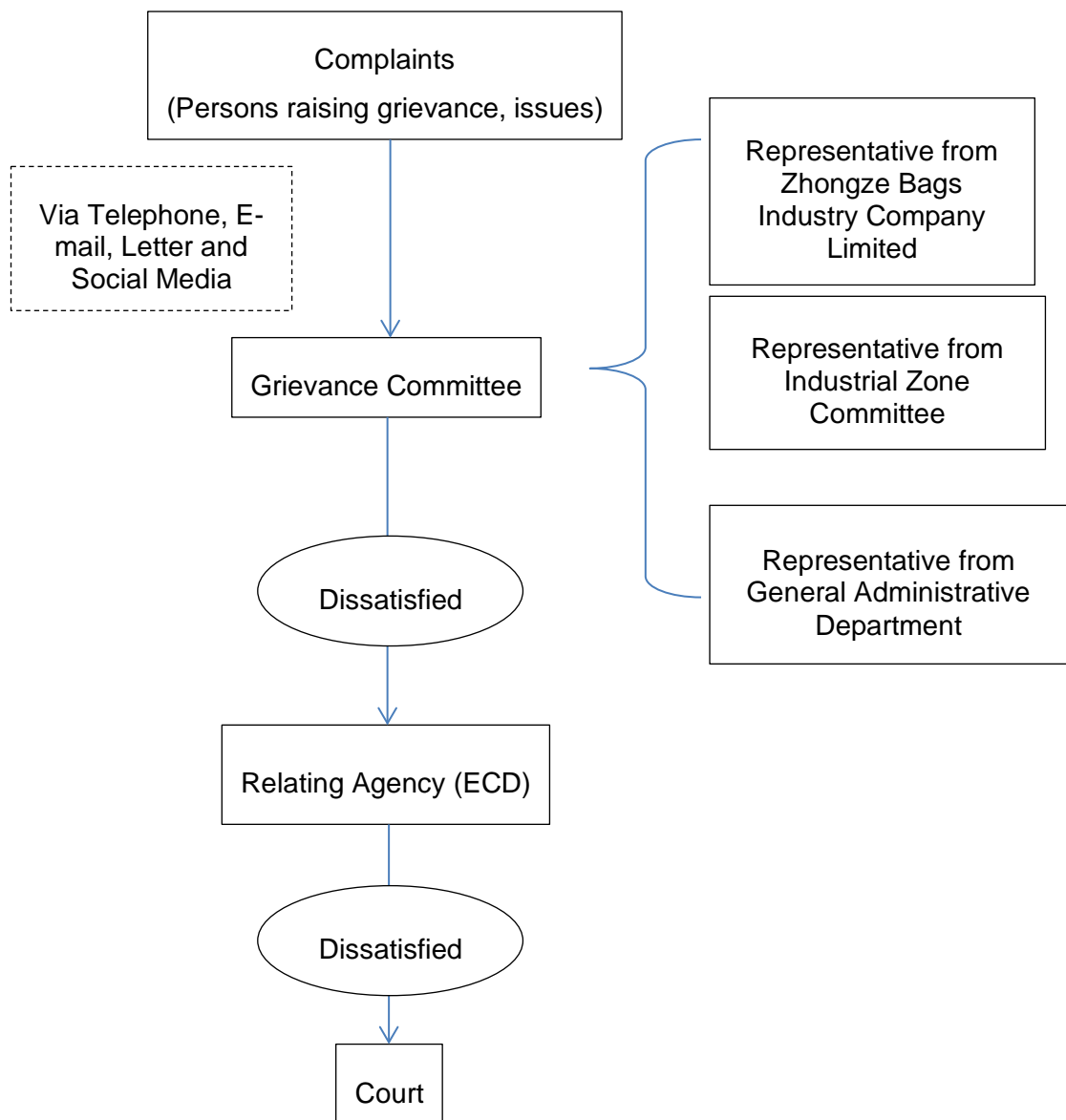
**Table 6-6 Emergency Contact Number**

Dagon Seik Kan Fire Station	09-73175954
Dagon Seik Kan Hospital	01-373254, 01-245358
Dagon Seik Kan Police Station	01-593472

### 6.15. GRIEVANCE REDRESS MECHANISM (GRM)

People who live near the project affected area or stakeholders can complain about the problems and impacts that they suffer; they can complain through Grievance Committee, which includes the responsible persons of Zhongze Bags Industry Company Limited representative from Dagon Seik Kan Industrial Zone and representative from General Administration Department (Dagon Seik Kan Township). Small issues will be solved at the Grievance Committee stage and other unsolved problems will be submitted to higher responsible authorities and finally the responsible

person decided by the court in legal terms. The following diagram (Figure 6-3) show steps of Grievance Redress Mechanism of Proposed Factory Project.



**Figure 6-3 Grievance Redress Mechanism Flow Diagram**

### 6.16. CORPORATE SOCIAL RESPONSIBILITY (CSR) PLAN

The CSR activities have the objective to uplift quality of life and gain favorable relations from all communities in the operation area. The CSR program for Zhongze Bags Industry Company Limited consists of three main sectors; Health, Education and Community Development Sector. CSR activities are conducted in compliance with MIC’s guideline for implementation of CSR program.

Zhongze Bags Industry Company Limited will contribute 2% of our Net Profit to social welfare activities that will help society and country of Myanmar. Our social welfare activities shall include training of our employees such as on job training to be more qualified, language (Chinese) training on weekends with experienced teachers and providing necessary healthcare such as medical checkups and giving proper medical knowledge about deceases and its prevention. Part of our CSR activity such as donations will also contribute to public school around our factory.



**Table 6-7 CSR Plan at Zhongze Bags Industry Company Limited**

<b>No</b>	<b>Particle</b>	<b>Contribution</b>	<b>Estimate Amount (MMK)</b>
1	Public school	0.5%	2,500,000
2	Non-profit training	1	5,000,000
3	Employees healthcare	0.5%	2,500,000

**6.16.1. Public School**

We will contribute 0.5% of our net profit to the public school near the factory to be a part of creating the better community. We will also work together with the school to understand more about the needs and we will also ensure that our contributions will be used in the most effective and efficient way for the society.

**6.16.2. Non-profit Training**

We will contribute 1% of our net profit for the trainings of our Employees. Our trainings include job-related trainings, language trainings and safety trainings. The main objective of our trainings are that we want our bags with their work but also improving their other skills such as language and promoting knowledge about safety measures and occupational health employees to be not only become more productive and more qualified.

**6.16.3. Healthcare**

One of our main concern is the well-being of our employees. We will contribute 0.5% of our net profit for the healthcare, which includes medical checkup for the employees and providing health education to our workers.

## 7. PUBLIC CONSULTATION AND DISCLOSURE

### 7.1. PUBLIC CONSULTATION PROCESS

This chapter presents results of public consultation and information disclosure conducted for the Zhongze Bags Industry factory. Public participation can be considered as the required element of the EMP process. In this study various stakeholders' participation were made.

Public consultation during preparation of EMP report was conducted on January 28, 2020 following the EIA procedure.

The project's stakeholders in this category are key officials or representatives of the regional and local authorities who have direct responsibilities for the administration of the EMP process for environmental and social clearance and issuing operation permits for proposed development projects.

For this factory, relevant key offices at the national level are Environmental Conservation Department (ECD) and Industry Supervision and Inspection Department.

Relevant key office at the regional level is Yangon City Development Committee (YCDC), General Administrative Department, Fire Department, Factories and General Labor Law Inspection Department, Public Health Department, Industrial Supervision and Inspection Department.

Public consultation carried out after the presentation on the project, followed by questions, answers and discussion. U Si Yan Hein presented EMP study and findings from Myanwei, after the presentation following questions and answer section. Summary of public consultation meeting is presented Table 7-1 Is shown the consultation meeting photo. **(PCM presentation power point slide are described in Appendix)**

**Table 7-1 Summary of public consultation meeting**

Time and Date	January 28, 2020  10:30-12:30
Venue	Industrial Zone Committee, Ka Naung Hall, Dagon Seikkan Township, Yangon.
Agenda	<ul style="list-style-type: none"> <li>• Presentation on the Background Information of Project,</li> <li>• Project Description,</li> <li>• Impact Assessment, Environmental Mitigation</li> <li>• Environmental Management Plan and Monitoring Plan</li> <li>• Site survey and performances of Zhongze Bags Industry factory</li> <li>• Received and Answer from feedback of participants</li> </ul>



Figure 7-1 Public consultation meeting photo

## 7.2. RECOMMEND SUGGESTION AND COMMENT

After the presentation, the floor opened for questions and answers. There is no suggestion and comment for presentation and EMP draft report, because the project is sample manufacturing of various bags on CMP Basis. In addition,

Suggestion; U Kyaw Kyaw; Township Development Committee

- To compliance with YCDC procedure for solid waste management and disposed process
- To implement the sufficient septic tank design for workers

Daw Thet Wai Hnin, Environmental Conservation Department;

- To control the dust emission form the fabric cutting line and other dust emission area
- To describe the mitigation plan of dust emission level in the report
- To describe the monitoring plan of air quality and detail parameter in the report

Suggestion; U Aung Myint Oo; YCDC

- To provide the waste tank for waste water and some used oils
- To plant the some plants in this factory and
- To make when they wasted at that time to get a bail

## **8. CONCLUSION AND RECOMMENDATION**

### **8.1. CONCLUSION**

IEE has been prepared for Zhongze Bags Industry Company Limited is located at Land Plot No. 142, Myay Taing Block No. Industrial Zone (2), Dagon Myo Thit (Seik Kan) Township, Yangon Region. The main objective of the study is focused specially on the required environmental management measures or creating environmentally friendly workplace. An IEE has been carried out for the factory according to the requirement of the proponent as it has been made for luggage and bags production factory.

Thus, the factory management can take proper mitigation steps against adverse environmental impacts by following this IEE. The necessary measure to mitigate impact regarding different environmental parameter such as air, water, waste, noise has been proposed in this IEE.

However, all necessary implementation measures to mitigate adverse environmental, health and safety impacts have already been taken to meet National Environmental Quality (Emission) Guideline (2015). On the other, the factory has positive impacts in terms of environmental in the operation phase. Further, this will indirectly help in boosting up the national economic condition through foreign investment. An outline of IEE has been given in the present report to mitigate/enhance the impacts, which occurs during operation phase of the factory.

The effective implementation of the mitigation measures proposed will ensure towards good environmental management within the proposed project area. Furthermore, the environmental monitoring plan prepared as part of the EMP will provide adequate opportunities to address any residual impacts during the operation phase.

In conclusion, it has been figured out that, the proposed bags factory is going to generate local employment opportunities and enhance capabilities and working skills of employees. Consequently, their socio-economic standard is expected to be improved and undertaking corporate social responsibilities (CSR) as recommended. The study further concluded that positive impacts would be of immense benefit to the local community and national development as well.

### **8.2. RECOMMENDATION**

This is recommended that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory
- Solid wastes and liquid wastes need to dispose according to YCDC rules and regulation
- Workers should be provided proper training and it should be ensured that workers use PPE during factory operation area.
- Daily, monthly and annual action plan shall be formulated based on this EMP (Chapter 8) and practiced at operation level.

- Keep full records of environmental management activities and present to annual independent third party environment audit.
- Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

Finally, the proponent should follow the comments and suggestions made by ECD after reviewing this IEE report. Once concerned authorities approve IEE report, effective implementation of IEE by the project proponent is essential. The proponent should abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.



## APPENDIX A

### Zhongze Bags Industry Company Limited's YRIC Endorsement



THE REPUBLIC OF THE UNION OF MYANMAR  
YANGON REGION INVESTMENT COMMITTEE  
ENDORSEMENT



Endorsement No. YGN -162/2019

Date 21 February 2019

This endorsement is issued by Yangon Region Investment Committee according to the section 25, sub-section (d) of the Myanmar Investment Law-

- (1) Name of Investor MR.LAI ZHENJIAN
- (2) Citizenship CHINESE
- (3) Residence Address UNIT 601, BUILDING 5, XIANGYANG NEW CITY, GUANGCHANG COUNTY, FUZHOU CITY, JIANGXI PROVINCE, PEOPLE'S REPUBLIC OF CHINA.
- (4) Name and Address of Principle Organization MAYSUN INTERNATIONAL ENTERPRISE LIMITED, ROOM 2105 TREND CTR 29-31, CHEUNG LEE STREET, CHAI WAN, HONG KONG.
- (5) Place of Incorporation HONG KONG
- (6) Type of business MANUFACTURING OF VARIOUS KINDS OF BAGS ON CMP BASIS
- (7) Place(s) of investment Project PLOT NO. 142, MYAY TAING BLOCK NO.INDUSTRIAL ZONE (2),DAGON MYO THIT (SEIK KAN) TOWNSHIP, YANGON REGION.
- (8) Amount of Foreign Capital US\$ 2.635 MILLION
- (9) Period for Foreign Capital to be brought in WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF ENDORSEMENT
- (10) Total Amount of Capital (Kyat) EQUIVALENT IN KYAT OF US\$ 2.635 MILLION
- (11) Construction/ Preparation Period ONE YEAR
- (12) Validity of Endorsement 28 YEARS
- (13) Form of Investment WHOLLY FOREIGN OWNED
- (14) Name of Company Incorporated in Myanmar ZHONGZE BAGS INDUSTRY COMPANY LIMITED



YRIC162/2019

*CF*  
21/2/2019  
(Phyo Min Thein)  
Chairman



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်  
ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီ  
အတည်ပြုမိန့်

အတည်ပြုမိန့်အမှတ် ရကတ-၁၆၂/၂၀၁၉ ၂၀၁၉ ခုနှစ် ဖေဖော်ဝါရီလ ၂၁ ရက်  
ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှု ကော်မတီသည် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ဥပဒေ  
ပုဒ်မ-၂၅ ပုဒ်မခွဲ (ဃ) အရ ဤအတည်ပြုမိန့်ကိုထုတ်ပေးလိုက်သည် -

- (၁) ရင်းနှီးမြှုပ်နှံသူအမည် MR.LAI ZHENJIAN
- (၂) နိုင်ငံသား CHINESE
- (၃) နေရပ်လိပ်စာ UNIT 601, BUILDING 5, XIANGYANG NEW CITY, GUANGCHANG COUNTY, FUZHOU CITY, JIANGXI PROVINCE, PEOPLE'S REPUBLIC OF CHINA.
- (၄) ပင်မအဖွဲ့အစည်းအမည်နှင့်လိပ်စာ MAYSUN INTERNATIONAL ENTERPRISE LIMITED, ROOM 2105 TREND CTR 29-31, CHEUNG LEE STREET, CHAI WAN, HONG KONG.
- (၅) ဖွဲ့စည်းရာအရပ် HONG KONG
- (၆) ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား CMP စနစ်ဖြင့် အိတ်အမျိုးမျိုး ထုတ်လုပ်ခြင်း လုပ်ငန်း
- (၇) ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ)မြေကွက်အမှတ် ၁၄၂၊ မြေတိုင်းရပ်ကွက်အမှတ် စက်မှုဇုန်(၂)၊ ဒဂုံမြို့သစ်(ဆိပ်ကမ်း)မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး
- (၈) နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ အမေရိကန်ဒေါ်လာ ၂.၆၃၅ သန်း
- (၉) နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ အတည်ပြုမိန့် ရရှိသည့် နေ့မှ ၁ နှစ်အတွင်း
- (၁၀) စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) အမေရိကန်ဒေါ်လာ ၂.၆၃၅ သန်း နှင့် ညီမျှသော မြန်မာကျပ်ငွေ
- (၁၁) တည်ဆောက်မှု/ ပြင်ဆင်မှုကာလ ၁ နှစ်
- (၁၂) အတည်ပြုမိန့်သက်တမ်း ၂၈ နှစ်
- (၁၃) ရင်းနှီးမြှုပ်နှံမှုပုံစံ ရာခိုင်နှုန်းပြည့် နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု
- (၁၄) မြန်မာနိုင်ငံတွင် ဖွဲ့စည်းမည့် ကုမ္ပဏီအမည် ZHONGZE BAGS INDUSTRY COMPANY LIMITED



*(Handwritten signature)*  
(ဖြိုးမင်းသိန်း)  
ဥက္ကဋ္ဌ





Myanmar Investment Commission

Date:.....

Subject: **Submit the Commencement Date of Commercial Operation to the Commission**

1. We have been notified that the commercial operation shall commence 30 days after the end of the investment construction period or investment preparation period in accordance with Myanmar Investment Rule 145. In accordance with rule 146 of Myanmar Investment Rules, the commencement date of commercial operation of any manufacturing or service business is determined as follow:

- (a) the date specified on the documents used in bill of loading or air consignment note or similar documents used in international trade for the export of manufacturing business, such date shall not exceed 180 days from the date of completion of the construction period;
- (b) the date of the income first-derived from the local sales of the manufacturing business and the date on which the services business commence, such date shall not exceed 90 days from the date of completion of the construction period.

2. We are advised that if we fail to submit the period mentioned above, we understand and accept that Myanmar Investment Commission will fix the date of commercial operation by its own discretion.

*Lai Zhenjian*

Signature of Investor

Name..... *Mr. Lai Zhenjian* .....

Designation..... *Managing Director* .....

Department/Company Name..... *Zhongze Bags Industry Co., Ltd.* .....

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THE REPUBLIC OF THE UNION OF MYANMAR  
YANGON REGION INVESTMENT COMMITTEE

Plot No. 49, Seinlae May Street,  
Kabar Aye Pagoda Road, Yankin Township, Yangon



Tel: 01-658263

Our ref : YRIC -1 /E-162 /2019( )

Fax: 01-658264

Date : 21 February 2019

**Subject: Decision of the Yangon Region Investment Committee on the Endorsement for manufacturing of various kinds of bags on CMP basis under the name ZhongZe Bags Industry Company Limited**

Reference: ZhongZe Bags Industry Company Limited's letter dated 11<sup>th</sup> February 2019

1. The Yangon Region Investment Committee, at its meeting (3/2019) held on 13<sup>th</sup> February 2019, approved the Endorsement for investment in manufacturing of various kinds of bags on CMP basis under the name of ZhongZe Bags Industry Company Limited submitted by Maysun International Enterprise Limited (100%) from Hong Kong as a wholly foreign owned investment in accordance with the Myanmar Investment Law and Rules.

2. The terms and conditions of the Endorsement are stated in the following paragraphs:

- (a) The term of an Endorsed project shall be twenty-eight (28) years commencing from the date of the issuance of the Endorsement by the Yangon Region Investment Committee.
- (b) The term of the Lease Agreement for land and buildings shall be initially eight (8) years and extendable for two times for ten(10) years commencing from the date of signing of the Lease Agreement between U Soe Naing and Daw May Thet Khaing @ Ma Pan Sein (Lessors) and ZhongZe Bags Industry Company Limited (Lessee).
- (c) The annual rent for the land and buildings shall be Kyats 204 million (Kyats Two Hundred and Four million only) calculated

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at the rate of Kyats 27248.4 per square meter per year measuring total area of 7486.684 square meters (1.85 acres).

- (d) ZhongZe Bags Industry Company Limited which has obtained the Endorsement for enjoyment of exemptions and reliefs under sections 75,77 and 78 of the Chapter XVIII of Myanmar Investment Law, may submit the application form.
- (e) ZhongZe Bags Industry Company Limited shall use its best efforts to achieve a timely realization of the work stated in the Endorsement application.
- (f) ZhongZe Bags Industry Company Limited shall obey and respect the responsibilities of investors under section 65 of and monitoring of significant environmental impacts according to the type of investment activities in accordance with the relevant laws, rules, regulations and procedures.
- (h) ZhongZe Bags Industry Company Limited shall submit to the Myanmar Investment Commission any transfer of shares or transfer of the business to any person during the investment period in accordance with section 72 of Myanmar Investment Law and rule 191 of Myanmar Investment Rules.
- (i) ZhongZe Bags Industry Company Limited, which has benefitted from the Endorsement or enjoyment of exemptions or reliefs, shall submit an annual report in the prescribed form to the Myanmar Investment Commission within three (3) months at the end of the financial year in accordance with rule 196 of Myanmar Investment Rules and shall publish a summary of the report on its website or the Myanmar Investment Commission's website.

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- (j) ZhongZe Bags Industry Company Limited must, during the operation period under the Endorsement of the Yangon Region Investment Committee, submit its operating report quarterly in the prescribed form in accordance with rule 197 of Myanmar Investment Rules.
3. ZhongZe Bags Industry Company Limited shall carry out in accordance with the stipulations of the relevant Union Ministries, governmental department and governmental organizations to obtain license, permit or registration as per section 65(d) of Myanmar Investment Law.
4. ZhongZe Bags Industry Company Limited shall submit five (5) copies of all approvals, licences, permits and similar authorizations relevant to the initial implementation of the investment and the Lease Agreement for land and building to the Yangon Region Investment Committee.



(Phyo Min Thein)

Chairman 

ZhongZe Bags Industry Company Limited

- cc:
1. Ministry of Office of the Union Government
  2. Office of the Myanmar Investment Commission
  3. Ministry of Home Affairs
  4. Ministry of Natural Resources and Environmental Conservation
  5. Ministry of Labour, Immigration and Population
  6. Ministry of Industry
  7. Ministry of Commerce
  8. Ministry of Planning and Finance
  9. Ministry of Investment and Foreign Economic Relations
  10. Chairman, CMP Enterprises Supervision Committee

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11. Director General, Department of Environmental Conservation
12. Director General, Directorate of Labour
13. Director General, Department of Immigration
14. Director General, Directorate of Industrial Supervision and Inspection
15. Director General, Department of Trade
16. Director General, Directorate of Investment and Company Administration
17. Director General, National Archives Department
18. Director General, Customs Department
19. Director General, Internal Revenue Department
20. Monitoring and Supervision Division, Directorate of Investment and Company Administration

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# APPENDIX B

## Environmental Monitoring Monitoring Result

### Air Quality Result



Plot No. (36, 38), Room No. 9A, 9<sup>th</sup> floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar.  
Office: (+95) 1 526574, Mobile: (+95) 9775405118, 9792528677, 9449251888; Website: www.myanweiconsulting.com

Project Name:	Zhongze Bags Industry Company Limited
Project Location:	Plot No. 142, Myay Taing Block No. Industrial Zone (2), Dagon Myo Thit (Seik Kan) Township, Yangon Region.
Sampling Date:	7 November 2019
Sampling Time:	10:30 am to 4:00 pm
Sampling Condition:	Good
Sampling By:	Environmental Team Represented By Myanwei Consulting Group Company Limited

Instrument	Type	Sampling Rate	Location
Oceanus AQM-09	Environmental Perimeter Air Station	1 second to 21 weeks	Operation Area (Indoor)

No	Parameter	Unit	Result	Standard	Remark
1	PM <sub>10</sub>	µg/M <sup>3</sup>	25.2	50	Normal
2	PM <sub>2.5</sub>	µg/M <sup>3</sup>	19.9	25	Normal
3	O <sub>3</sub>	µg/M <sup>3</sup>	81.8	100	Normal
4	NO <sub>2</sub>	µg/M <sup>3</sup>	51.9	200	Good
5	SO <sub>2</sub>	µg/M <sup>3</sup>	40.9	500	Good
6	CO	µg/M <sup>3</sup>	0.01	10	Good

#### National Environmental Quality (Emission) Guideline

Parameter	Averaging period	Guideline value	Unit
PM 10b	1-year 24-hour	20 50	µg/M <sup>3</sup>
PM 2.5b	1-year 24-hour	10 25	µg/M <sup>3</sup>
O <sub>3</sub>	8-hour	100	µg/M <sup>3</sup>
NO <sub>2</sub>	1-hour	200	µg/M <sup>3</sup>
SO <sub>2</sub>	10-minute	500	µg/M <sup>3</sup>
CO	8-hour	10	µg/M <sup>3</sup>

a. Particulate matter 10 micrometer or less in diameter

b. Particulate matter 2.5 micrometer or less in diameter

c. Calculated as Total carbon

d. As the 30-minute mean for stack emissions: 2 mg/Nm<sup>3</sup> for volatile organic compounds classified as carcinogenic or mutagenic with mass flow greater than or equal to 10 g/hour; 20 mg/Nm<sup>3</sup> for discharges of halogenated volatile organic compounds with a mass flow equal or greater than 100 g/hour; 50 mg/Nm<sup>3</sup> for waste gases from drying of large installations (solvent consumption > 15 tons/year); 75 mg/Nm<sup>3</sup> for coating application processes for large installations (solvent consumption > 15 tons/year); 100 mg/Nm<sup>3</sup> for small installations (solvent consumption < 15 tons/year); if solvent is recovered from emissions and reused, the guideline value is 150 mg/Nm<sup>3</sup>

  
 Lin Htet Sein  
 Environmental Consultant  
 Myanwei Consulting Co., Ltd.

## Noise Result



Plot No. (36, 38), Room No. 9A, 9<sup>th</sup> floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar.  
Office: (+95) 1 526574, Mobile: (+95) 9775405118, 9792528677, 9449251888; Website: www.myanweiconsulting.com

Project Name:	Zhongze Bags Industry Company Limited
Project Location:	Plot No. 142, Myay Taing Block No. Industrial Zone (2), Dagon Myo Thit (Seik kan) Township, Yangon Region.
Sampling Date:	7 November 2019
Sampling Time:	10:30 am To 4:00 pm
Sampling Condition:	Good
Sampling By:	Environmental Team Represented By Myanwei Consulting Group Company Limited

Instrument	Type	Sampling Rate	Location
Digital Sound Level Meter	GM 1356 USB	30 -130 dB	16°58'56.4"N 96°03'07.5"E

No	Place	Unit	Result	Standard	Remark
1	Operation Area	dBA	74.9	70 dBA	Normal

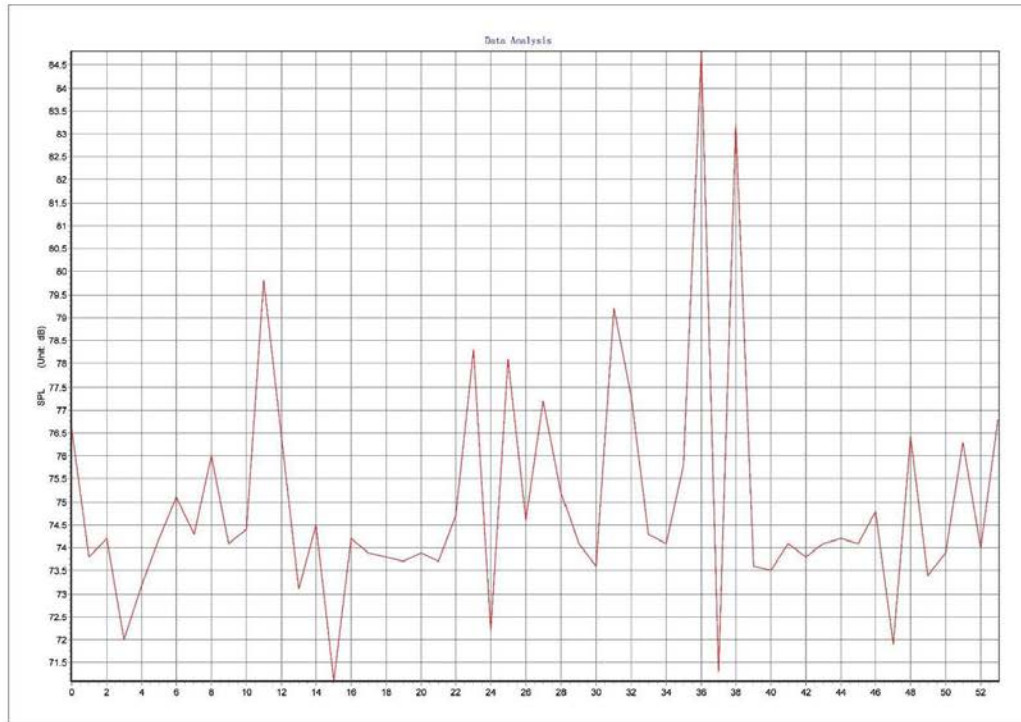
### National Environmental Quality (Emission) Guideline

Receptor	One Hour Laeq (dBA)		Guideline value	
	Daytime		Nighttime	
	7:00 – 22:00 (10:00 – 22:00 for Public holidays)		22:00 – 07:00 (22:00 – 10:00 for Public holidays)	
Residential, Institutional, Educational	55		45	
Industrial, Commercial	70		70	

  
Lin Htet Sein  
Environmental Consultant  
Myanwei Consulting Co., Ltd.

## Noise Graph

### Monitoring Graph





## Light Result



Plot No. (36, 38), Room No. 9A, 9<sup>th</sup> floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar.  
Office: (+95) 1 526574, Mobile: (+95) 9775405118, 9792528677, 9449251888; Website: www.myanweiconsulting.com

Project Name:	Zhongze Bags Industry Company Limited
Project Location:	Plot No. 142, Myay Taing Block No. Industrial Zone (2), Dagon Myo Thit (Seik Kan) Township, Yangon Region.
Sampling Date:	7 November 2019
Sampling Time:	10:30 am to 4:00 pm
Sampling Condition:	Good
Sampling By:	Environmental Team Represented By Myanwei Consulting Group Company Limited

Instrument	Type	Sampling Rate	Location
Uni-T (Luminometer)	UT380 Series	100 times/second	16°58'56.4"N 96°03'07.5"E

No	Measure area	Unit	Result	Standard	Remark
1	Sewing Section	Lux	1219	500-1500	Normal
2	Cutting Section	Lux	1437	500-1500	Normal
3	Quality Control	Lux	1134	500-1500	Normal
4	Packing Section	Lux	783	500-1500	Normal
5	Drying Room	Lux	205	200-300	Normal

### IESNA Lighting Handbook

Area / Task / Process	Illuminance levels (lux)
Exterior calculating, walkways, stores, main entrances and exit roads, car parking, internal factory roads, etc.	20-50
Boiler house, transformer yards, furnace rooms, entrances, corridors, stairs, etc.	70-100
Calculation area in industry, stores, stock rooms and canteen.	100-150
Coarse Work	200-300
Medium work	300-500
Fine Work	500-1500
Very fine minute and precise work	1500-3000

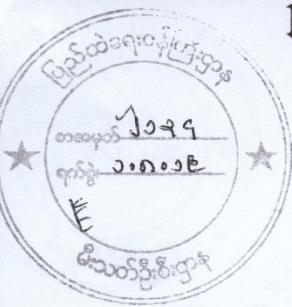
Department	Type of Light	Wattage of Light	Lux Level
Fabric store	Fluorescent tube light	40 W	300
Sewing floor	LED tube light	20 W (T8)	400

Cutting floor	LED tube light	22 W (T8)	1000
Finishing	LED tube light	28 W (T8)	600
Inspection points	LED tube light	28 W (T8)	900 (except 1500 at audit tables)
Sampling	LED tube light	22 W (T8)	500
Office areas	Fluorescent tube light	36 W (T)	300



Lin Htet Sein  
Environmental Consultant  
Myanwei Consulting Co., Ltd.

# APPENDIX C Fire Safety Certificate



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်

ပြည်ထဲရေးဝန်ကြီးဌာန

မီးသတ်ဦးစီးဌာန



## မီးဘေးလုံခြုံရေးစစ်ဆေးထောက်ခံချက်

အမှတ်စဉ်(၂၀၃၄)

ရက်စွဲ၊ ၂၀၁၉ ခုနှစ်၊ ဩဂုတ်လ ) ရက်

၁။ ရန်ကုန် \_\_\_\_\_ တိုင်းဒေသကြီး/ပြည်နယ်၊ ဒဂုံမြို့သစ်(အိမ်ကမ်း) မြို့နယ်၊ စက်မှုဇုန်(၂) \_\_\_\_\_ ရပ်ကွက်/ ကျေးရွာ၊ \_\_\_\_\_ ဦးထွန်းညို \_\_\_\_\_ လမ်းအမှတ် \_\_\_\_\_ (၁၄၂) \_\_\_\_\_ ပိုင်ရှင်ဦး/ဒေါ် \_\_\_\_\_ ဦးစိုးနိုင်+ဒေါ်မေသက်ခိုင် \_\_\_\_\_ ၏ \_\_\_\_\_ Steel Structure (၁၂)ထပ်(အထည်ချုပ်စက်ရုံ) \_\_\_\_\_ အဆောက်အဦအတွက် ဤဌာန၏(၂၇-၅-၂၀၁၄ ) ရက်စွဲပါစာအမှတ်၊ ၂၇၆၆ / ၁၀၀ / ၅၂ / ဦး ၁ \_\_\_\_\_ ဖြင့်သတ်မှတ်ပေးထားသည့် မီးဘေးလုံခြုံရေးဆိုင်ရာ ပြဌာန်းချက်များအား ( ၇-၇-၂၀၁၉ ) ရက်နေ့တွင် စစ်ဆေးသည့်အခါ ပြည့်စုံစွာဆောင်ရွက်ထားကြောင်း စစ်ဆေးတွေ့ရှိရသည်။

- ၂။ ဤထောက်ခံချက်သည် စစ်ဆေးသည့်နေ့မှစ၍ (၃)နှစ်အထိသာ အကျိုးဝင်သည်။
  - ၃။ ထို့ပြင် မီးသတ်ဦးစီးဌာနမှ အခါအားလျော်စွာ ထပ်မံစစ်ဆေးချိန်တွင် မီးဘေးလုံခြုံရေးဆိုင်ရာ ပြဌာန်းချက်များကို လိုက်နာဆောင်ရွက်ခြင်းမရှိပါက ဤထောက်ခံချက်ကို ပြန်လည်ရုတ်သိမ်းသွားမည်ဖြစ်ပြီး အဆောက်အဦအားအသုံးပြုသူ(သို့မဟုတ်)ပိုင်ရှင်သည် မြန်မာနိုင်ငံမီးသတ်တပ်ဖွဲ့ ဥပဒေအရ အရေးယူခြင်းခံရမည်။
- မှတ်ချက်။ ဤထောက်ခံချက်အား လွှဲပြောင်းသုံးစွဲခြင်းမပြုရ။ အဆောက်အဦအား မူလရည်ရွယ်ချက်မှ ပြောင်းလဲအသုံးပြုပါက ထောက်ခံချက်အသစ် ထပ်မံလျှောက်ထားရမည်။

ညွှန်ကြားရေးမှူးချုပ်(ကိုယ်စား)  
 (သိန်းထွန်းဦး ၊ ညွှန်ကြားရေးမှူး)



# APPENDIX D Electricity Bill

လျှပ်စစ်ပုံစံ (၂၄၃)      ရန်ကုန်လျှပ်စစ်ဓာတ်အားပေးရေးကော်ပိုရေးရှင်း  
ဓာတ်အားကောင်းခံလွှာ

၁၃ရပ်ကမ်း      Oct, 2019

ဒေါ်မေသက်ခိုင်      ၂၀၂၁-၁၁-၂၁

142 ရန်(၇)/ဦးထွန်းညိုလမ်း      ၂၀၂၁-၁၁-၂၁

1813 021 616      Group No - NR1

နောက်ဆုံးပေးဆောင်ရန်ရက်စွဲ  
21 Nov 2019

မဆောင်ပါက မီးဖြတ်ပါမည်။

မေဋ္ဌစာရင်းအမှတ်	IND / 09 / 10	မီတာအမှတ် XS-51951	နန်းထား	သင့်ငွေ(ကျပ်)
နန်း	4	၁ မှ ၅၀၀ ယူနစ်အထိ	၁၂၅ ကျပ်	62,500
မီတာဖတ်သည့်နေ့	03/11/2019	၅၀၀ မှ ၅၀၀၀ ယူနစ်အထိ	၁၃၅ ကျပ်	607,500
ယခင်လဖတ်ချက်	770	၅၀၀၀ မှ ၁၀၀၀၀ ယူနစ်အထိ	၁၄၅ ကျပ်	725,000
ယခုလဖတ်ချက်	947	၁၀၀၀၀ မှ ၂၀၀၀၀ ယူနစ်အထိ	၁၅၅ ကျပ်	864,280
ကျွေးပေးမှု	177			
ပြောင်းလဲခန်း	80			
ပေါင်းခြင်း	10%			
သုံးစွဲမှု	15,576	ဓာတ်အားခစုစုပေါင်း		2,259,280
ပြားကောင်ရေ	338	မီတာဝန်ဆောင်ခ		5,000
မေဋ္ဌစာရင်းခံလွှာအမှတ် -	16282	မြင်ကောင်းစေရန်ကြေး		67,600
		ကျသင့်ငွေစုစုပေါင်း		2,331,880

မန်နေဂျာ-09977275710, E.E-09421011335, ရုံးဖုန်း-013593464,09442776414, ဂျူတီတာဝန်ကျ  
အဖွဲ့ (1)-09445484450, အဖွဲ့ (2)-09445484460, အဖွဲ့ (3)-09445484470

ပြန်လည်လျှပ်စစ်မန်နေဂျာ

လျှပ်စစ်ပုံစံ (၂၄၃)      (၇)      ရန်ကုန်လျှပ်စစ်ဓာတ်အားပေးရေးကော်ပိုရေးရှင်း  
ဓာတ်အားကောင်းခံလွှာ

၁၃ရပ်ကမ်း      Sep, 2019

ဒေါ်မေသက်ခိုင်      ၂၀၂၁-၁၁-၂၁

142 ရန်(၇)/ဦးထွန်းညိုလမ်း      ၂၀၂၁-၁၁-၂၁

1813 021 616      Group No - E

နောက်ဆုံးပေးဆောင်ရန်ရက်စွဲ  
21 Oct 2019

မဆောင်ပါက မီးဖြတ်ပါမည်။

မေဋ္ဌစာရင်းအမှတ်	IND / 09 / 10	မီတာအမှတ် XS-51951	နန်းထား	သင့်ငွေ(ကျပ်)
နန်း	4	၁ မှ ၅၀၀ ယူနစ်အထိ	၁၂၅ ကျပ်	62,500
မီတာဖတ်သည့်နေ့	03/10/2019	၅၀၀ မှ ၅၀၀၀ ယူနစ်အထိ	၁၃၅ ကျပ်	607,500
ယခင်လဖတ်ချက်	336	၅၀၀၀ မှ ၁၀၀၀၀ ယူနစ်အထိ	၁၄၅ ကျပ်	725,000
ယခုလဖတ်ချက်	770	၁၀၀၀၀ မှ ၂၀၀၀၀ ယူနစ်အထိ	၁၅၅ ကျပ်	1,360,000
ကျွေးပေးမှု	201	၂၀၀၀၀ မှ ၅၀၀၀၀ ယူနစ်အထိ	၁၆၅ ကျပ်	97,880
ပြောင်းလဲခန်း	80			
ပေါင်းခြင်း	10%			
သုံးစွဲမှု	20,592	ဓာတ်အားခစုစုပေါင်း		3,042,680
ပြားကောင်ရေ	338	မီတာဝန်ဆောင်ခ		5,000
မေဋ္ဌစာရင်းခံလွှာအမှတ် -	15138	မြင်ကောင်းစေရန်ကြေး		67,600
		ကျသင့်ငွေစုစုပေါင်း		3,115,280

မန်နေဂျာ-09977275710, E.E-09421011335, ရုံးဖုန်း-013593464,09442776414, ဂျူတီတာဝန်ကျ  
အဖွဲ့ (1)-09445484450, အဖွဲ့ (2)-09445484460, အဖွဲ့ (3)-09445484470

ပြန်လည်လျှပ်စစ်မန်နေဂျာ

## APPENDIX E Public Consultation Meeting (PCM)

### Invitation List

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ ဖိတ်ကြားထားသူများစာရင်း

နေ့စွဲ - ၂၀ ရက်၊ ဇန်နဝါရီလ ၂၀၂၀ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
	Kyawt Kay Paing	Deputy Staff Officer	ECID		<i>Kawt</i>
	ဟန်နီသက်ယော်	ဒီ.ဘက်စီ.စီ.ဌာန		၀၅-၅၆၅၆၅၅၆၅၆	<i>ဟန်နီ</i>
	ဦးကျော်အောင်	ကျွမ်းကျင်ရေး		၀၅-၅၆၅၆၅၅၆၅၆	<i>ကျော်အောင်</i>
	ကျော်အောင်	စာရေးဆရာ		၀၅-၅၆၅၆၅၅၆၅၆	<i>ကျော်အောင်</i>
	ကျော်အောင်	ဒီ.ဘက်စီ.စီ.ဌာန	အိ.ပတ်.စီ.စီ.	၀၅-၅၆၅၆၅၅၆၅၆	<i>ကျော်အောင်</i>
	ဦးကျော်အောင်	ဒီ.ဘက်စီ.စီ.ဌာန		၀၅-၅၆၅၆၅၅၆၅၆	<i>ကျော်အောင်</i>
	ကျော်အောင်	ဒီ.ဘက်စီ.စီ.ဌာန		၀၅-၅၆၅၆၅၅၆၅၆	<i>ကျော်အောင်</i>
	ကျော်အောင်	ဒီ.ဘက်စီ.စီ.ဌာန		၀၅-၅၆၅၆၅၅၆၅၆	<i>ကျော်အောင်</i>
	ကျော်အောင်	ဒီ.ဘက်စီ.စီ.ဌာန		၀၅-၅၆၅၆၅၅၆၅၆	<i>ကျော်အောင်</i>
	ကျော်အောင်	ဒီ.ဘက်စီ.စီ.ဌာန		၀၅-၅၆၅၆၅၅၆၅၆	<i>ကျော်အောင်</i>



တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ ဖိတ်ကြားထားသူများစာရင်း










နေ့စွဲ - ၂၃ ရက်၊ ဇန်နဝါရီလ၊ ၂၀၂၀ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
၁	ကျော်စွာ	ဧည့်သည်	ITB	၀၁-၅၅၂၁၀၆	၁၇

**Attendance List**

**တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း**

နေ့စွဲ - ၂၈ ရက်၊ ဇန်နဝါရီလ၊ ၂၀၂၀ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
၁	ဦးဖြူစို	မဟာမိတ်အဖွဲ့အစည်း	PECO (YCO)	၀၉၄၈၆၃၀၄၅	
၂	ဦးကျော်ကျော်	လက်ထောက်ဥက္ကဋ္ဌ	u	၀၉၅၀၇၈၃၇၄	
၃	ဦးစိုင်းစိုင်း	ဥက္ကဋ္ဌ (အစည်းအဝေး)	u	၀၉၂၄၅၇၅၅၇	
၄	အောင်အောင်	အထောက်အကူပြု	အထောက်အကူပြု	၀၉၂၄၅၇၅၅၇	
၅	ဒေါ်အေးအေး	ဦးစီးအရာရှိ	ECO	၀၉ ၄၃၀၇၆၈၇၅	
၆	ဒေါ်ဖြူဖြူ	ဦးစီးအရာရှိ	ECO	၀၉-၉၇၄၂၂၂၉၂၈	
၇	ဦးကျော်ကျော်	လက်ထောက်ဥက္ကဋ္ဌ	စီးပွားရေးဦးစီးဌာန	၀၉-၄၅၀၀၀၀၀၀	
၈	ဦးစိုင်းစိုင်း	တပ်မတော်	u		
၉	ဦးအောင်အောင်	ဦးစီးအရာရှိ	ဦးစီးအရာရှိ	၀၉-၄၅၀၀၀၀၀၀	





**APPENDIX F**  
**Public Consultation Presentation Slides**

29/01/2020

**Zhongze Bags Industry Co.,Ltd၏ CMP**  
**စနစ်ဖြင့် အိတ်အမျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်း**

**ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း အစီရင်ခံစာ (မူကြမ်း) အတွက်**  
**သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနား။**

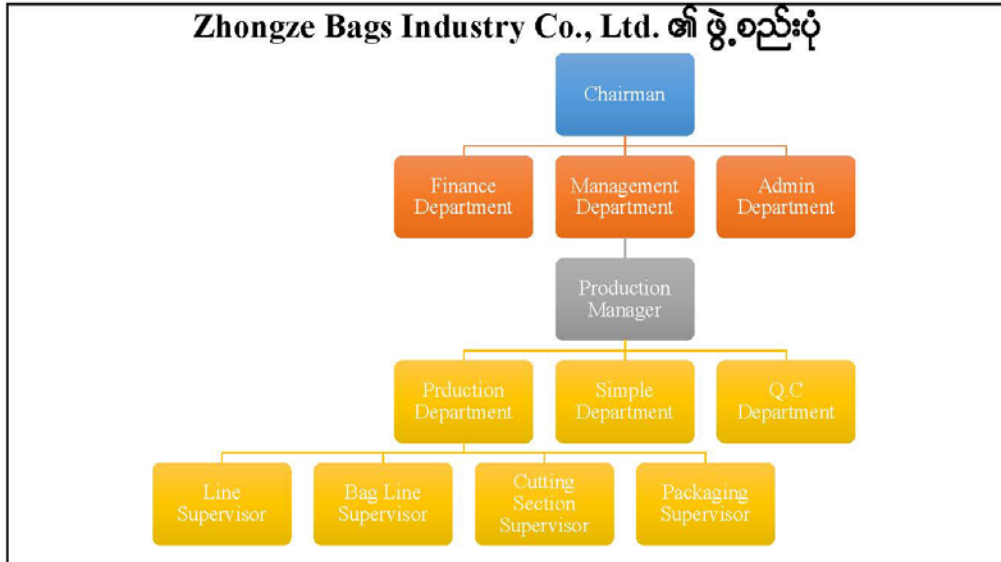
၂၈ရက်၊ ဇန်နဝါရီလ၊ ၂၀၂၀ ခုနှစ်။  
Prepared By  
Myanwei Consulting Co., Ltd.

**အစည်းအဝေး အကြောင်းအရာ**

- ၁။ Zhongze Bags Industry Company Limitedအား မိတ်ဆက်ခြင်း
- ၂။ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းအား မိတ်ဆက်ခြင်း
- ၃။ သက်ရောက်မှုဆန်းစစ်ခြင်း ရလဒ်များနှင့် ထိခိုက်မှုအဆင့်သတ်မှတ်ချက်များ
- ၄။ ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများနှင့် ဖြေလျော့ရေးနည်းလမ်းများ
- ၅။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် နှင့်
- ၆။ စက်ရုံ၏ဆောင်ရွက်ချက်များ

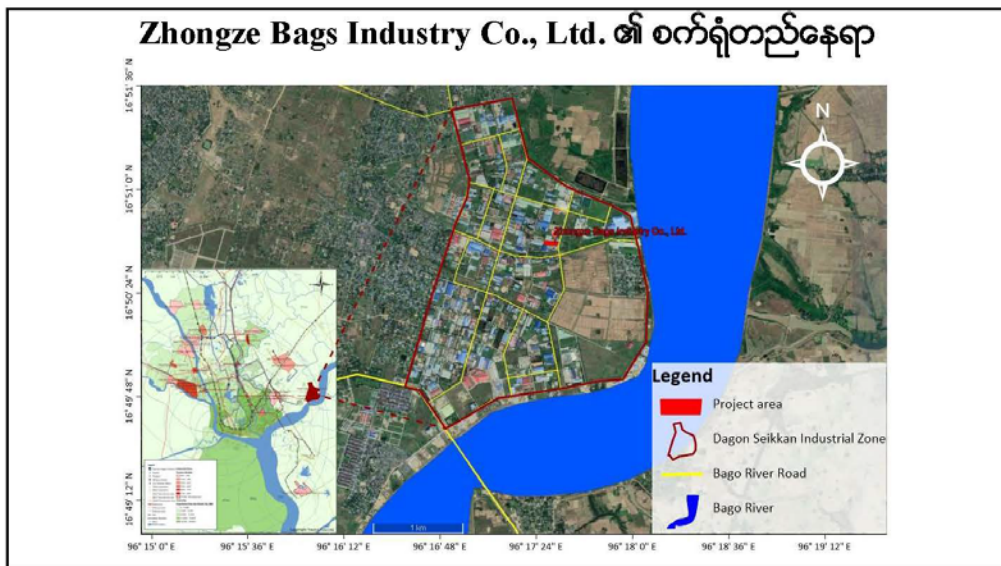
# Zhongze Bags Industry Company Limited





<b>Zhongze Bags Industry Company Limited</b>	
လုပ်ငန်းအမျိုးအစား	CMP စနစ်ဖြင့် အိတ်အမျိုးမျိုးထုတ်လုပ်ခြင်းလုပ်ငန်း။
ခွင့်ပြုမိန့်အမှတ်	(ခွင့်ပြုမိန့်အမှတ်- ၁၆၂/၂၀၁၉)၂၀၁၉ ခုနှစ်၊ ဖေဖော်ဝါရီလ ၂၁ ရက်။
ရင်းနှီးမြှုပ်နှံမှု	၁၀၀ ရာခိုင်နှုန်း နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု
မြေဧရိယာ	မြေဧရိယာစုစုပေါင်း = ၁.၈၅ ဧက(၇,၄၈၆.၆၈၄ စတုရန်းမီတာ)
အဆောက်အုံ	(ပေ ၄၃၂ × ပေ ၁၀၀) စက်ရုံအဆောက်အုံ (၁)လုံး (ပေ ၁၄ × ပေ ၁၀) ရုံးခန်းအဆောက်အုံ (၁)လုံး
ရင်းနှီးမြှုပ်နှံသည့်ကာလ	နှစ် ၂၈ ရင်းနှီးမြှုပ်နှံမှု
စက်ရုံလိပ်စာ	မြေကွက်အမှတ် (၁၄၂)၊ မင်းကြီးမဟာမင်းခေါင်လမ်း၊ မြေတိုင်းရပ်ကွက်အမှတ်-စက်မှုဇုန် (၂)၊ ဒဂုံမြို့သစ်ဆိပ်ကမ်းမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။

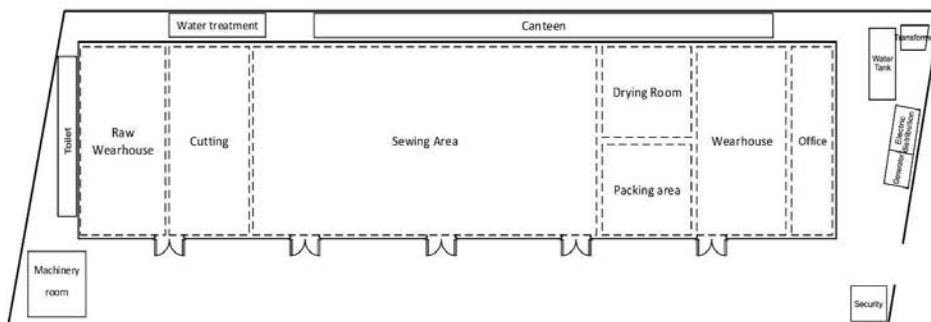
လုပ်ငန်းလည်ပတ်ရန်အခြေခံလိုအပ်ချက်များ	
ရေအသုံးပြုမှုအခြေအနေ	
ရေအရင်းအမြစ်	အဝီစိတွင်းရေ (၁ တွင်း)
အဓိကလိုအပ်ချက်	
လက်ရှိလူဦးရေ	၄၃၁ ဦး
အဓိကကုန်ကြမ်း	ချည်မျှင်၊ သားရေ၊ ဇစ်အမျိုးမျိုး နှင့် ဆက်စပ်ပစ္စည်းများ။
နှစ်စဉ်ထွက်ကုန်ပစ္စည်းပမာဏ	နှစ်စဉ် ပျမ်းမျှအထည်အရေအတွက် ပထမနှစ်မှ ၁၀နှစ်အတွင်း (၁,၂၅၅,၀၀၀) မှ (၁,၃၁၇,၇၅၀) အထိ။



Zhongze Bags Industry Co., Ltd. ၿိထုတ်လုပ်မှုအလိုက် နေရာပြမြေပုံ



Zhongze Bags Industry Co., Ltd. ၿိထုတ်လုပ်မှုအလိုက် နေရာပြမြေပုံ







**Zhongze Bags Industry Co., Ltd. ၏ထုတ်လုပ်ပုံများ**

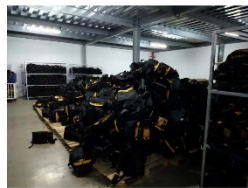


ထုတ်ကုန်စစ်ဆေးခြင်း



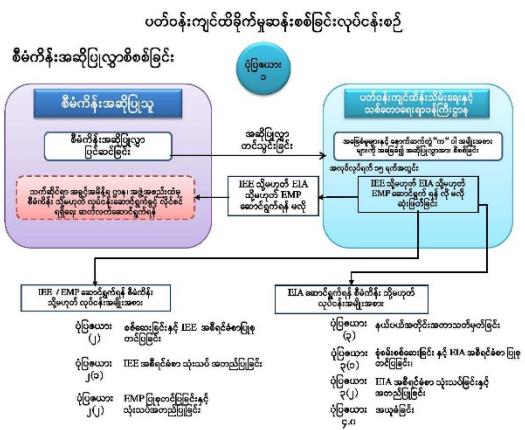
ထုတ်ပိုးခြင်း

**Zhongze Bags Industry Co., Ltd. ၏ထုတ်ကုန်ပစ္စည်းများ**



# ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းလုပ်ငန်းအား မိတ်ဆက်ခြင်း

## ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းလုပ်ငန်းစဉ်





# ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြုပ်နှံမှုကော်မတီအတည်ပြုမိန့်.

**THE REPUBLIC OF THE UNION OF MYANMAR**  
**YANGON REGION INVESTMENT COMMISSION**  
 ENDORSEMENT

စာအုပ်အမှတ်: YUN-102219

This endorsement is issued by Yangon Region Investment Commission according to the section 25, sub-section (1) of the Myanmar Investment Law.

(1) Name of Investor: **SHI LAI ZHENHAN**

(2) Citizenship: **CHINESE**

(3) Residence Address: **UNIT 605, HUIZHEN 3, XIANGYANG NEW CITY, CHANGCHANG COUNTY, YUZHOU CITY, HANANI PROVINCE, PEOPLE'S REPUBLIC OF CHINA**

(4) Name and Address of Principal Organization: **MAYEIN INTERNATIONAL ENTERPRISE LIMITED, ROOM 204 TROND CHU WUI, CHONGLEE STREET, CHAI WAN, HONG KONG**

(5) Place of Incorporation: **HONGKONG**

(6) Type of business: **MANUFACTURING OF VARIOUS KINDS OF BAOS ON CMP BASIS**

(7) Purpose of Investment Project: **PLANT NO. 101, XIANGYANG BLOCK NO. INDUSTRIAL ZONE (GUAOIN MYSI THAI (SHI KAN) TOWNSHIP, YANGON REGION.**

(8) Amount of Foreign Capital: **US\$ 2.655 MILLION**

(9) Period for Foreign Capital to be brought in: **WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF ENDORSEMENT**

(10) Total Amount of Capital (Kyat): **EQUVALENT IN KYAT OF US\$ 2.655 MILLION**

(11) Construction Preparation Period: **ONE YEAR**

(12) Validity of Endorsement: **25 YEARS**

(13) Form of Investment: **WHOLLY FOREIGN OWNED**

(14) Name of Company Incorporated in Myanmar: **ZHONGGE BAOS INDUSTRY COMPANY LIMITED**

(Type Min. Train) Chairman 3

ပြည်ထောင်စုအစိုးရကော်မတီ၏အမိန့်ဖြင့်  
 ရင်းနှီးမြုပ်နှံမှုကော်မတီ၏  
 အတည်ပြုမိန့်

စာအုပ်အမှတ်: YUN-102219

၂၀၁၉ ခုနှစ် ဇူလိုင်လ ၂၃ ရက်  
 ရင်းနှီးမြုပ်နှံမှု ဝတ်လမ်းထည့် ဖြန့်ဝေပိုင်ခွင့် ရရှိရန်အတွက်  
 (၁) ရင်းနှီးမြုပ်နှံသူအမည်: **SHI LAI ZHENHAN**

(၂) ဇာတိ: **CHINESE**

(၃) နေထိုင်လိမ္မော်: **UNIT 605, HUIZHEN 3, XIANGYANG NEW CITY, CHANGCHANG COUNTY, YUZHOU CITY, HANANI PROVINCE, PEOPLE'S REPUBLIC OF CHINA**

(၄) ဝတ်လမ်းထည့်မှုကို ဆောင်ရွက်မည့် ကုမ္ပဏီအမည်: **MAYEIN INTERNATIONAL ENTERPRISE LIMITED, ROOM 204 TROND CHU WUI, CHONGLEE STREET, CHAI WAN, HONG KONG**

(၅) နေထိုင်ရာ: **HONG KONG**

(၆) ရင်းနှီးမြုပ်နှံမှုအမျိုးအမည်: **CMP နေရာထည့် ဆက်တိုက်ထုတ်  
 လုပ်ငန်းစဉ်**

(၇) ရင်းနှီးမြုပ်နှံမှုအတွက် အစီအစဉ်အရ ဝတ်လမ်းထည့်မှုကို ဆောင်ရွက်မည့်  
 ဝန်ထုပ်ဝတ်ပုံ: **PLANT NO. 101, XIANGYANG BLOCK NO. INDUSTRIAL ZONE (GUAOIN MYSI THAI (SHI KAN) TOWNSHIP, YANGON REGION.**

(၈) ရင်းနှီးမြုပ်နှံမှုအတွက် အစီအစဉ်အရ ဝတ်လမ်းထည့်မှုကို ဆောင်ရွက်မည့်  
 စာအုပ်အမှတ်: **US\$ 2.655 MILLION**

(၉) ဝတ်လမ်းထည့်မှုကို ဝတ်လမ်းထည့်မှု ဝတ်လမ်းထည့်မှု ဝတ်လမ်းထည့်မှု  
 ဝတ်လမ်းထည့်မှု: **WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF ENDORSEMENT**

(၁၀) စုစုပေါင်း အင်အားစွမ်းဆောင်ရည်: **EQUVALENT IN KYAT OF US\$ 2.655 MILLION**

(၁၁) အတည်ပြုမိန့်ထုတ်ပေးရန် ဝတ်လမ်းထည့်မှု: **ONE YEAR**

(၁၂) အတည်ပြုမိန့်ထုတ်ပေးရန် ဝတ်လမ်းထည့်မှု: **25 YEARS**

(၁၃) အတည်ပြုမိန့်ထုတ်ပေးရန် ဝတ်လမ်းထည့်မှု: **WHOLLY FOREIGN OWNED**

(၁၄) အတည်ပြုမိန့်ထုတ်ပေးရန် ဝတ်လမ်းထည့်မှု: **ZHONGGE BAOS INDUSTRY COMPANY LIMITED**

CS-1008  
 (ရင်းနှီးမြုပ်နှံမှု)  
 ၀၉၉ ၂

# သက်ရောက်မှုဆန်းစစ်ခြင်းရလဒ်များနှင့် ထိခိုက်မှုအဆင့်သတ်မှတ်ချက်များ

### စီမံကိန်းပတ်ဝန်းကျင်အနေအထား

စဉ်	အကြောင်းအရာ	ဖော်ပြချက်
၁။	ကိုဩဒိနိတ်အမှတ်	မြောက်လတ္တီကျု ၁၆°၅၀'၄၄.၅" နှင့် အရှေ့လောင်ဂျီကျု ၉၆° ၁၇'၂၉.၆"
၂။	ရာသီဥတုအခြေအနေ	ဒဂုံမြို့သစ်ဆိပ်ကမ်းမြို့နယ် နှစ်စဉ်ပျမ်းမျှအမြင့်ဆုံးအပူချိန် ၄၂°C၊ အနိမ့်ဆုံးအပူအချိန် ၁၆°C စုစုပေါင်း မိုးရေချိန်လက်မ ၉၈.၆၇ လက်မ
၃။	စက်ရုံနေရာတွင်မြေအသုံးချမှု	စက်မှုလုပ်ငန်းနှင့်သက်ဆိုင်သောမြေအသုံးချမှုပုံစံ (စက်မှုရန်)
၄။	လမ်းပန်းဆက်သွယ်ရေး	ပဲခူးမြစ်လမ်း၊ ကနောင်မင်းသားကြီးလမ်း။
၅။	အနီးဆုံးရေအရင်းအမြစ်	ပဲခူးမြစ်။
၆။	သစ်တောဧရိယာ	မရှိ။
၇။	ကန့်သတ်ကာကွယ်ထားသော ဧရိယာ	မရှိ။
၈။	တိုင်းတာမှုရလဒ်	<input type="checkbox"/> ဆူညံသံ တိုင်းတာခြင်း <input type="checkbox"/> အလင်းရောင် တိုင်းတာခြင်း <input type="checkbox"/> လေထုအရည်အသွေး တိုင်းတာခြင်း <input type="checkbox"/> အပူချိန် နှင့် စိုထိုင်းမှု အရည်အသွေး တိုင်းတာခြင်း

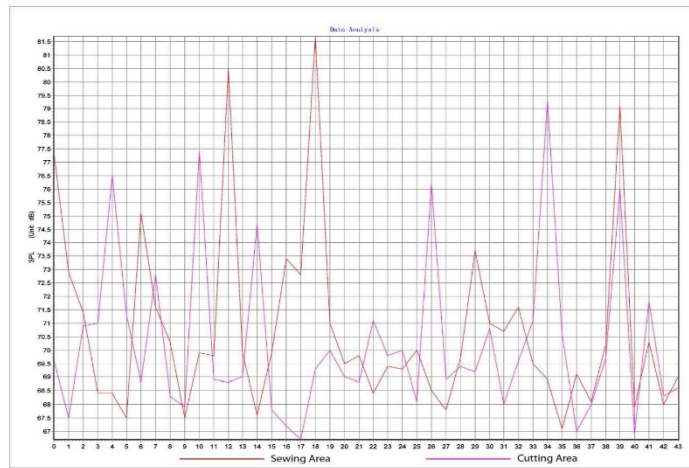
### ဆူညံသံတိုင်းတာမှု

Date/ Time	Measurement Area	GPS value	Measurement Result	NEQ Guidline
7 November 2019 (10:00 to 4:00 pm)	Sewing Section	16°50'44.5"N 96°17'30.1"E	74.9 dBA	70 dBA
7 November 2019 (10:00 to 4:00 pm)	Cutting Section	16°50'45.3"N 96°17'28.8"E	72.8 dBA	70 dBA

အထက်ဖော်ပြပါ ဆူညံသံတိုင်းတာမှုရလဒ်များအရ Zhongze Bags Industry Co., Ltd.၏ဆူညံသံများမှာ National Emission Quality Guideline ထက်အနည်းငယ်ကျော်လွန်နေသည်ကိုလေ့လာတွေ့ရှိရပါသည်။



**Zhongze Bags Industry Co., Ltd. ၏ဆူညံသံတိုင်းတာမှုပြ ရရပ်**



လုပ်ငန်းခွင်အလင်းရောင်တိုင်းတာမှု

Date/ Time	Measurement Area	Measurement Result	Standard Value	Remark
7 November, 2019	Sewing Section	1219	400	Above
	Cutting Section	1437	1000	Above
	Quality Control	1134	900	Above
	Packing Section	783	600	Above
	Drying Room	205	200	Above



လုပ်ငန်းခွင်အတွင်းအလင်းရောင်တိုင်းတာမှု



### လေထုတိုင်းတာမှု

Date/Time	Parameter	Measurement Area	Result	Guideline Value	Unit	Organization	Period
7 November 2019	PM <sub>10</sub>	Project Area	25.2	50	μg/m <sup>3</sup>	NEQG	24 hours
	PM <sub>2.5</sub>		19.9	25	μg/m <sup>3</sup>	NEQG	24 hours



စက်ရုံတွင်း  
လေထုတိုင်းတာခြင်း

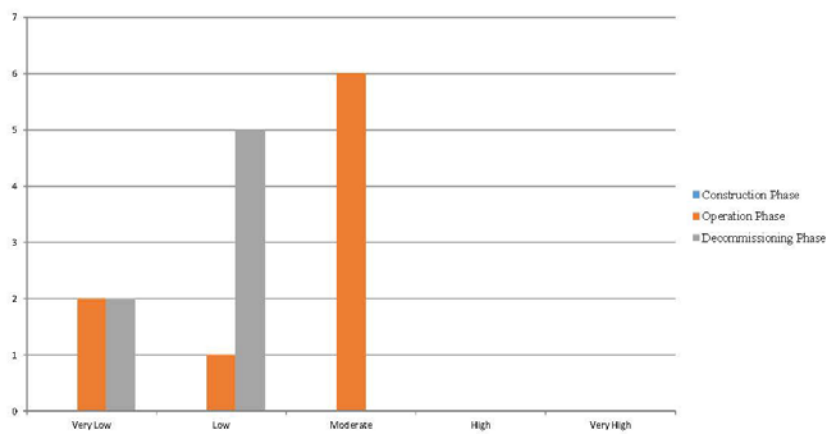
### အပူချိန်တိုင်းတာမှု

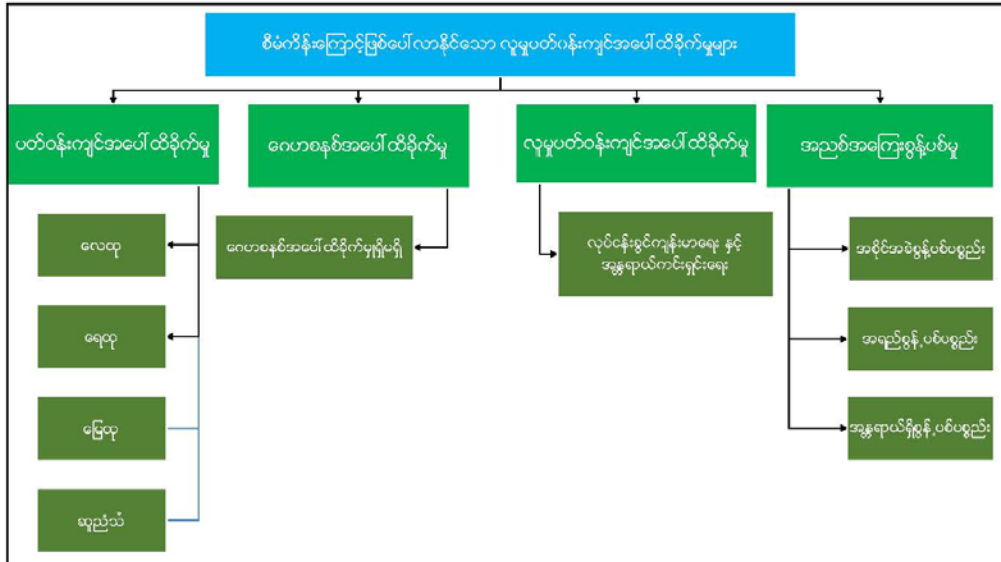


Zhongze Bags Industry Company Limited. ၏ လုပ်ငန်းခွင်ပျမ်းမျှစိုထိုင်းမှုမှာ ၈၇.၆% နှင့် အပူချိန်တိုင်းတာမှုမှာ ၃၃.၈ °C ရှိပါသည်။

ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှုများနှင့် ဖြေလျှော့ရေးနည်းလမ်းများ

**Impact Significance Data Chart on Proposed Project**





သက်ရောက်မှု	စီမံကိန်းဆောင်ရွက်ချက်	လျော့နည်းစေရန် အရေးယူဆောင်ရွက်မှု
ဆူညံသံ	<ul style="list-style-type: none"> <li>မီးစက်၊ လေမှုတ်စက် နှင့် မော်တော်ယာဉ် အသုံးပြု မှုကြောင့် ပတ်ဝန်းကျင်ဆူညံမှု</li> </ul>	<ul style="list-style-type: none"> <li>ဆူညံသံထွက်သောနေရာများကို အကာအကွယ်ဖြင့်ထားရှိခြင်း</li> <li>စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ပေးခြင်း</li> </ul>
မီးဘေးအန္တရာယ်	<ul style="list-style-type: none"> <li>ကျွန်းကြမ်းသိုလှောင်မှု နှင့် လျှပ်စစ်သုံးစွဲပျော်လျော့မှု</li> </ul>	<ul style="list-style-type: none"> <li>ကျွန်းကြမ်းများအား သီးသန့်ထားရှိခြင်း</li> <li>လျှပ်စစ်သုံးစွဲမှုများအား စနစ်တကျအသုံးပြုစေခြင်း</li> </ul>
စွန့်ပစ်အမှိုက်	<ul style="list-style-type: none"> <li>ထုတ်လုပ်ရာတွင် ကျန်ရှိသော ပိတ်စအပိုင်းအစများ၊ မီးဖိုချောင်နှင့် ရုံးတွင်းစွန့်ပစ်ပစ္စည်းများ</li> </ul>	<ul style="list-style-type: none"> <li>စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အခြေခံသတ်မှတ်ပေးသီးခြားစွန့်ပစ်စေခြင်း</li> </ul>
စွန့်ပစ်အရည်	<ul style="list-style-type: none"> <li>နေအိမ်၊ စားသောက်ဆောင်တိုက်စွန့်ထုတ်ရေ၊ မိလ္လာကန်စနစ်</li> </ul>	<ul style="list-style-type: none"> <li>စွန့်ပစ်အရည်များအား သီးခြားရေနှုတ်မြောင်းတွေင်းတွေဖြင့်စွန့်ပစ်ခြင်း။</li> </ul>
အန္တရာယ်ရှိအမှိုက်	<ul style="list-style-type: none"> <li>စက်များမှဆီယိုစိမ့်မှုများ၊ နိုင်လွန်ပိတ်စများ၊ တစ်ခြားမီးလောင်လွယ်သောအမှိုက်များ</li> </ul>	<ul style="list-style-type: none"> <li>စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း</li> </ul>

# ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်

<b>လေထုညစ်ညမ်းမှုလျှော့ချရေး</b>	
<b>ရည်ရွယ်ချက်</b>	<b>စီမံကိန်းကြောင့် စက်ရုံမှ ထွက်သော ဓာတ်ငွေ့များနှင့် မီးစက်များမှ ထွက်ရှိသော ဓာတ်ငွေ့များကြောင့် လေထုညစ်ညမ်းမှုကို လျှော့ချရန်</b>
<b>လိုက်နာရမည့် စည်းကမ်း</b>	<b>အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)</b>
<b>စီမံခန့်ခွဲမှု အစီအစဉ်</b>	<ul style="list-style-type: none"> <li>▪ စက်ရုံအတွင်းနှင့် အနားဝန်းကျင်တွင် သစ်ပင်ပန်းမန်စိုက်ပျိုးခြင်း</li> <li>▪ စက်ရုံအတွင်း မည်သည့်စွန့်ပစ်ပစ္စည်းများအား မီးရှို့ဖျက်စီးခြင်း မပြုလုပ်ခြင်း</li> <li>▪ လုပ်သားများအား Personal Protective Equipment (PPE) ဟုခေါ်သော အကာအကွယ်ပစ္စည်းများဖြစ်သည့် လေကာ/နေကာမျက်မှန်များ၊ နှာခေါင်းစည်း၊ Helmets စသည်တို့အားထောက်ပံ့ခြင်း၊ အသိပညာပေး သင်တန်းများ ပေးခြင်း</li> </ul>
<b>တာဝန်ယူရမည့် ပုဂ္ဂိုလ်</b>	<ul style="list-style-type: none"> <li>▪ ပြုပြင်ထိန်းသိမ်းရေးအရာရှိ - လေထုညစ်ညမ်းမှုလျှော့ချရေးနည်းလမ်းများ</li> <li>▪ ထုတ်လုပ်ရေးမန်နေဂျာ- လုပ်ငန်းခွင်လေထုသန့်ရှင်းရေး</li> <li>▪ မန်နေဂျာ - ပတ်ဝန်းကျင်လေအရည်အသွေးတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်</li> </ul>

<b>ဆူညံသံလျော့ချရေး</b>	
<b>ရည်ရွယ်ချက်</b>	<b>ဘေးပတ်ဝန်းကျင်ဆူညံမှုမဖြစ်ပေါ်စေရန် နှင့် စက်ရုံရှိ မီးစက်နှင့် အခြားစက်ပစ္စည်းများ ကြောင့် လုပ်သားများအပေါ် ထိခိုက်မှု လျော့ချရန်</b>
လိုက်နာရမည့် စည်းကမ်း	<ul style="list-style-type: none"> <li>▪ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅)</li> <li>▪ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)</li> </ul>
စီမံခန့်ခွဲမှုအစီအစဉ်	<ul style="list-style-type: none"> <li>▪ မီးစက်၊လေမှုတ်စက်တို့ကို ဆူညံသံထိန်းချုပ်နိုင်သော ခန်းဖွဲ့ စည်းပုံပုံစံ တည်ဆောက်ထားခြင်း</li> <li>▪ လုပ်ငန်းသုံးယာဉ်များကိုဆူညံသံလျော့ချရန်သတ်မှတ်အရှိန်ထက်ကျော်လွန်မမောင်းစေမောင်းစေခြင်း</li> <li>▪ လုပ်သားများအား Personal Protective Equipment (PPE) ဟုခေါ်သော အကာအကွယ်ပစ္စည်းများဖြစ်သည့် လေကာ/နေကာမျက်မှန်များ၊ နှာခေါင်းစည်း၊ Helmets စသည်တို့အား ထောက်ပံ့ခြင်း၊ အသိပညာပေး သင်တန်းများ ပေးခြင်း</li> </ul>
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ - ဆူညံသံတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

<b>အမှိုက်အခွန်ပစ်မှု ထိန်းသိမ်းရေး</b>	
<b>ရည်ရွယ်ချက်</b>	<b>စွန့်ပစ်အမှိုက်ထွက်ရှိမှုလျော့ချရေးနှင့် စွန့်ပစ်အမှိုက်ကြောင့် ပတ်ဝန်းကျင်ညစ်ညမ်းမှုကို လျော့ချရန်</b>
လိုက်နာရမည့်စည်းကမ်း	<ul style="list-style-type: none"> <li>▪ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅)</li> <li>▪ National Waste Management Strategy and Action Plan (Draft 2018)</li> </ul>
စီမံခန့်ခွဲမှုအစီအစဉ်	<ul style="list-style-type: none"> <li>▪ စက်ရုံမှ မည်သည့်စွန့်ပစ်ပစ္စည်းမှ မြစ်၊ ချောင်း၊ အင်း၊ အိုင် အတွင်းသို့ မစွန့်ပစ်ရ</li> <li>▪ စက်ရုံတွင် စွန့်ပစ်ပစ္စည်းများကို ပြန်လည်အသုံးပြုနိုင်သောပစ္စည်း(ဆိုးဆေး၊ ဓာတ္တု၊ ပလတ်စတစ်၊ စသည်ဖြင့်) များကို ပြည်တွင်းဝယ်ယူသူများထံ ပြန်လည်ရောင်းချခြင်း</li> <li>▪ စွန့်ပစ်ရန်ပစ္စည်း(လုပ်သားများမှစွန့်ပစ်ပစ္စည်းနှင့်မီးဖိုချောင်ထွက်ပစ္စည်းများ)ကို မြို့တော်စည်ပင်သာယာရေးအဖွဲ့အစည်း ကို နေ့စဉ်ခေါ်ယူပြီး သိမ်းဆည်းစေခြင်း</li> <li>▪ အန္တရာယ်ရှိပစ္စည်း (စက်ဆီအဟောင်းများ၊ လျှပ်စစ်ပစ္စည်းအပျက်များ၊ သံထည်ပစ္စည်း) များကို ဝယ်ယူသူထံမှပြန်လည် သိမ်းဆည်းစေခြင်း</li> <li>▪ စက်ရုံတွင် အမှိုက်စွန့်ပစ်ရန် အတွက် အမှိုက်ပုံးများကို စီမံထားခြင်း</li> <li>▪ စက်ရုံဝန်းထမ်းအားလုံးကို စနစ်တကျ အမှိုက်စွန့်ပစ်ရန် တိုက်တွန်းနှိုးဆော်ထားခြင်း</li> </ul>
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	<ul style="list-style-type: none"> <li>▪ မန်နေဂျာ - စက်ရုံအတွင်းသန့်ရှင်းရေးအတွက်စီမံခန့်ခွဲရန်တာဝန်ရှိသည်</li> <li>▪ အမှိုက်စွန့်ပစ်မှု ပုံမှန်ပြုလုပ်ရန်နှင့် စွန့်ပစ်ပစ္စည်းသယ်ယူသူများကို ပုံမှန်ပြုလုပ်ရန် တာဝန်ယူဆောင်ရွက်ရန်</li> </ul>

<b>စွန့်ပစ်အရည် ထိန်းသိမ်းရေး</b>	
<b>ရည်ရွယ်ချက်</b>	<b>မြေပေါ် ရေနှင့် မြေအောက်ရေ ညစ်ညမ်းမှုမဖြစ်စေရေး</b>
လိုက်နာရမည့်စည်းကမ်း	<ul style="list-style-type: none"> <li>▪ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅)</li> <li>▪ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)</li> </ul>
စီမံခန့်ခွဲမှုအစီအစဉ်	<ul style="list-style-type: none"> <li>▪ စက်ရုံရေမြောင်းများနှင့်မိလ္လာစနစ်ကို စနစ်တကျ သန့်ရှင်းအောင်ထားရှိခြင်း</li> <li>▪ လုံလောက်သည့်အတိုင်းအတာ ပမာဏရှိခြင်း</li> <li>▪ မိလ္လာစနစ်ကို ပုံမှန်စစ်ဆေးပြီး လိုအပ်သကဲ့သို့ ထိန်းသိမ်းပြုပြင်ခြင်း</li> <li>▪ စက်ရုံရေမြောင်းအတွင်းတွင် ပိတ်ဆို့မှုမရှိစေရန်နှင့် အနံ့ဆိုးများမထွက်စေရန်စီမံခြင်း</li> </ul>
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ - စွန့်ထုတ်ရေအရည်အသွေးတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

<b>စွမ်းအင်သုံးစွဲမှု ထိန်းသိမ်းရေး</b>	
<b>ရည်ရွယ်ချက်</b>	<b>လျှပ်စစ်သုံးစွဲမှုလျော့ချစေရန်နှင့် လုပ်ငန်းခွင်အတွင်း လျှပ်စစ်သုံးစွဲမှုကြောင့် အန္တရာယ်မရှိစေရန်</b>
စီမံခန့်ခွဲမှုအစီအစဉ်	<ul style="list-style-type: none"> <li>▪ စက်ရုံတွင်း လျှပ်စစ်သုံးစွဲမှုများအတွက် စွမ်းအင်လျော့ချနိုင်သည့် စက်ကရိယာများတပ်ဆင်ခြင်း</li> <li>▪ အသုံးမပြုလျှင် စက်ကရိယာများပိတ်ဆင်ထားခြင်း</li> <li>▪ စွမ်းအင်အသုံးနည်းသော Lighting စနစ်တပ်ဆင်ခြင်း</li> <li>▪ စက်ပစ္စည်းနှင့် Lighting အသုံးပြုမှုကို စောင့်ကြည့်ထိန်းသိမ်းရေးစနစ်ထားရှိခြင်း (ဥပမာ-အသုံးမပြုပိတ်ဖွင့်ထားခြင်း၊ စက်ဖွင့်ထားခြင်းမျိုး မရှိစေရန်)</li> </ul>
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ

<b>မြေအောက်ရေသုံးစွဲမှု</b>	
ရည်ရွယ်ချက်	ရေသုံးစွဲမှုလျော့ချရေး
လိုက်နာရမည့်စည်းကမ်း	The Underground Water Act (1930)
စီမံခန့်ခွဲမှုအစီအစဉ်	<ul style="list-style-type: none"> <li>▪ ရေအသုံးပြုမှု သိရှိနိုင်သော မိတာတပ်ဆင်ခြင်း</li> <li>▪ ဝန်ထမ်းများအားအသိပညာပေးခြင်းနှင့် လိုက်နာဆောင်ရွက်ရန် တိုက်တွန်းခြင်း</li> <li>▪ စက်ရုံရှိတာဝန်ရှိပုဂ္ဂိုလ်များအား (Third Party) နေဖြင့်မြေအောက်ရေအကျိုးရှိရှိအသုံးချရန်စည်းကမ်းချက်နဲ့အညီ လမ်းညွှန်ထားခြင်း။</li> </ul>
တာဝန်ယူရမည့် ပုဂ္ဂိုလ်	<p>မန်နေဂျာ</p> <ul style="list-style-type: none"> <li>▪ ရေ အသုံးပြုမှုစာရင်း စစ်ဆေးခြင်း</li> <li>▪ ဝန်ထမ်းများလိုက်နာဆောင်ရွက်မှု စစ်ဆေးခြင်း</li> </ul>

<b>အရေးပေါ်အခြေအနေတုန့်ပြန်မှု</b>	
ရည်ရွယ်ချက်	စက်ရုံတွင်းမတော်တဆထိခိုက်မှု လျော့ချရေး
လိုက်နာရမည့်စည်းကမ်း	အလုပ်အကိုင်နှင့် ကျွမ်းကျင်မှုဖွံ့ဖြိုးတိုးတက်ရေးဥပဒေ (၂၀၁၃), ILO guide to Myanmar Labour Law (2017)
စီမံခန့်ခွဲမှုအစီအစဉ်	<ul style="list-style-type: none"> <li>▪ အရေးပေါ်အခြေအနေဖြစ်သော (မီး၊ ငလျင်၊ ရေကြီးရေလျှံမှု) တို့အတွက် စက်ရုံတွင် စီမံခန့်ခွဲမှုရှိခြင်း</li> <li>▪ စက်ရုံ၏မီးသတ်စနစ်များကို ပုံမှန်စစ်ဆေးခြင်း</li> <li>▪ ရေးဆွဲထားသော အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်များကို ဝန်ထမ်းများအကျွမ်းတတ်ဖြစ်စေရန် စီမံထားခြင်း</li> <li>▪ လောင်စာသိုလှောင်နေရာများ၊ လျှပ်စစ်ဖြန့်ဖြူးရေးနေရာများကို အဓိကထားပြီး စောင့်ကြည့်စစ်ဆေးခြင်း၊ ပြုပြင်မှုနဲ့ဆောင်ရွက်ခြင်း</li> <li>▪ ပုံမှန်မီးဘေးကာကွယ်ရေး၊ ငလျင်လုပ်ခတ်လျှင် ပြုလုပ်ရမည့်ပုံစံများ၊ ရေကြီးရေလျှံမှု၊ အခြေအနေထိန်းသိမ်းရေး အစီအစဉ်များ၊ ရှေးဦးပြုစုခြင်းသင်တန်းများကို ပုံမှန်လေ့ကျင့်မှုများ သင်ကြားမှုများ ပြုလုပ်ခြင်း</li> <li>▪ အရေးပေါ်ဆက်သွယ်ရန် ဖုန်းနံပါတ်၊ လိပ်စာများ၊ အများသုင်မြင်သာစေသောနေရာများတွင် ကပ်ထားခြင်း</li> <li>▪ စက်ရုံတွင်း မီးသတ်အဖွဲ့ ငယ်၊ အန္တရာယ်ကင်းရှင်းရေး စောင့်ကြည့်ရေးအဖွဲ့ဝင်များထားရှိပြီး လစဉ် ဆွေးနွေးတိုင်ပင်ခြင်း လေ့ကျင့်ခြင်းများ ပြုလုပ်ခြင်း</li> </ul>
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	<ul style="list-style-type: none"> <li>▪ Manager and EHS officer</li> <li>▪ မီးသတ်သင်တန်းများ ၃ လတစ်ကြိမ်ပြုလုပ်ရန်စီမံပေးခြင်း</li> <li>▪ အရေးပေါ်အခြေအနေနှင့် မတော်တဆထိခိုက်မှုမရှိစေရေး စောင့်ကြည့်စစ်ဆေးခြင်း</li> </ul>



### ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြည့်မှု

တက္က	အမျိုးအစား	ကြိမ်နှုန်း	နေရာ	တာဝန်ရှိသူ
<b>လုပ်ငန်းလည်ပတ်ချိန်</b>				
လေထု	PM <sub>2.5</sub> , PM <sub>10</sub>	တစ်နှစ် ၂ကြိမ်	ထုတ်လုပ်မှု ဓရိယာအတွင်း	Zhongze Bags Industry Co., Ltd
ရေ	pH, DO, BOD, COD, TDS, Temp, Oil and Grease, Chlorine, Arsenic	တစ်နှစ် ၂ကြိမ်	ရေဆိုးသန့်စင်ဆက်မှ သန့်စင်ပြီးရေ	Zhongze Bags Industry Co., Ltd
ဆူညံသံ	ဆူညံသံ ပမာဏ	တစ်နှစ် ၂ကြိမ်	၂ နေရာ (ထုတ်လုပ်မှု ဓရိယာ အတွင်း)	Zhongze Bags Industry Co., Ltd
အမှိုက်စွန့်ပစ်မှု	အစိုင်အခဲ၊ အရည် နှင့် အန္တရာယ်ရှိပစ္စည်း	ပုံမှန်	စက်ရုံအတွင်း ပြန်လည်အသုံးပြုရန်နှင့် စွန့်ပစ်ရန်ဟူ၍ အမှိုက်ပုံများအား ခွဲခြားခြင်း	Zhongze Bags Industry Co., Ltd
မီးသတ်ဆေးကုသပစ္စည်းများနှင့်အရေအစေ့ပေါ်စွန့်ပစ်ပစ္စည်းများ	မီးသတ်ဆေးကုသပစ္စည်းများနှင့်အရေအစေ့ပေါ်စွန့်ပစ်ပစ္စည်းများ	လစဉ်	စက်ရုံဓရိယာ အတွင်း	Zhongze Bags Industry Co., Ltd
အလင်းရောင်ပြင်းပြမှု	အလင်းရောင်ပေးခြင်း	တစ်နှစ် ၂ကြိမ်	ထုတ်လုပ်မှု ဓရိယာအတွင်း (ပိတ်ပတ်ခြင်း နှင့် အရည်အသွေး စစ်ဆေးခြင်း)	Zhongze Bags Industry Co., Ltd
<b>လုပ်ငန်းပိတ်သိမ်းခြင်းကာလ</b>				
လေထု	PM <sub>2.5</sub> , PM <sub>10</sub>	မြတ်သိမ်းမှု ကာလအတွင်း ၁ကြိမ်	ထုတ်လုပ်မှု ဓရိယာအတွင်း	Zhongze Bags Industry Co., Ltd
ရေ	pH, DO, BOD, COD, TDS, Temp, Oil and Grease, Chlorine, Arsenic	ထိုကာလအတွင်း ၁ကြိမ်	ရေဆိုးသန့်စင်ဆက်မှ သန့်စင်ပြီးရေ	Zhongze Bags Industry Co., Ltd
ဆူညံသံ	ဆူညံသံ ပမာဏ	ထိုကာလအတွင်း ၁ကြိမ်	မြတ်သိမ်းမှု ဓရိယာ	Zhongze Bags Industry Co., Ltd
ပြန်လည်စွမ်းဆောင်ရည်	သစ်ပင်များပြန်လည်စိုက်ပျိုးခြင်း		မြတ်သိမ်းမှု ဓရိယာအားလုံး	Zhongze Bags Industry Co., Ltd

### ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြည့်မှု ခန့်မှန်းကုန်ကျစရိတ်

စဉ်	အကြောင်းအရာ	အကြိမ်အရေအတွက်	ကုန်ကြေးစရိတ် (အမေရိကန်ဒေါ်လာ)
<b>လျော့ချခြင်းအစီအစဉ်</b>			
၁.	စက်ရုံအတွင်းလေအဝင်အထွက်အစီအစဉ်	၁နှစ် တကြိမ်	နှစ်စဉ် ဒေါ်လာ ၂၀၀
၂.	စက်ရုံဓရိယာအတွင်း သစ်ပင်များစိုက်ပျိုးခြင်း	၃လ တကြိမ်	၃လခြား ဒေါ်လာ ၇၀
၃.	အစိုင်အခဲအမှိုက်ပစ်ခြင်း	၁၂ ကြိမ်	နှစ်စဉ် ဒေါ်လာ ၁၀၀၀
၄.	တစ်ကိုယ်ရည်သုံး ကာကွယ်ရေးပစ္စည်းများဝယ်ယူခြင်း	၆ လ တကြိမ်	၆ လခြား ဒေါ်လာ ၁၅၀
၅.	ဆေးပစ္စည်းများနှင့် ကျန်းမာရေးစစ်ဆေးခြင်း	၁ နှစ် တကြိမ်	နှစ်စဉ် ဒေါ်လာ ၅၀၀
<b>အရေးပေါ်အစီအစဉ်</b>			
၁.	မီးသတ်ဆေးဘူး	၁လ တကြိမ်	လစဉ် ဒေါ်လာ ၃၀၀
၂.	မီးသတ်အချက်ပြ စနစ်	၁လ တကြိမ်	
၃.	ရှေးဦးသူနာပြု ပစ္စည်းများ	၁လ တကြိမ်	
<b>စောင့်ကြပ်ကြည့်ရှုရေးအစီအစဉ်</b>			
၁.	ရေဆိုးရေညစ်	၂ ကြိမ်	၁နှစ် ဒေါ်လာ ၂၀၀
၂.	ဆူညံသံ	၂ ကြိမ်	၁နှစ် ဒေါ်လာ ၃၀၀
၃.	စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာ	၁ ကြိမ်	ဒေါ်လာ ၁၀၀၀

### လူမှုအကျိုးတူပူးပေါင်း ပါဝင်မှု

Zhongze Bags Industry တွင် CSR အတွက် အမြတ်ငွေ၏ ၂% ကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေးတို့ အတွက် အသုံးပြုသွားမည် ဖြစ်ပါသည်။

ကျန်းမာရေး	ဝန်ထမ်းများ ကျန်းမာရေး စောင့်ရှောက်မှု	၀.၅ %
ပညာရေး	ပညာရေးကဏ္ဍ မြှင့်တင်ရေးနှင့် လူ့အခွင့်အရေး အသိပညာပေးခြင်း	၀.၅ %
နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေး	ဒေသတွင်း လိုအပ်သကဲ့သို့ လှူဒါန်းခြင်း	၁ %

### စက်ရုံ၏ဆောင်ရွက်ချက်များ



Zhongze Bags Industry Co., Ltd ဝန်ထမ်းများအတွက်သုံးရေပြင်ဆင်ထားရှိမှု



Zhongze Bags Industry Co., Ltd. ၏ လျှပ်စစ်သုံးစွဲမှု



***Thank You for Your Patient  
Attention!***

## APPENDIX D List of Commitment

Zhongze Bags Industry Company Limited ၏ အိတ်အမျိုးမျိုး ထုတ်လုပ်ခြင်းလုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းကြောင့် ဖြစ်ပေါ်လာနိုင်သော သဘာဝပတ်ဝန်းကျင်၊ လူမှုဘဝ နှင့် ကျန်းမာရေးထိခိုက်မှုများရှိခဲ့ပါက လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် တားဆီးရေး အစီအစဉ်များကို ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (Initial Environmental Examination- IEE) ဖြစ်ကြောင်း အောက်ဖော်ပြပါ ဇယားဖြင့် အကျဉ်းချုပ် စာရင်းပြုစုဖော်ပြထားပါသည်။

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်းချက်အခန်း
နိဒါန်း	၁	<ul style="list-style-type: none"> <li>➢ စီမံကိန်းအဆိုပြုသူဆိုင်ရာ အချက်အလက်များ</li> <li>➢ အစီရင်ခံစာရေးသားပြုစုသည့် တတိယအဖွဲ့အစည်း၏ အချက်အလက်များ</li> </ul> <p>ဤအချက်အလက်များသည် မှန်ကန်စွာ ဖြည့်စွက်ထားခြင်း ဖြစ်ပါသည်။</p>	အခန်း(၁)
မူဝါဒ၊ ဥပဒေနှင့် အဖွဲ့အစည်းဆိုင်ရာ မူဘောင်များ	၂	စီမံကိန်းမှ လိုက်နာဆောင်ရွက်သွားမည့် သက်ဆိုင်ရာအစိုးရဌာနများမှ ထုတ်ပြန်ထားသော မူဝါဒ၊ ဥပဒေ၊ နည်းဥပဒေ၊ လုပ်ထုံးလုပ်နည်းနှင့် လမ်းညွှန်ချက်များအား ရေးသားဖော်ပြထားပြီး စီမံကိန်းပိုင်ရှင်မှ လိုက်နာဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။	အခန်း(၂)
စီမံကိန်းအကြောင်းအရာ အချက်အလက်	၃	ဟိုတယ်လုပ်ငန်းနှင့် သက်ဆိုင်သည့် တည်နေရာ၊ မြေအသုံးချမှုများ၊ စီမံကိန်းလည်ပတ်ဆောင်ရွက်ပုံနှင့် စီမံကိန်းအကောင်အထည်ဖော်ဆောင်ရွက်ရန် လိုအပ်ချက်များနှင့် စွန့်ပစ်ပစ္စည်းထွက်ရှိမှုနှင့် စီမံဆောင်ရွက်ထားရှိမှုများအား မှန်ကန်စွာ ရေးသားပြုစုထားပါသည်။	အခန်း (၃)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်းချက်အခန်း
အနီးပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအရာများ	၄	စီမံကိန်းအား ကွင်းဆင်းလေ့လာမှုနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေးများ တိုင်းတာခြင်း၊ ရူပပတ်ဝန်းကျင်၊ သက်ရှိဇီဝဆိုင်ရာအကြောင်းအချက်များ၊ လူမှုစီးပွားဆိုင်ရာ အချက်အလက်များအား ဖော်ပြထားပါသည်။	အခန်း (၄)
စက်ရုံအတွင်း အပူချိန်နှင့် စိုထိုင်းဆ တိုင်းတာခြင်း	၄.၁	စီမံကိန်းအတွင်း အပူချိန်နှင့် စိုထိုင်းဆအား တိုင်းတာဖော်ပြထားခြင်း ဖြစ်ပါသည်။	အပိုဒ်ခွဲ (၄.၃.၁)
လေထုအရည်အသွေးတိုင်းတာခြင်း	၄.၂	စီမံကိန်း၏ လေထုအရည်အသွေးအား တိုင်းတာထားရှိပြီး ရလဒ်များအား အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်ဖြင့် နှိုင်းယှဉ်၍ ဖော်ပြထားပါသည်။	အပိုဒ်ခွဲ (၄.၃.၂)
အလင်းရောင်ရရှိမှု တိုင်းတာခြင်း	၄.၃	စီမံကိန်းဆောင်ရွက်နေစဉ် အလင်းရောင်ရရှိမှုအား တိုင်းတာဖော်ပြထားပြီး IESNA Light Standard နှင့် နှိုင်းယှဉ်ဖော်ပြထားပါသည်။	အပိုဒ်ခွဲ (၄.၃.၃)
ဆူညံသံထွက်ရှိမှု တိုင်းတာခြင်း	၄.၄	စီမံကိန်းမှ ဆူညံသံထွက်ရှိမှုပမာဏအား တိုင်းတာထားပြီး ရလဒ်များအား အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်ဖြင့် နှိုင်းယှဉ်၍ ဖော်ပြထားပါသည်။	အပိုဒ်ခွဲ (၄.၃.၄)
ရူပပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအချက်များ	၄.၅	စီမံကိန်း တည်ရှိရာ ဒဂုံဆိပ်ကမ်းမြို့နယ်၏ ရူပပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအချက်များအား ဖော်ပြထား ခြင်း ဖြစ်ပါသည်။	အပိုဒ် (၄.၄)

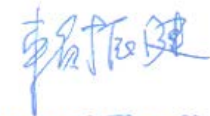


ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်းချက်အခန်း
သက်ရှိဇီဝဆိုင်ရာ အကြောင်းအချက်များ	၄.၆	စီမံကိန်းဝန်းကျင်ရှိ သက်ရှိဇီဝဆိုင်ရာ အကြောင်းအချက်များအား လေ့လာဆန်းစစ်၍ ဖော်ပြထားခြင်း ဖြစ်ပါသည်။	အပိုဒ် (၄.၅)
လူမှုစီးပွားဆိုင်ရာ အချက်အလက်	၄.၆	စီမံကိန်းတည်ရှိရာ ဒဂုံဆိပ်ကမ်းမြို့နယ်၏ လူမှုစီးပွားဆိုင်ရာ အချက်အလက်များ အား ဖော်ပြထားခြင်း ဖြစ်ပါသည်။	အပိုဒ် (၄.၆)
ပတ်ဝန်းကျင်ထိခိုက်မှုလေ့လာခြင်းနှင့် လျော့ချရေးအစီအစဉ်	၅	စီမံကိန်းအကောင်အထည်ဖော် ဆောင်ရွက်ခြင်းကြောင့် ဖြစ်ပေါ်လာနိုင်သော ပတ်ဝန်းကျင်နှင့် လူမှုစီးပွားအပေါ် ထိခိုက်နိုင်မှုများနှင့် ၎င်းထိခိုက်မှုများအား လျော့ချမည့် အစီအစဉ်များကို စိစစ်ဖော်ပြထားခြင်းဖြစ်ပါသည်။	အခန်း (၅)
ပတ်ဝန်းကျင်ထိခိုက်မှုစီမံခန့်ခွဲမှု လုပ်ငန်း	၆	ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ခွဲများ၊ ၎င်းအစီအစဉ်ခွဲများအား တာဝန်ယူဆောင်ရွက် မည့် ပုဂ္ဂိုလ်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်၊ ရန်ပုံငွေထားရှိမှုနှင့် သင်တန်းပို့ချခြင်းအစီအစဉ်နှင့် လူမှုအကျိုးတူပူးပေါင်းဆောင်ရွက်မှုများအား ဖော်ပြ ထားရှိပါသည်။	အခန်း (၆)
လေအရည်အသွေးစီမံခန့်ခွဲမှု	၆.၁	ဟိုတယ်ဧရိယာအတွင်း သစ်ပင်ပန်းမန်များ စိုက်ပျိုးထားခြင်းအား ဆောင်ရွက်လျက်ရှိပြီး စီမံကိန်းဧရိယာအတွင်း လေထုအရည်အသွေးအား ခြောက်လလျှင် တစ်ကြိမ် ပုံမှန် တိုင်းတာခြင်းအား လုပ်ဆောင်သွားမည် ဖြစ်ပါသည်။	အပိုဒ် (၆.၂)
ရေသုံးစွဲမှုဆိုင်ရာ စီမံခန့်ခွဲမှု	၆.၂	စီမံကိန်း၏ ရေသုံးစွဲမှုအား စောင့်ကြပ်ကြည့်ရှုနိုင်ရန် ရေမီတာ တပ်ဆင်အသုံးပြုခြင်း၊ ရေသုံးစွဲမှုနှင့် ပတ်သက်၍ ဝန်ထမ်းများအား ဗဟုသုတ ဝေငှခြင်းများ ဆောင်ရွက်လျက် ရှိပါသည်။	အပိုဒ် (၆.၃)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်းချက်အခန်း
ဆူညံသံထွက်ရှိမှုဆိုင်ရာ စီမံခန့်ခွဲမှု	၆.၃	ဆူညံသံထွက်ရှိသော မီးစက်၊ မော်တော်ယာဉ်များအား စနစ်တကျ ထိန်းသိမ်းပြုပြင်၍ အသုံးပြုခြင်း၊ ဆူညံသံထွက်ရှိမှုထိန်းချုပ်သော အခန်းဖြင့် သီးသန့်ထားရှိခြင်း နှင့် စီမံကိန်းဧရိယာအတွင်း ဆူညံသံထွက်ရှိမှုအား ခြောက်လလျှင် တစ်ကြိမ် ပုံမှန် တိုင်းတာခြင်းအား လုပ်ဆောင်သွားမည် ဖြစ်ပါသည်။	အပိုဒ် (၆.၄)
အစိုင်အခဲစွန့်ပစ်ပစ္စည်းဆိုင်ရာ စီမံခန့်ခွဲမှု	၆.၄	စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက်၍ အမှိုက်များအား စနစ်တကျ စွန့်ပစ်ခြင်း၊ လုံလောက်သော အမှိုက်ပုံးများ ထားရှိခြင်း၊ ဝန်ထမ်းများအား စွန့်ပစ်ပစ္စည်းဆိုင်ရာ သင်တန်းများပေးခြင်းများ ဆောင်ရွက်လျက်ရှိပါသည်။	အပိုဒ် (၆.၅)
အရည်စွန့်ပစ်ပစ္စည်းဆိုင်ရာ စီမံခန့်ခွဲမှု	၆.၅	သင့်လျော်သော ရေဆိုးသန့်စင်စနစ်အား တည်ဆောက်အသုံးပြုထားခြင်း၊ ရေဆိုးများအား သန့်စင်ပြီးမှသာ စွန့်ထုတ်ခြင်းများ ဆောင်ရွက်လျက်ရှိပြီးနှင့် ရေအရည်အသွေးအား ခြောက်လလျှင် တစ်ကြိမ် ပုံမှန်တိုင်းတာခြင်းအား လုပ်ဆောင်သွားမည်ဖြစ်ပါသည်။	အပိုဒ် (၆.၆)
အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းဆိုင်ရာ စီမံခန့်ခွဲမှု	၆.၆	MSDS များထားရှိခြင်း၊ အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်းများအား စနစ်တကျ ယာယီသိမ်းဆည်းထားရှိပြီး စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက် စွန့်ပစ်ခြင်းများ ဆောင်ရွက်လျက်ရှိပါသည်။	အပိုဒ် (၆.၇)
မီးဘေးအန္တရာယ်ဆိုင်ရာ စီမံခန့်ခွဲမှု	၆.၇	မီးသတ်ဦးစီးဌာနနှင့် ချိတ်ဆက်၍ မီးသတ်လေ့ကျင့်မှုများ၊ သင်တန်းများ ဆောင်ရွက်ပေးခြင်း၊ စီမံကိန်းရှိ မီးသတ်ပစ္စည်းများအား ပုံမှန် ထိန်းသိမ်း၍ လဲလှယ်မှုများ ဆောင်ရွက်ခြင်းအား လုပ်ဆောင်လျက်ရှိပါသည်။	အပိုဒ် (၆.၈)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်းချက်အခန်း
စွမ်းအင်ဆိုင်ရာ စီမံခန့်ခွဲမှု	၆.၈	စွမ်းအင်ချွေတာသော စက်ပစ္စည်းများ တပ်ဆင်အသုံးပြုခြင်း၊ လျှပ်စစ်သုံးစွဲမှုအား မှတ်တမ်းထားရှိခြင်းများ ဆောင်ရွက်လျက်ရှိပါသည်။	အပိုဒ် (၆.၉)
အရေးပေါ် တုံ့ပြန်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု	၆.၉	စက်ရုံအနေဖြင့် အရေးပေါ်ဖြစ်ပေါ်လာနိုင်သော မီးဘေးအန္တရာယ်၊ ငလျင်၊ ရေကြီးခြင်းနှင့် မုန်တိုင်းများအတွက် စီမံထားရှိခြင်း၊ မီးသတ်ပစ္စည်းကိရိယာများနှင့် မီးသတ်ဆေးဘူးများကို နေရာတိုင်းတွင် တပ်ဆင်ထားခြင်းနှင့် စစ်ဆေးခြင်း၊ အသေးစိတ်အခြေအနေပြ ရုပ်ပုံ (အရေးပေါ်ထွက်ပေါက်တံခါး စသည်) ကို လုပ်သမားများ သိရှိစေရန် ဆောင်ရွက်ထားရှိခြင်း၊ အရေးပေါ်ဆေးအဖွဲ့များနှင့် ဆေးပစ္စည်းများ ထားရှိခြင်း၊ အရေးပေါ်ဆက်သွယ်နိုင်သည့် မီးသတ်ဌာန၊ ရဲတပ်ဖွဲ့၊ ဆေးရုံ စသည့် တယ်လီဖုန်းနံပါတ်များကို မြင်သာနိုင်သည့် နေရာတွင် ကပ်ထားခြင်း နှင့် သဘာဝဘေးအန္တရာယ်စီမံခန့်ခွဲရေး၊ မီးဘေးအန္တရာယ်နှင့် လုပ်ငန်းခွင်ထိခိုက်မှု နှင့် ကျန်းမာရေးကာကွယ်ရေးအတွက် သင့်လျော်သော သင်တန်းများ ပို့ချခြင်းတို့အား ဆောင်ရွက်လျက်ရှိပါသည်။	အပိုဒ် (၆.၁၀)
ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြပ်ကြည့်ရှုမှု အစီအစဉ်	၆.၁၀	စီမံကိန်း၏ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း အစီရင်ခံစာ အတည်ပြုမိန့်ရရှိပြီးပါက ဆောင်ရွက်ရမည့် ပတ်ဝန်းကျင်ဆိုင်ရာ စောင့်ကြပ်ကြည့်ရှုမှု အစီအစဉ်အား ၆ လတစ်ကြိမ် ဆောင်ရွက်သွားမည်ဖြစ်ပြီး ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ တင်ပြအစီရင်ခံသွားမည် ဖြစ်ပါသည်။	အပိုဒ် (၆.၁၂)
ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု ရန်ပုံငွေ လျာထားချက်	၆.၁၁	ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုနှင့် စောင့်ကြပ်ကြည့်ရှုခြင်းများ လုပ်ဆောင်ရာတွင် ကုန်ကျစရိတ်များအတွက် ခန့်မှန်းကုန်ကျစရိတ်အား ဖော်ပြထားခြင်း ဖြစ်ပါသည်။	အပိုဒ် (၆.၁၃)

ကတိကဝတ်၏ အတိုချုပ်အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါရည်ညွှန်းချက်အခန်း
		အစီရင်ခံစာပါအတိုင်း လုံလောက်မှုမရှိပါက စီမံကိန်းအဆိုပြုသူမှ ထပ်မံစိုက်ထုတ်သုံးစွဲသွားမည် ဖြစ်ပါသည်။	
သင်တန်းပို့ချခြင်းအစီအစဉ်	၆.၁၂	စီမံကိန်းရှိ ဝန်ထမ်းများအတွက် လိုအပ်ချက်များအလိုက် သက်ဆိုင်ရာ ဌာနများနှင့် ချိတ်ဆက်၍ ပို့ချပေးမည့် အစီအစဉ်များအား ဖော်ပြထားခြင်း ဖြစ်ပါသည်။	အပိုဒ် (၆.၁၄)
လူမှုအကျိုးတူပူးပေါင်းဆောင်ရွက်မှု	၆.၁၃	စီမံကိန်းမှ ရရှိလာမည့် အမြတ်ငွေများ၏ ၂ ရာခိုင်နှုန်းအား ကျန်းမာရေးစောင့်ရှောက်မှု၊ ပညာရေးဖွံ့ဖြိုးတိုးတက်မှုနှင့် ဒေသတွင်း ဖွံ့ဖြိုးတိုးတက်ရေး လုပ်ငန်းများတွင် အထောက်အကူပြုစေရေးအတွက် အသုံးပြုသွားမည် ဖြစ်ပါသည်။	အပိုဒ် (၆.၁၆)
အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးပွဲအစီအစဉ်	၇	အများပြည်သူနှင့်တွေ့ဆုံဆွေးနွေးပွဲအား (၂၈-၁-၂၀၂၀) တွင် စက်မှုဇုန်ကော်မတီအစည်းအဝေးခန်းမတွင် ဆောင်ရွက်ခဲ့ပါသည်။ တက်ရောက်လာသော အစိုးရဌာနဆိုင်ရာများမှ အကြံပြုချက်များ ပေးခဲ့ပြီး လိုက်နာဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။	အခန်း (၇)
နိဂုံး	၈	အစီရင်ခံစာသုံးသပ်ချက်များနှင့် စီမံကိန်းအဆိုပြုသူအား လိုက်နာဆောင်ရွက်ရမည့် အကြံပြုချက်များအား ရေးသားဖော်ပြထားပြီး ၎င်းအကြံပြုချက်၊ သုံးသပ်ချက်များအား လိုက်နာဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။	အခန်း (၈)



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