

# **Hong Sheng (Myanmar) Industrial Company Limited**

## **Initial Environmental Examination**

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

Prepared by:



**MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED**

**Date: 16-Feb-24**



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Date: 16.2.2024

Subject: Initial Environmental Examination (IEE) in respect of the Manufacturing of various kinds of bags on CMP Basis by Hong Sheng (Myanmar) 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.



  
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Date: 16. 2. 2024

Subject: Initial Environmental Examination (IEE) Report in respect of the Manufacturing of various kinds of bags on CMP Basis

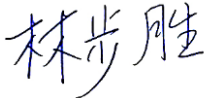
We refer to the captioned IEE report, which has been prepared by Myanwei Environmental Solutions Co., Ltd. (Third Party Consultant) in compliance with EIA procedure (2015) and other related laws/rules.

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.

Hong Sheng (Myanmar) Company Limited will at all times comply fully with all commitment and obligations in the IEE report.

We acknowledge and understand that



Mr. Lin BuSheng

Promoter

Hong Sheng (Myanmar) Industrial Co.,Ltd.

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APPENDIX E List Of Commitment

## **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

ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းဆိုင်ရာအစီရင်ခံစာသည် Hong Sheng (Myanmar) Industrial Company Limited ၏ CMP စနစ်ဖြင့် အိတ်အမျိုးမျိုးထုတ်လုပ်ခြင်းလုပ်ငန်းမှ ပတ်ဝန်းကျင်အပေါ်အဓိက ထိခိုက်မှုများကို လေ့လာဆန်းစစ်ပြီး လျှော့ချရေး အစီအစဉ်များ၊ ကာကွယ်ထိန်းသိမ်းရေး အစီအစဉ်များကို အဓိပ္ပါယ်သတ်မှတ်ထားခြင်း ဖြစ်သည်။

Hong Sheng (Myanmar) Industrial Company Limitedသည် မြေကွက်အမှတ် (၁၆)၊ မြေတိုင်းရပ်ကွက် (၉၆-၄) ၊ စက်မှုဇုန် ၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင်တည်ရှိသော စုစုပေါင်း မြေဧရိယာ ၁.၀၅၅ ဧကပေါ်တွင် အိတ်အမျိုးမျိုး ထုတ်လုပ်မည့်လုပ်ငန်းအား ရန်ကုန်တိုင်း ဒေသကြီးရင်းနှီးမြှုပ်နှံမှု ကော်မတီ မှ ၂၀၁၉ ခုနှစ်၊ ဇွန်လ ၊ ၁၁ ရက်နေ့တွင် (ခွင့်ပြုမိန့်အမှတ်- ၁၉၈/၂၀၁၉)ဖြင့် ရရှိပြီးဖြစ်ပါသည်။ လုပ်ငန်းလည်ပတ်ရန်အတွက် မြန်မာနိုင်ငံသယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ၏ အတည်ပြုချက် ရယူရန်လိုအပ်ကြောင်း ကော်မရှင်မှ မှာကြားခဲ့ပါသည်။ ထို့ကြောင့် မြန်မာနိုင်ငံပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂)အရ၊ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း Initial Environmental Examination (IEE) ပြုလုပ်ရန် လိုအပ်ကြောင်း ၂၀၁၉ ခုနှစ် ၊ ဇွန်လ ၊ ၁၄ ရက် နေ့ရက်စွဲပါ စာအမှတ် ၊ ရက-၁/၃/၄ (အီးအိုင်အေ) (၁၀၁၄/၂၀၁၄) ဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန ရန်ကုန်တိုင်းဒေသကြီးမှ သဘောထားမှတ်ချက် ရရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဦးစီးဌာန (ECD)၏ ထုတ်ပြန်ထားသော ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်း (EIA Procedure) ၂၀၁၅ အတိုင်း Hong Sheng (Myanmar) Industrial Company Limited သည် စက်ရုံအတွက် IEE အစီအရင်ခံစာ ရေးဆွဲခဲ့ပါသည်။ IEE အစီအရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော Myanwei Environmental Solutions Company Limited မှ တာဝန်ယူရေးဆွဲခဲ့ပါသည်။ စက်ရုံတွင် ကျန်းမာရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ အဖွဲ့အစည်းတစ်ခုထားရှိပြီး လျှော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို အကောင်အထည်ဖော်သွားမည်ဖြစ်သည်။

Hong Sheng (Myanmar) Industrial Company Limited စက်ရုံသည် ခန့်မှန်းခြေ အမေရိကန် ဒေါ်လာသန်း ၀.၆၆၈ သန်းခန့် ခွင့်ပြုမတည်ရင်းငွေဖြင့် အိတ်အမျိုးမျိုး ထုတ်လုပ်မည့် လုပ်ငန်းဖြစ်ပါသည်။ စက်ရုံသည် ၁၀၀% နိုင်ငံခြားသား ရင်းနှီးမြှုပ်နှံမှုဖြင့် အကောင်အထည်ဖော် ဆောင်ရွက်လျက် ရှိပါသည်။ စက်ရုံအကျယ်အဝန်းမှာ ၁.၀၅၅ ဧကမြေပေါ်တွင် စက်ရုံတည်ဆောက်ပြီး အိတ်အမျိုးမျိုး ထုတ်လုပ်ခြင်းလုပ်ငန်း လုပ်ဆောင်ခြင်းဖြစ်ပါသည်။ ကနဦးရင်းနှီးမြှုပ်နှံမှုကာလ(၂၅)နှစ် ဖြင့် လုပ်ငန်း ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။ အိတ်အမျိုးမျိုး ထုတ်လုပ်ခြင်းစက်ရုံအတွက် ပြည်တွင်း လုပ်သားဦးရေ ၈၀၀ ယောက် နှင့် နိုင်ငံခြားသားပညာရှင် ၁၅ ဦး တို့ဖြင့် လည်ပတ်လျက်ရှိပါသည်။ လုပ်သားများအတွက် ကန်တင်အား သီးသန့်နေရာထားရှိပြီး သက်ဆိုင်ရာ

မီးစက်ခန်း၊သောက်သုံးရေသန့်စင်မှုအခန်းနှင့်အမှိုက်စွန့်ပစ်ရာနေရာအစရှိသည်တို့အား  
သီးသန့်တည်ဆောက်ပေးထားပါသည်။

ပိတ်သိမ်းခြင်းကာလ။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုအဆိုပြုချက်အရ ၂၅ နှစ်ရင်းနှီးမြှုပ်နှံမှုကာလအပြီးတွင်  
လုပ်ငန်းပိတ်သိမ်းခြင်း ကာလ ကိုဆိုလိုသည်။

**ဥပဒေနှင့် မူဝါဒဆိုင်ရာ အချက်အလက်များ**

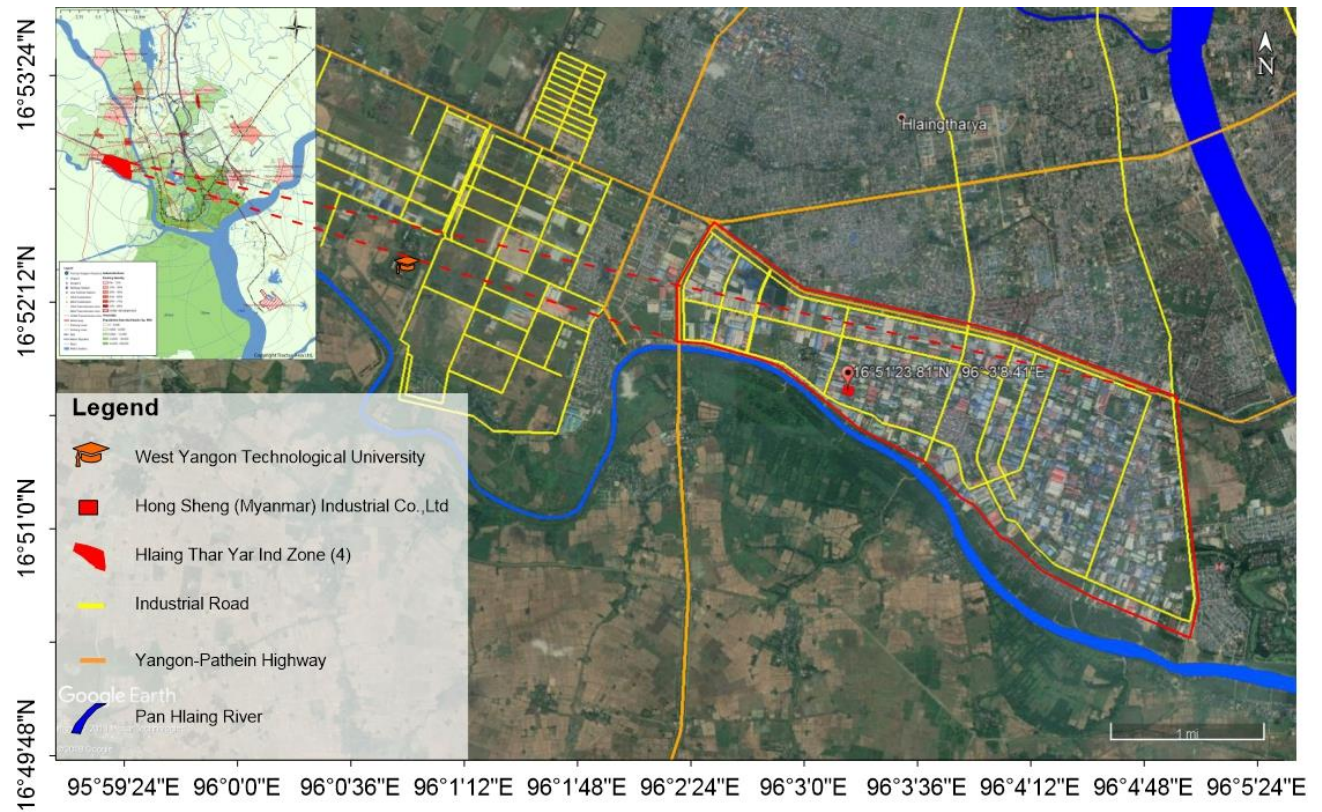
စက်ရုံနှင့် ဆက်စပ်သက်ဆိုင်နေပြီး လိုက်နာရမည့် ဥပဒေနှင့် နည်းဥပဒေများ၊ MONREC မှ  
ထုတ်ပြန်ထားသည့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများ၊  
အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ၊ စက်ရုံနှင့်သက်ဆိုင်သည့်  
ဒေသတွင်း သို့မဟုတ် အပြည်ပြည်ဆိုင်ရာ သဘာဝပတ်ဝန်းကျင်နှင့်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

1. The Constitution Law, 2008
2. The Environmental Conversation Law, 2012
3. The Environmental Conversation Rule, 2014
4. Environmental Impact Assessment Procedure, 2015
5. National Environmental Quality (Emission) Guideline, 2015
6. National Myanmar Environmental Policy, 2019
7. Myanmar Investment Rule, 2017 Amendment 2018
8. Payment of Wages Law, 2016
9. Yangon City Development Committee Law, 2018
10. The Amended Law for Factories Act, 1951 (2016)
11. The Private Industrial Enterprise Law
12. The Export and Import Law, 2012
13. The Prevention of Hazard from Chemical and Related Substances Law, 2013
14. The Underground Water Act
15. Myanmar Fire Brigade Law, 2015
16. The Electricity Law, 2014
17. Boiler Law, 2015
18. The Social Security Law, 2012
19. Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)
20. The Employment and Skill Development (2013)
21. Prevention and Control of Communicable Disease Law (1995 Amendment in 2011)

- 22. Occupational Safety and Health Law, 2019
- 23. The Law on Standardization
- 24. Vehicles Safety and Motor Vehicle Management Law, 2020
- 25. The Conversation of Water Resources and River Law, 2006
- 26. The Commercial Tax Law (1990 Amended 2014)

### စီမံကိန်းဆိုင်ရာအချက်အလက်

Hong Sheng (Myanmar) Industrial Company Limited သည် လတ္တီတွဒ်  $16^{\circ}51'23.81''N$  နှင့် လောင်ဂျီတွဒ်  $96^{\circ}03'8.41''E$  ၊ မြေကွက်အမှတ် (၁၆) ၊ မြေတိုင်းရပ်ကွက် (၇၆-၄) ၊ စက်မှုဇုန် ၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး တည်ရှိသည်။ ဧရိယာအကျယ်အဝန်းမှာ (၁.၀၅၅) ဧက ရှိ၍ အဆောက်အအုံများမှာ ကုန်ထုတ်လုပ်ဆောင်၊ လူနေဆောင်၊ ကုန်ကြမ်းသိုလှောင်ရုံ၊ မီးဖိုချောင်၊ ထမင်းစားဆောင်၊ ထရန်စဖော်မာ၊ မီးစက်ခန်း တို့ဖြစ်သည်။



### စက်ရုံတည်နေရာ

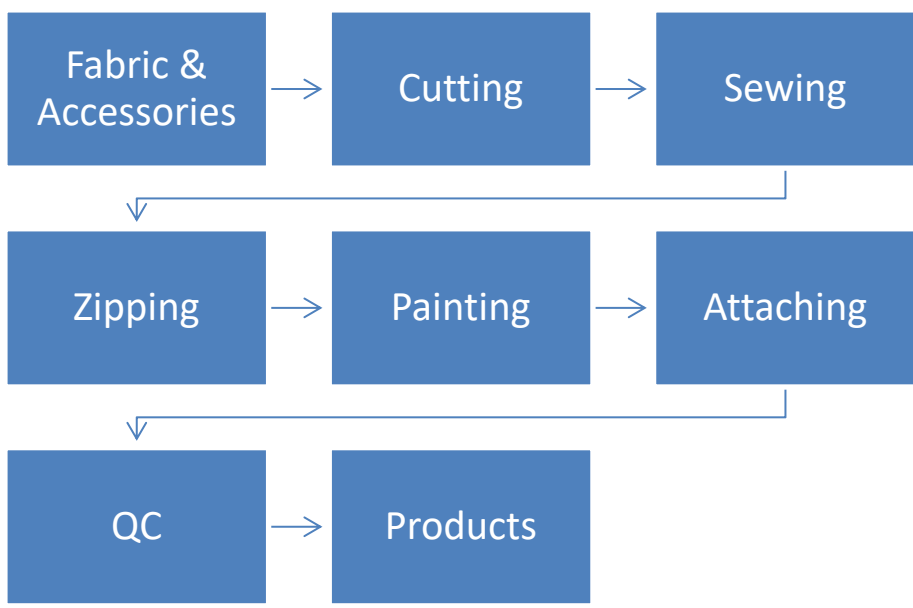




**စက်ရုံတည်ဆောက်မှု ပုံစံ**

ရေသိုလှောင်ကန် နှင့် မီးသတ်ရေလှောင်ကန်တို့၏ ထုထည်မှာ ၆၈၀၀ ဂါလံ အသီးသီးဖြစ်ကြသည်။ ခန့်မှန်းရေသုံးစွဲမှုမှာ နှစ်စဉ် ၆၅၇,၀၀၀ ဂါလံဖြစ်သည်။

အဓိကသုံးစွဲသည့် ကုန်ကြမ်းပစ္စည်းများမှာ Fabric, Accessory နှင့် Packing material ဆက်စပ်ပစ္စည်းများ ဖြစ်၍ တရုတ်နိုင်ငံ မှတင်သွင်းပါမည်။ ကုန်ထုတ်လုပ်မှုနှုန်းမှာ ပထမ (၁၀)နှစ်အတွင်း ၃,၇၀၀,၀၀၀ မှ ၄,၀၇၀,၀၀၀ ဖြစ်သည်။



**ထုတ်လုပ်ပုံအဆင့်ဆင့်**



HandBag #1



Cross Bag #1



Belt Bag



Cross Bag #3



Backpack #1



Backpack #2



Transparent Plastic Bag #1



Transparent Plastic Bag #2



Cross Bag #2



Shopping Bag #2



Cross Bag #4



HandBag #2



Shopping Bag #1



HandBag #3

### ထုတ်ကုန်ပစ္စည်း

#### အနီးပတ်ဝန်းကျင် အခြေအနေ

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

အခြေခံစစ်တမ်းများကောက်ယူခြင်းကို ၂၀၁၉ ခုနှစ်၊ အောက်တိုဘာလ ၊ ၃၁ ရက်နေ့ တွင်ဆောင်ရွက်ခဲ့၍ လေအရေအသွေး၊ အပူချိန်၊ စိုထိုင်းဆ၊ ဆူညံသံ နှင့် ညစ်ညမ်းမှုကို တိုင်းတာ ၍ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး ထုတ်လွှတ်မှု လမ်းညွှန်ချက်များ နှင့် နှိုင်းယှဉ်ဖော်ပြထားပါသည်။ စီမံကိန်းကြောင့် သက်ရောက်မှုများကို လျှော့ချရန် နှင့် ထိန်းသိမ်းရေးများပြုလုပ်ရန် ဖော်ပြထားပါသည်။ လေ၊ ရေ၊ အလင်း နှင့် ဆူညံသံ များ၏ အခြေအနေ အကျဉ်းချုပ်ကိုလည်း ဖော်ပြထားပါသည်။

#### အဆိုပြုလုပ်ငန်း၏စစ်တမ်းကောက်ယူမှု

အမျိုးအစား	ရလဒ်
ဆူညံသံ	
ထုတ်လုပ်မှုဧရိယာအတွင်း	71.296 dBA
လေထုအရည်အသွေး	
စက်ရုံဧရိယာပြင်ပ	

အမျိုးအစား	ရလဒ်
PM <sub>10</sub>	43.98 µg/m <sup>3</sup>
PM <sub>2.5</sub>	27.62 µg/m <sup>3</sup>
SO <sub>2</sub>	253.57 µg/m <sup>3</sup>
NO <sub>2</sub>	11.08 µg/m <sup>3</sup>
CO	0.3 ppm
<b>စက်ရုံဧရိယာအတွင်း</b>	
PM <sub>10</sub>	21.81 µg/m <sup>3</sup>
PM <sub>2.5</sub>	10.96 µg/m <sup>3</sup>
SO <sub>2</sub>	2.30 µg/m <sup>3</sup>
NO <sub>2</sub>	15.91 µg/m <sup>3</sup>
O <sub>3</sub>	4.64 µg/m <sup>3</sup>
<b>အလင်း</b>	
Warehouse	310
Cutting Section	978
Pattern Section	889
Sewing Section	680
Quality Control	820
Packing	360

**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။

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
လေထုညစ်ညမ်းမှု	ကုန်ကြမ်းပစ္စည်းများ၊ ကုန်ချောပစ္စည်းများသယ်ဆောင်သော ယာဉ်များမှ ဖုန်မှုန့်များ၊ ဖန်လုံအိမ်အာနိသင်ဖြစ်စေသော ဓာတ်ငွေ့များထွက်ရှိခြင်း အရေးပေါ်မီးစက်များနှင့် ယာဉ်အသွားအလာမှ ထွက်သော မီးခိုးများ	<ul style="list-style-type: none"> <li>• လေညစ်ညမ်းမှုများကိုထိန်းချုပ်ခြင်း၊ ယာဉ်များ၊ မီးစက်များ၊ စက်ပစ္စည်းများကို ပုံမှန်စစ်ဆေးခြင်း။</li> <li>• ယာဉ်များ၊ ကွန်ပရက်ဆာ၊ မီးစက်များကို ကောင်းမွန်စွာထိန်းသိမ်းခြင်း</li> <li>• မီးခိုးထွက်ရှိမှုများကို စစ်ပေးသည့်အိတ်များတပ်ဆင်စေခြင်း</li> </ul>
မြေဆီလွှာ ညစ်ညမ်းမှု	<ul style="list-style-type: none"> <li>• မတော်တဆ စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း။</li> </ul>	<ul style="list-style-type: none"> <li>• လျော့ချရန်မလိုပါ။</li> </ul>
ဆူညံသံ	<ul style="list-style-type: none"> <li>• ကုန်ပစ္စည်းထုတ်လုပ်ရေးလုပ်ငန်းကြောင့်ပတ်ဝန်းကျင် ဆူညံမှု။</li> </ul>	<ul style="list-style-type: none"> <li>• စက်လှိုင်းများနှင့် စက်ပစ္စည်းများရွေ့ရှားမှုကြောင့် ဆူညံသံကိုကာကွယ်ရန် လုပ်သားများကို နားကြပ်များအသုံးပြုစေခြင်း</li> </ul>
ကုန်းနေ၊ ရေနေ အပင်နှင့် သတ္တဝါများ ပျက်စီးဆုံးရှုံးမှု	<ul style="list-style-type: none"> <li>• အိတ်အမျိုးမျိုးချုပ်လုပ်ခြင်း</li> </ul>	<ul style="list-style-type: none"> <li>• လျော့ချရန်မလိုပါ</li> </ul>
မီးဘေးအန္တရာယ်	<ul style="list-style-type: none"> <li>• လျှပ်စစ်တပ်ဆင်အသုံးပြုမှုကြောင့် မတော်တဆဖြစ်ခြင်း</li> <li>• အမှိုက်စွန့်ပစ်သည့် နေရာနှင့် ကုန်ကြမ်းသိုလှောင်သည့် နေရာမှ မီးလောင်ကျွမ်းနိုင်ခြင်း</li> </ul>	<ul style="list-style-type: none"> <li>• စက်ရုံ၏မီးဘေးအန္တရာယ်ကာကွယ်ရန်အတွက် မီးသတ်ပူး၊ မီးသတ်ပိုက်၊ မီးသတ်ခေါင်း များထားရှိခြင်း။</li> <li>• မီးသတ်ဆိုင်ရာစက်ပစ္စည်းကိရိယာ များကိုပုံမှန်စစ်ဆေးခြင်း၊ အရေးပေါ် အခြေနေအတွက် မီးသတ်ရေကန်အဆင်သင့်ထား ရှိခြင်း။</li> <li>• စက်ရုံအတွင်းအရေးပေါ်အချက်ပေးစနစ်များထားရှိခြင်း။</li> </ul>

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
		<ul style="list-style-type: none"> <li>• အရေးပေါ်ထွက်ပေါက်များတွင်တစ်လျှောက်တွင် ကုန်ပစ္စည်းများပိတ်ဆို့ခြင်းမရှိအောင်ရှင်းလင်းထားရှိခြင်း။</li> </ul>
လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် လုံခြုံမှု	<ul style="list-style-type: none"> <li>• စက်ပစ္စည်းများလည်ပတ်ခြင်းကြောင့် မတော်တဆထိခိုက်မှုများဖြစ်ပေါ်နိုင်ခြင်း။</li> <li>• ပစ္စည်းတင်ချပြုလုပ်ခြင်း၊ ဖြတ်တောက်ခြင်း၊ ရောနှောခြင်း၊ ဖိနှိပ်ခြင်း၊ ထုတ်ပိုးခြင်း။</li> </ul>	<ul style="list-style-type: none"> <li>• အရေးပေါ်အခြေအနေများအတွက် စက်ပစ္စည်းကိုင်တွယ်မှုသင်တန်းပေးခြင်း၊ ကြက်ခြေနီသင်တန်းပေးခြင်း၊ မီးသတ်သင်တန်းပေးခြင်း။</li> <li>• လုပ်ငန်းခွင်တွင်း အလုပ်သမားများ အလင်းရောင်ကောင်စွာရရှိစေရန်နှင့် အမြင်အာရုံမထိခိုက်စေရန် အလင်းရောင်များကို လုံလောက်စွာထားရှိခြင်း။</li> <li>• အလုပ်သမားများအတွက်တစ်ကိုယ်ရေ ကာကွယ်ရေးသုံးပစ္စည်းများဖြစ်သည့် နားကြပ်၊ လက်အိတ်၊ ဦးထုတ်၊ မျက်မှန် များ အသုံးပြုစေခြင်း။</li> <li>• လျှပ်စစ်အန္တရာယ်မဖြစ်စေရန် နှင့် ပြုပြင်ထိန်းသိမ်းမှုများ ပြုလုပ်ရန်အတွက် ဝန်ထမ်းထားရှိ၍ ပုံမှန်စစ်ဆေးခြင်း။</li> </ul>
ကျန်းမာရေး	<ul style="list-style-type: none"> <li>• အရေးပေါ် မီးစက်များမှ ဆူညံသံများထွက်ပေါ်လာခြင်း။</li> </ul>	<ul style="list-style-type: none"> <li>• လုပ်သားများအတွက်ကျန်းမာရေး မထိခိုက်စေရန်ရေမြောင်းများကိုစနစ်တကျထားရှိခြင်း။</li> <li>• လုပ်သားများအတွက် ရှစ်နာရီအတွင်းလက်ခံနိုင်သည့် အမြင့်ဆုံး ဆူညံမှု နှုန်းမှာ 90dB(A) ဖြစ်သည်။</li> </ul>

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
		အသံဆူညံမှုအမြင့်ဆုံးနေရာများတွင် နားကြပ်များ တပ်ဆင်စေခြင်း။
စွန့်ပစ်အမှိုက်	<ul style="list-style-type: none"> <li>မီးဖိုချောင်၊ လူနေဆောင် ရုံးခန်းမှ တွက်ရှိသော အမှိုက်များ။</li> </ul>	<ul style="list-style-type: none"> <li>စက်ရုံအတွင်း အမှိုက်ပုံးများထားရှိခြင်း။</li> <li>သတ်မှတ်ထားသောနေရာတွင် အမှိုက်စို၊ အမှိုက်ခြောက်များခွဲခြားစွန့်ပစ်ခြင်း။</li> <li>အမှိုက်များကို ရန်ကုန်မြို့နယ်စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက်၍စွန့်ပစ်ခြင်း။</li> </ul>
စွန့်ပစ်အရည်	<ul style="list-style-type: none"> <li>မိလ္လာစနစ်ထားရှိခြင်း။</li> <li>ရုံးခန်း၊ မီးဖိုချောင် နှင့် လူနေဆောင်များမှ စွန့်ပစ်အရည်များတွက်ရှိခြင်း။</li> </ul>	<ul style="list-style-type: none"> <li>ဆီကန်၊ မိလ္လာကန်များ ကိုပုံမှန်စစ်ဆေးခြင်း၊ သန့်စင်ခြင်းများပြုလုပ်ခြင်းဖြင့် စွန့်ပစ်အရည်များ စိမ့်ဝင်မှုများကိုလျော့ကျစေနိုင်ခြင်း။</li> </ul>
အန္တရာယ်ရှိအမှိုက်	<ul style="list-style-type: none"> <li>မော်တော်ယာဉ်များ စက်ပစ္စည်းများ ပြုပြင်ထိန်းသိမ်းခြင်းမှ ဆီများတွက်ရှိခြင်း။</li> </ul>	<ul style="list-style-type: none"> <li>အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်းများသိုလှောင်မှု အားထိန်းသိမ်းခြင်း စစ်ဆေးခြင်း။</li> <li>လုပ်ငန်းခွင်ကျန်းမာရေး လုံခြုံမှုနှင့်ပတ်ဝန်းကျင်ဆိုင်ရာ လိုအပ်ချက်များ နှင့်ကိုက်ညီမှုရှိစေရန် ဓာတုပစ္စည်းများကို စနစ်တကျစွန့်ပစ်ခြင်း။</li> <li>အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းများကို ရန်ကုန်မြို့နယ်စည်ပင်သာယာရေးကော်မတီ နှင့်ချိတ်ဆက်၍စွန့်ပစ်ခြင်း။</li> </ul>

သိသာထင်ရှားသောသက်ရောက်မှုများကိုတွက်ချက်ရာတွင်ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုနှင့် ဆန်းစစ်ခြင်းအဖွဲ့အစည်း (IEMA) မှ ချမှတ်ထားသော နည်းလမ်းကို အသုံးပြု၍ ဆန်းစစ်ထားပါသည်။

စီမံကိန်းလုပ်ဆောင်ချက်များပေါ် မူတည်၍ ရလဒ်များ နည်းသည်။ အလွန်နည်းသည်ကို ဖော်ပြထားပါသည်။ အချို့ရလဒ်များမှာ အသင့်အတင့် ရှိပါသည်။ လူမှုစီးပွားဆိုင်ရာ တိုးတက်မှုများ အနေဖြင့် ကောင်းမွန်သောသက်ရောက်မှု ရှိသည်ကို တွေ့ရှိရပါသည်။

**ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ် လုပ်ဆောင်ချက်**

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

- ၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
  - လေထုညစ်ညမ်းမှုနှင့် ကာဘွန်ထွက်ရှိမှုကို လျော့ချရန် သစ်ပင်များစိုက်ပျိုးခြင်း
  - ဖုံးထူထပ်သောနေရာများတွင် အလုပ်သမားများကို တစ်ကိုယ်ရေသုံး အကာအကွယ်ပစ္စည်းများ အသုံးပြုစေခြင်း
  - တစ်နှစ်လျှင် ခန့်မှန်းကုန်ကျစရိတ် ၁၀၀၀၀၀၀ ကျပ်
- ၂။ ရေအသုံးပြုမှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
  - ရေအသုံးပြုမှုကို သိရှိနိုင်ရန် water meter အသုံးပြုခြင်း
  - ရေအသုံးပြုမှုကို ထိန်းသိမ်းမှုများ ပြုလုပ်နိုင်စေရန် ဝန်ထမ်းများကို သင်ကြားပေးခြင်း
  - တစ်နှစ်လျှင် ခန့်မှန်းကုန်ကျစရိတ် ၅၀၀၀၀၀ ကျပ်
- ၃။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
  - စက်ရုံမြောင်း ရေစီးရေလာကောင်းစေရန် ထိန်းချုပ်ခြင်း နှင့်
  - မိလ္လာစနစ်ကို စစ်ဆေးခြင်း
  - စက်ရုံမြောင်းများ ပိတ်ဆို့ခြင်းမဖြစ်စေရန် စစ်ဆေးခြင်း
- ၄။ ဆူညံမှုထိန်းခြင်းဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
  - မီးစက်ခန်းများတွင် ဆူညံသံထိန်းချုပ်ကိရိယာများတပ်ဆင်ခြင်း
  - လုံလောက်သော တစ်ကိုယ်ရေကာကွယ်ရေးပစ္စည်းများအသုံးပြုစေခြင်း

- ဆူညံသော နေရာများတွင် အလုပ်လုပ်သော အလုပ်သမားများအတွက် တစ်ကိုယ်ရေသုံးကာကွယ်ရေးပစ္စည်းများကို အသုံးပြုစေခြင်း
- တစ်နှစ်လျှင် ခန့်မှန်းကုန်ကျစရိတ် ၁၀၀၀၀၀ ကျပ်

၅။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

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

၆။ စွမ်းအင်အသုံးပြုမှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

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

၇။ အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်

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

၈။ လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan

- ကျန်းမာရေးစောင့်ရှောက်မှု - ၀.၅%
- သင်တန်းပို့ချမှု - ၁%
- ဝန်ထမ်းများကျန်းမာရေးစောင့်ရှောက်မှု - ၀.၅%

**လုပ်ငန်းဆောင်ရွက်နေစဉ်အတွင်း စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်**

အကြောင်းအရာ	တိုင်းတာမှု	အကြိမ်အရေအတွက်	ကုန်ကျစရိတ်	တိုင်းတာမည့်နေရာ	တာဝန်ရှိပုဂ္ဂိုလ်
လေထုအရေအသွေး	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub> , CO	၆လ တကြိမ် (လုပ်ငန်း လည်ပတ်စဉ်အတွင်း)	၈ သိန်း	စီမံကိန်းဧရိယာအတွင်း	Environmental Management Team's Hong Sheng (Myanmar) Industrial



					Company Limited
ဆူညံသံနှင့် တုန်ခါမှု	ဆူညံသံ အဆင့် (dBA)	လေတကြိမ်	၅သိန်း	စီမံကိန်းဧရိယာအတွင်း	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
စွန့်ပစ်အပိုင်အခဲ		အပတ်စဉ်	၅သောင်း	စက်ရုံဝန်းအတွင်း ပြန်လည်ပြုပြင် အသုံးပြုသည့် ပစ္စည်း များထားရှိရာနေရာနှင့် စွန့်ပစ်ပစ္စည်းများ	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
စွန့်ပစ်အရည်	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate	အပတ်စဉ်	၅သောင်း	မိလ္လာနှင့် ရေမြောင်း	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်း များ			၁၀သိန်း	သိုလှောင်သည့် ဧရိယာအတွင်း	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
မီးဘေး အန္တရာယ် စစ်ဆေးမှု	အမြင်အာရုံ စစ်ဆေးခြင်း၊ မီးသတ်ကိရိယာ များ	လစဉ်	၅သိန်း	စက်ရုံဝန်းအတွင်း	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited

စက်ရုံတွင်း အလင်းရောင် အခြေအနေ	ကျန်းမာရေးနှင့် လုံခြုံရေး	အပတ်စဉ်	၁၁သိန်း	စက်ရုံဝန်းအတွင်း နှင့်လုပ်ငန်း လည်ပတ်သည့်နေရာ	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
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**လုပ်ငန်းဖျက်သိမ်းချိန်အတွင်း စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်**

အကြောင်းအရာ	တိုင်းတာမှု	အကြိမ်အရေ အတွက်	ကုန်ကျစရိတ်	တိုင်းတာမည့်နေရာ	တာဝန်ရှိပုဂ္ဂိုလ်
လေထုအရေအသွေး	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub> , CO	လုပ်ငန်း ဖျက်သိမ်း ချိန်အတွင်း	၁၀သိန်း	လုပ်ငန်းဖျက်သိမ်း မည့်နေရာ	ဖျက်သိမ်းမည့် ကုမ္ပဏီ
ဆူညံသံနှင့် တုန်ခါမှု	ဆူညံသံ အဆင့် (dBA)	လုပ်ငန်း ဖျက်သိမ်း ချိန်အတွင်း	၁၀သိန်း	လုပ်ငန်းဖျက်သိမ်း မည့်နေရာ	ဖျက်သိမ်းမည့် ကုမ္ပဏီ

**သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း**

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း အစီအစဉ်တွင် စက်ရုံ၏ EMP အစီရင်ခံစာ အကြောင်းကို ရှင်းလင်းတင်ပြခြင်းဖြစ်သည်။ တွေ့ဆုံပွဲကို ၁၆ ရက်၊ ဇန်နဝါရီလ၊ ၂၀၂၀ ခုနှစ်တွင် Sky Hotel အစည်းအဝေးခန်းမ၌ ပြုလုပ်ခဲ့ပါသည်။ တွေ့ဆုံပွဲတွင် စက်ရုံ၏သက်ဆိုင်ရာပုဂ္ဂိုလ်များ၊ အစိုးရအဖွဲ့ရုံးများဖြစ်သော ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန၊ စက်မှုကြီးကြပ်နှင့် စစ်ဆေးရေး ဦးစီးဌာန ၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနှင့် သန့်ရှင်းရေးဌာ အစရှိသော သက်ဆိုင်ရာဌာနများ၏ တာဝန်ရှိပုဂ္ဂိုလ်များ၊ စက်မှုဇုန်စီမံခန့်ခွဲ မှုကော်မတီ၏ တာဝန်ရှိပုဂ္ဂိုလ်များမှ လိုအပ်သည်များကို အကြံပေးခြင်း၊ စီမံကိန်း၏ အစီရင်ခံစာတွင် လိုအပ်သည်များကို ဖြည့်စွက်ပေးရန် အကြံပြုချက်များပေးခဲ့ပါသည်။ ပြုလုပ်ခဲ့သည့် အစီအစဉ်အကျဉ်းကိုပါ ထည့်သွင်းဖော်ပြထားပါသည်။

အချိန်	ကြာသပတေးနေ့၊ ၁၆ ရက်၊ ဇန်နဝါရီလ၊ ၂၀၂၀
နေရာ	Sky Hotel အစည်းအဝေးခန်းမ၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်မြို့။
အစီအစဉ်	<ul style="list-style-type: none"> <li>• စက်ရုံနောက်ခံအကြောင်း</li> <li>• စက်ရုံလုပ်ငန်းအကြောင်း</li> <li>• ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့် လျော့ချရေးအစီအစဉ်</li> <li>• ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်နှင့် စောင့်ကြပ်ကြည့်ရှုမှုအစီအစဉ်</li> <li>• အမေးအဖြေကဏ္ဍ</li> </ul>

**(အသေးစိတ်ကို အခန်း ၇ တွင် ဖော်ပြထားပါသည်)**

အဆိုပါစက်ရုံ၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ရေရှည်ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်သော ပတ်ဝန်းကျင်အဖြစ် အကောင်အထည်ဖော်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို လျော့နည်းစေရန် စီမံခန့်ခွဲမှုအစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုရမည့်အစီအစဉ်များကို အောက်ပါအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအရာတစ်ခုချင်းစီအလိုက် ခွဲခြားပြုလုပ်ထားပါသည်။

- ၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
- ၂။ ဆူညံမှုထိန်းခြင်းဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
- ၃။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
- ၄။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
- ၅။ စွမ်းအင်အသုံးပြုမှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
- ၆။ ရေအသုံးပြုမှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်
- ၇။ အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်
- ၈။ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်
- ၉။ လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan
- ၁၀။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အတွက် ငွေကြေးလျာထားမှုအခြေအနေ

**(အသေးစိတ်ကို အခန်း ၈ တွင် ဖော်ပြထားပါသည်)**

**နိဂုံး**

အကျဉ်းချုပ်အားဖြင့် ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒ လမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက် ကျင့်သုံးရန်တာဝန်များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် ဖော်ပြရှင်းလင်း တင်ပြထားပါသည်။ စီမံကိန်းနှင့် သက်ဆိုင်သူများအား စီမံကိန်းဆိုင်ရာ အကြောင်းအရာများ ရှင်းလင်းတင်ပြခြင်း၊ အကြံပြုချက်များနှင့် ဆွေးနွေးတင်ပြလာသည့် သဘောထား အကြံဉာဏ်များကိုရယူပြီး အစီအရင်ခံစာတွင် ဖော်ပြထားပါသည်။

## EXECUTIVE SUMMARY

### **Introduction**

This report describes the findings of the Initial Environmental Examination (IEE) for the Manufacturing of various kinds of bags on CMP Basic by Hong Sheng (Myanmar) Industrial 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. 198/2019 on 11, June 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 Hong Sheng (Myanmar) Industrial 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 Endorsement No. Yaka- 1/3/4 (EIA) (1014/2019) on 14 June 2019. Therefore, Hong Sheng (Myanmar) Industrial Company Limited commissioned Myanwei Consulting Company Limited for IEE report study.

The proposed factory is the 100% foreign investment by Hong Sheng (Myanmar) Industrial Company Limited with an estimated authorized capital of USD (0.68) million. The proposed factory is located at Land Plot No. 16, Myay Taing Block No. Zone 4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region and the total land area 1.055 Acres. The factory aims to manufacture of various kinds of bags product by using semiautomatic process control system with production process. The construction phase of the proposed factory initiated in June, 2019 and then commercial running operation stage is December, 2019. The proposed duration of the investment shall be 25 years extendable 10 years periods two times. The term of the Lease shall be initial 5 years commencing from the date of signing of the Lease Agreement between Ma Khin Pyone and Hong Sheng (Myanmar) Industrial Company Limited for proposed project site for 1.055 acres of land and extendable for 10 years in 2 times recommended by the Yangon Region Government.

Decommissioning phase: The proposed project investment duration is 25 years and they will close out the project according to their MIC proposal.

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

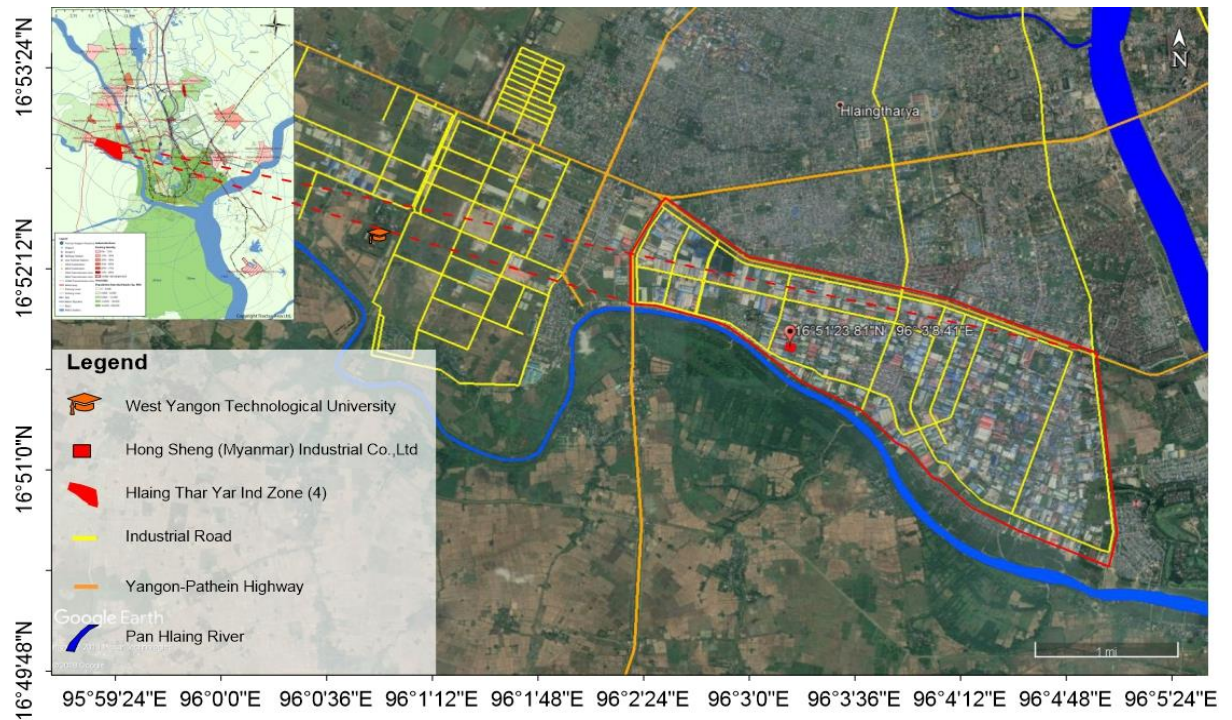
The brief summary of relevant national environmental legislations such as Environmental Impact Assessment Procedure (2015) and National Environmental Quality (emission) Guidelines, established by the Ministry of Natural Resources and Environmental Conservation (MONREC) and overview of current local and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

#### 1. The Constitution Law, 2008

2. The Environmental Conversation Law, 2012
3. The Environmental Conversation Rule, 2014
4. Environmental Impact Assessment Procedure, 2015
5. National Environmental Quality (Emission) Guideline, 2015
6. National Myanmar Environmental Policy, 2019
7. Myanmar Investment Rule, 2017 Amendment 2018
8. Payment of Wages Law, 2016
9. Yangon City Development Committee Law, 2018
10. The Amended Law for Factories Act, 1951 (2016)
11. The Private Industrial Enterprise Law
12. The Export and Import Law, 2012
13. The Prevention of Hazard from Chemical and Related Substances Law, 2013
14. The Underground Water Act
15. Myanmar Fire Brigade Law, 2015
16. The Electricity Law, 2014
17. Boiler Law, 2015
18. The Social Security Law, 2012
19. Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)
20. The Employment and Skill Development (2013)
21. Prevention and Control of Communicable Disease Law (1995 Amendment in 2011)
22. Occupational Safety and Health Law, 2019
23. The Law on Standardization
24. Vehicles Safety and Motor Vehicle Management Law, 2020
25. The Conversation of Water Resources and River Law, 2006
26. The Commercial Tax Law (1990 Amended 2014)

### **Project Description**

Hong Sheng (Myanmar) Industrial Company Limited is located beteen Latitude 16°51'23.81"N Longitude 96°03'8.41"E at Land Plot No. 16, Myay Taing Block No.Zone 4,Industrial Zone, Hlaing Thar Yar Township, Yangon Region. The total area of project site is 1.055 acres. and There are factory buildings, office building and dormitory. Transformer room, generator room and canteen are separated by main factory building structure.



**Location Map**

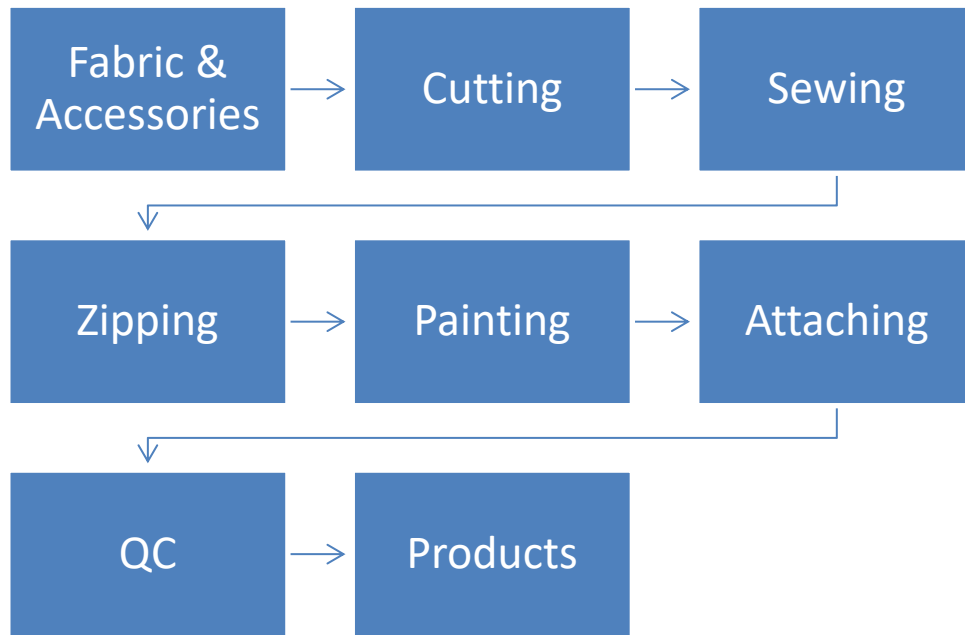


**Factory Layout Drawing**

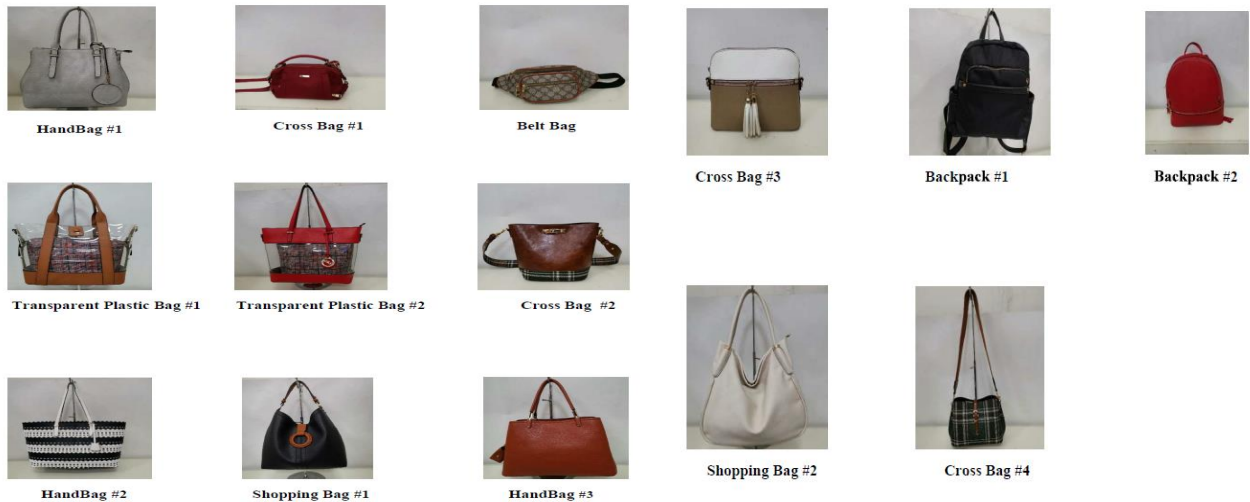
Capacity of domestic water storage tank and fire safety water tank are 6800 gallons storage tanks respectively. The factory uses water about 657,000 gallons annually.

The main Raw Materials are Fabric, Accessory and Packing material etc. which imported from China. The main product of Hong Sheng (Myanmar) Industrial Company Limited is

manufacturing of various kinds of bags which are exposed to China. Total production rate is from 3,700,000 pcs to 4,070,000 pcs for first 10 years.



### Production Process



### Product Photos

### 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 Environmental Solutions Company 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 31 October 2019. The overall conditions of air quality, water quality, soil quality, and noise levels are quoted from the project.

**Survey Result in Proposed Project**

Type	Result
<b>Noise level</b>	
Operation area	71.296 dBA
<b>Air Quality</b>	
<b>Outdoor Area</b>	
PM <sub>10</sub>	29.23 µg/m <sup>3</sup>
PM <sub>2.5</sub>	25.52 µg/m <sup>3</sup>
SO <sub>2</sub>	4.9 µg/m <sup>3</sup>
NO <sub>2</sub>	11 µg/m <sup>3</sup>
CO	3 µg/m <sup>3</sup>
PM <sub>10</sub>	0.3 ppm
<b>Indoor Area</b>	
PM <sub>10</sub>	21.81 µg/m <sup>3</sup>
PM <sub>2.5</sub>	10.96 µg/m <sup>3</sup>
SO <sub>2</sub>	2.30 µg/m <sup>3</sup>
NO <sub>2</sub>	15.91 µg/m <sup>3</sup>
O <sub>3</sub>	4.64 µg/m <sup>3</sup>
<b>Light Quality</b>	
Warehouse	310
Cutting Section	978
Pattern Section	889
Sewing Section	680
Quality Control	820
Packing	360

**Environmental Impact and Mitigation Measure**

The project activities may cause impacts on environmental resources, ecological resources, human and waste disposal. The potential impacts will occur in operation and decommissioning phases. The summary of impacts with respect to project activities and mitigation measures are described as below:



**Evaluation and Perdition of Significant Impacts and mitigation measure for Operation Phase**

Environmental Impact	Project Activities	Mitigation Measures
<b>Operation Phase</b>		
Air	Dust and GHGs emission from vehicles used for transporting raw materials and final products Emission of smoke from emergency diesel generator and vehicle movement	To control air pollution, the vehicles, generators and machineries have to check and maintain regularly. Ensuring vehicles, compressor and generator are well maintained. The factory has planted trees to reduce carbon emission and minimize air pollution
Soil	Engine oil leaks, spills at diesel storage and during fuel refueling	No mitigation measure
Water	Dormitory Cleaning and Kitchen	No mitigation measure
Noise and vibration	Generating noise from the production machinery	Should be built individual room like as generator room Low noise equipment should be used Should be provided the noise covering equipment or personal protective equipment (PPE)
Flora and fauna on terrestrial and aquatic life	Operation of the factory	No Mitigation Measure
Fire	Poor electrical installations Waste disposed area raw materials and chemical storage	To provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. 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.

Occupational Safety	<p>Accidental cases cause by operating machines.</p> <p>Unloading, cutting, and packaging activities.</p> <p>Accidental cases of thermic fluid heater</p>	<p>First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers.</p> <p>According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers.</p> <p>Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department.</p> <p>To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.</p>
Health	<p>Influx of people</p> <p>Noise from the generating of the emergency generators</p>	<p>Manage the drainage systems of the factory to prevent health risk of the workers.</p> <p>The maximum allowable noise level for workers is 90dB(A) for 8hours 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.</p>
Solid waste	<p>Residual pieces from the production lines</p> <p>Waste from packaging materials</p> <p>Waste from kitchen, dormitory and office.</p>	<p>Provides separate garbage bins at each building.</p> <p>All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area</p> <p>Final wastes should be disposed by using municipal and local buyers.</p>
Liquid waste	<p>Septic system and sewage.</p> <p>Domestic liquid waste disposal from office, kitchen and dormitory.</p>	<p>Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.</p>
Hazardous waste	<p>Used oil and lubricant discharged from the maintenance of vehicles and machines.</p>	<p>Proper inspection and maintenance in storage of hazardous waste.</p> <p>The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty</p>
Natural Disaster (Earthquakes, Floods, landsides and cyclone)		<p>Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency</p>
<b>Decommissioning Phase</b>		
Air pollution	<p>Decommissioning of buildings and related materials</p> <p>Transportation of demolished materials</p>	<p>Spray water twice a day</p> <p>Cover mesh trap around the decommission area</p> <p>Install shading net about 2 meters above temporary fence of decommission area</p> <p>Carry broken material with cover by canvas.</p>

Water pollution	Sewage form decommissioning workers Demolition machinery equipment	Systematically demolish the septic tanks.
Soil Contamination	Decommissioning of buildings and related materials Transportation of demolished materials	Manage the spillage of oil and diesel and sewage.
Noise Pollution	Decommission activities Transportation of demolished materials	Carry out the activities during day time. Maintain the machines and vehicles to reduce noise pollution. Provide the ear plugs to the workers.
Waste disposal	Demolished debris such as bricks, concrete materials	Recyclable materials and dispose to the define areas.
Hazardous waste	Used lubricants from decommissioning vehicles and machines	Manage the disposal way of hazardous waste.
Occupational Health and Safety (Accidents, Injuries)	Decommissioning activities Transportation of demolished materials	Provide protective fencing or demarcation with tape at the boundaries of dangerous / hazardous zone and the appropriate warning signs, marking and safety signs and installation of the lost time injury notice board.  Clean up excessive waste debris and liquid spills regularly.  Use the third-party expert assisted by trained personnel to identify and remove hazardous materials.

Modified method of Institute of Environmental Management and Assessment (IEMA) from United Kingdom is applied in this report to assess the significance of the impacts. Results of analysis mention that most of the project activities are very low/low significant and some are moderate significant to be improved for environmental performance. Social and economic developments are positive impacts of the proposed project.

### **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
  - The Factory has Planted Trees to reduce the carbon and minimize the air pollution
  - Workers are provided mask during working in any dusty area
  - 1,000,000 kyat per year
2. 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
3. Noise Management
  - 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.
  - 100,000 kyat per year
4. 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
5. Hazardous Waste Management Plan
  - Proper inspection and maintenance in storage of hazardous waste
  - Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements
  - The empty chemical containers will hand over to suppliers for recycle or appropriate disposal
  - 800,000 kyat per year
6. Energy Consumption 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
7. Fire Management Plan
  - Must be provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases
  - Must be indicated the emergency exit and assembly point in public area.
  - 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.

- 500000 kyats per year
8. Occupational Safety and Health Mangement Plan
- First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers.
  - According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers.
  - Personal Protective Equipment (PPE) like earmuffs, safety gloves, helmets and goggles are provided for each department.
  - To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.
  - Manage the drainage systems of the factory to prevent health risk of the workers.
  - The maximum allowable noise level for workers is 90dB(A) for 8hours 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.
  - 500,000 Kyats
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
- Health Care – 0.5%
  - Nonprofit training– 1%
  - Employee Healthcare – 0.5%

### Environmental Monitoring Plan during Operation Phase

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
<b>Operation Phase</b>					
Air quality	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub> , CO	Biannually	Outdoor and Indoor of proposed project	800,000 Kyats	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
Noise quality	Noise level in decibel (dBA)	Biannually	Production area	500000 Kyats per year	Environmental Management

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
					Team's Hong Sheng (Myanmar) Industrial Company Limited
Solid Waste Generation		Weekly	Recycle house and waste house and at the factory office	50,000 Kyats	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
Liquid Waste Generation	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate	Weekly	Sewage and drainage	500000 Kyats per year	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
Hazardous Waste Generation		Weekly	Recycle house and temporary storage area at the factory office	1000000 Kyats per year	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory	500000 Kyats	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
Light intensity	Illuminance	Monthly	At the production line (especially cutting and QC)	100000 Kyats	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
<b>Decommissioning Phase</b>					
Air quality	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub> , CO	One time during this phase	One point in the production area	1000000 Kyats	Land Owner
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	1000000 Kyats	Land Owner
Rehabilitation	Recovering and Revegetation		All decommissioning area		Land Owner

### **Public Consulting Meeting**

This chapter presents results of public consultation and information disclosure conducted for the Hong Sheng Myanmar Industrial factory. Public participation can be considered as the required element of the EMP process. In this study various stakeholder's participation were made. Public consultation during preparation of EMP report was conducted on 16, January 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	Thursday, 16 January 2020 10:30-12:30
Venue	Sky Hotel Meeting Room, Hlaing Tharyar 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>• 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 EMP 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 Hong Sheng (Myanmar) Industrial 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.

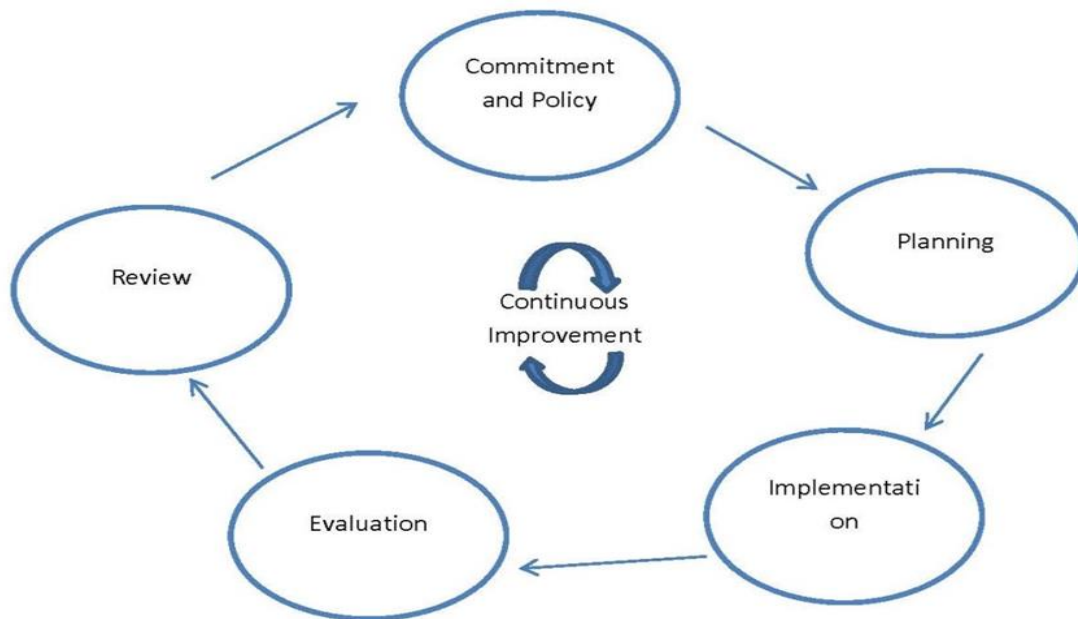
### **1.1. AIM OF INITIAL ENVIRONMENTAL EXAMINATION**

- 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. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN**

An Environmental Management System (EMS) is a framework that helps an organization achieves 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 company then implements the revised plan. The cycle repeats, and continuous improvement occurs.



**Figure 1-1 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.

### 1.2.1. Institutional Requirement

Hong Sheng (Myanmar) Industrial 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.

### 1.2.2. 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:

**Hong Sheng (Myanmar) Industrial 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 Hong Sheng (Myanmar) Industrial 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.

### 1.2.3. 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.

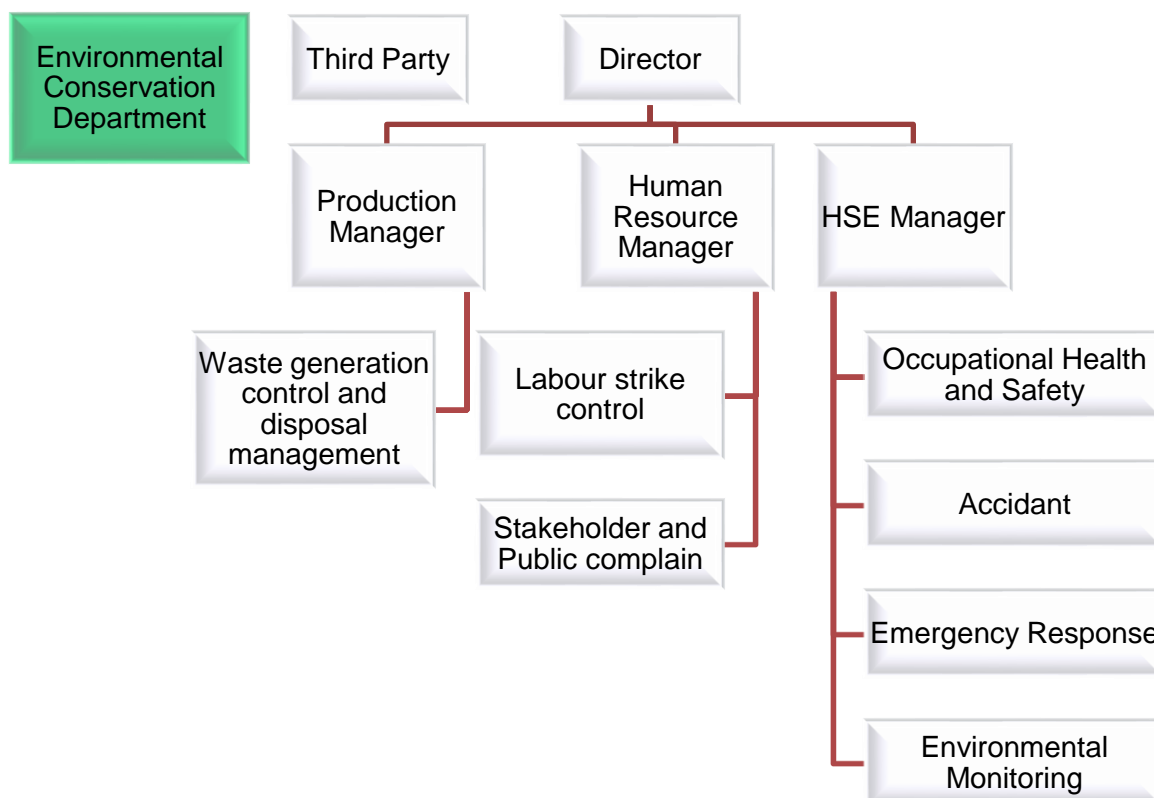


Figure 1-2 Organization Structure of Environmental Management Plan

Table 1-1 Responsibilities of HSE Members

Roles	Responsibilities
General Manager	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: <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	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: <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>

Roles	Responsibilities
HR Manager	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: <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	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: <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>

### 1.3. PROJECT BACKGROUND

The project is new investment for manufacturing of various kind of bag from Myanmar. The Yangon Region Investment Committee (YRIC) issues the project on 11, June 2019 with the Endorsement No. YGN-198/2019.

This report describes the findings of the Initial Environmental Examination (IEE) for the Manufacturing of various kind of bag by Hong Sheng (Myanmar) Industrial 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) (1014/2019) on 14, June, 2019. Therefore, Hong Sheng (Myanmar) Industrial Company Limited commissioned Myanwei Environmental Solutions Co.,Ltd for IEE report study.

#### 1.4. PROJECT PROPONENT PROFILE

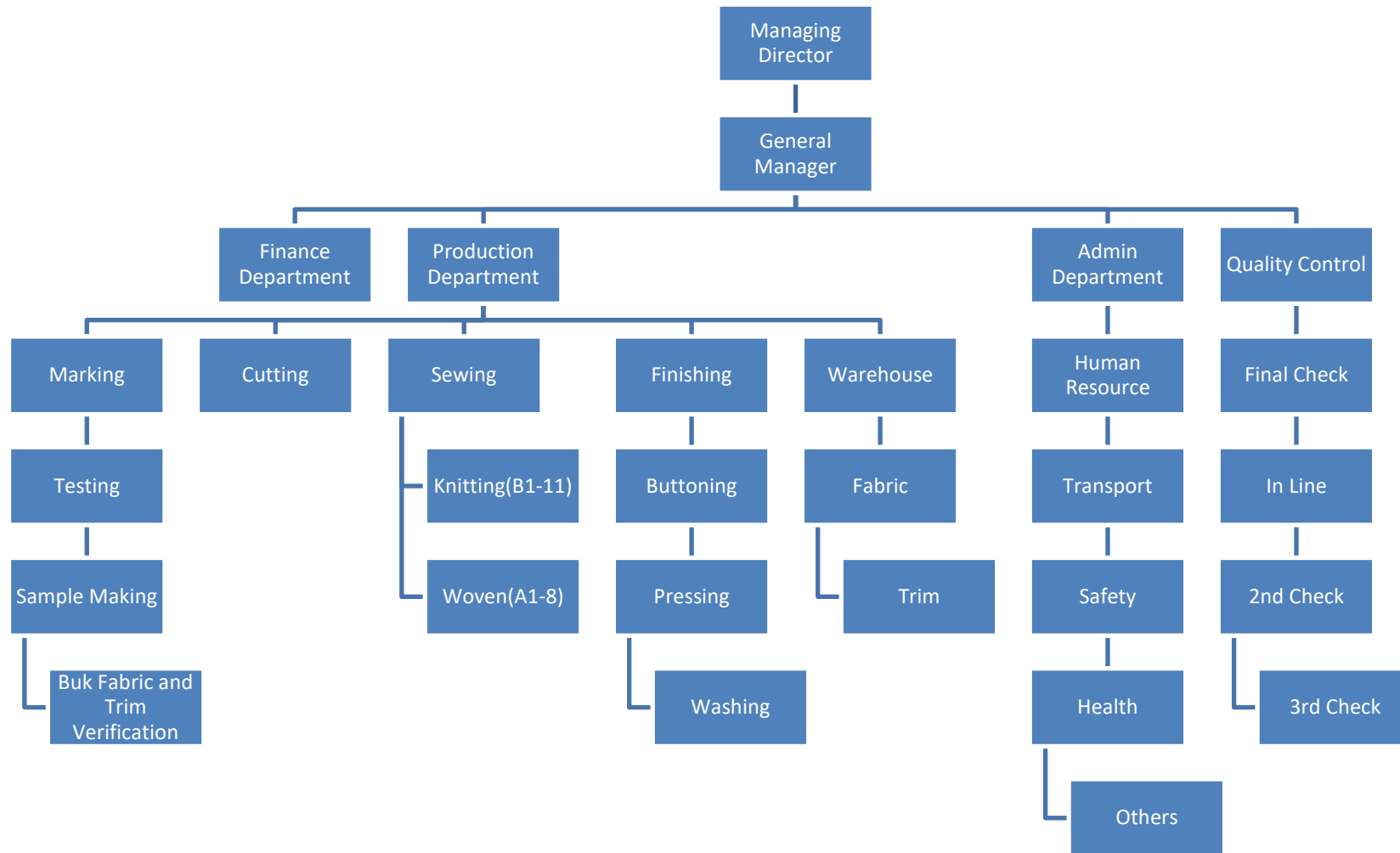
The proposed factory is the 100% foreign investment by Hong Sheng (Myanmar) Industrial Company Limited with an estimated authorized capital of USD (0.688) million. The proposed factory is located at Land Plot No. 16, Myay Taing Block No. Zone 4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region and the total land area are 1.055 Acres. The factory aims to manufacture of various kind of bag products by using bags production process. The construction phase of the proposed factory initiated in June 2019 and then commercial running operation stage is December 2019. The proposed duration of the investment shall be 25 years extendable 10 years periods two times. The term of the Lease shall be initial 5 years commencing from the date of signing of the Lease Agreement between Ma Khin Pyone and Hong Sheng (Myanmar) Industrial Company Limited for proposed project site for 1.055 acres of land and extendable for 10 years in 2 times recommended by the Yangon Region Government Shown in Table 1-2.

**Table 1-2 Information of Investor**

<b>Investor Name:</b>	Mr. Lin Busheng
<b>Citizenship:</b>	Chinese
<b>Company ID No./ Passport No</b>	ED 6359739
<b>Address of Registration office:</b>	Qiyun Forest Farm, Huling Town, Ruian City, Zhejiang Province, China.

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

<b>Type of Proposed Business:</b>	Manufacturing of Various Kind of Bags on CMP Basis
<b>Type of investment:</b>	100% Foreign Investment
<b>Type of Share:</b>	Ordinary Share
<b>Type of land:</b>	Stay Application (Industrial Land)
<b>Total land area:</b>	1.055 acre (4,269.4335 sq. meter)
<b>Total building area:</b>	Factory building (180 ft x 200 ft), Office Building (40 ft x 60 ft)
<b>Land lease year:</b>	25 years
<b>Construction period:</b>	One year
<b>Address:</b>	Land Plot No. 16, Myay Taing Block No. Zone 4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region
<b>Contact person:</b>	Ma Win Win War
<b>Mobile:</b>	09-256086172



**Figure 1-3 Organization Chart of Hong Sheng (Myanmar) Industrial Company Limited**

## 1.5. ENVIRONMENTAL CONSULTANT PROFILE

### 1.5.1. 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 Myanmar Consulting firm 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.

### 1.5.2. 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

## 1.6. IDENTIFICATION OF IEE STUDY TEAM

Myanmarwei 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.

**Table 1-4 Member of IEE study team**

Name	Qualification	Responsibility
<b>Myanmarwei Environmental Solutions Co., Ltd.</b>	<b>Transition Consultant Registration Certificate No. 0069</b>	<b>EIA Organization No.2, Myay Nu Street, Sanchaung Township, Yangon, Myanmar. Website: www.myanmarweiconsulting.com Ph-09421137569, 09-5185776</b>
Mr. Lin Htet Sein	MSc (Regional Geology) BSc (Hons) Geology Dip in Environmental Science Certificate in Environmental & Social Assessment Certificate in Environmental Sustainability	Project Director, Environmental Consultant, Project Management



Name	Qualification	Responsibility
<p align="center"><b>Myanwei Environmental Solutions Co., Ltd.</b></p>	<p align="center"><b>Transition Consultant Registration Certificate No. 0069</b></p>	<p align="center"><b>EIA Organization No.2, Myay Nu Street, Sanchaung Township, Yangon, Myanmar. Website: www.myanweiconsulting.com Ph-09421137569, 09-5185776</b></p>
	<p align="center"><b>TCR No. 0048</b></p>	
<p align="center">Dr. Hein Lynn Aung</p>	<p>M.B, B.S (Yangon), Business Management (International Collage of Management Sydney, Australia)</p>	<p align="center">Project Director, Public Health Consultant, Project Management</p>
<p align="center">Ms. Wah Wah Zaw</p>	<p>B.E Material and Metallurgy Engineering Diploma in Environmental Planning and Management M.S Environmental Planning and Management</p>	<p align="center">Senior Environmental Consultant, Social and Environmental Research, Quality control, Environmental Planning and Management</p>
<p align="center">Ms. Khin Thu Zar Myint</p>	<p>B.E(Materials and Metallurgy) Dip in Environmental Planning and Management</p>	<p align="center">Senior Environmental Consultant, Social Research, Public consultation, Social Economic Investigation</p>
<p align="center">Mr. Kyaw Win Han</p>	<p>B.E. Chemical Engineering B. Tech Chemical Engineering</p>	<p align="center">Junior Environmental Consultant, Team Leader of Baseline Survey, Monitoring Measure</p>
<p align="center">Mr. Aung Kyaw Moe</p>	<p>B.E. Chemical Engineering B. Tech Chemical Engineering</p>	<p align="center">Junior Environmental Consultant, Monitoring measure, Document Administration</p>
<p align="center">Mr. Saw Yan Naung</p>	<p>B.E. Chemical Engineering B. Tech Chemical Engineering</p>	<p align="center">Junior Environmental Consultant, Monitoring Measure, Document Administration</p>
<p align="center">Mr. Myat Ko Ko</p>	<p>B.Sc (Hons) Geology M.Sc. Geology (Economic and Mining) Certificate of Environment Management Certificate of Geotechnical Engineering (Myanmar Geoscience Society)</p>	<p align="center">Junior Environmental Consultant, Monitoring Measure, Document Administration</p>
<p align="center">Mr. Kaung Sett Lwin</p>	<p>B.Sc (Hons) Geology Certificate of Geotechnical Engineering (Myanmar Geoscience Society)</p>	<p align="center">Junior Environmental Consultant, Monitoring Measure, Document Administration</p>
<p align="center">Ms. Haymar Htet Naing</p>	<p>B.A (English) Certificate of Achievement (English Access Micro Scholarship Program) U.S Embassy Rangoon</p>	<p align="center">Junior Environmental Consultant, Monitoring Measure, Document Administration</p>

<b>Name</b>	<b>Qualification</b>	<b>Responsibility</b>
<b>Myanwei Environmental Solutions Co., Ltd.</b>	<b>Transition Consultant Registration Certificate No. 0069</b>	<b>EIA Organization No.2, Myay Nu Street, Sanchaung Township, Yangon, Myanmar. Website: www.myanwweiconsulting.com Ph-09421137569, 09-5185776</b>
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## 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 FRAMEWORK

Myanmar has 24 ministries under the Office of the President as of May 2016. The leading ministries in-charge of environmental and social considerations are the Environmental Conservation Department (ECD) of the MONREC that was reorganized Ministry of Environmental Conservation and Forestry (MOECAF) in April 2016.

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

Requirements related to environmental (and social) impact management for development projects are described in Table 2-1.

**Table 2-1 List of Myanmar's Law relating to environmental management**

Law and Regulation	Description
National Environmental Policy of Myanmar, (Notification No. 26/94 dated 5 December 1994)	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.
<b>Constitution 2008</b>	
Section 37, (a)	The Union is the ultimate owner of all lands and all-natural resources above and below the ground, above and beneath the water and in atmosphere in the Union.
Section 37, (b)	The Union shall permit citizens rights of private property, right of inheritance, right of private initiative and patent in accord with the laws.
Section 372	The Union guarantees the right to ownership, the use of property and the right to private invention and patent in the conducting of business if it is not contrary to the provisions of this Constitution and the existing laws.
Section 45	The Union shall protect and conserve natural environment.
Section 390, (a), (b), (c), (d)	Every citizen has the duty to assist the Union in preserving and safeguarding the cultural heritage, conserving the environment, striving for the development of human resources, and protecting and preserving the public property.
<b>Environmental Conservation Law, 30 March 2012</b>	
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.

Law and Regulation	Description
Section 3	c) to enable to emerge a healthy and clean environment and to enable to conserve natural and cultural heritage for the benefit of present and future generations; (d) to reclaim ecosystems as may be possible which are starting to degenerate and disappear; (e) to enable to manage and implement for decrease and loss of natural resources and for enabling the sustainable use beneficially;
Provisions of Duties and Powers relating to the Environmental Conservation of the Ministry: Section 7	(a) To specify categories and classes of hazardous wastes generated from the production and use of chemicals or other hazardous substances in carrying out industry, agriculture, mineral production, sanitation and other activities; (b) To prescribe categories of hazardous substances that may affect significantly at present or in the long run on the environment; (c) To promote and carry out the establishment of necessary factories and stations for the treatment of solid wastes, effluents and emissions which contain toxic and hazardous substances; (j) To prescribe the terms and conditions relating to effluent treatment in industrial estates and other necessary places and buildings and emissions of machines, vehicles and mechanisms; (m) To lay down and carry out a system of EIA and SIA as to whether or not a project or activity to be undertaken by any Government department, organization or person may cause a significant impact on the environment; (o) To manage to cause the polluter to compensate for environmental impact, cause to contribute fund by the organizations which obtain benefit from the natural environmental service system, cause to contribute a part of the benefit from the businesses which explore, trade and use the natural resources in environmental conservation works.
Chapter VI Environmental Quality Standards: Section 10	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

Law and Regulation	Description
	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.
Section 16	A person or organization operating business in the industrial estate or business in the SEZ or category of business stipulated by the Ministry: (a) is responsible to carry out by contributing the stipulated cash or kind in the relevant combined scheme for the environmental conservation including the management and treatment of waste; (b) shall contribute the stipulated users' charges or management fees for the environmental conservation according to the relevant industrial estate, SEZ and business organization; (c) shall comply with the directives issued for environmental conservation according to the relevant industrial estate, SEZ or business.
Section 24	The project proponent has to allow relevant governmental organization or department to inspect whether performing is conformity with the terms and condition include in prior permission, stipulated by the ministry, or not.
Section 25	The project proponent has to comply with the terms and conditions include in prior permission.
Section 29	The project proponent has to abide by the stipulations included in the rules, regulations, by-law, order, notification and procedure, which are issued by said law.
<b>Environmental Conservation Rules, 2014</b>	
Rules 58	The Ministry shall form the EIA Report Review Body with the experts from the relevant Government departments, organizations.
Rules 59	The Ministry may assign duty to the Department to scrutinize the report of EIA prepared and submitted by any organization or person relating to EIA and report through the EIA Report Review Body.
Rules 61	The Ministry may approve and reply on the EIA report or IEE or EMP with the guidance of the Committee.
Sub-rule (a) of rule 68	The project proponent has to avoid emit, discharge or dispose the materials which can pollute to environment, or hazardous waste or hazardous material prescribed by notification in the place where directly or indirectly injure to public.
Sub-rule (b) of rule 68	The project proponent has to avoid performing to damage to ecosystem and the environment generated by said ecosystem.
<b>Environmental Impact Assessment Procedure (December 2015)</b>	
Objectives	The project proponent has to be liable for all adverse impacts caused by doing or emitting of project owner or contractor, sub-

Law and Regulation	Description
	<p>contractor, officer, employee, representative or consultant who is appointed or hired to perform on behalf of project owner, under sub-paragraph (a) of paragraph 102.</p> <p>The project proponent has to support, after consulting with effected persons by project, relevant government organization, government department and other related persons, to resettlement and rehabilitation for livelihood until the effected persons by the project receiving the stable socio-economy which is not lower than the status in pre-project, under sub-paragraph (b) of paragraph 102</p> <p>The project proponent has to fully implement all commitments of project and conditions included in EMP. Moreover, the project proponent has to be liable for contractor and sub-contractor who perform on behalf of him/her have to fully abide by the relevant laws, rules, this procedure, EMP and all conditions, under paragraph 103.</p> <p>The project proponent has to be liable and fully &amp; effectively implement all requirements included in ECC, relevant laws and rules, this procedure and standards under rule 104.</p> <p>The project proponent has to inform the completed information, after specifying the adverse impacts caused by the project, from time to time, under paragraph 105.</p> <p>The project proponent has to continuously monitor all adverse impacts in the pre-construction phrase, construction phrase, operation phrase, suspension phrase, closure phrase and post-closure phrase, moreover has to implement the EMP with abiding the all conditions included in ECC, relevant laws &amp; rules and this procedure, under paragraph 106.</p> <p>The project proponent has to submit, as soon as possible, the failures of his or her responsibility, other implementation, ECC or EMP. If dangerous impact caused by this failure or failure should be known by the Ministry the project proponent has to submit within 24 hours and other than this situation has to submit within 7 days from knowing it, under paragraph 107.</p> <p>The project proponent has to submit the monitoring report dually or prescribed time by Ministry in line with the schedule of EMP, under paragraph 108.</p> <p>The project proponent has to prepare the monitoring report in accord with the rule 109.</p> <p>The project proponent has to show this monitoring report in public place such as library, hall and website and office of project for the purpose to know this report by public within 10 days from the date which the report is submitted to the Ministry. Moreover, has to give the copy of this report, by email or other way which way agreed with the asked person, to any asked person or organization, under paragraph 110.</p> <p>The project proponent has to allow inspector to enter and inspect in working time and if it is needed by Ministry has to allow inspector to enter and inspect in the office and work-place of project and other work-place related to this project in any time, under paragraph 113.</p> <p>The project proponent has to allow inspector to immediately enter and inspect in any time if it is emergency or failure to implement the</p>

Law and Regulation	Description
	<p>requirements related to social or environment or caused to it, under paragraph 115.</p> <p>The project proponent has to allow inspector to inspect the contractor and sub-contractor who implement on behalf of project, under paragraph 117.</p>
Screening: Section 23	<p>(a) The project proponent shall submit the Project Proposal to the Ministry for Screening.</p> <p>(b) The Ministry will send the Project Proposal to the Environmental Conservation Department to determine the need for environmental assessment.</p> <p>(c) Following the preliminary Screening and verification that the Project Proposal contains all required documents and related materials, subject to Articles 8, 9, 10, 11, 26 and 27 the Department shall make a determination in accordance with Annex 1='Categorization of Economic Activities for Assessment Purposes', taking into account Article 25 and the additional factors listed in Article 28 in order to designate the Project as one of the following, and then submit it to the Ministry:</p> <p>(i) An EIA Type Project, or</p> <p>(ii) An IEE Type Project, or</p> <p>(iii) A Non IEE or EIA Type, and therefore not required to</p>
<b>National Environmental Quality (Emission) Guidelines (NEQG) (December 2015)</b>	
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.
<b>National Environmental Policy of Myanmar (2019)</b>	
National Environmental Policy Vision & mission	<p><b>Vision</b></p> <p>A clean environment, with healthy and functioning ecosystem, that ensures includes development and wellbeing for all people in Myanmar.</p> <p><b>Mission</b></p> <p>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>
Section 17	<p>(a) To abide by the existing laws of the Republic of the Union of Myanmar.</p> <p>(b) To carry out the business by forming a company under the existing laws of Myanmar by the investor.</p> <p>(h) To carry out not to cause environmental pollution or damage in accord with existing laws in respect of investment business.</p> <p>(k) To carry out the systematic transfer of high technology relating to the business which are carried out by the investor to the relevant enterprises, departments or organizations in accord with the contract.</p>

Law and Regulation	Description
<b>Myanmar Investment Rules, 2017 Amendment 2018</b>	
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 203	The project proponent has to fully assist while negotiating with the authority for settling the grievance of the local community which has been affected due to 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
<b>Myanmar Insurance Law (1993)</b>	Section 15 - If the project proponent uses the owned vehicles the project owner has to ensure the insurance for the injured person. Section 16 - The project proponent has to ensure insurance to compensate for general damages because the project may cause damages to the environment and injury to the public.
<b>Payment of Wages Law (2016)</b>	
Section 3 & 4	The project proponent has to pay the wages in accord with section 3 and 4 of said law,
Section 5	The project proponent has to submit with the agreements of employees & reasonable ground to the department if it is difficult to pay because of force majeure included in a natural disaster
Section 7-13	The project proponent has to abide by the provisions of section 7 to 13 in the chapter (3) in respect of deduction from wages.
Section 14	The project proponent has to pay the overtime fees, prescribed by law, to the employees who work over working hours
<b>Yangon City Development Committee Law (2018)</b>	
Section (317)	The proponent shall not block the natural river channel, change the course, and disrupt the water channel, filling with soil within the city boundaries without the consent of the Committee
Section (318)	The project proponent shall not construct buildings, factories, and industries without sewage, toilet, septic tanks, and wastewater treatment system
Section (322)	The project proponent is not allowed to make activities that will produce noise pollution, water pollution, air pollution, and soil pollution to impact the environment within the city's boundaries
<b>The Amended Law for Factories Act, 1951 (2016)</b>	
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.



Law and Regulation	Description
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.
<b>The Private Industrial Enterprise Law, 1990</b>	
Basic Principles: Section 3	Private Industrial Enterprises shall be conducted in accordance with the following basic principles: (a) to enhance the higher proportion of the manufacturing value added in the gross national product and value of services, and to increase the production of the respective economic enterprises which are related to the industrial enterprise; (b) to acquire modern technical know-how for raising the efficiency of industrial enterprises and to establish the sale of finished goods produced by the industrial enterprise not only in the local market, but also in the foreign market; (d) to cause narrowing down of the gap between rural development and urban development by causing the development and improvement of industrial enterprises; (e) to cause opening up of more employment opportunities; (f) to cause avoidance of or reduction of the use of technical know-how which cause environmental pollution; (g) to cause the use of energy in the most economical manner.
<b>The Export and Import Law (2012)</b>	
Objectives	The objectives of this law are as follows: (a) To enable to implement the economic principles of the State successfully. (b) To enable to lay down the policies relating to export and import that supports the development of the State. (c) To cause the policies relating to export and import of the State and activities are to be in conformity with the international trade standards. (d) To cause to be streamlined and speedy in carrying out the matters relating to export and import.
Prohibitions: Section 5	No persons shall export or import restricted, prohibited and banned goods.
Prohibitions: Section 6	Without obtaining license, no person shall export or import the specified goods which are to obtain permission.
Prohibitions: Section 5	A person who obtained any license shall not violate the conditions contained in the license.
<b>The Prevention of Hazard from Chemical and Related Substances Law, 2013</b>	
Chapter II Aims Section 3	This law was enacted with the objectives of: a. To protect from being damaged the natural environment resources and being hazardous any living beings by chemical and related substances;

Law and Regulation	Description
	<p>b. To supervise systematically in performing the chemical and related substances business with permission for being safety;</p> <p>c. To perform the system of obtaining information and to perform widely educative and research for using the chemical and related substance systematically;</p> <p>d. To perform the sustainable development for the occupational safety, health and environmental conservation.</p> <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> <p>(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;</p> <p>(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.</p>
Section 16	<p>A person who has obtained a licence: -</p> <p>(a) shall abide the licence regulations;</p> <p>(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;</p> <p>(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;</p> <p>(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;</p> <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>

Law and Regulation	Description
	<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>
<b>Underground Water Act (21st June, 1930)</b>	
<p>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.</p>	
Section 3	<p>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.</p> <p>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.</p>

Law and Regulation	Description
Section 5	Every person obtaining or attempting to obtain underground water shall supply the water officer with such information as the President of the Union may by rule prescribe.
Section 6	The President of the Union may make rules 1- (a) prescribing the conditions subject to which licences may be granted by the water officer under section 3; (b) prescribing the form of and the procedure for granting such licences and the fees payable for the issue thereof; (c) prescribing the information to be supplied to the water officer under section 5.
<b>Myanmar Fire Brigade Law (2015)</b>	
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	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.

Law and Regulation	Description
Section 24	
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.
<b>The Electricity Law (2014)</b>	
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.	
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.

Law and Regulation	Description
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.
<b>Boiler Law (2015)</b>	
Chapter (2) Objective	The objectives of this law are as follows: (a) To obtain boilers in compliance with Myanmar Standards or International Standards (b) To prevent the country and citizens from hazards caused by boiler accidents (c) To use boilers in compliance with Myanmar Standards or International Standards within the country (d) To develop boiler technology and to produce experts capable of manufacturing, handling, repair, and maintenance of boilers (e) To optimize the use of boilers through effective utilization of fuel energy (f) To reduce the environmental, social and health impacts through long-lasting use of boilers.
Chapter (3) 4. With the permission of the Ministry, the inspector general can:	Notify the inspection methods and instructions according to the national or international standards for safe operations of boilers in line with this law, procedures and instructions Only the results obtained from the prescribed boiler standards and inspection methods will be approved.
Chapter (4). Boiler Registration	5. Anybody who would like to use a boiler in any kind of business should be registered. 6. Boiler should be manufactured according to Myanmar Standards or International Standards. 7. Those who would like to apply for boiler registration according to Section 5 should apply to the inspector with the application, documents and vouchers related to boiler 8. If the application regarding registration of boiler according to Section 7, the Registration Officer should conduct necessary inspection and submit results of the findings to the Inspector General. 9. The Inspector General should assess and inspect the submission of the Registration Officer according to Section 8 and could allow or reject for registration of the boiler. 10. The Inspector General shall define boiler size according to heated surface area in accordance with adopted procedures.
Chapter (13) Prohibitions	59. According to Section 21, nobody must alter, change, deface, deform or make embossed registration unnoticeable illegitimately. 60. Nobody is allowed to repair a boiler without boiler repair certificate. 61. Nobody is allowed to maintain a boiler without boiler maintenance certificate. 62. Nobody must alter safety relief valve in order to exceed the allowable pressure due to his consent or direction given by the owner.

Law and Regulation	Description
	63. Nobody must manufacture boilers against Section 25, Subsection 25 (a) and (b) enacted.
<b>The Social Security Law (2012)</b>	
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.	
Section 53(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;
<b>Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)</b>	
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 23	A party, employer or worker, may complain individual dispute relating to his grievance to the Conciliation Body and if he is not satisfied with the conciliation of such body in accord with stipulated manners, may apply to the competent court in person or by the legal representative.
Section 24	The relevant Conciliation Body shall, in respect of the collective dispute known or received by the complaint of either party, employer or worker, in respect of the dispute; information sent by the Minister or the Region or State Government or any other means, carry out as follows: (a) conciliating so as to be settled within three days, not including the official holidays, from the day of knowing or receipt of such dispute; (b) concluding mutual agreement if the settlement is reached in conciliating under subsection (a), before the Conciliation Body.
Section 25	The Conciliation Body shall refer the collective dispute which does not reach settlement to the relevant Arbitration Body and inform the persons relating to the dispute.
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 f violates any act or any emission to omission to damage the interest of labour by reducing of product without efficient cause.

Law and Regulation	Description
Section 46	Any employer who violates any prohibition contained in sections 38 and 39 shall, on conviction, be punished with a fine for a minimum of one-lakh kyats.
<b>The Employment and Skill Development (2013)</b>	
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.	
Section 5	The project proponent has to appoint employees with the contract in line with the provision of section 5 of said law.
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.
The Worker'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.
The Payment of Wages Act, 1936	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.
The Leave and Holidays Act (1951, partially revised in 2014)	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.
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.
Public Health Law (1972)	Chapter 2; Prevention of Public Health
Objectives	<p>To ensure the public health include not only employees but also resident people and cooperation with the authorized person or organization of health department. This law focuses as follows</p> <p>The project owner has to cooperate with the authorized person or organization in line with the section 3 and 5 of said law.</p> <p>The project proponent has to abide by any instruction or stipulation for public health under the section 3 of said law.</p> <p>The project proponent has to allow any inspection, anytime, anywhere if it is needed under the section 5 of said law.</p>



Law and Regulation	Description
<b>Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)</b>	
Chapter 2 Prevention	4. When a Principal Epidemic Disease of a Notifiable Disease occurs; Immunization and other necessary measures shall be undertaken by the Department of Health, in order to control the spread thereof; The public shall abide by measures undertaken by the Department of Health under sub-section (a).
Chapter 4 Environmental Sanitation	For prevention of the outbreak of Communicable Disease and effective control of Communicable Disease when it occurs, the public shall under the supervision and guidance of the Health Officer of the relevant area, undertake the responsibility of carrying out the following environmental sanitation measures; Indoor, outdoor sanitation or inside the fence outside the fence sanitation; Well, ponds and drainage sanitation; Proper disposal of refuse and destruction thereof by fire; Construction and use of sanitary latrines; Other necessary environmental sanitation measures.
<b>Occupational Safety and Health Law (2019)</b>	
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.
<b>The law on Standardization (2014)</b>	
Objectives	The Objectives of this Law are as follows: to enable to determine Myanmar Standard to enable to support export promotion by enhancing quality of production organizations and their product, production processes and services

Law and Regulation	Description
	<p>to enable to protect the consumers and user by guaranteeing imports and products are not lower than prescribed standard, and safe from health hazards</p> <p>to enable to support protection of environment related to products, production process and services from impact, and conservation of natural resources</p> <p>to enable to protect manufacturing, distributing and importing the disqualified goods which do not meet the prescribed standard and those which are not safe and endangered to the environment</p> <p>to support on establishing the ASEAN Free Trade Area and to enable to reduce technical barriers to trade</p> <p>to facilitate technological transfer and innovation by using the standards for the development of national economic and social activities in accordance with the national development programme.</p>
<p>Chapter 7 Taking Action by Committee No. 19</p>	<p>The committee may, if it is found out that holder of certificate of certification violates any term or condition contained in the relevant recommendation, pass any of the following administrative order:</p> <p>warning</p> <p>suspending the certificate of certification for limited period</p> <p>cancelling the certificate of certification</p>
<b>Vehicles Safety and Motor Vehicle Management Law, 2020</b>	
<p>Objectives</p>	<p>When the constructions periods and if it is needed in operation and production period for all vehicles</p> <ul style="list-style-type: none"> <li>• The project proponent has to promise to abide by the nearly all provisions of said law and rules, especially the provisions related to air pollution, noise pollution and life safety.</li> </ul>
<b>The Conservation of Water Resources and Rivers Law (2016)</b>	
<p>Chapter II Aims Section 3</p>	<p>The aims of this Law are as follows:</p> <p>(a) to conserve and protect the water resources and rivers system for beneficial utilization by the public;</p> <p>(b) to smooth and safety waterways navigation along rivers and creeks;</p> <p>(c) to contribute to the development of State economy through improving water resources and river system;</p> <p>(d) to protect environmental impact.</p>
<p>Chapter V Prohibitions Section 8</p>	<p>No person shall:</p> <p>(a) carry out any act or channel shifting with the aim to ruin the water resources and rivers and creeks.</p> <p>(b) cause the wastage of water resources wilfully.</p>
<p>Section 11</p>	<p>No person shall:</p> <p>(a) dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk.</p>

Law and Regulation	Description
	<p>(b) catch aquatic creatures within river-creek boundary, bank boundary or waterfront boundary with poisonous materials or explosives.</p> <p>(c) dispose of disposal soil and other materials from panning for gold, gold mineral dredging or resource production in the river and creek, into the river and creek or into the water outlet gully which can flow into the river and creek.</p>
Section 11	<p>11. No person shall:</p> <p>(a) dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk.</p> <p>(b) catch aquatic creatures within river-creek boundary, bank boundary or waterfront boundary with poisonous materials or explosives.</p> <p>(c) dispose of disposal soil and other materials from panning for gold, gold mineral dredging or resource production in the river and creek, into the river and creek or into the water outlet gully which can flow into the river and creek.</p>
Section 19	<p>No one shall dispose of any substance into the river-creek that may cause damage to waterway or change of watercourse from the bank or vessel which is plying, vessel which has berthed, anchored, stranded or sunk.</p>
Section 22	<p>No one shall, without the permission of the directorate, pile sand, shingle and other heavy materials for business purposes in the bank area and waterfront area.</p>
Chapter VI Penalties Section 29	<p>Whoever attempts or conspires or abets in the commission of an offence under this Law shall be punished with the punishment provided for such offence in this Law.</p>
Chapter VII Miscellaneous Section 30	<p>Any government department and organization or any person desirous of constructing drainage, utilizing river water intake, constructing bridges spanning rivers, connecting underground pipe, connecting underground electric power cable, connecting underground telecom cable or digging in rivers and creeks, bank boundary and waterfront boundary, under the requirement of work, shall in order not to adversely affect the water resources and rivers and creeks, carry out only after obtaining the approval of the Ministry of Transport.</p>
<b>The Commercial Tax Law (1990) Amended 2014</b>	
Chapter 5 Registration and Intimation of Commencement of Enterprise 11 (b)	<p>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.</p>
Chapter 6	<p>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</p>

Law and Regulation	Description
Monthly Payment of Tax and Sending of Three-Monthly Return 12 (a)	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.
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.
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.
12 (d)	The tax paid under sub-section (a), (b) or (c) shall be set-off from the tax due in the assessment.
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.

## 2.2. National Environmental Quality (Emission) Guidelines

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. 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 emissions. 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.

According to the Environmental Conservation Law, MOECAP shall set standards of environmental qualities as agreed by the Union Government and the Environmental Conservation Committee 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.

### 2.2.1. General Guidelines

General guidelines of related environmental impact guideline for proposed project are -

### 2.2.1.1. 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 2.

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

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

<sup>a</sup> Particulate matter 10 micrometers or less in diameter

<sup>b</sup> Particulate matter 2.5 micrometers or less in diameter

### 2.2.1.2. 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)**

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

a Standard Unit

b 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

## 2.2.2. Garment, Textile and Leather Products Manufacturing

This guideline applies to textile manufacturing using natural fibers, synthetic fibers (made entirely from chemicals), and regenerated fibers (made from natural materials by processing these materials to form a fiber structure). It does not include polymer synthesis and natural raw material production.

### 2.2.2.1. Effluent levels

Parameter	Unit	Guideline Value
5-day Biochemical oxygen demand	mg/l	30
Absorbable organic halogens	mg/l	1
Ammonia	mg/l	10
Cadmium	mg/l	0.02
Chemical oxygen demand	mg/l	160
Chromium (hexavalent)	mg/l	0.1
Chromium (total)	mg/l	0.5
Cobalt		0.5
Color		7 (436 nm <sup>a</sup> , yellow) 5 (525 nm, red) 3 (620 nm, blue)
Copper	mg/l	0.5
Nickel	mg/l	0.5
Oil and grease	mg/l	10
Pesticides		0.05-010 <sup>b</sup>
pH	S.U. <sup>c</sup>	6-9
Phenol	mg/l	0.5
Sulfide	mg/l	1
Temperature increase	°C	<3 <sup>d</sup>
Total coliform bacteria	100 ml	400
Total nitrogen	mg/l	10
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

a Nanometers

b 0-05 mg/l for total pesticides (organ phosphorus pesticides excluded); 0.10 mg/l for organo phosphorus pesticides

c Standard Unit

d b 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

### 2.2.2.2. Air emission levels

Parameter	Unit	Guideline Value
Ammonia	mg/Nm <sup>3a</sup>	30
Carbon disulfide	mg/Nm <sup>3</sup>	150
Chlorine	mg/Nm <sup>3</sup>	5
Formaldehyde	mg/Nm <sup>3</sup>	20
Hydrogen sulfide	mg/Nm <sup>3</sup>	5
Particulates	mg/Nm <sup>3</sup>	50 <sup>b</sup>
Volatile organic compounds	mg/Nm <sup>3</sup>	2/20/50/75/100/1 150 <sup>c, d</sup>

a Milligrams per normal cubic meter at specified temperature and pressure

b as the 30-minute mean for stack emissions

c Calculate 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/hr; 20 mg/Nm<sup>3</sup> for discharges of halogenated volatile organic compounds with a mass flow equal or greater than 100 g/hr; 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>

### 2.2.3. IFC EHS Guidelines

The EHS Guidelines<sup>1</sup> by International Finance Cooperation (IFC) are technical reference documents with general and industry-specific examples of Good International Industry practice (GIIP), as defined in IFC's Performance Standard 3: Resources Efficiency and Pollution Prevention. 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.

There are two kinds of guidelines, General EHS Guidelines and Industry Sector Guidelines. The General EHS Guidelines contain information on cross-cutting environmental, health, and safety issues potentially applicable to all industry sectors in the following section: (1) Environment, (2) Occupational Health and Safety, (3) Community Health and Safety and (4) Construction and Decommissioning. Table 2-4 shows the contents of the section of Community Health and Safety.

**Table 2-4 Community health and safety contents**

Contents	Brief Description
Water Quality and Availability	Drinking water sources should at all times be protected so that they meet or exceed applicable national acceptability standards or in their absence the current edition of WHO Guidelines for Drinking-Water Quality.  Project activities should not compromise the availability of water for personal hygiene needs and should take account of potential future increases in demand. The overall target should be the availability of 100 liters per person per day.



Contents	Brief Description
Structural Safety of Project Infrastructure	Reduction of potential hazards is best accomplished during the design phase when the structural design, layout and site modifications can be adapted more easily. The following issues should be considered and incorporated as appropriate into the planning, siting, and design phases of a project (1) inclusion of buffer strips or other methods of physical separation around project sites to protect the public from major hazards associated with hazardous materials incidents or process failure (2) incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire, and (3) application of locally regulated or internationally recognized building codes, standards and regulations, and mitigation measures.
Traffic Safety	Traffic safety should be promoted by all project personnel during displacement to and from the workplace, and during operation of project equipment on private or public roads. Prevention and control of traffic related injuries and fatalities should include the adoption of safety measures that are protective of project workers and of road users, including those who are most vulnerable to road traffic accidents.
Transport of Hazardous Materials	Projects should have procedures in place that ensure compliance with local laws and international requirements applicable to the transport of hazardous materials.
Disease Prevention	Recommended interventions against the communicable diseases at the project level include (1) providing surveillance and active screening and treatment of workers, (2) preventing illness among workers in local communities by undertaking health awareness and education initiatives, training health workers in disease treatment and conducting immunization programs for workers, and (3) providing treatment through standard case management in on-site or community health care facilities.
Emergency preparedness and Response	All projects should have an Emergency preparedness and Response Plan that is commensurate with the risks of the facility and that includes the following basic elements: (1) Administration (policy, purpose, distribution, definitions, etc.) (2) Organization of emergency areas (command centers, medical stations, etc. (3) Roles and responsibilities, (4) Communication systems, (5) Emergency response procedures, (6) Emergency resources, (7) Training and updating, (8) Checklists (role and action list and equipment checklist), and (9) Business Continuity and Contingency.

Source: IFC, Environmental, Health, and Safety (EHS) Guidelines, General EHS Guidelines: Community Health and Safety (April 30.20070)

### 2.3. INSTITUTIONAL ARRANGEMENT

The Ministry of Environmental Conservation and Forestry (MOECAF) was reformed as the Ministry of Natural Resources and Environmental Conservation (MONREC) on 30th March, 2016 in 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 EMP or EIA or to develop an EMP, and to obtain an Environmental Compliance Certificate (ECC) in accordance with this EIA procedure.

#### **2.4. Commitment Of Hong Sheng (Myanmar) Industrial Limited**

Hong Sheng (Myanmar) Industrial Limited has made the commitments and 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 MONREC in which to conduct 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 EMP and be abided by the environment policy, Environmental Conservation Law and other environmental related rules and procedures.

- Monitoring the factory area operations according to EMP and Environmental Monitoring Plan (EMoP)
- Submitting environmental monitoring reports to ECD
- Planning and implementation of CSR activities
- 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 carry out fire safety assessment and ensure adequate and appropriate fire safety measures for employees

### **3. PROJECT DESCRIPTION**

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

The proposed project factory is located at Land Plot No. 16, Myay Taing Block No. Zone 4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region and the Republic of the Union of Myanmar. The proposed factory falls at the coordinates of North Latitude 16°51'23.81"N and East Longitude 96°03'8.41"E. Location of the proposed project area were shown in Figure 3-1 and Figure 3-2.

#### **3.2. OBJECTIVES OF PROPOSED PROJECT**

The proposed project intends to manufacture bags on CMP basic and to export 100% of the finished products. Hong Sheng (Myanmar) Industrial Limited uses raw materials for bags manufacturing from China.

##### **3.2.1. Site Description**

The total land area of the proposed project area is 1.055 acres. Factory started to construct in May 2014. Construction period is about 2 years. There are factory buildings, office building and dormitory. Transformer room, generator room and canteen are separated by main factory building structure. Factory layout drawing are able to seen in Figure 3-3 and Figure 3-4.

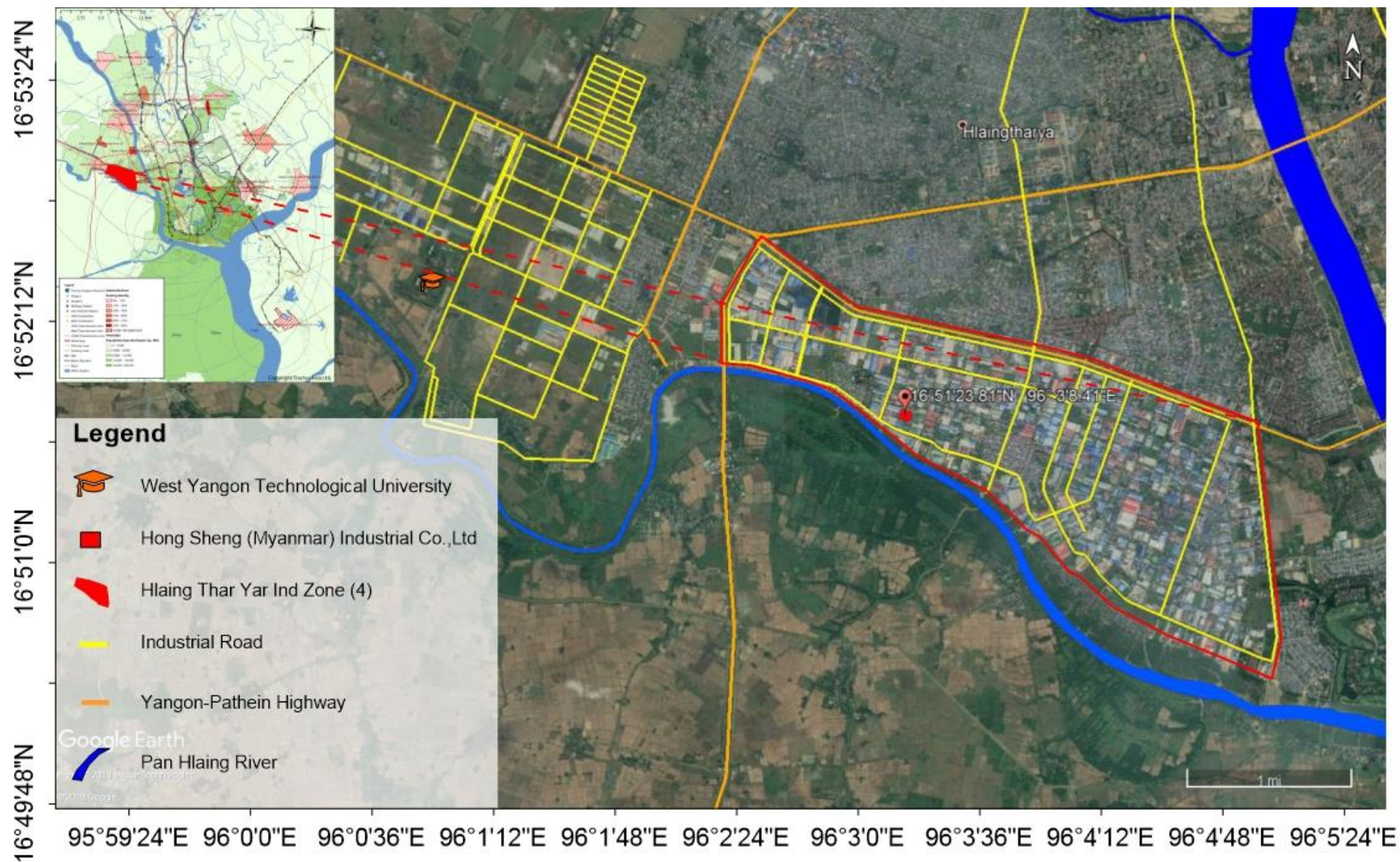


Figure 3-1 Location Map

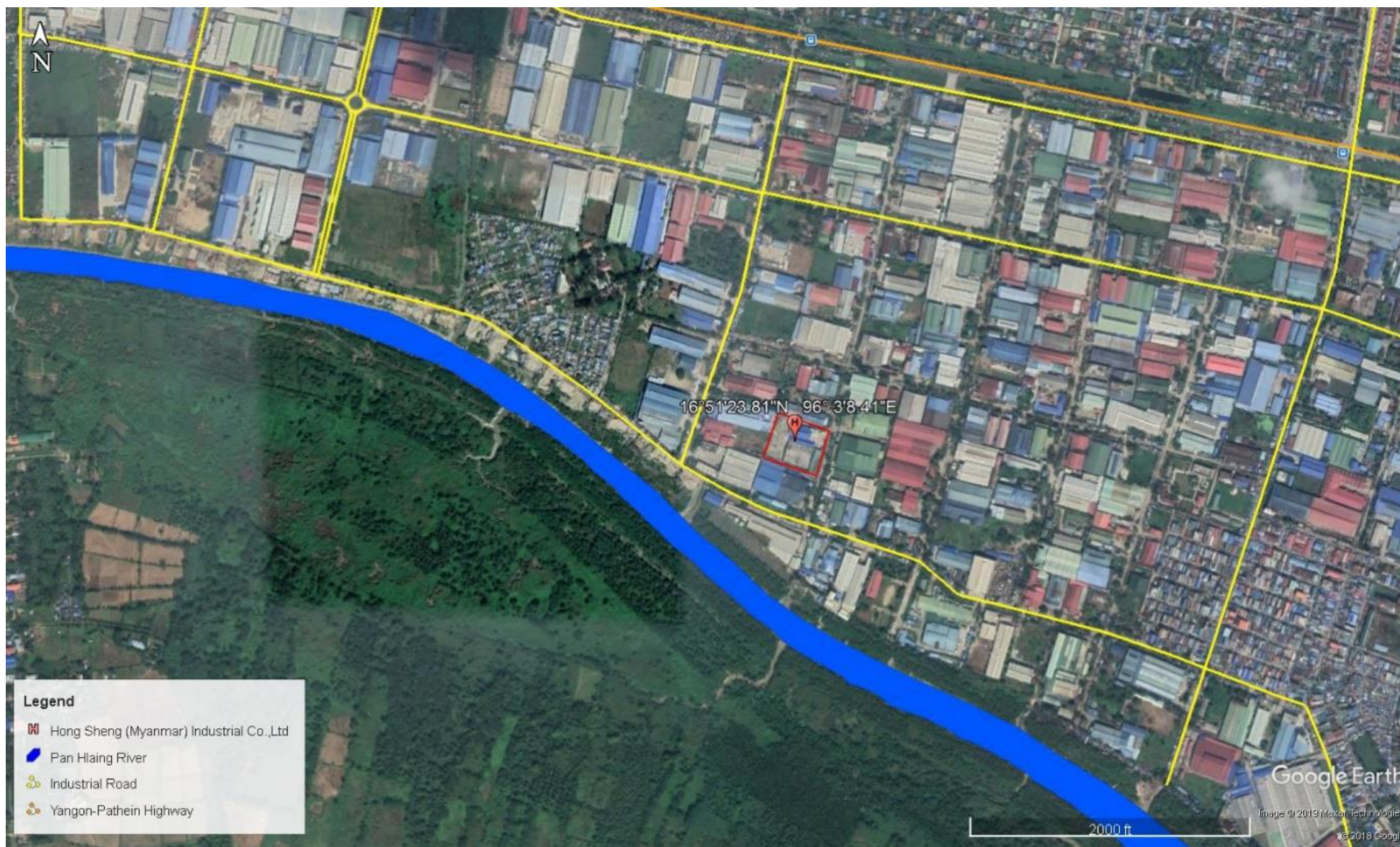


Figure 3-2 Location map of Project (Google source)



Figure 3-3 Factory Layout Drawing (Google drawing)

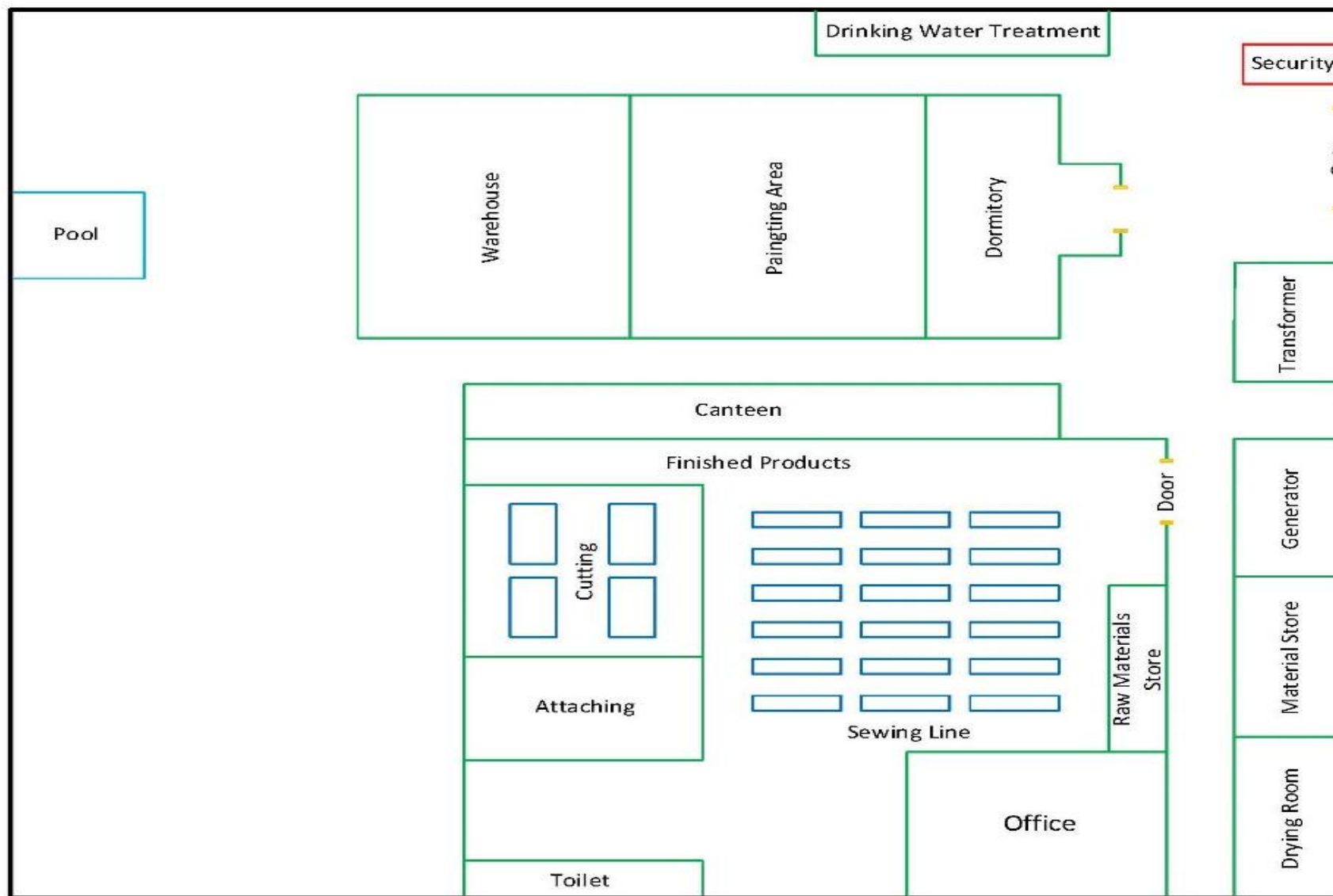


Figure 3-4 Factory Layout drawing

### 3.3. PRODUCTION PROCESS

The methods used to create bags will vary between different brands, but the process of manufacturing bags usually starts from creating the body of the bag. If the bag is high fashion and hand-made, the manufacturer will choose a piece of leather, which is consistent in color, and use it to cut out five basic sections of the bag – the front, the back, the sides and the bottom.

To cut out the parts and to ensure that all bags have the same size, the artisan will use special patterns. The sections are stitched together by machines, starting from sewing the front, back and sides to the bottom and then stitching all of the parts together. If the lining is stitched to the interior of the bag, it is often sewn together with the sides and the bottom. If the material used to create the bag has patterns on it, the high fashion manufacturer will cut each of the sections in such a way, which allows matching the patterns on the seams. Process flow diagram of Hong Sheng (Myanmar) Industrial factory is presented in Figure 3-5.

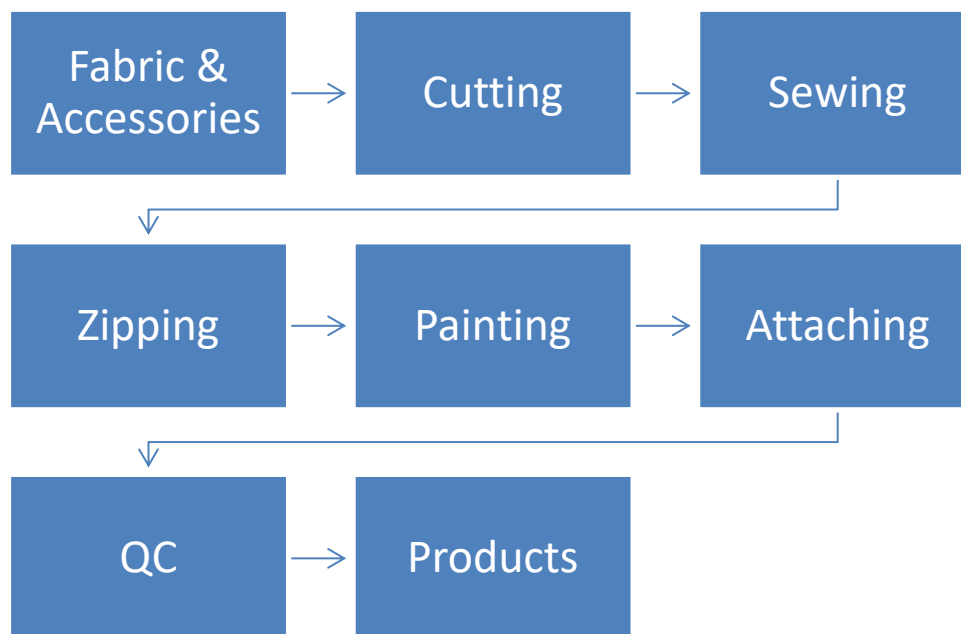
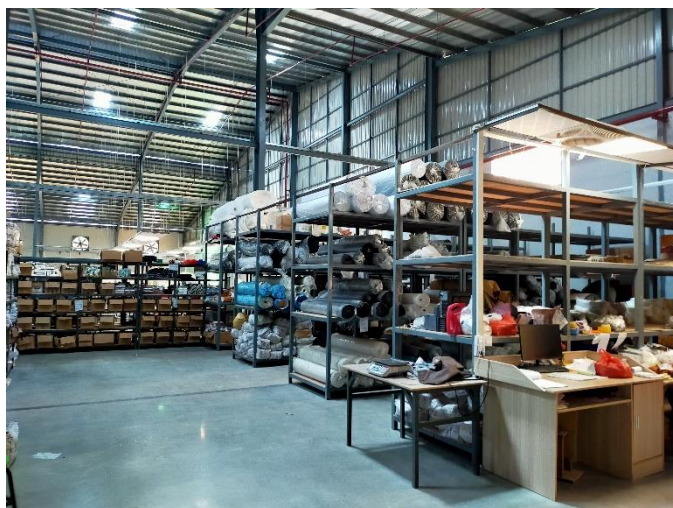


Figure 3-5 Production Flow Diagram



Fabric & Accessories



Cutting





Sewing



Zippering



Attaching



Painting



Quality Control

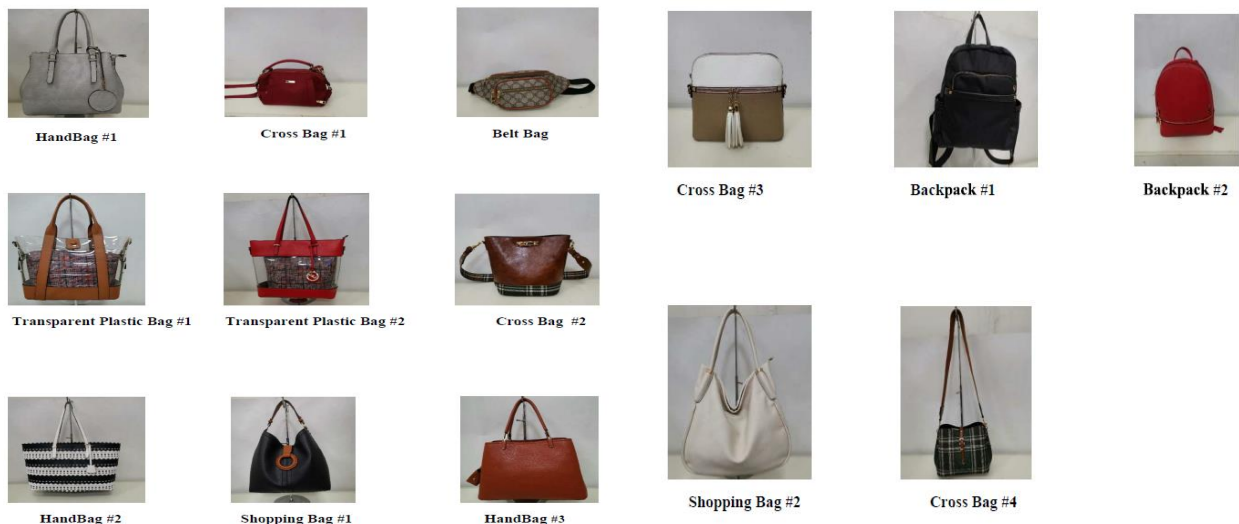


Products

Figure 3-6 Production Photos

**Table 3-1 Annual Production Rate**

No	Product	Unit	Year 1-3	Year 4-10
1	Handbag #1	US\$	601,201	663,307
2	Handbag #2	US\$	601,201	663,307
3	Handbag #3	US\$	400,800	442,204
4	Cross Bag #1	US\$	300,600	331,653
5	Cross Bag #2	US\$	300,600	331,653
6	Cross Bag #3	US\$	300,600	331,653
7	Cross Bag #4	US\$	300,600	331,653
8	Backpack #1	US\$	751,501	829,133
9	Backpack #2	US\$	751,501	829,133
10	Transparent Plastic Bag #1	US\$	300,600	331,653
11	Transparent Plastic Bag #2	US\$	300,600	331,653
12	Belt Bag	US\$	140,280	154,772
13	Shopping Bag #1	US\$	751,501	829,133
14	Shopping Bag #2	US\$	751,501	829,133
<b>Total</b>			<b>6,553,087</b>	<b>7,230,042</b>



**Figure 3-7 Products Photo**

### 3.4. UTILITIES

#### 3.4.1. Raw Material

The main materials for production of bags are Fabric, Accessory and Packing material, which imported from China. Annual raw material requires for production process provided in Table 3-2

**Table 3-2 List of Raw Materials Requirement**

No.	Particular	HS Code	Unit	Year- 1	Year- 2	Year- 3	Year- 4-10
1	Peva Fabric	5903	M	2,962,000	2,962,000	2,962,000	3,258,200
2	Cotton Strip	5806	KG	9,350,000	9,350,000	9,350,000	10,285,000
3	Nylon Zipper	8479	M	12,200,000	12,200,000	12,200,000	13,420,000
4	Metal Zipper	9606	M	12,200,000	12,200,000	12,200,000	13,420,000
5	Zipper Head	9607	PCS	12,200,000	12,200,000	12,200,000	13,420,000
6	Nylon Webbing	5607	M	9,800,000	9,800,000	9,800,000	10,780,000
7	Hardware Accessories	7610	PCS	1,106,000	1,106,000	1,106,000	1,216,600
8	Label	4821	PCS	5,300,000	5,300,000	5,300,000	5,830,000
9	Hangtag	4821	PCS	3,700,000	3,700,000	3,700,000	4,070,000
10	Packing Material	4819	PCS	4,830,000	4,830,000	4,830,000	5,313,000
11	Packing Tape	3919	PCS	2,380,000	2,380,000	2,380,000	2,618,000
12	PVC	3904	Yard	2,150,000	2,150,000	2,150,000	2,365,000
13	PU	3926	Yard	3,000,000	3,000,000	3,000,000	3,300,000
14	Lining	5407	Yard	2,440,000	2,440,000	2,440,000	2,684,000
15	Pattern Cloth Material	6037	Yard	3,033,000	3,033,000	3,033,000	3,336,300
16	Non-Woven Fabric	5603	Yard	2,110,000	2,110,000	2,110,000	2,321,000
17	Thread	5204	PCS	740,000	740,000	740,000	814,000
18	PP Board	3926	PCS	3,700,000	3,700,000	3,700,000	4,070,000
19	Japan Paper	4811	PCS	1,300,000	1,300,000	1,300,000	1,430,000
20	Bonded Leather	4115	PCS	16,200,000	16,200,000	16,200,000	17,820,000
21	EVA	3901	Yard	1,197,000	1,197,000	1,197,000	1,316,700
22	SBR	4002	Yard	1,197,000	1,197,000	1,197,000	1,316,700
23	Paper	4802	KG	1,197,000	1,197,000	1,197,000	1,316,700
24	Micro-Pak #1	3920	PCS	3,700,000	3,700,000	3,700,000	4,070,000
25	Pearl Wool #1	3926	Yard	1,581,000	1,581,000	1,581,000	1,739,100

No.	Particular	HS Code	Unit	Year- 1	Year- 2	Year- 3	Year- 4-10
26	Packing Box	4819	PCS	3,700,000	3,700,000	3,700,000	4,070,000
27	Polyster	5402	Yard	1,181,000	1,181,000	1,181,000	1,299,100
28	Reinforcing Band	5806	Yard	23,600,000	23,600,000	23,600,000	25,960,000
29	Dust Bag	5911	PCS	3,700,000	3,700,000	3,700,000	4,070,000
30	Oil for Machine	8421	KG	356,000	356,000	356,000	391,600
31	Thread Oil	3403	KG	1,630,000	1,630,000	1,630,000	1,793,000
32	Tissue Paper	4802	KG	1,461,000	1,461,000	1,461,000	1,607,100
33	Chip Board Paper	4823	PCS	1,197,000	1,197,000	1,197,000	1,316,700
34	Paper Pipe	4822	PCS	1,021,000	1,021,000	1,021,000	1,123,100
35	Masking Tape	3919	Case	885,000	885,000	885,000	973,500
36	Self-Adhesive Paper	4821	Case	553,000	553,000	553,000	608,300
37	Sponge	3912	Yard	103,000	103,000	103,000	113,300
38	Cutting Fabric	5810	KG	2,248,000	2,248,000	2,248,000	2,472,800
39	Edge Painting	3210	KG	700,000	700,000	700,000	770,000
40	Materials of Edge Painting	3208	KG	700,000	700,000	700,000	770,000
41	Pearl Wool #1	6115	Yard	170,000	170,000	170,000	187,000
42	Glue	3506	KG	2,065,000	2,065,000	2,065,000	2,271,500
43	Cleaning Agent	3204	KG	1,316,000	1,316,000	1,316,000	1,447,600
44	Polyster Fabric	5407	Yard	2,210,000	2,210,000	2,210,000	2,431,000
45	Synthesis Leather	4203	FT	40,700,000	40,700,000	40,700,000	44,770,000
46	Hot Melt Glue	3506	Case	610,000	610,000	610,000	671,000
47	Drying Agent	3824	Case	1,228,000	1,228,000	1,228,000	1,350,800
48	Micro-Pak #1	3920	Pack	3,700,000	3,700,000	3,700,000	4,070,000
49	Poly Bag	3923	Pcs	3,700,000	3,700,000	3,700,000	4,070,000
50	Poly Tube	3917	Yard	1,730,000	1,730,000	1,730,000	1,903,000

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

No.	Particular	HS Code	Unit	Year- 1	Year- 2	Year- 3	Year- 4-10
1	Peva Fabric	5903	M	2,962,000	2,962,000	2,962,000	3,258,200

No.	Particular	HS Code	Unit	Year- 1	Year- 2	Year- 3	Year- 4-10
2	Cotton Strip	5806	KG	9,350,000	9,350,000	9,350,000	10,285,000
3	Nylon Zipper	8479	M	12,200,000	12,200,000	12,200,000	13,420,000
4	Metal Zipper	9606	M	12,200,000	12,200,000	12,200,000	13,420,000
5	Zipper Head	9607	PCS	12,200,000	12,200,000	12,200,000	13,420,000
6	Nylon Webbing	5607	M	9,800,000	9,800,000	9,800,000	10,780,000
7	Hardware Accessories	7610	PCS	1,106,000	1,106,000	1,106,000	1,216,600
8	Label	4821	PCS	5,300,000	5,300,000	5,300,000	5,830,000
9	Hangtag	4821	PCS	3,700,000	3,700,000	3,700,000	4,070,000
10	Packing Material	4819	PCS	4,830,000	4,830,000	4,830,000	5,313,000
11	Packing Tape	3919	PCS	2,380,000	2,380,000	2,380,000	2,618,000
12	PVC	3904	Yard	2,150,000	2,150,000	2,150,000	2,365,000
13	PU	3926	Yard	3,000,000	3,000,000	3,000,000	3,300,000
14	Lining	5407	Yard	2,440,000	2,440,000	2,440,000	2,684,000
15	Pattern Cloth Material	6037	Yard	3,033,000	3,033,000	3,033,000	3,336,300
16	Non-Woven Fabric	5603	Yard	2,110,000	2,110,000	2,110,000	2,321,000
17	Thread	5204	PCS	740,000	740,000	740,000	814,000
18	PP Board	3926	PCS	3,700,000	3,700,000	3,700,000	4,070,000
19	Japan Paper	4811	PCS	1,300,000	1,300,000	1,300,000	1,430,000
20	Bonded Leather	4115	PCS	16,200,000	16,200,000	16,200,000	17,820,000
21	EVA	3901	Yard	1,197,000	1,197,000	1,197,000	1,316,700
22	SBR	4002	Yard	1,197,000	1,197,000	1,197,000	1,316,700
23	Paper	4802	KG	1,197,000	1,197,000	1,197,000	1,316,700
24	Micro-Pak #1	3920	PCS	3,700,000	3,700,000	3,700,000	4,070,000
25	Pearl Wool #1	3926	Yard	1,581,000	1,581,000	1,581,000	1,739,100
26	Packing Box	4819	PCS	3,700,000	3,700,000	3,700,000	4,070,000
27	Polyster	5402	Yard	1,181,000	1,181,000	1,181,000	1,299,100
28	Reinforcing Band	5806	Yard	23,600,000	23,600,000	23,600,000	25,960,000
29	Dust Bag	5911	PCS	3,700,000	3,700,000	3,700,000	4,070,000
30	Oil for Machine	8421	KG	356,000	356,000	356,000	391,600
31	Thread Oil	3403	KG	1,630,000	1,630,000	1,630,000	1,793,000

No.	Particular	HS Code	Unit	Year- 1	Year- 2	Year- 3	Year- 4-10
32	Tissue Paper	4802	KG	1,461,000	1,461,000	1,461,000	1,607,100
33	Chip Board Paper	4823	PCS	1,197,000	1,197,000	1,197,000	1,316,700
34	Paper Pipe	4822	PCS	1,021,000	1,021,000	1,021,000	1,123,100
35	Masking Tape	3919	Case	885,000	885,000	885,000	973,500
36	Self-Adhesive Paper	4821	Case	553,000	553,000	553,000	608,300
37	Sponge	3912	Yard	103,000	103,000	103,000	113,300
38	Cutting Fabric	5810	KG	2,248,000	2,248,000	2,248,000	2,472,800
39	Edge Painting	3210	KG	700,000	700,000	700,000	770,000
40	Materials of Edge Painting	3208	KG	700,000	700,000	700,000	770,000
41	Pearl Wool #1	6115	Yard	170,000	170,000	170,000	187,000
42	Glue	3506	KG	2,065,000	2,065,000	2,065,000	2,271,500
43	Cleaning Agent	3204	KG	1,316,000	1,316,000	1,316,000	1,447,600
44	Polyster Fabric	5407	Yard	2,210,000	2,210,000	2,210,000	2,431,000
45	Synthesis Leather	4203	FT	40,700,000	40,700,000	40,700,000	44,770,000
46	Hot Melt Glue	3506	Case	610,000	610,000	610,000	671,000
47	Drying Agent	3824	Case	1,228,000	1,228,000	1,228,000	1,350,800
48	Micro-Pak #1	3920	Pack	3,700,000	3,700,000	3,700,000	4,070,000
49	Poly Bag	3923	Pcs	3,700,000	3,700,000	3,700,000	4,070,000
50	Poly Tube	3917	Yard	1,730,000	1,730,000	1,730,000	1,903,000

**Table 3-4 Raw material require for a piece of product and annual requirement**

No	Particular	Unit	Hand bag#1	Hand bag#2	Hand bag#3	Cross Bag#1	Cross Bag#2	Cross Bag#3	Cross Bag#4
1	Peva Fabric	M	1.0	1.0	1.0	0.5	0.5	0.5	0.5
2	Cotton Strip	KG	3.0	3.0	3.0	2.0	2.0	2.0	2.0
3	Nylon Zipper	M	4.0	4.0	4.0	2.0	2.0	2.0	2.0
4	Metal Zipper	M	4.0	4.0	4.0	2.0	2.0	2.0	2.0
5	Zipper Head	PCS	4.0	4.0	4.0	2.0	2.0	2.0	2.0
6	Nylon Webbing	M	3.0	3.0	3.0	2.0	2.0	2.0	2.0
7	Hardware Accessories	PCS	0.5	0.5	0.5	0.2	0.2	0.2	0.2

No	Particular	Unit	Hand bag#1	Hand bag#2	Hand bag#3	Cross Bag#1	Cross Bag#2	Cross Bag#3	Cross Bag#4
8	Label	PCS	1	1	1	1.0	1.0	1.0	1.0
9	Hangtag	PCS	1	1	1	1.0	1.0	1.0	1.0
10	Packing Material	PCS	1	1	1	0.5	0.5	0.5	0.5
11	Packing Tape	PCS	0.5	0.5	0.5	0.2	0.2	0.2	0.2
12	PVC	Yard	0.7	0.7	0.7	0.3	0.3	0.3	0.3
13	PU	Yard	0.9	0.9	0.9	0.6	0.6	0.6	0.6
14	Lining	Yard	0.8	0.8	0.8	0.4	0.4	0.4	0.4
15	Pattern Cloth Material	Yard	1	1	1	0.5	0.5	0.5	0.5
16	Non-Woven Fabric	Yard	0.7	0.7	0.7	0.3	0.3	0.3	0.3
17	Thread	PCS	0.2	0.2	0.2	0.2	0.2	0.2	0.2
18	PP Board	PCS	1	1	1	1	1	1	1
19	Japan Paper	PCS	0.4	0.4	0.4	0.2	0.2	0.4	0.4
20	Bonded Leather	PCS	5	5	5	2.0	2.0	2.0	2.0
21	EVA	Yard	0.3	0.3	0.3	0.22	0.22	0.22	0.22
22	SBR	Yard	0.3	0.3	0.3	0.22	0.22	0.22	0.22
23	Paper	KG	0.3	0.3	0.3	0.22	0.22	0.22	0.22
24	Micro-Pak #1	PCS	1	1	1	1	1	1	1
25	Pearl Wool #1	Yard	0.5	0.5	0.5	0.3	0.3	0.3	0.3
26	Packing Box	PCS	1	1	1	1	1	1	1
27	Polyster	M	0.3	0.3	0.3	0.2	0.2	0.2	0.2
28	Reinforcing Band	Yard	7	7	7	4	4	4	4
29	Dust Bag	PCS	1	1	1	1	1	1	1
30	Oil for Machine	KG	0.1	0.1	0.1	0.09	0.09	0.09	0.09
31	Thread Oil	KG	0.7	0.7	0.7	0.3	0.3	0.3	0.3
32	Tissue Paper	KG	0.5	0.5	0.5	0.2	0.2	0.2	0.2
33	Chip Board Paper	PCS	0.3	0.3	0.3	0.22	0.22	0.22	0.22
34	Paper Pipe	PCS	0.3	0.3	0.3	0.1	0.1	0.1	0.1
35	Masking Tape	Case	0.1	0.1	0.1	0.03	0.03	0.03	0.03
36	Self-Adhesive Paper	Case	0.2	0.2	0.2	0.01	0.01	0.01	0.01
37	Sponge	Yard	0.03	0.03	0.03	0.02	0.02	0.02	0.02
38	Cutting Fabric	KG	0.67	0.67	0.67	0.5	0.5	0.5	0.5
39	Edge Painting	KG	0.2	0.2	0.2	0.1	0.1	0.1	0.1

No	Particular	Unit	Hand bag#1	Hand bag#2	Hand bag#3	Cross Bag#1	Cross Bag#2	Cross Bag#3	Cross Bag#4
40	Materials of Edge Painting	KG	0.2	0.2	0.2	0.1	0.1	0.1	0.1
41	Pearl Wool #1	Yard	0.1	0.1	0.1	0.05	0.05	0.05	0.05
42	Glue	KG	0.7	0.7	0.7	0.3	0.3	0.3	0.3
43	Cleaning Agent	KG	0.42	0.42	0.42	0.2	0.2	0.2	0.2
44	Polyester Fabric	Yard	1	1	1	0.5	0.5	0.5	0.5
45	Synthesis Leather	FT	12	12	12	8	8	8	8
46	Hot Melt Glue	Case	0.2	0.2	0.2	0.1	0.1	0.1	0.1
47	Drying Agent	Case	0.31	0.31	0.31	0.2	0.2	0.2	0.2
48	Micro-Pak #1	Pack	1	1	1	1	1	1	1
49	Poly Bag	Pcs	1	1	1	1	1	1	1
50	Poly Tube	Yard	0.5	0.5	0.5	0.3	0.3	0.3	0.3

### 3.4.2. Machinery and Equipment

Automation systems for fully automatic and semiautomatic systems control of each process machine or complete processing line have been implemented. Lists of machinery and equipment required for the proposed factory are listed in Table 3-5.

**Table 3-5 Annual Raw Material Requirements**

No.	Machinery Name	Asset	Quantity
1	Computer pattern Machine	Set	60
2	Sewing Machine	Set	300
3	Cutting Machine	Set	10
4	Staking Machine	Set	4
5	Gliding Machine	Set	4
6	Cutting Ribbing Machine	Set	4
7	Barrack Machine	Set	5
8	Nailing Machine	Set	20
9	Coding Machine	Set	2
10	Prober Machine	Set	2
11	Prober by Hand	Set	10
12	Folder material Machine	Set	3
13	Strip Cutting Machine	Set	2
14	Embossed Machine	Set	2
15	Pressure Line Machine	Set	2
16	Paper Pattern Machine	Set	1



<b>No.</b>	<b>Machinery Name</b>	<b>Asset</b>	<b>Quantity</b>
17	Column Sewing Machine	Set	10
18	High Chariot Sewing Machine	Set	60
19	Cloth Inspection Machine	Set	1
20	Edge Painting Dryer	Set	2
21	Edge Painting Machine	Set	2
22	Glue Sprayer	Set	4
23	Vacuum Cleaner of Staking Machine	Set	2
24	Dehumidifier	Set	6
25	Electronic Scale	Set	5
26	Twin needle Machine	Set	15
27	Thread Cutting Machine	Set	60
28	Bagger Machine	Set	10
29	Air Compressor(30KWh)	Set	2
30	Punch Machine	Set	8
31	Window Folding Spraying Machine	Set	2
32	Fully Automatic Straight Edge Folding Machine	Set	2
33	Spot Welding Machine	Set	2
34	Fork-Lift (3 Ton)	Set	3
35	Fork-Lift (5 Ton)	Set	2
36	Hammer	Set	600
37	Tool/Cutter	Set	1000
38	Mold	Set	2000
39	Cutter Mold	Set	1000
40	Material of Cutter Mold	Set	1500
41	Countertop tempered glass	Set	280
42	Pressure Regulator (400KVA)	Set	1
47	Electric Generator Automatic Transfer Switching Equipment (400KVA)	Set	1
48	Electric Generator (50 KWh)	Set	1
49	Tape Machine	Set	10
50	Edge Painting Box	Set	3000
51	Glue Gun	Set	100

### 3.4.3. Human Resource

The proposed Factory of Hong Sheng (Myanmar) Industrial Company Limited has the employees more than 99.9% 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. Management and team member detail of human resource is mentioned in Table 3-6.

**Table 3-6 Employment Schedule of Hong Sheng (Myanmar) Industrial factory**

No	Particular	Local	Foreign
1	General Manager	1	
2	Shipping Manager	1	
3	HR Manager	1	
4	Quality Inspection Manager	1	
5	Secretary	1	1
6	Warehouse In and Out of the Clerk	1	
7	Driver	2	
8	Security	4	
9	Cleaner	2	
10	Supervisor	14	
11	Leader	28	
12	Skilled Worker	639	
13	Unskilled Worker	100	
14	Translator	2	
15	Mechanic	1	
16	Fire Safety Officer	1	
17	Office Clerk	1	1
18	Financial Manager		1
19	Factory Manager		1
20	Quality Inspection Manager		1
21	Production Manager		1
22	Purchasing Manager		1
23	Warehouse Supervisor		1
24	Mechanic		1
25	Sampling Technician		2
26	Quality Control Technician		2

No	Particular	Local	Foreign
27	Production Technician		2
	<b>Total</b>	<b>800</b>	<b>15</b>

#### 3.4.4. Water Requirement

The project was use groundwater for laundry use, domestic use and firefighting. The groundwater stores in the three storage tanks on one-ground tanks with capacity of 5,000 gallons for fire-fighting and two overhead tanks with capacity of 1,800 gallons for domestic use.

Currently 110 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 and 35 gallons per day (gpd) per employee. Since the factory has a maximum of 116 workers, factory water needs ranged from 1,000 to 1,800 gallons per day.

The factory has 2 separated water distribution systems comprising domestic use system and fire water system. Groundwater contains in ground storage tank with capacity of 5,000 gallons for fire-fighting. Treated water pumps to be stored in the overhead tank with 500 gallons on the water tower then water distribute to the factory operation area via pipes by gravity.





Figure 3-8 Water storage and filtration system

#### 3.4.5. Electricity and Fuel Requirement

The electricity supply during full operation will be from the 125 kVA transformer. There will be two The proposed project is intended to get required electricity supply form Yangon City Electricity Supply Board (YESB) and distributed by 315 KVA and 800 KVA of Transformers. Another sources of energy 150 KVA and 400 KVA generators will also be kept as the emergency generator if normal electricity supply could not provide for the proposed project. Electricity distribution room is shown Figure 3-9.



Figure 3-9 Electricity distribution room

### 3.5. FACILITIES

#### 3.5.1. Fire hazards protect facility

Fire extinguishers, fire hose reels and fire hydrants are installed in the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening is also constructed with the capacity of 2,500 gallon gallons at the proposed area. The emergency contact numbers of township and district fire services department must be printed and tagged at easily visible places for fire emergency cases. 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. In addition, the project proponent has plans to provide trainings on firefighting for the workers by a professional or otherwise by sending to training courses. The plan to install fire alarm system and fire-frightening system are mentioned in Figure 3-10.



Figure 3-10 Firefighting system

### 3.5.2. Liquid waste control facility

Kitchen and dishwashing sink were 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 Hlaing Thar Yar. This area has been suffered from flood problems during raining season. The factory has already provided internal rainwater drainage system in connection with local drainage system outside the factory to drain into Pan Hlaing River to prevent flood problems



**Figure 3-11 Drainage and Toilet facility**

### **3.5.3. Solid waste management facility**

The factory provides separate garbage bins at each building. All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste bin: non-hazardous waste, hazardous waste, re-usable waste and final wastes will be disposed by using YCDC's service.

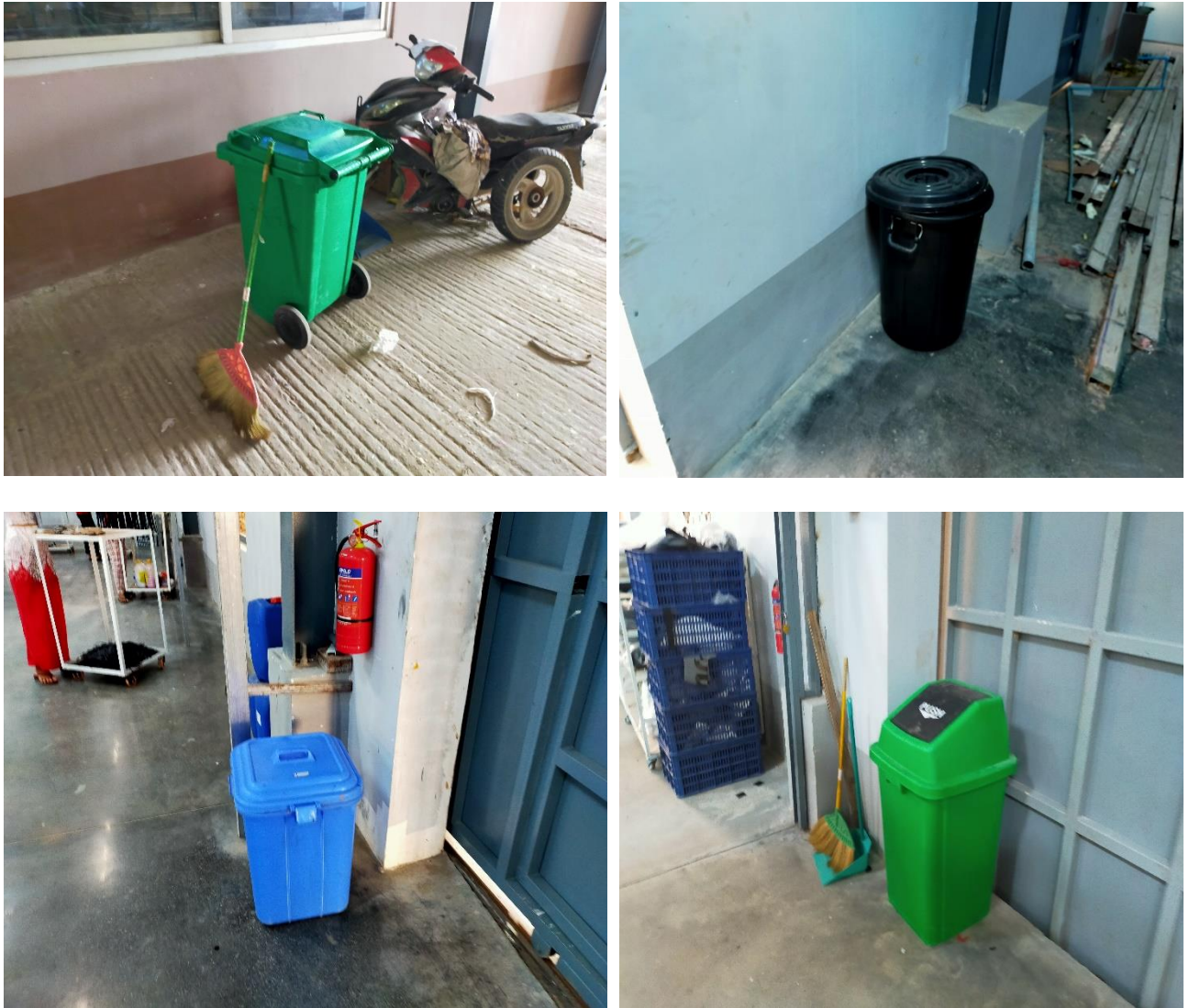


Figure 3-12 Waste storage and Dispose photo

#### 3.5.4. Ventilation System

The factory ventilation systems consist of natural ventilation system and mechanical ventilation system. The mechanical ventilation system is provided in office room, production area, toilet, kitchen and dormitory.





Figure 3-13 Ventilation System at factory

### 3.5.5. Toilet Facility

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 3-14 Toilet Facilities at Hong Sheng (Myanmar) Industrial Factory

### 3.6. WASTE GENERATION

The project will be generated solid waste, liquid waste and hazardous waste from the operation of the Hong Sheng (Myanmar) Industrial Limited . Detail description of waste generation and waste amount are shown in Table 3-7.

**Table 3-7 Waste Generation and Waste Amount**

Wastes		Type of wastes	Estimated waste amount	Source of generation
Solid waste	Re-usable	Disposed packaging materials, paper or plastic wrapping	546 kg / week	Materials store and supply packaging
	Non re-usable	Food residues, domestic waste	102 kg / day*	Canteen, Kitchens, Dormitory
Liquid waste		Sanitary discharge water	2.8 m <sup>3</sup> /day*	Toilet facility, kitchen and canteen
Hazardous waste		Oil leakage and spills	-	Operation of generator and movements of vehicles

\* 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).

\*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)

### 3.7. ALTERNATIVE PROJECT SITE

No alternative site has been proposed aside from this area since the proposed project area is situated within Land Plot No. 16, Myay Taing Block No.Zone 4, Industrial Zone, Hlaing Thar Yar 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.

### 3.8. DECOMMISSIONING PHASE

The proposed project investment duration is 25 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 Mingaladon Township, Yangon Region.

### 4.2. ENVIRONMENTAL BASELINE STUDY

The filed 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 is shown in

**Table 4-1 Location of the Survey Point**

Type of Survey	Coordinates	Survey point	Description of survey point
AirQuality Measurement Point	16°51'22.9"N 96°03'08.7"E	Project site	Outdoor and Indoor area of the factory
Noise Level (NL)	16°51'22.9"N 96°03'08.7"E	Project site	Operation Area of the factory
Light Measurement	16°51'22.8"N 96°03'08.5"E	Project site	Operation Area of the factory

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.

#### 4.2.1. Site Survey and Environmental Monitoring

The baseline environmental quality at the Project Site and its immediate surroundings was established by wastewater, ambient air quality samples and noise level measurements at immediate surrounding areas. To determine the existing baseline environmental quality within the project site on 5<sup>th</sup> May 2022.

The overall conditions of air quality, water quality, soil quality and noise levels are quoted from the project. The summary of the field survey for overall conditions is shown in

**Table 4-2 Relative Humidity and Temperature Measure at Proposed Project**

Item	Parameter
Air quality	(1) Sulfur dioxide (SO <sub>2</sub> ), (2) Carbon monoxide (CO), (3) Nitrogen dioxide (NO <sub>2</sub> ), (4) PM <sub>10</sub> and PM <sub>2.5</sub> , (5) Ozone (O <sub>3</sub> ), (6) Carbon Dioxide (CO <sub>2</sub> ),
Noise level	Indoor sound level (LAeq)
Light Result	Light Standard
Water	pH, Colour, Turbidity, Conductivity, Total Hardness, Calcium Hardness, Magnesium Hardness, Total Alkalinity, Phenolphthalein Alkalinity, Carbonate (CaCO <sub>3</sub> ), Bicarbonate (HCO <sub>3</sub> ), Iron, Chloride (as CL), Sodium Chloride (as NaCL), Sulphate(as SO <sub>4</sub> ), Total Solids, Suspended solids, Dissolved solids, Manganese, Phosphate, Phenolphthalein Acidity, Methyl Orange Acidity Salinity,

#### 4.2.2. Air Quality

To determine the existing baseline ambient air quality status within the project site on 31 October 2019, 8-hours of working period air pollutants level, which include dust PM<sub>10</sub> and PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>2</sub> were measured at the selected site using the HCHO 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 and international ambient air quality standard (NAAQS, ACGIH) guidelines. The measurement location point is situated at latitude 16°51'22.9"N and longitude 96°03'08.7"E.

It was observed that the air quality of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>2</sub> are within the National Environmental Quality (Emission) Guideline.

**Table 4-3 Observed Air Quality Results (Outdoor)**

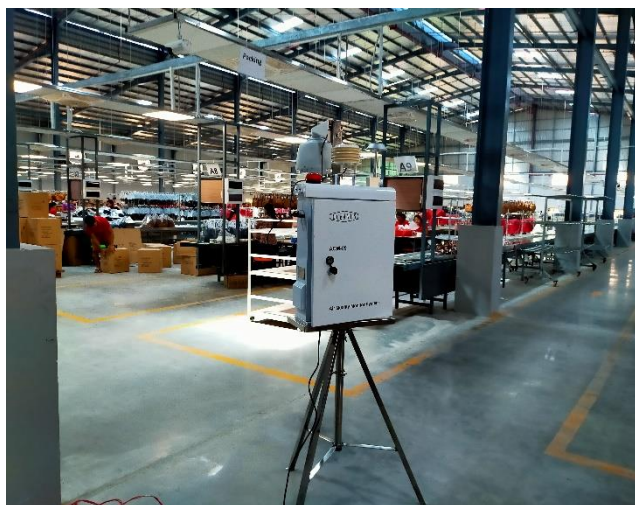
Parameters	Observed value	Guideline value	Unit	Organization	Period
PM <sub>10</sub>	43.98	50	µg/m <sup>3</sup>	NEQG	24 hrs
PM <sub>2.5</sub>	27.62	25	µg/m <sup>3</sup>	NEQG	24 hrs

Parameters	Observed value	Guideline value	Unit	Organization	Period
SO <sub>2</sub>	253.57	500	µg/m <sup>3</sup>	NEQG	10 min
NO <sub>2</sub>	11.08	200	µg/m <sup>3</sup>	NEQG	1 hrs
CO	0.3	35	ppm	ACGIH	24 hrs

NEQG = National Environmental Quality (Emission) Guideline

**Table 4-4 Observed Air Quality Results (Indoor)**

Parameters	Observed value	Guideline value	Unit	Organization	Period
PM <sub>10</sub>	21.81	50	µg/m <sup>3</sup>	NEQG	24 hrs
PM <sub>2.5</sub>	10.96	25	µg/m <sup>3</sup>	NEQG	24 hrs
SO <sub>2</sub>	2.30	20	µg/m <sup>3</sup>	NEQG	10 min
NO <sub>2</sub>	15.91	200	µg/m <sup>3</sup>	NEQG	1 hrs
O <sub>3</sub>	4.64	100	µg/m <sup>3</sup>	NEQG	24 hrs





**Figure 4-1 Outdoor Air Quality Measurement Photos**

**4.2.3. Noise**

The Noise level was measured by using Digital Sound Level Meter for working hours on 31 October 2019 (Figure 4-3). The average noise level in the project site area is presented in Table 4-4. 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 4-5 Comparison of Noise Level measurement**

Area	GPS location	Average Noise Level	NEQ Guideline
Operation Area (Cutting Section)	16°51'22.9"N 96°03'08.7"E	71.296 dB	70 dB

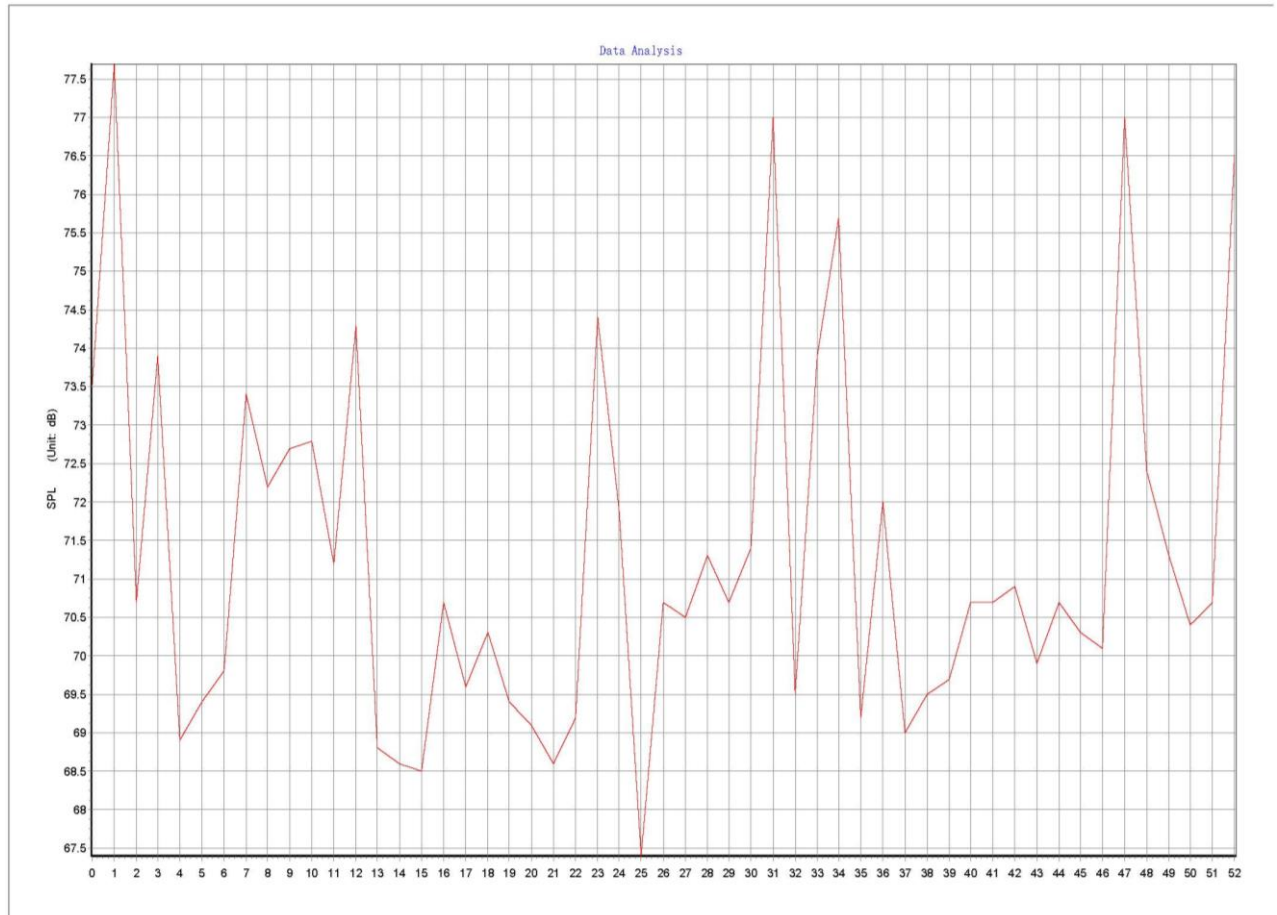


Figure 4-2 Noise Level Result Graph



Figure 4-3 Sound level measurement photo

#### 4.2.4. Tube Well Water Quality

The baseline data on tube well water quality were collected and measured on 2 September, 2019 with respect to WHO Guidelines for Drinking Water Standard and Laboratory analysis results can be seen in (**Appendix**) for treatment water. The water quality of the nearest water features that are likely to be affected by the project, was studied with the aim of understanding, preventing and minimizing water pollutions in the public water sources so as to ensure human health and biodiversity. Water quality is one of the key factors affecting the environment and health. Analyzed results of

treatment water result compare with NEQG. The collected samples factory wastewater was tested at ISO Tech Laboratory.

**Table 4-6 Tube well water quality result compare with guideline**

Parameter	Unit	Result	Guideline
pH		7.8	6.5-8.5
Colour	TCU	200	15
Turbidity	NTU	330	5
Conductivity	Micro S/cm	3100	
Total Hardness	mg/l as CaCO <sub>3</sub>	440	500
Calcium Hardness	mg/l as CaCO <sub>3</sub>	294	
Magnesium Hardness	mg/l as CaCO <sub>3</sub>	146	
Total Alkalinity	mg/l as CaCO <sub>3</sub>	412	
Phenolphthalein Alkalinity	mg/l as CaCO <sub>3</sub>	Nil	
Carbonate (CaCO <sub>3</sub> )	mg/l as CaCO <sub>3</sub>	Nil	
Bicarbonate (HCO <sub>3</sub> )	mg/l as CaCO <sub>3</sub>	412	
Iron	mg/l	9.90	0.3
Chloride (as CL)	mg/l	1110	250
Sodium Chloride (as NaCL)	mg/l	1832	
Sulphate(as SO <sub>4</sub> )	mg/l	120	500
Total Solids	mg/l	1918	1500
Suspended solids	mg/l	368	
Dissolved solids	mg/l	1150	1000
Manganese	mg/l	0.6	0.05
Phosphate	mg/l	Nil	
Phenolphthalein Acidity	mg/l	2	
Methyl Orange Acidity	mg/l	Nil	
Salinity	ppt	1.5	

#### 4.2.4.1. Reverse Osmosis Water Quality

The baseline data on reverse osmosis water quality were collected and measured on 2 September, 2019 with respect to WHO Guidelines for Drinking Water Standard and Laboratory analysis results can be seen in (**Appendix**) for treatment water. The water quality of the nearest water features that are likely to be affected by the project, was studied with the aim of understanding, preventing and minimizing water pollutions in the public water sources so as to ensure human health and biodiversity. Water quality is one of the key factors affecting the environment and health. Analyzed results of treatment water result compare with NEQG. The collected samples factory wastewater was tested at ISO Tech Laboratory.



**Table 4-7 Reverse Osmosis water quality result compare with guideline**

Parameter	Unit	Result	Guideline
pH		6.6	6.5-8.5
Colour	TCU	Nil	15
Turbidity	NTU	1	5
Conductivity	Micro S/cm	124	
Total Hardness	mg/l as CaCO <sub>3</sub>	4	500
Calcium Hardness	mg/l as CaCO <sub>3</sub>	2	
Magnesium Hardness	mg/l as CaCO <sub>3</sub>	2	
Total Alkalinity	mg/l as CaCO <sub>3</sub>	12	
Phenolphthalein Alkalinity	mg/l as CaCO <sub>3</sub>	Nil	
Carbonate (CaCO <sub>3</sub> )	mg/l as CaCO <sub>3</sub>	Nil	
Bicarbonate (HCO <sub>3</sub> )	mg/l as CaCO <sub>3</sub>	12	
Iron	mg/l	0.10	0.3
Chloride (as CL)	mg/l	29	250
Sodium Chloride (as NaCL)	mg/l	48	
Sulphate(as SO <sub>4</sub> )	mg/l	Nil	500
Total Solids	mg/l	63	1500
Suspended solids	mg/l	1	
Dissolved solids	mg/l	62	1000
Manganese	mg/l	Nil	0.05
Phosphate	mg/l	Nil	
Phenolphthalein Acidity	mg/l	4	
Methyl Orange Acidity	mg/l	Nil	
Salinity	ppt	0.1	

#### 4.2.5. Light

Activities of the workers in Handbag factory are highly dependent on the quality of light. Therefore, the consultant conducted the light measurement in Handbag factory is presented in Figure 4-7. The illustrates the recommended illumination and limiting glare index applicable to typical works (fairly severe to very severe tasks) in Handbag factory is provided inTable 4-11. 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 Handbag factory, like the inspection points (on-floor and in stores), sampling, cording section, beading section, iron 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 4-8 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 4-4 Light Quantity Measurement Photo**

**Table 4-9 Result of Light Measurement in Hong Sheng (Myanmar) Industrial Limited**

No	Measure area	Unit	Measure Value	Standard	Type of Light
1	Warehouse	Lux	310	1000	LED tube light
2	Cutting Section	Lux	978	1300 - 2000	LED tube light
3	Pattern Section	Lux	889	1300 - 2000	LED tube light
4	Sewing Section	Lux	680	600	LED tube light
5	Quality Control	Lux	820	600	LED tube light
6	Packing	Lux	360	900	LED tube light

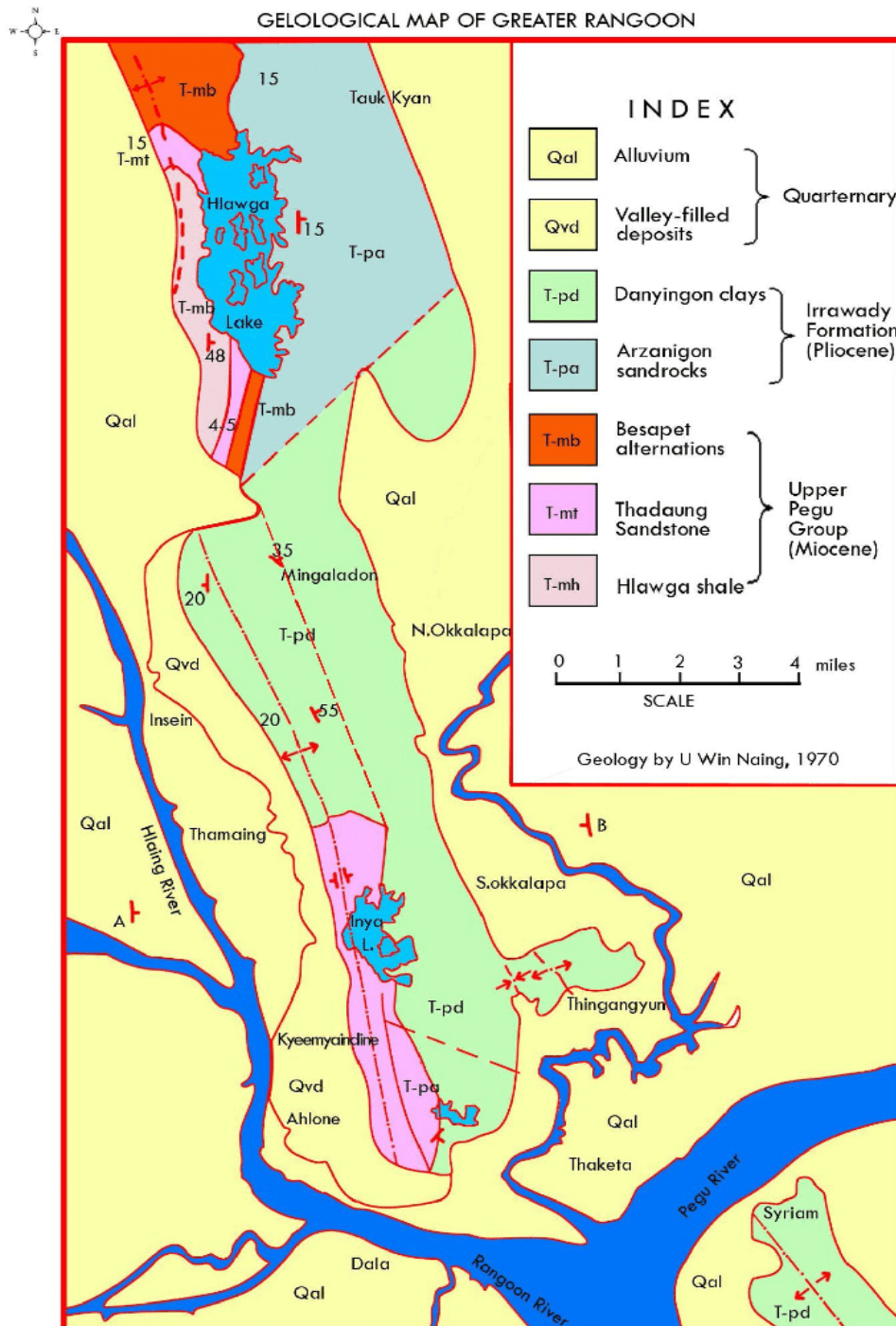
#### 4.2.6. Topography

The proposed project area is situated in Plot No (16), Myay Taing Block No., Industrial Zone (4), Hlaing Thar Yar Township, and its topographic condition is flat. The proposed project site is primarily agricultural land, but now is initiated into the industrial zone area.

#### 4.2.7. Geology

In Yangon area mainly composed of Pegu Group, Irrawaddy Formation and Alluvium. Alluvial deposits (Pliocene to Recent), the non-marine fluvial sediments of Irrawaddy formation

(Pliocene), and hard, massive sandstone of Pegu series (early-late Miocene) underlie the Yangon area. 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, limestones and conglomerate. Geological map of Yangon Regional area is shown in Figure 4-5.



**Figure 4-5 Geological Map of Yangon Region**

#### 4.2.8. **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).

#### 4.2.9. **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. <sup>[2]</sup>

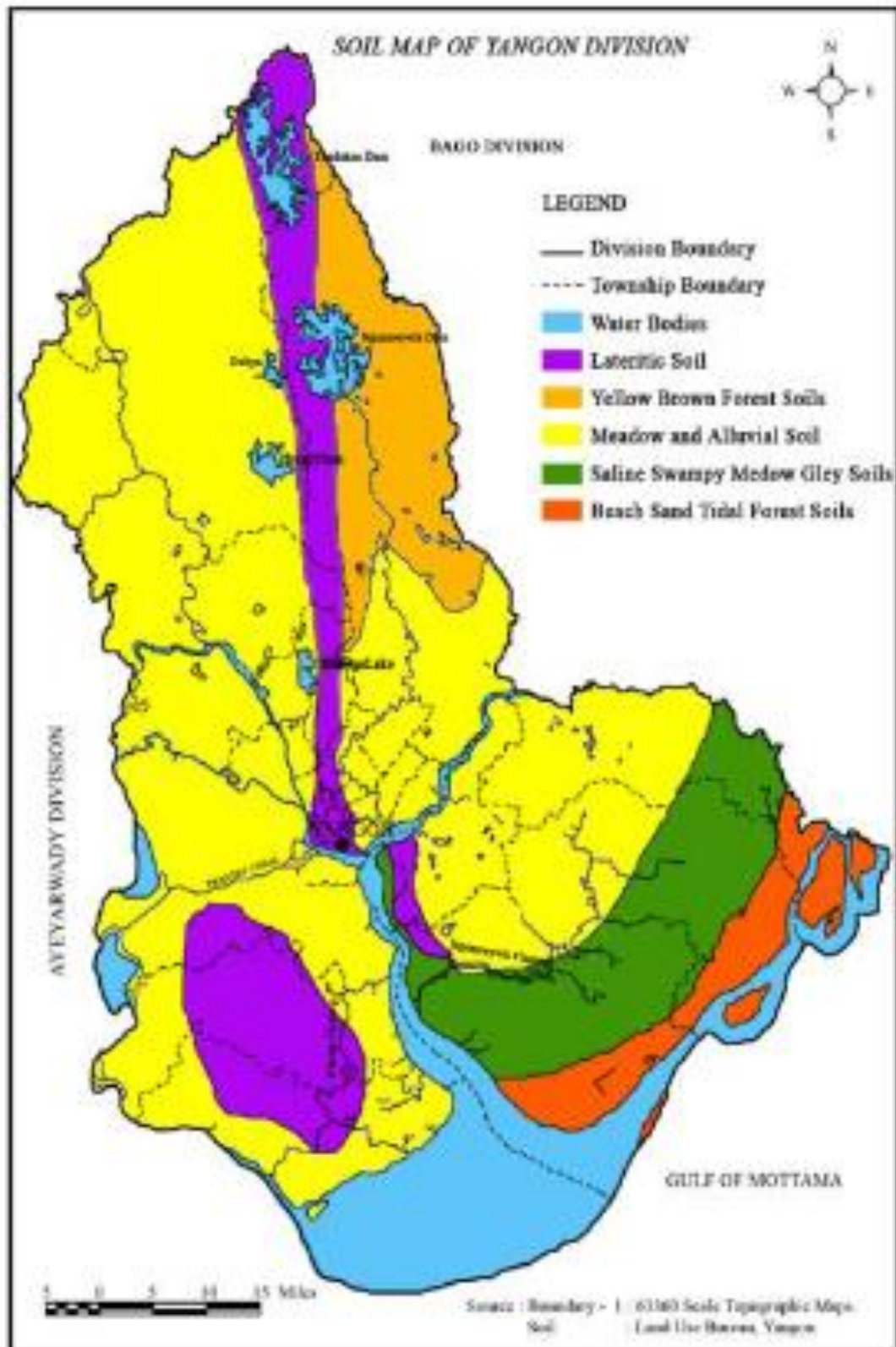


Figure 4-6 Soil map of Yangon (Source: Land use of Bureau of Yangon)

#### 4.2.10. Hydrogeology

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 Hlaing River which flows North to South. 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. <sup>[2]</sup>

#### **4.2.11. Climate and Meteorology**

##### **4.2.11.1. 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. <sup>[6]</sup>

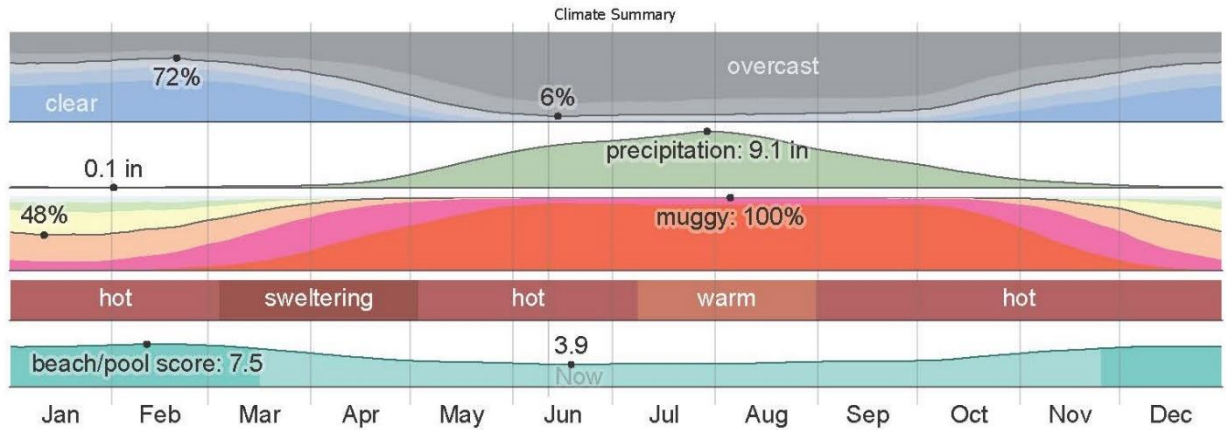


Figure 4-7 Climate Summary of Yangon Region

4.2.11.2. 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. [6]

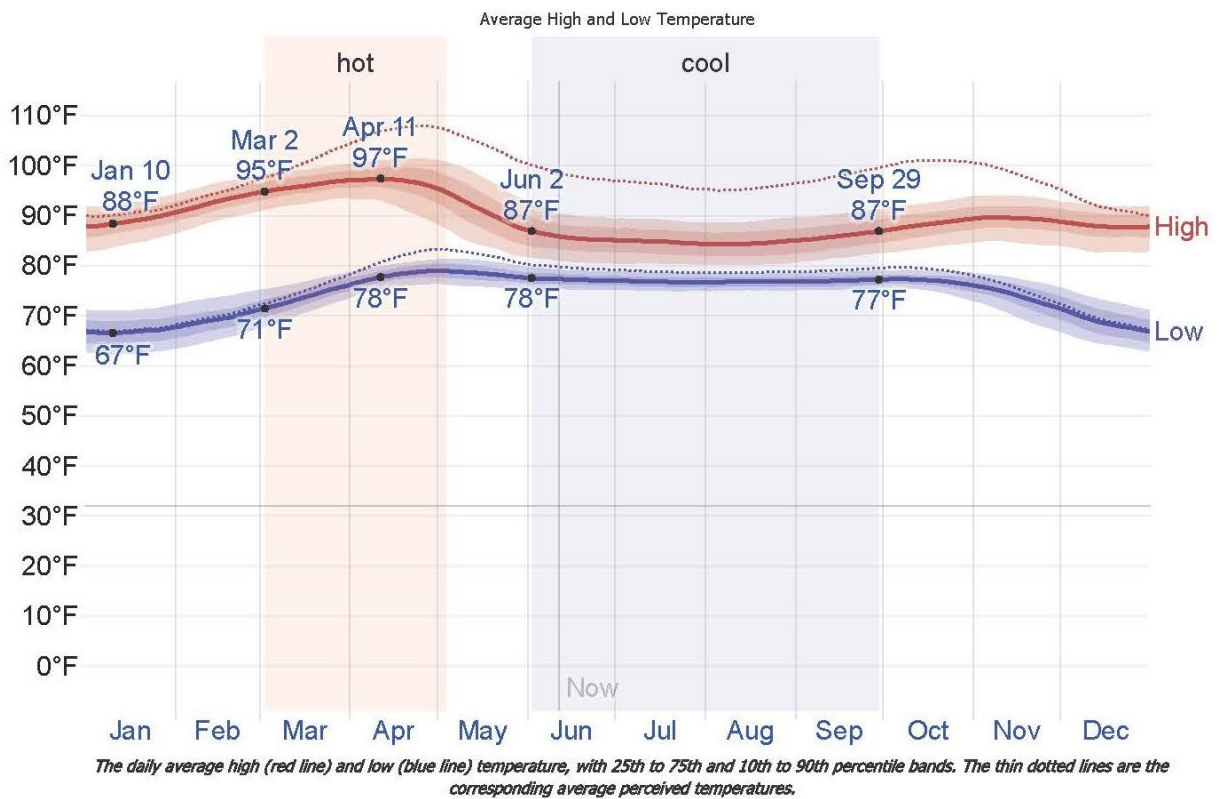


Figure 4-8 Average Temperature of Yangon Region

### 4.2.11.3.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. [6]

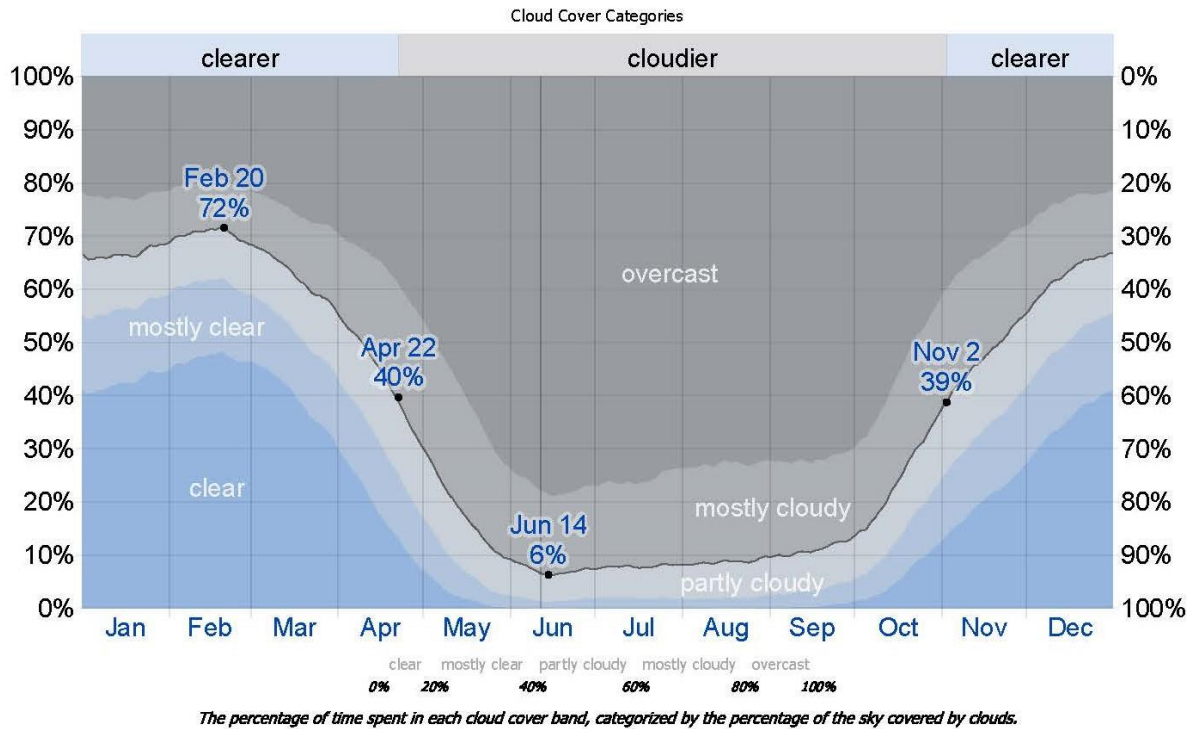


Figure 4-9 Cloud Cover Categories

### 4.2.11.4.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. [6]



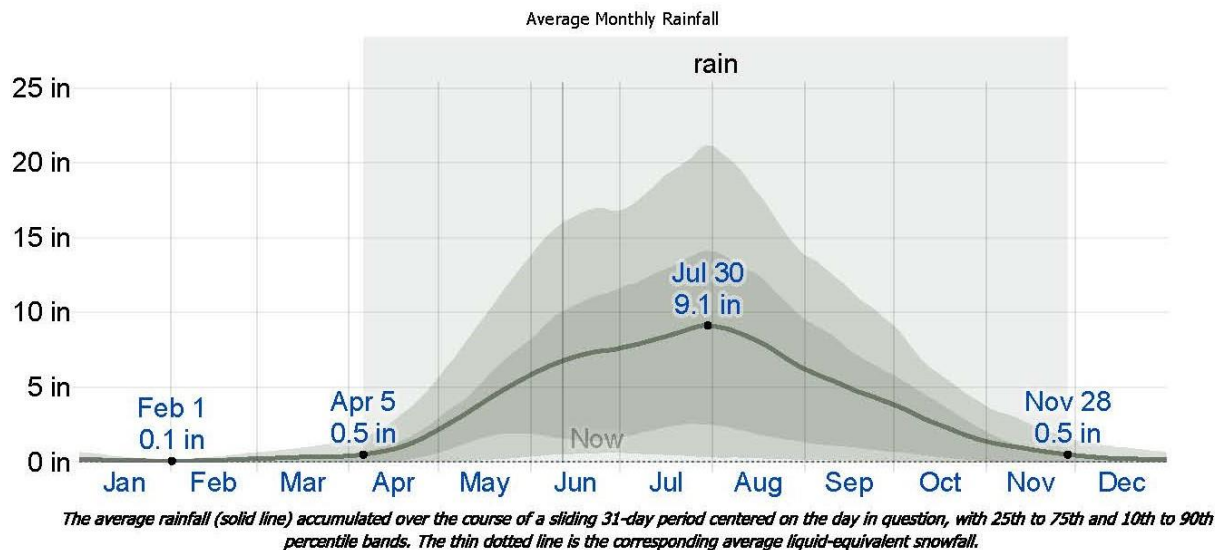


Figure 4-10 Average Monthly Rainfall at Yangon Region

Table 4-10 Annual Rainfall and Temperature

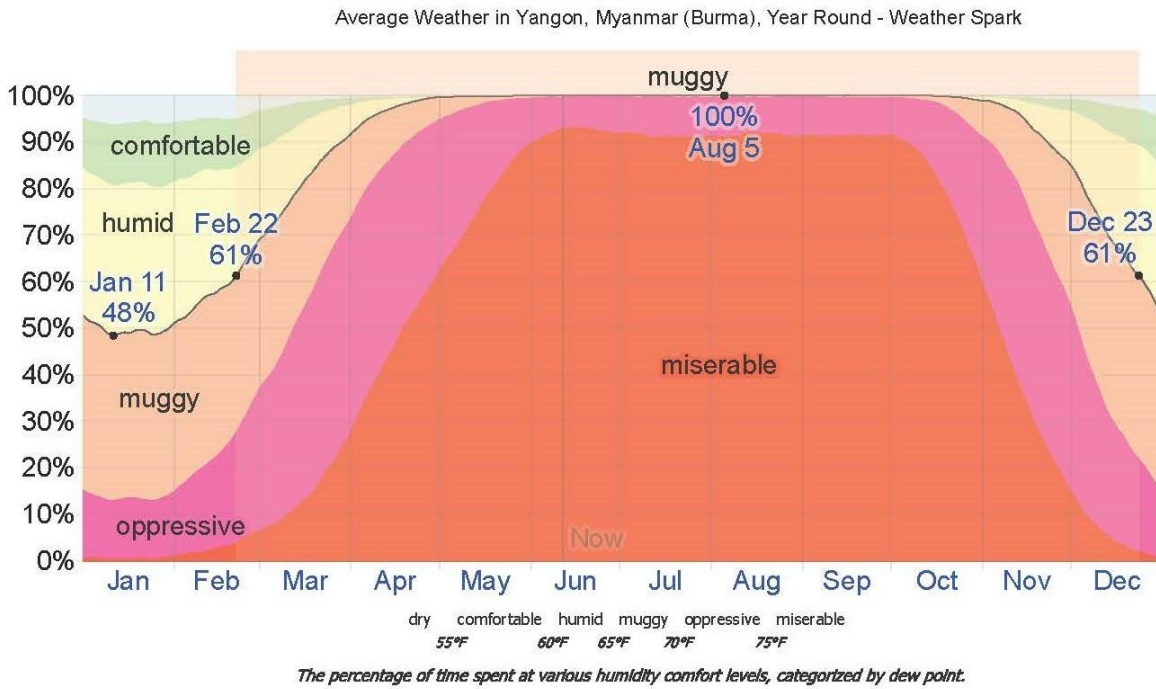
Year	Rainfall		Temperature	
	Raining day	Rainfall value	Summer season Max (°C)	Winter season Min (°C)
2016	126	104	38	15.7
2017	117	101.93	39	15.5
2018	81	79.03	39	15.5
2019	135	132.85	38	15.8

Source: Department of Administrative Mingaladon Township, Regional Data (www.gad.gov.mm)

#### 4.2.11.5. 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. In May 11, 2020, the weather condition of proposed project is 35.3 °C average temperature and 38.9 % average humidity. [6]



**Figure 4-11 Humidity of Yangon**

4.2.11.6.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. [6]

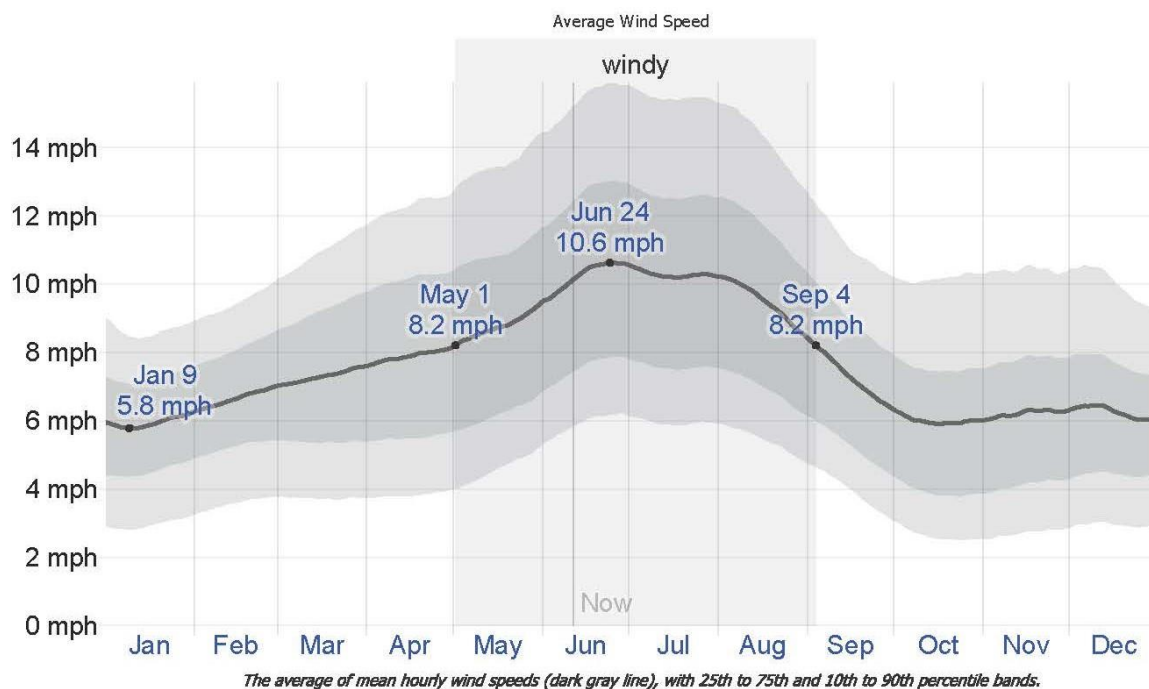


Figure 4-12 Average Wind Speed in Yangon

### 4.3. BIOLOGICAL COMPONENT

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

### 4.4. SOCIO-ECONOMIC COMPONENT

#### 4.4.1. Population

Hong Sheng (Myanmar) Industrial factory is located across Hlaing Tharyar Township in Yangon Region. In 2019, there are about people 414,209 in Township as shown in Table 4-11. <sup>[1]</sup>

Table 4-11 Population of Males and Females at Hlaing Thar Yar Township (2019)

Item	Older 18 year			Younger 18 year			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	105075	119903	224978	44884	49782	94666	149959	169685	319644
Rural	33257	31319	64576	14953	10536	29989	48210	46355	94565
Total	138332	151222	289554	59837	64818	124655	198169	216040	414209

Source: Department of Administrative Hlaing Thar Yar Township, Regional data (www.gad.gov.mm.com)

#### 4.4.2. Religion

The different kinds of religion present in Hlaing Thar Yar Township are shown in Table 4-12. More than 90% of the people living in the township are Buddhists. <sup>[1]</sup>

**Table 4-12 Religion in Hlaing Thar Yar Township (2019)**

Township	Buddhist	Christian	Hindu	Muslim	Total
Hlaing Thar Yar township	395789	6400	8320	3700	414209

Source: Department of Administrative Hlaing Thar Yar Township, Regional data (www.gad.gov.mm.com)

#### 4.4.3. Local Economy

Among regional towns, Mingaladon Township has a variety of businesses and services operating in the community with other businesses/services, based in the region. Most of the source of livelihood in the Township is 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

#### 4.4.4. Public Infrastructure and Access

##### 4.4.4.1. Communication and Transportation

Major transportation route in Haling Thar Yar Township are airport, railway, port, and car road as presented in Table 4-13. <sup>[1]</sup>

**Table 4-13 Transportation Route**

Categories	Township		Miles
Water Route	From Pun Hlaing River and Hlaing confluence	To Ngwe Pin Lae Industrial	8

No.	Township	Bus Stop	Transportation path	Type of Bus	No. of Bus
1.	Hlaing Thar Yar	16	11	YBS	125

Source: Department of Administrative Hlaing Thar Yar Township, Regional data (www.gad.gov.mm.com)

#### 4.4.4.2. Electricity

The electricity demand of Hlaing Thar Yar Township is higher and higher due to the normally increased in population and infrastructure. <sup>[1]</sup>

#### 4.4.4.3. 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 Hlaing Thar Yar Township.

**Table 4-14 List of major school in Hlaing Thar Yar Township**

No.	Name of School	Location
1.	West Yangon Technological University	Outside Padan Village Tract
2.	BEHS (1)	No. (2) ward
3.	BEHS (2)	No. (12) ward
4.	BEHS (3)	No. (17). Ward
5.	BEHS (4)	No. (5) ward
6.	BEHS (5)	No. (7) ward
7.	BEHS (6)	Yae Okken
8.	BEHS (7)	No. (16) ward
9.	BEHS (8)	No. (20) ward
10.	BEMS (Branch) (1)	No. (6) Ward
11.	BEMS (Branch) (2)	Nyaung Village Tract
12.	BEMS (Branch) (3)	Dine Su, Nyaung Village
13.	BEMS (Branch) (4)	No. (6) ward
14.	BEMS (Branch) (5)	No. (1) ward
15.	BEMS (Branch) (6)	No. (10) ward
16.	BEMS (Branch) (7)	Outside Padan Village Tract
17.	BEMS (Branch) (8)	No. (18) ward
18.	BEMS (Branch) (9)	Shwe Lin Pan Village Tract
19.	BEMS (Branch) (10)	No. (9) Ward
20.	BEMS (Branch) (11)	No. (12) Ward
21.	BEMS (Branch) (12)	No. (18) Ward
22.	BEMS (Branch) (13)	No. (15) Ward

No.	Name of School	Location
23.	BEMS (Branch) (14)	No. (14) Ward
24.	BEMS (Branch) (15)	No. (13) Ward
25.	BEMS (Branch) (16)	No. (11) Ward
26.	BEMS (Branch) (17)	No. (7) Ward
27.	BEMS (Branch) (18)	No. (11) Ward
28.	BEPS (1 to 32)	Hlaing Thar Yar
29.	Pre School (1 to 6)	Hlaing Thar Yar

Source: Department of Administrative Hlaing Thar Yar Township, Regional data (www.gad.gov.mm.com)

#### 4.4.4.4. 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 Hlaing Tharyar Township, no accidental work injuries reported to the township hospital in 2013 as shown in Table 4-15. The common diseases are as shown in Table 4-15.

**Table 4-15 Common Diseases in Hlaing Tharyar Township**

Disease	Hlaing Tharyar	
	Morbidity	Mortality
Malaria (Per 100000P)	-	-
Dysentery	21	-
Diarrhea (Per 100000P)	37	-
TB (Sputum+) (Per 10000P)	67	-
Hepatitis	5	-

**Table 4-16 Lists of hospital in the Hlaing Tharyar Township**

Hospital Name	Beds/Services	Responsible
Township Hospital	200	Government
Cottage Hospital (Shwe Lin Pan)	16	Government
Pan Hlaing	95	Private
Tun Foundation	20	Private
Total	330	-

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

## 4.5. CULTURAL AND VISUAL COMPONENTS

Hlaing Tharyar 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 IDENTIFICATIONS

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

During 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 Hlaing Thar Yar 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.

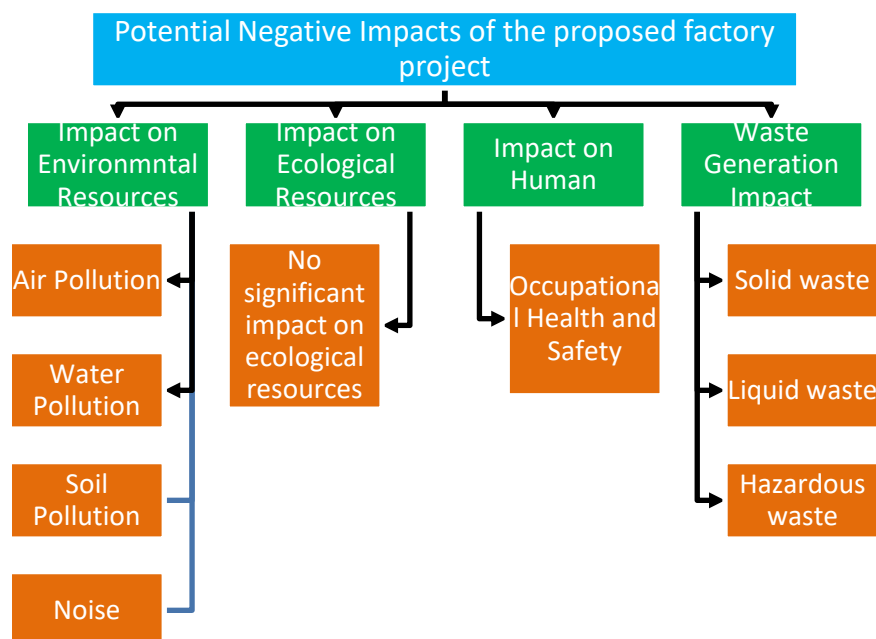


Figure 5-1 Potential negative impact affect from proposed factory project

## 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.

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

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

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 combustion would also be a factor slightly affecting to air quality.

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, 150 kVA and 400 kVA of standby generators will be used for both operation and administration appliances. The proposed project will use annually 2160 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 5-2 Category of GHGs Assessment**

Category	Range
Negligible	no GHG assessment necessary
Low	< 20 kt/y CO <sub>2</sub> -equivalent per year
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 5-3 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	1,560	0.0153	Negligible

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, 2 years.

### 5.3.2. Impact on Water Quality

During the construction period, water consumption is for implementation of the construction works and domestic water usage by construction workers. Surface water and ground water could be contaminated from the several activities of construction works such as mixing of the concrete, wetting of dry surfaces, washing of the equipment, etc. Moreover, oil spill from the vehicles and machinery can pollute water quality and can enter into the ground water and run into near river during the rainy season. 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 operation phase of garment manufacturing factory, there is no water use for processing purpose. Tube well is the main source of raw water for factory waster use. The raw water is provided for the whole factory use of general office facilities such as canteen, toilets and kitchen. Moreover, sewage disposed from the employees, staffs, oils spill and grease leakage from transporting vehicles and machinery equipment used in operating the production of garment can seriously pollute the quality of underground water source. But the factory plans to use separate waste water channels, septic type toilet system and sewage treatment plants in accordance with YCDC guidelines to avoid potential contaminations and hazards by waste water and sewages. So, it can cause low impact to the water quality.

During the decommissioning phase, oil spill from the demolished vehicles and machinery can penetrate into the ground water quality. Water can also be contaminated by activities related with decommissioning works and waste disposed by workers.

### 5.3.3. 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 Bag 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.

### 5.3.4. 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.

#### **5.4. IMPACT ON ECOLOGICAL RESOURCES**

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 Hlaing River.

#### **5.5. IMPACT ON HUMAN**

##### **5.5.1. Socio-economic**

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.

##### **5.5.2. 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.

### **5.5.3. Waste Disposal**

#### **5.5.3.1. 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 garment factory may be generated from 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 is 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.

#### **5.5.3.2. 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 guideline for proper disposal.

#### **5.5.3.3. 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.

## 5.6. PROJECT ACTIVITIES AND ITS SIGNIFICANT IMPACTS

The project activities, their impacts and significance of impact are provided in following Table.

**Table 5-4 Evaluation and Perdition of Significant Impacts and mitigation measure for Operation Phase**

Categories	Source of Impact	Significant Potential Impacts of					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
<b>Impact on Environmental Resource</b>									
Air	<ul style="list-style-type: none"> <li>Dust and GHGs emission from vehicles used for transporting raw materials and final products</li> <li>Emission from emergency diesel generator and vehicle movement</li> </ul>	3	4	2	4	36	Moderate	<ul style="list-style-type: none"> <li>Air pollution in atmosphere.</li> <li>Inhaling them can increase the chance you'll have health problems</li> <li>People with heart or lung disease, older adults and children are at greater risk from air pollution.</li> </ul>	<ul style="list-style-type: none"> <li>To control air pollution, the vehicles, generators and machineries have to check and maintain regularly.</li> <li>Ensuring vehicles, compressor and generator are well maintained.</li> <li>Smoke emission should be fitted with the bag filter.</li> </ul>
Soil	<ul style="list-style-type: none"> <li>Engine oil leaks, spills at diesel storage and during fuel refueling.</li> </ul>	1	4	1	1	6	Very Low	<ul style="list-style-type: none"> <li>The factory compound area was paved with concrete and hence, contamination due to the oil spillage at this area is insignificant.</li> </ul>	<ul style="list-style-type: none"> <li>No Mitigation Measure</li> </ul>

Categories	Source of Impact	Significant Potential Impacts of					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Noise and Vibration	<ul style="list-style-type: none"> <li>Generating noise from the production machinery</li> </ul>	2	4	2	2	16	Low	<ul style="list-style-type: none"> <li>The factory not operate heavy machinery</li> <li>the major noise source of CMP basic operation activities such as cutting, stitching/finishing and packaging by respective machines.</li> <li>There is insignificant impact on surrounding environment.</li> </ul>	<ul style="list-style-type: none"> <li>No Mitigation Measure</li> </ul>
<b>Impact on Ecological Resources</b>									
Flora and fauna on terrestrial and aquatic life	Operation of the garment factory	1	4	1	1	6	Very Low	<ul style="list-style-type: none"> <li>Not Significant Impact on Ecological Resources</li> </ul>	<ul style="list-style-type: none"> <li>No Mitigation Measure</li> </ul>
<b>Impact on Human</b>									
Fire	<ul style="list-style-type: none"> <li>Poor electrical installations</li> <li>Waste disposed area raw materials and chemical storage</li> </ul>	3	5	2	4	40	Moderate	<ul style="list-style-type: none"> <li>Serious damage to property and even injury and death</li> </ul>	<ul style="list-style-type: none"> <li>To provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases.</li> <li>Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening.</li> </ul>

Categories	Source of Impact	Significant Potential Impacts of					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
								<ul style="list-style-type: none"> <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>	
Occupational Safety	<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	<ul style="list-style-type: none"> <li>Accident in workplace (physical injuries or even death) can occur during operation.</li> <li>First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers.</li> <li>According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers.</li> <li>Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department.</li> <li>To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.</li> </ul>	

Categories	Source of Impact	Significant Potential Impacts of					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Health	<ul style="list-style-type: none"> <li>Influx of people</li> <li>Noise from the generating of the emergency generators</li> </ul>	2	4	1	2	14	Very Low	<ul style="list-style-type: none"> <li>Change in demographic structure, new diseases form immigrant workers</li> <li>To cause a range of health problems ranging from stress, poor concentration, productivity losses in the workplace, and communication difficulties and fatigue from lack of sleep, to more serious issues</li> </ul>	<ul style="list-style-type: none"> <li>Manage the drainage systems of the factory to prevent health risk of the workers.</li> <li>The maximum allowable noise level for workers is 90dB(A) for 8hours 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.</li> </ul>
<b>Waste Generation Impact</b>									
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	<ul style="list-style-type: none"> <li>Surrounding environmental pollution and soil contamination</li> </ul>	<ul style="list-style-type: none"> <li>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>



Categories	Source of Impact	Significant Potential Impacts					of	Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP				
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	2	16		Low	<ul style="list-style-type: none"> <li>Contamination of soil, surface water, ground water</li> </ul>	<ul style="list-style-type: none"> <li>Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.</li> </ul>
Hazardous Waste	<ul style="list-style-type: none"> <li>Used oil and lubricant discharged from the maintenance of vehicles and machines.</li> </ul>	2	4	1	2	14		Very Low	<ul style="list-style-type: none"> <li>Reduce the risk of contamination from fuels, oils and hazardous wastes</li> <li>Response effectively to incident and accident</li> </ul>	<ul style="list-style-type: none"> <li>Proper inspection and maintenance in storage of hazardous waste.</li> <li>Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements.</li> <li>The empty chemical containers will hand over to suppliers for recycle or appropriate disposal</li> <li>The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty (eg., DOWA and YCDC)</li> </ul>

**Table 5-5 Evaluation and Perdition of Significant Impacts and mitigation measure for Decommissioning Phase**

Categories	Source of Impact	Significant Potential Impacts of					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
<b>Impact on Ecological Resources</b>									
Flora and fauna on terrestrial and aquatic life	Operation of the factory demolishing activity	1	4	1	1	6	Very Low	<ul style="list-style-type: none"> <li>Not Significant Impact on Ecological Resources</li> </ul>	<ul style="list-style-type: none"> <li>No Mitigation Measure</li> </ul>
<b>Impact on Human</b>									
Occupational Safety	<ul style="list-style-type: none"> <li>Decommissioning activities</li> <li>Transportation of demolished materials</li> </ul>	3	1	2	3	18	Low	<ul style="list-style-type: none"> <li>Accident in workplace (physical injuries or even death) can occur</li> </ul>	<ul style="list-style-type: none"> <li>Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are</li> </ul>
Hazardous Waste	<ul style="list-style-type: none"> <li>Residual empty fuel container and oil from operation</li> </ul>	2	4	1	2	14	Very Low	<ul style="list-style-type: none"> <li>Reduce the risk of contamination from fuels, oils</li> </ul>	<ul style="list-style-type: none"> <li>The empty chemical containers will hand over to suppliers for recycle or appropriate disposal</li> <li>The hazardous wastes are transported by specially licensed carriers and disposed by connecting with Bago municipal.</li> </ul>

## **5.7. MITIGATION MEASURES OF IMPACT ON ENVIRONMENTAL RESOURCES**

### **5.7.1. Recommended Air Impact Mitigation Measures**

During the operation phases, ventilation system of the factory is enough for the workers cause the proponent has installed Moist Fan around the factory building. To control air pollution, the vehicles, generators and machineries have to check and maintain regularly. Since the factory compound area is paved with concrete, dust emission from the movements of vehicles and cars is not significant. The project proponent must install good exhaust system at the kitchen to reduce adverse impacts of indoor air quality. The factory uses chimney for generator through which the flue gas is emitted for reducing the impact of stack emission on environment. Monitoring and check installed cyclones and ventilation system. The factory has planted trees in its premises to reduce carbon emission and thus minimize air pollution. Ensuring vehicles, compressor and generator are well maintained.

During the decommissioning phases, the impact on air quality can be controllable and reduced to minimum level and minimized dust emissions from material handling sources. Sprinkling water on the top soil can reduce dust emission from the demolishing activities. In the proposed project area, vehicle movements should be limit and maintain and check the vehicles and machineries regularly. Burning the demolished materials and residual wastes must not be allowed.

### **5.7.2. Mitigation Measure of Impact on Water**

During the operation phase, water discharge from the factory site will be treated by silts track tank before discharging. Water effluent levels should be within acceptable limit of the National Environmental Quality (Emissions) Guidelines values. The factory plan has kitchen, canteen and toilet facilities attached in various buildings of the factory. In the kitchen, separated drainage lines are provided to flow wastewater from the activities washing and cooking, etc. And around the compound area of the project area, drainages are also provided and maintain to flow storm water (rain water, snow and surface water). The compound area of the factory is paved with concrete and the drainages are covered and holes are there to flow the storm water. Besides, the factory plans to use separate wastewater channels, septic type toilet system. Wastewater from the dining room, canteens and toilet facilities are collected in septic tanks which are attached with sewer treatment plant and the proponent will connect and cooperate with YCDC to be carried out for disposing of these septic tank wastes. To mitigate the impact on water, the drainages around the compound area of the factory have to maintain and clean regularly. Spillage and leakages of oil and grease should also be minimized by cleaning and maintaining the machineries regulary and must check them up regularly that there is no leakage.

During the decommissioning phases, appropriate sanitary facilities should be provided for demolishing workers. An accidental spill of fuel and oil should be avoided. Wastes generated from the demolishing activities should not be disposed directly into the drainage channels.

### **5.7.3. Mitigation Measures for Water Consumption and Contamination**

#### **5.7.3.1. Water Consumption**

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.

- 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

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.

- ❖ 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

#### **5.7.4. Mitigation Measure of Impact on Soil Contaminate**

During the operation phase, the compound area of the factory area will be paved with concrete and hence, contamination due to the oil spillage at this area is insignificant. But refilling fuel must be done with great care for preventing spillage.

During the decommissioning phase, impact on soil can be mitigated by using modernized machineries, these machines would be maintained regularly and isolated maintenance area would be identified. Any accidental spills of fuel, oil or other hazardous waste must be avoided. Construction wastes and demolishing debris should be disposed properly.

#### **Mitigation Measure of Impact on Noise**

During the operation phase, the regular maintenance plans for vehicles, machines generators should be provided to mitigate impact on noise. Using modernized low noise machines should be used if possible. Noise impact to employees shall be minimized by providing earmuffs and ear plugs to those working near the noisy machines.

During the decommissioning phases, temporary noise pollution can be controlled by planning regular maintenance for decommissioning vehicles and machines. Moreover, construction and decommissioning activities should not be worked during nighttime.

### **5.8. MITIGATION MEASURES OF IMPACT ON HUMAN**

#### **5.8.1. Mitigation Measures on Fire Hazard**

The project proponent has provided fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening is also constructed with the capacity of 46800 gallons at the proposed area. The emergency contact numbers of township and district fire services department must be printed and tagged at easily visible places for fire emergency cases. 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. In addition, the project proponent has plans to provide trainings on firefighting for the workers by a professional or otherwise by sending to training courses.

No mitigation measure is needed in decommissioning phase.



Figure 5-2 Firefighting plan and Escape plan

#### 5.8.2. Mitigation Measure for Occupational Health and Safety

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 **Error! Reference source not found..** 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.

During the decommissioning phase, decommissioning activities can cause accidental injuries so personal protective equipment (PPE) should be provided.



Figure 5-3 First Aid Box Photos

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
1	105
1/2	110
1/4	115

### 5.8.3. Mitigation Measure of Waste Generation

During the operation phase, the project proponent provides separate garbage bins at each building. All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste houses: Non-hazardous Waste Production related house, Hazardous Waste Production related house, Non- Hazardous Waste Non-Production related house and Hazardous Waste Non-Production related house and final wastes will be disposed by using YCDC's service.

During the decommissioning phase, some of demolished solid wastes must be recycled and the other solid wastes should be stored in dedicated waste storage area in the project site and transferred to YCDC for final disposal.

### 5.8.4. Mitigation Measures for Waste Disposal

At Hong Sheng (Myanmar) Industrial 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 poly propylene bags (PP) and cardboards 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. Hong Sheng (Myanmar) Industrial Company Limited also has an agreement services with Hlaing Thar Yar Township Development Committee for waste disposal facilities to collect the all production waste, office waste and domestic waste. According to the waste management practice, Hong Sheng (Myanmar) Industrial 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 environmentally friendly manner.



**Figure 5-4 Solid waste management at Hong Sheng (Myanmar) Industrial Factory**

#### **5.8.5. Mitigation Measurement of Disasters During Construction and Operation**

Disasters like earthquakes, floods, drought, landslides and cyclones for Management Plan should include Emergency Preparedness Plan, Emergency Response Team, Emergency Communication, Emergency Responsibilities, Emergency Facilities, and Emergency Actions.

The objective of the Industrial Disaster Management Plan is to make use of the combined resources of the plant and the outside services to achieve the following:

- Effect the rescue and medical treatment of casualties;
- Safeguard other people;
- Minimize damage to property and the environment;
- Initially contain and ultimately bring the incident under control;
- Identify any dead;
- Provide for the needs of relatives;
- Provide authoritative information to the news media;
- Secure the safe rehabilitation of affected area;
- Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency.

It is attempted to plan and construct the buildings following all safety norms. However, it is not always possible to totally eliminate such eventualities and random failures of equipment or human errors. An essential part of major hazard control has therefore, to be concerned with mitigating the effects of such emergency and restoration of normalcy at the earliest. Detailed Table showing activities during construction and operation phases along with mitigation measures are given in Table.

**Table 5-7 Activities during Construction and Operation along with Mitigation Measures**

Hazards Associated with Activities	Control / Mitigation Measures
<b>Manual Handling</b> Strains and sprains - incorrect lifting - too heavy loads -twisting - bending - repetitive movement - body vibration.	Exercise/ warm up-get help when needed control loads-rest breaks/ no exhaustion-no rapid movement/ twisting/bending/repetitive movement – good housekeeping.
<b>Falls - Slips - Trips</b> Falls on same level - falls to surfaces below - poor housekeeping- slippery surfaces uneven surfaces -poor access to work areas climbing on and off plant-unloading materials into excavations wind - falling objects.	Housekeeping - tidy workplace - guardrails, handholds, harnesses, hole cover, hoarding, no slippery floors/trip hazards - clear/ safe access to work areas-egress from work areas - dust/water controlled - PPE.
<b>Fire</b> Flammable liquids/Gases like LPG, Diesel Storage area and combustible building materials - poor housekeeping - grinding sparks – open flames, absence of Fire hydrant network.	Combustible/ flammable materials properly stored /used -good housekeeping-fire extinguishers made available & Fire hydrant Network with reserve Fire water (As per NFPA Code) - Emergency Plan in case of Fire or collapse of structure.
<b>Absence of Personal Protective Equipment</b> Lack of adequate footwear- head protection hearing/ eye protection - respiratory protection gloves-goggles.	Head / face- footwear- hearing / eye-skin respiratory protection provided - training maintenance.



Hazards Associated with Activities	Control / Mitigation Measures
<p><b>Defective or wrong Hand Tools</b>                      Wrong tool - defective tool - struck by flying debris- caught in or on -missing guards -carbon monoxide - strains and sprains - dust.</p>	<p>Right tool for the job - used properly – good condition/ maintenance guards- isolation eye/ face protection - flying debris controlled.</p>
<p><b>Electricity</b>                      Electrocutation – overhead / underground services - any leads damaged or poorly insulated temporary repairs -no testing and tagging circuits overloaded-non-use of protective devices.</p>	<p>Leads good condition and earthed – no temporary repairs - no exposed wires-good insulation-no overloading - use of protective devices - testing and tagging -no overhead/ underground services</p>
<p><b>Scaffolding</b>                      Poor foundation-lack of ladder access insufficient planking-lack of guardrails and toe boards-insufficient ties or other means-all scaffolds incorrectly braced or stabilized to prevent overturning.</p>	<p>All scaffolds correctly braced and stabilized - 3:1 height to base ratio - firm foundation, plumb and level - ladder access provided and used - proper platform (3 planks/ 675 mm) - planks secured-guardrails and toe boards – 900 mm to 1100mm high, within 200 mm of working face, mid - rail.</p>
<p><b>Ladders</b>                      Carrying loads - not secured against dislodgement - defective ladders– not sufficient length- wrong positions - incorrectly placed (angles, in access ways, vehicle movements.</p>	<p>Secured against movement or footed - ladders in good condition – regularly inspected - extend one (1 m) meter above platform - 4:1 angle - out of access ways, vehicle movements - climbing - no carrying loads - 3 points of contact - no higher than 3rd step down - use for access only, not working platforms.</p>
<p><b>Excavations</b>                      Trench collapse - material falling in undetected underground services-falls-hazardous atmosphere struck by traffic and mobile plant.</p>	<p>Soil stability known-no water accumulation existing services known - material 600 mm from edge - clear of suspended loads hardhats/ PPE- ladders - public protection - atmospheric testing- traffic controls - Emergency Plan.</p>
<p><b>Gas Cutting and Welding</b>                      Fire-welding flash, burns, fumes, electrocution in wet conditions-flashback in oxygen set, leaking cylinders, acetylene cylinders lying down-poorly maintained leads.</p>	<p>Welding flash and burns controlled with PPE and shields -fumes controlled with ventilation and PPE (in good condition and properly positioned), Gas cylinders be kept upright &amp; secured position (properly tied) - combustible materials to be kept at secured place to avoid fire &amp; Fire Extinguishers to be kept in fire prone area with training to people for its use.</p>
<p><b>Noise</b>                      Unknown noise levels - known noise levels over 85 decibels</p>	<p>Levels below 85 decibels – proper protection.</p>
<p><b>Falling Material</b></p>	<p>Materials to be secured-kept away from edge- toe boards -Use of hard hats.</p>

Hazards Associated with Activities	Control / Mitigation Measures
Fall during carrying/ Lifting materials dislodged tools and materials from overhead work areas.	
<p><b>Carnage&amp; Lifts</b></p> <p>Display of carrying capacity i. e load (No. of person) incorrectly slung, defective lifting equipment, unsecured loads, craning in close proximity to building people and plant- falls falling materials.</p>	<p>Periodic testing by competent authority correctly slung/ secured loads, lifting equipment good condition-use of proper hand signals - falls while unloading controlled.</p>
<p><b>Visitors Presence at site</b></p> <p>Falls -struck by - dropped materials-road accidents -insufficient hoarding or fencing pedestrian access past site-mechanical plant movement on and off site</p>	<p>Sufficient hoarding - fencing and barricades safe pedestrian access past site traffic management for loading and delivery construction separated from occupied areas of projects</p>

## 6. ENVIRONMENTAL MANAGEMENT ACTION

The IEE for Hong Sheng (Myanmar) Industrial Limited has been prepared to added potential issues based upon discussion with factory management, workers, local community view, stakeholder consultation and the site visit. The EMP is additional to and compliments the factory's safety management system. The following environmental impact issues which require environmental management plans based upon the potential impacts activities of Hong Sheng (Myanmar) Industrial Limited are as follows:

### 6.1. AIR POLLUTION/ DUST MANAGEMENT PLAN

<b>Objectives:</b>	<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>
<b>Performance Indicator:</b>	<ul style="list-style-type: none"> <li>Nil complaints relating to air quality management</li> <li>Extraction equipment maintained as per maintenance schedule</li> </ul>
<b>Relevant Government Law And Rule</b>	<ul style="list-style-type: none"> <li>National Environmental Quality (Emission) Guidelines (2015)</li> </ul>
<b>Management Plan</b>	<ul style="list-style-type: none"> <li>The factory has planted trees in its premises which reduce the carbon emission by the factory and minimize the air pollution</li> <li>Periodic maintenance of generator is conducted</li> <li>There is no open burning of waste materials at the site</li> <li>Workers are provided mask during working in any dusty area</li> </ul>
<b>Estimate Cost</b>	<ul style="list-style-type: none"> <li>100,000 Kyat per year</li> </ul>
<b>Responsibility</b>	<p>Management of the factory;</p> <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>

### 6.2. WATER CONSUMPTION MANAGEMENT PLAN

<b>Objectives:</b>	<ul style="list-style-type: none"> <li>The water consumption management is aimed at minimizing ground water use</li> </ul>
<b>Performance Indicator:</b>	<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>
<b>Relevant Government Law And Rule</b>	<ul style="list-style-type: none"> <li>The Underground Water Act (1930)</li> </ul>
<b>Management Plan</b>	<ul style="list-style-type: none"> <li>Install water meter for internal control of water consumption</li> </ul>

	<ul style="list-style-type: none"> <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>
<b>Estimate Cost</b>	<ul style="list-style-type: none"> <li>500000 Kyat per year</li> </ul>
<b>Responsibility</b>	<ul style="list-style-type: none"> <li>Manager</li> <li>Arrange audit on water usage controls environmental officer</li> </ul>

### 6.3. WASTEWATER MANAGEMENT PLAN

<b>Objectives:</b>	<ul style="list-style-type: none"> <li>Prevent pollution underlying groundwater sources</li> </ul>
<b>Performance Indicator:</b>	<ul style="list-style-type: none"> <li>Implement an environmentally friendly sewerage system</li> </ul>
<b>Relevant Government Law And Rule</b>	National Environmental Quality (Emission) Guidelines (2015)
<b>Management Plan</b>	<ul style="list-style-type: none"> <li>Ensure that drainage lines and sewage system of factory and the nearest public drainage are watertight and sufficient capacity</li> <li>Regular check and maintain sewerage facility.</li> <li>Clean the factory 's drainage to avoid odor emission and to avoid the block of water flow</li> <li>Regularly monitor and check the discharge temperature from boiler wastewater before directly discharge into factory 's final drainage</li> </ul>
<b>Responsibility</b>	<ul style="list-style-type: none"> <li>Manager -To hire organization/independent third-party testing wastewater quality</li> <li>EHS officer-Monitor the condition of factory's drainage and sewerage system</li> </ul>

### 6.4. NOISE MANAGEMENT PLAN

<b>Objectives:</b>	<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>
<b>Performance Indicator:</b>	Nil complaints relating to noise nuisance
<b>Relevant Government Law And Rule</b>	<ul style="list-style-type: none"> <li>National Environmental Quality (Emission) Guidelines (2015)</li> </ul>
<b>Management Plan</b>	<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> </ul>

	<ul style="list-style-type: none"> <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>
<b>Responsibility</b>	<p>Manager</p> <ul style="list-style-type: none"> <li>To hire organization/independent third-party testing noise level</li> <li>Ensure that all workers use PPE during operation</li> </ul>

#### 6.5. SOLID WASTE MANAGEMENT PLAN

<b>Objectives:</b>	<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>
<b>Performance Indicator:</b>	Nil complaints relating to noise nuisance
<b>Relevant Government Law And Rule</b>	<ul style="list-style-type: none"> <li>National Waste Management Strategy and Action Plan (Draft 2018)</li> </ul>
<b>Management Plan</b>	<ul style="list-style-type: none"> <li>The factory does not dispose any kind of solid waste on the factory premises or not dump in the surface water like local pond, canal or river, etc.</li> <li>The solid wastes are stored properly and separately in a certain location in proper manner such as cloth scrap waste need to collect at one place and poly/carton waste should collect at another place. Metal/Hazardous material waste such as fudge electric bulbs, empty chemical container is stored another in separate place of storage area.</li> <li>Recycle wastes like fabric scrap, carton box, plastic sheet, etc. are hand over to local buyer for reuse and waste-tracking record shall be kept every day.</li> <li>The metal or glass waste of electric bulb is taken by the suppliers to recycle them.</li> <li>The daily domestic waste of workers hands over to YCDC waste collector to collect every day</li> <li>Daily wastes are stored clearly labeled containers and in such a manner that all related personnel are provided proper training about the relevant issues.</li> </ul>
<b>Responsibility</b>	<p>Manager (HR)</p> <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>

#### 6.6. HAZARDOUS WASTE MANAGEMENT PLAN

<b>Objective</b>	<ul style="list-style-type: none"> <li>To avoid environmental pollution and adverse health effects due to its improper handing &amp; disposal.</li> </ul>
<b>Relevant Government Law And Rule</b>	<ul style="list-style-type: none"> <li>Yangon City Development Committee Law (2018), Explosive Ordnance Disposal Law (2018)</li> </ul>
<b>Time Frame</b>	<ul style="list-style-type: none"> <li>Entire life spans of proposed project</li> </ul>

<b>Management Action</b>	<ul style="list-style-type: none"> <li>• Proper inspection and maintenance in storage of hazardous waste.</li> <li>• Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements.</li> <li>• The empty chemical containers will hand over to suppliers for recycle or appropriate disposal</li> <li>• The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty (e.g. DOWA and YCDC)</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
<b>Estimated Cost</b>	<ul style="list-style-type: none"> <li>• 1,000,000 Kyats per year</li> </ul>
<b>Responsible Person</b>	<ul style="list-style-type: none"> <li>• HSE Manager or Environmental Management Team of Hong Sheng (Myanmar) Industrial Limited</li> </ul>

#### 6.7. FIRE MANAGEMENT PLAN

<b>Objectives:</b>	<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>
<b>Relevant Government Law And Rule</b>	<ul style="list-style-type: none"> <li>• Myanmar Fire Brigade Law 2015</li> </ul>
<b>Time Frame</b>	<ul style="list-style-type: none"> <li>• Entire life spans of proposed project operation</li> </ul>
<b>Management Plan</b>	<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>
<b>Monitoring &amp; Reporting</b>	<ul style="list-style-type: none"> <li>• To check monthly Visual inspection, Firefighting equipment (fire extinguish, firefighting hose, portable fire pumps, fire hose reels, fire monitor and firefighting nozzles)</li> </ul>
<b>Estimated cost</b>	<ul style="list-style-type: none"> <li>• 1,200,000 Kyats per year</li> </ul>

<b>Responsibility</b>	<ul style="list-style-type: none"> <li>HSE Manager, Operation Manager or Environmental Management Team of Hong Sheng (Myanmar) Industrial Limited</li> </ul>
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### 6.8. OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT PLAN

<b>Objective</b>	<ul style="list-style-type: none"> <li>To provide a broad framework for improving standards of workplace health and safety to reduce work-related injury and illness.</li> </ul>
<b>Relevant Government Law And Rule</b>	<ul style="list-style-type: none"> <li>Public Health Law (1972), Prevention and Control of Communicable Diseases Law 1995 (Amendment 2011), Occupational Safety and Health Law (2019)</li> </ul>
<b>Time Frame</b>	<ul style="list-style-type: none"> <li>Entire life spans of proposed project</li> </ul>
<b>Management Action</b>	<ul style="list-style-type: none"> <li>First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers.</li> <li>According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers.</li> <li>Personal Protective Equipment (PPE) like earmuffs, safety gloves, helmets and goggles are provided for each department.</li> <li>To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.</li> <li>Manage the drainage systems of the factory to prevent health risk of the workers.</li> <li>The maximum allowable noise level for workers is 90dB(A) for 8hours 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.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>Weekly check fire extinguishers and water hydrant in position</li> <li>Daily inspect that all fire exist are open</li> <li>Servicing fire extinguisher and records accidents</li> </ul>
<b>Estimated Cost</b>	<ul style="list-style-type: none"> <li>500,000 Kyats per year</li> </ul>
<b>Responsible Person</b>	<ul style="list-style-type: none"> <li>HSE Manager, Operation Manager or Environmental Management Team of Hong Sheng (Myanmar) Industrial Limited</li> </ul>

## 6.9. ENERGY MANAGEMENT PLAN

<b>Objectives:</b>	<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>
<b>Relevant Government Law And Rule</b>	<ul style="list-style-type: none"> <li>National Energy Management Committee (Myanmar Energy Master Plan 2015)</li> </ul>
<b>Time Frame</b>	Once in a year throughout the factory life
<b>Management Plan</b>	<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>
<b>Monitoring &amp; Reporting</b>	<ul style="list-style-type: none"> <li>Conduct annual energy efficiency of adult to find out the scope for energy saving</li> </ul>
<b>Estimated cost</b>	<ul style="list-style-type: none"> <li>Approximately 100,000 Kyats per year</li> </ul>
<b>Responsibility</b>	<p>Manager</p> <ul style="list-style-type: none"> <li>To arrange energy audit technical personnel</li> <li>To monitor and record electricity consumption, other related energy issues and take necessary actions if any problem arises</li> </ul>

## 6.10. EMERGENCY RESPONSE AND MANAGEMENT PLAN

<b>Objectives:</b>	<ul style="list-style-type: none"> <li>Reduce the risk of accidents at the factory area</li> </ul>
<b>Performance Indicator:</b>	<ul style="list-style-type: none"> <li>Establish a safe working environment</li> </ul>
<b>Relevant Government Law And Rule</b>	<ul style="list-style-type: none"> <li>The Employment and Skill Development Law (August 2013), ILO guide to Myanmar Labour Law (2017)</li> </ul>
<b>Management Plan</b>	<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</li> </ul>



	<p>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</p> <ul style="list-style-type: none"> <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>
<b>Responsibility</b>	<p>Manager and EHS officer</p> <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>

### 6.11. 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 6-1 is provided the environmental monitoring schedule for Hong Sheng (Myanmar) Industrial factory. The factory submits monitoring report to the Ministry not less frequently than every six (6) months, as provided in a schedule in the IEE,

**Table 6-1 Environmental monitoring schedule for Hong Sheng (Myanmar) Industrial Company Limited**

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
<b>Operation Phase</b>					
Air quality	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub> , CO	Biannually	Outdoor and Indoor of proposed project	800,000 Kyats	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
Noise quality	Noise level in decibel (dBA)	Biannually	Production area	500000 Kyats per year	Environmental Management Team's Hong Sheng

<b>Issues</b>	<b>Parameter</b>	<b>Frequency</b>	<b>Area to be monitored</b>	<b>Monitoring cost</b>	<b>Responsible Organization</b>
					(Myanmar) Industrial Company Limited
Solid Waste Generation		Weekly	Recycle house and waste house and at the factory office	50,000 Kyats	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
Liquid Waste Generation	pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate	Weekly	Seawage and drainage	500000 Kyats per year	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
Hazardous Waste Generation		Weekly	Recycle house and temporary storage area at the factory office	1000000 Kyats per year	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory	500000 Kyats	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
Light intensity	Illuminance	Monthly	At the production line (especially cutting and QC)	100000 Kyats	Environmental Management Team's Hong Sheng (Myanmar) Industrial Company Limited
<b>Decommissioning Phase</b>					
Air quality	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub> , CO	One time during this phase	One point in the production area	1000000 Kyats	Land Owner
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	1000000 Kyats	Land Owner
Rehabilitation	Recovering and Revegetation		All decommissioning area		Land Owner

## 6.12. 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;

### 6.12.1. 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.

### 6.12.2. 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

### 6.12.3. 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

### 6.12.4. 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

### 6.12.5. 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.

#### **6.12.6. Fire Safety and Evacuation Plan**

Fire Evacuation plans should include the following information

- Emergency escape routes must be clearly shown on floor plans and workplace maps
- Employers must know that their employees know the emergency escape routes
- Procedures for employees who must remain to operate critical equipment before evacuating
- 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 6-2 American National Fire Fighting Association (NFFA) Standards**

No.	Parameters	Proposed Capacity	Remark
1.	Fire water flow	14 bars	
2.	Deluging rate	12.0 liters/m2/min	
3.	Foam rate	10.0 liters/m2/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 excavation 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.

#### 6.12.7. 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)

#### 6.12.8. 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

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

Health and Safety Training plan currently used and provided in Hong Sheng (Myanmar) Industrial 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 6-3 Training Plan Used in Hong Sheng (Myanmar) Industrial 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

#### 6.12.10. Emergency Contact Number of Hlaing Thar Yar Township

Hong Sheng (Myanmar) Industrial Limited is located at Haling Thar Yar Township. The Emergency contact number of Haling Thar Yar Township is presented in the following

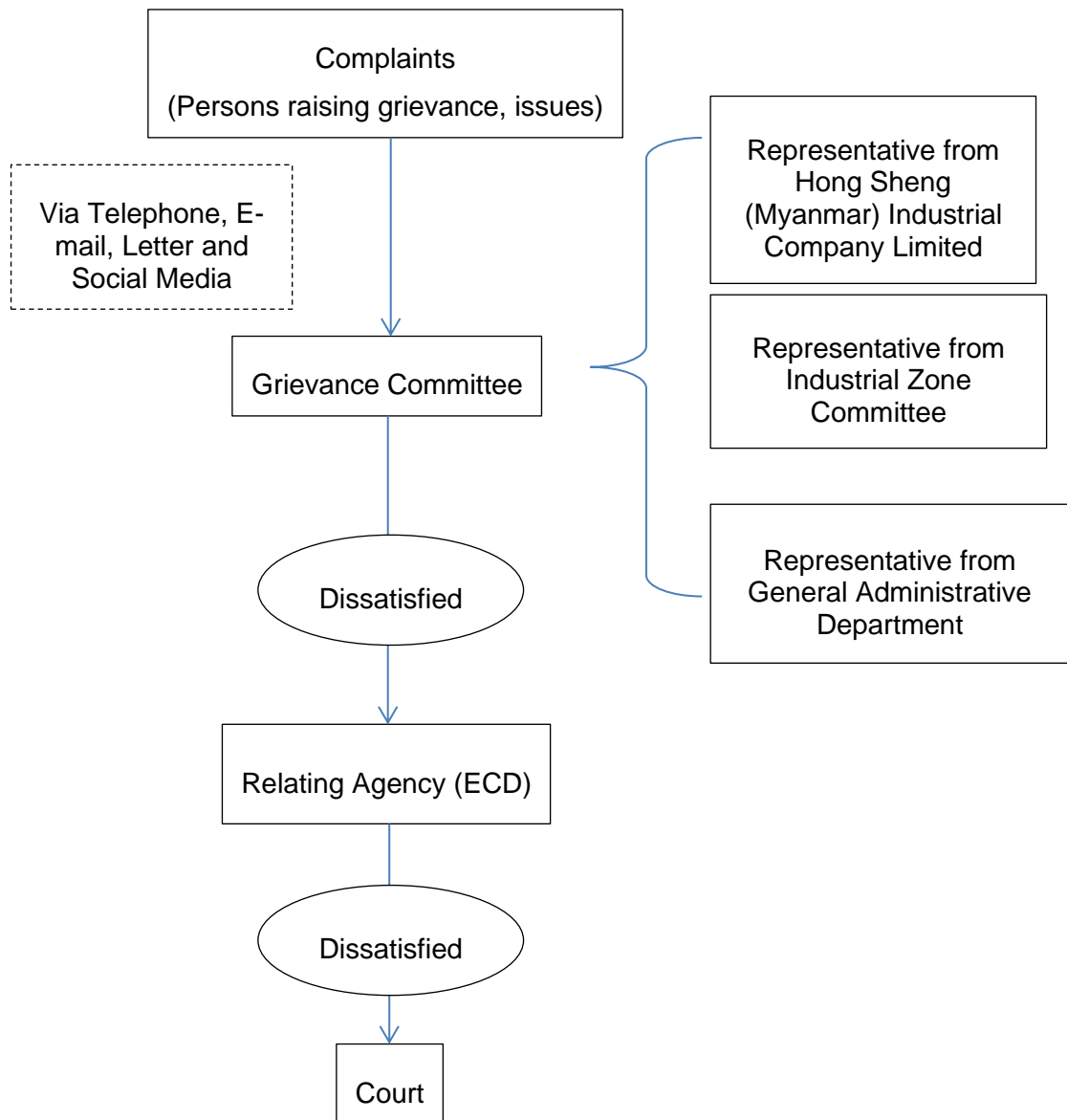
**Table 6-4 Emergency Contact Number**

<b>Hlaing Thar Yar Fire Station</b>	01-645017
<b>Haling Thar Yar General Hospital</b>	01-640814

<b>Hlaing Thar Yar Police Station</b>	01-645016
---------------------------------------	-----------

### 6.13. 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 Hong Sheng (Myanmar) Industrial Company Limited representative from Hlaing Thar Yar, Zone (4) and representative from General Administration Department (Hlaing Thar Yar 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 6-1) show steps of Grievance Redress Mechanism of Proposed Factory Project.



**Figure 6-1 Grievance Redress Mechanism Flow Diagram**



## 6.14. 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 Hong Sheng (Myanmar) Industrial Limited consists of three main sectors; Health, Education and Communities Development Sector. CSR activities are conducted in compliance with MIC's guideline for implementation of CSR program.

Hong Sheng (Myanmar) Industrial Company Limited has a plan to implement and donate 2 percent of the profit per year for Corporate Social Responsibility (CSR) and Employee Welfare Arrangement.

**Table 6-5 CSR Plan at Hong Sheng (Myanmar) Industrial Limited**

Area	Priority item	Contribution (%)	Estimated Cost (Kyats)	Detail targets
Health	Healthcare for employees and their family	1.5 %	7,000,000	One of our main concerns is the well-being of our employees. We will contribute 0.6 % of our net profit for the healthcare which includes medical checkup for the employees and providing health education to our workers.
Education	Raising awareness education level and human right	1 %	5,000,000	We will contribute 0.6 % 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.
Community Development	Donation to local community	0.5%	3,000,000	<ul style="list-style-type: none"> <li>• Donate to local charities with a worthy cause</li> <li>• Actively participate in community events</li> <li>• Encourage staff to participate, and to form a community engagement team to actively support community events</li> <li>• Embedding understanding and consciousness about human rights issues among the employees</li> <li>• Development of sexual harassment and power harassment (workplace bullying &amp; harassment) prevention efforts</li> </ul>

## 7. PUBLIC CONSULTATION AND DISCLOSURE

### 7.1. PUBLIC CONSULTATION PROCESS

This chapter presents results of public consultation and information disclosure conducted for the Hong Sheng (Myanmar) Industrial factory. Public participation can be considered as the required element of the EMP process. In this study various stakeholder 's participation was made.

Public consultation during preparation of EMP report was conducted on 16, January 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 C Yan Hein presented EMP study and findings from Myanmar, after the presentation following questions and answer section. Summary of public consultation meeting is presented

**Table 7-1 Summary of Public Consultation Meeting**

<b>Time and Date</b>	Thursday, 16 January 2020 10:30-12:30
<b>Venue</b>	Sky Hotel, Hlaing Tharyar Township.
<b>Agenda</b>	<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 Hong Sheng (Myanmar) Industrial factory</li><li>• Received and Answer from feedback of participants</li></ul>

## 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 kind of bags (CMP basic). In addition,

Suggestion; U Kyaw Kyaw; Assistant supervisor (Environmental Conservation and Cleaning Department-Industrial Section) YCDC

- To compliance with YCDC procedure for solid waste management and disposed process
- To implement the sufficient septic tank design for workers
- To provide the waste tank for waste water and some used oils
- To make when they wasted at that time to get a bail
- To construct the small pond in front of factory to filter the factory's wastewater before discharging to the surrounding drainage
- To get sanitation regularly

Suggestion; Daw Myat Htet Khine, Environmental Conservation Department;

- To control the dust emission form the operation 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
- To implement monitoring plan regular





Figure 7-1 Public Consultation Meeting Photo

## 8. CONCLUSION AND RECOMMENDATION

### 8.1. CONCLUSION

IEE has been prepared for Hong Sheng (Myanmar) Industrial Company Limited is located at Land Plot No. 16, Myay Taing Block No. Zone 4, Industrial Zone, Hlaing Thar Yar 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 various kind of 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 will 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**  
**Company Registration of Hong Sheng (Myanmar) Industrial Company Limited**



Form (5-B)

**THE REPUBLIC OF THE UNION OF MYANMAR**

Yangon Region Investment Committee

**ENDORSEMENT**

Endorsement No. YGN 198/2019

Date 11 June 2019

This endorsement is issued by Yangon Region Investment Committee according to the section 25 of the Myanmar Investment Law-

- (1) Name of Investor MR. LIN, BUSHENG
- (2) Citizenship CHINESE
- (3) Residence Address QIYUN FOREST FARM, HULING TOWN, RUIAN CITY, ZHEJIANG PROVINCE, PEOPLE'S REPUBLIC OF CHINA.
- (4) Name and Address of Principal Organization -
- (5) Place of Incorporation -
- (6) Type of business MANUFACTURING OF VARIOUS KINDS OF BAGS ON CMP BASIS.
- (7) Place(s) of investment Project PLOT NO.(16), MYAY TAING BLOCK NO. ZONE (4), INDUSTRIAL ZONE, HLAING THAR YAR TOWNSHIP, YANGON REGION.
- (8) Amount of Foreign Capital US\$ 0.688 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\$ 0.688 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 HONG SHENG (MYANMAR) INDUSTRIAL COMPANY LIMITED



YRIC1982019

(Phyo Min Thein)  
Chairman

*Phyo Min Thein*  
11/6/2019



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်  
ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီ  
အတည်ပြုမိန့်

အတည်ပြုမိန့်အမှတ် ရကတ- ၁၉၈/၂၀၁၉ ၂၀၁၉ ခုနှစ် ဇွန် လ ၁၁ ရက်  
ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှု ကော်မတီသည် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ဥပဒေ  
ပုဒ်မ-၂၅ အရ ဤအတည်ပြုမိန့်ကိုထုတ်ပေးလိုက်သည် -

- (၁) ရင်းနှီးမြှုပ်နှံသူအမည် MR. LIN, BUSHENG
- (၂) နိုင်ငံသား CHINESE
- (၃) နေရပ်လိပ်စာ QIYUN FOREST FARM, HULING TOWN, RUIAN CITY, ZHEJIANG PROVINCE, PEOPLE'S REPUBLIC OF CHINA.
- (၄) ပင်မအဖွဲ့အစည်းအမည်နှင့်လိပ်စာ -
- (၅) ဖွဲ့စည်းရာအရပ် -
- (၆) ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား CMPစနစ်ဖြင့်အိတ်အမျိုးမျိုး ထုတ်လုပ် ခြင်း လုပ်ငန်း
- (၇) ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ) မြေကွက်အမှတ် ၁၆၊ မြေတိုင်းရပ်ကွက်အမှတ် (ဇန်-၄)၊ စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး
- (၈) နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ အမေရိကန်ဒေါ်လာ ၀.၆၈၈သန်း
- (၉) နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ အတည်ပြုမိန့် ရရှိသည့် နေ့မှ ၁ နှစ် အတွင်း
- (၁၀) စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) အမေရိကန်ဒေါ်လာ ၀.၆၈၈ သန်း နှင့် ညီမျှသော မြန်မာကျပ်ငွေ
- (၁၁) တည်ဆောက်မှု/ ပြင်ဆင်မှုကာလ ၁ နှစ်
- (၁၂) အတည်ပြုမိန့်သက်တမ်း ၂၅ နှစ်
- (၁၃) ရင်းနှီးမြှုပ်နှံမှုပုံစံ ရာခိုင်နှုန်းပြည့် နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု
- (၁၄) မြန်မာနိုင်ငံတွင် ဖွဲ့စည်းမည့် ကုမ္ပဏီအမည် HONG SHENG (MYANMAR) INDUSTRIAL COMPANY LIMITED



  
(ဖြိုးမင်းသိန်း)  
ဥက္ကဋ္ဌ



Confidential



THE REPUBLIC OF THE UNION OF MYANMAR  
YANGON REGION INVESTMENT COMMITTEE

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

Tel: 01-658263

Our ref :YRIC-1/E198/2019( 427 )

Fax: 01-658264

Date : " June 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 of Hong Sheng (Myanmar) Industrial Company Limited

Reference: Hong Sheng (Myanmar) Industrial Company Limited's letter dated 24<sup>th</sup> May 2019

1. The Yangon Region Investment Committee, at its meeting (8/2019) held on 29<sup>th</sup> May 2019, approved the Endorsement for investment in manufacturing of various kinds of bags on CMP basis under the name of Hong Sheng (Myanmar) Industrial Company Limited submitted by Mr. Lin, Busheng (95%) and Mr. He, YuJun (5%) from People's Republic of China 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-five (25) 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 initial five (5) years and extendable for two times for ten (10) years commencing from the date of signing of the Lease Agreement between Ma Yan Gay @ Ma Khin Pyone (Lessor) and Hong Sheng (Myanmar) Industrial Company Limited (Lessee).
- (c) The annual rent for the land and buildings shall be Kyats 24.000 million (Kyats twenty-four million only) calculated at the rate of

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Kyats 5622.00 per square meter per year for the total land measuring 4269.4335 square meters(1.055 acres).

- (d) Hong Sheng (Myanmar) Industrial Company Limited may submit the application form for the right to use land under Chapter XII and exemptions and reliefs under section 75, 77 and 78 of the Chapter XVIII of Myanmar Investment Law.
- (e) Hong Sheng (Myanmar) Industrial Company Limited shall use its best efforts to achieve a timely realization of the work stated in the Endorsement application.
- (f) Hong Sheng (Myanmar) Industrial Company Limited shall obey and respect the responsibilities of investors under section 65 of Myanmar Investment Law and Chapter XX of Myanmar Investment Rules.
- (g) Hong Sheng (Myanmar) Industrial Company Limited shall carry out prevention, mitigation and monitoring of significant environmental impacts according to the type of investment activities in accordance with the relevant laws, rules, regulations and procedures.
- (h) Hong Sheng (Myanmar) Industrial 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) Hong Sheng (Myanmar) Industrial 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 financial year in accordance with rule 196 of Myanmar Investment

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Rules and shall publish a summary of the report on its website or the Myanmar Investment Commission's website.

- (j) Hong Sheng (Myanmar) Industrial 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. Hong Sheng (Myanmar) Industrial 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. Hong Sheng (Myanmar) Industrial 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.



(Phyto Min Thein)

Chairman 

Hong Sheng (Myanmar) Industrial Company Limited

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

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10. Chairman, CMP Enterprises Supervision Committee
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, National Archives Department
17. Director General, Customs Department
18. Director General, Internal Revenue Department
19. Director General, Directorate of Investment and Company Administration
20. Monitoring and Supervision Division, Directorate of Investment and Company Administration

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# APPENDIX B

## Environmental Monitoring Quality Result

### Air Quality Result



No (28), 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:	Hong Sheng Myanmar Industrial Limited
Project Location:	Land Plot No. 16, Myay Taing Block No. Zone 4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region.
Sampling Date:	October 31, 2019
Sampling Time:	10:00 AM to 10:00 AM
Sampling Condition:	Good
Sampling By:	Environmental Team Represented by Myanwei Environmental Solutions Company Limited.

Instrument	Type	Sampling Rate	Location
Haz-Scanner	Environmental Perimeter Air Station	1 second to 21 weeks	Outdoor/ Indoor Operation Area

#### National Environmental Quality (Emission) Guideline

Parameter	Averaging period	Guideline value	Unit
PM <sub>10</sub> <sup>a</sup>	1-year	20	(µg/m <sup>3</sup> )
	24-hour	50	
PM <sub>2.5</sub> <sup>b</sup>	1-year	10	(µg/m <sup>3</sup> )
	24-hour	25	
O <sub>3</sub>	8 hour	100	(µg/m <sup>3</sup> )
NO <sub>2</sub>	1-year	40	(µg/m <sup>3</sup> )
	1-hour	200	
SO <sub>2</sub>	24-hour	20	(µg/m <sup>3</sup> )
	10-min	500	

a. Particulate matter 10 micrometer or less in diameter  
b. Particulate matter 2.5 micrometer or less in diameter

#### Monitoring Result

Parameters	Observed value	Guideline value	Unit	Organization	Period
<b>Air Quality Monitoring</b>					
<b>Outdoor Air Quality Monitoring</b>					
PM <sub>10</sub>	43.98	50	µg/m <sup>3</sup>	NEQG	24 hrs
PM <sub>2.5</sub>	27.62	25	µg/m <sup>3</sup>	NEQG	24 hrs
SO <sub>2</sub>	253.57	500	µg/m <sup>3</sup>	NEQG	10 min
NO <sub>2</sub>	11.08	200	µg/m <sup>3</sup>	NEQG	1 hrs
CO	0.3	35	ppm	NEQG	24 hrs
<b>Indoor Air Quality Monitoring</b>					
PM <sub>10</sub>	21.81	50	µg/m <sup>3</sup>	NEQG	24 hrs
PM <sub>2.5</sub>	10.96	25	µg/m <sup>3</sup>	NEQG	24 hrs
SO <sub>2</sub>	2.30	20	µg/m <sup>3</sup>	NEQG	10 min
NO <sub>2</sub>	15.91	200	µg/m <sup>3</sup>	NEQG	1 hrs
O <sub>3</sub>	4.64	100	µg/m <sup>3</sup>	NEQG	24 hrs

**LIN HTET SEIN**  
**DIRECTOR**  
**MYANWEI ENVIRONMENTAL SOLUTIONS**  
**COMPANY LIMITED.**

## Noise Result



No(28), 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:	Hong Sheng Myanmar Industrial Limited
Project Location:	Land Plot No. 16, Myay Taing Block No. Zone 4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region
Sampling Date:	October 31, 2019
Sampling Time:	10:00 AM to 4:00 PM
Sampling Condition:	
Sampling By:	Environmental Team Represented by Myanwei Environmental Solutions Company Limited.

Instrument	Type	Sampling Rate	Location
Digital Sound Level Meter	GM 1356 USB	70 dB	16°51'22.9"N 96°03'08.7"E

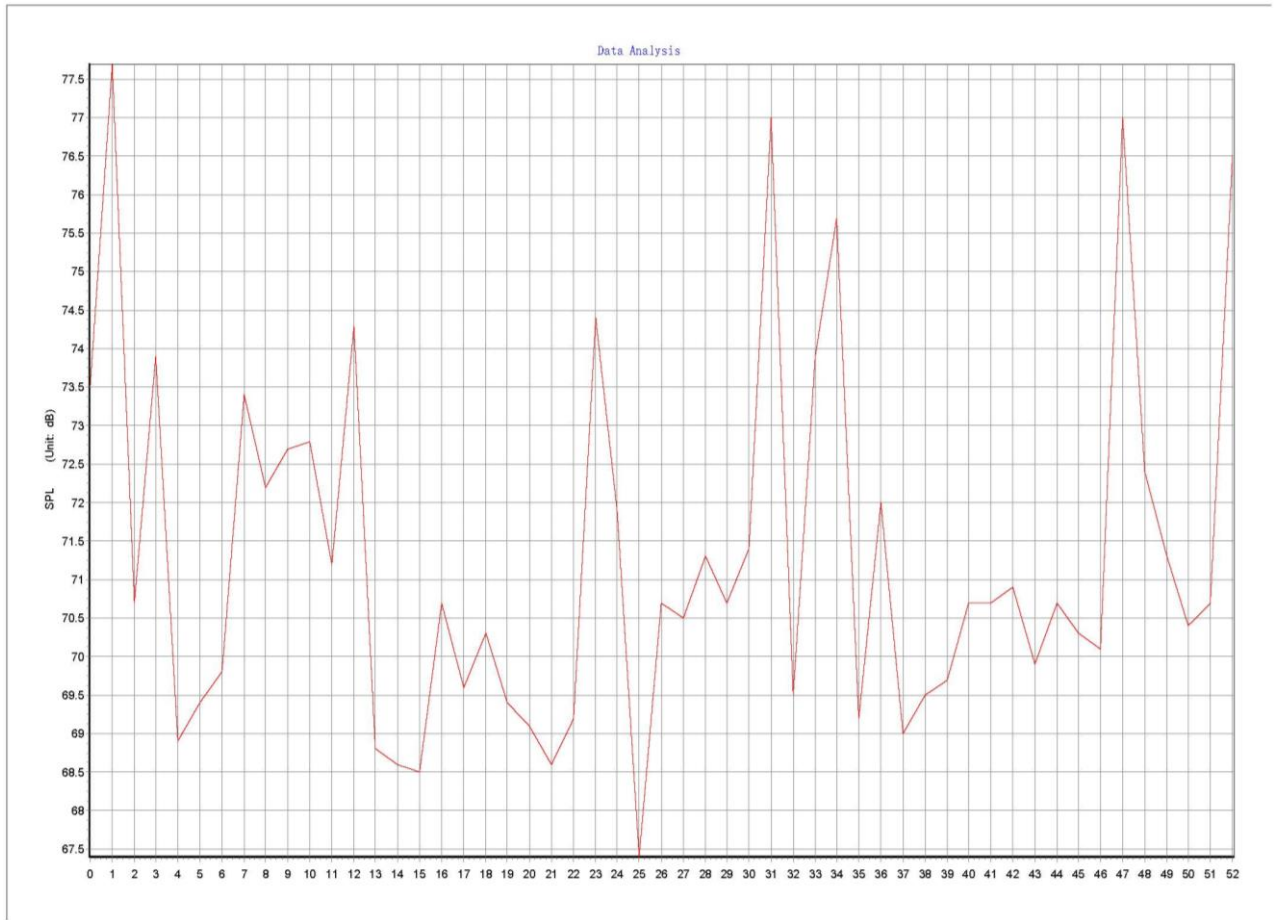
No.	Place	Unit	Result	Standard	Remark
1.	Operation Area (Cutting Section)	dB(A)	71.296	70 dB(A)	Slightly Above

### National Environmental Quality (Emission) Guideline

Receptor	One Hour Laeq (dBA)	
	Daytime	Nighttime
	7:00-22:00 (10:00-22:00 for public holidays)	22:00-7:00 (22:00-10:00 for public holidays)
Residential, Institutional, Educational	55	45
Institutional, Commercial	70	70

**LIN HTET SEIN**  
**DIRECTOR**  
**MYANWEI ENVIRONMENTAL SOLUTIONS**  
**COMPANY LIMITED.**

# Monitoirng Graph



## Light Result



No(28), 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:	Hong Sheng Myanmar Industrial Limited
Project Location:	Land Plot No. 16, Myay Taing Block No.Zone 4, Industrial Zone, Hlaing Thar Yar Township, Yangon Region
Sampling Date:	October 31, 2019
Sampling Time:	10:00 AM to 4:00 PM
Sampling Condition:	
Sampling By:	Environmental Team Represented by Myanwei Environmental Solutions Company Limited.

Instrument	Type	Sampling Rate	Location
Digital Sound Level Meter	GM 1356 USB	70 dB	16°51'22.9"N 96°03'08.7"E

No.	Place	Unit	Result	Standard	Remark
1.	Operation Area (Cutting Section)	dB(A)	71.296	70 dB(A)	Slightly Above

### 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)	22:00-7:00 (22:00-10:00 for public holidays)
Residential, Institutional, Educational	55	45
Institutional, Commercial	70	70

LIN HTET SEIN  
DIRECTOR  
MYANWEI ENVIRONMENTAL SOLUTIONS  
COMPANY LIMITED.



# Tube Well Water Result



Laboratory Technical Consultant: U Saw Christopher Maung  
 B.Sc Engg. (Civil), Dip S.E. (Delft) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.  
 Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

WTL-RE-001  
 Issue Date - 01-12-2012  
 Effective Date - 01-12-2012  
 Issue No - 1.0/Page 1 of 1

W0919 032

## WATER QUALITY TEST RESULTS FORM

Client HONG SHENG(MYANMAR) INDUSTRIAL COMP ANY LIMITED  
 Nature of Water Tube Well Water  
 Location No.16 Myawaddy Min Thar Gyi Street,Hlaing Thar Yar Zone(4)  
 Date and Time of collection 2.9.2019  
 Date and Time of arrival at Laboratory 2.9.2019  
 Date and Time of commencing examination 3.9.2019  
 Date and Time of completing 5.9.2019

### Results of Water Analysis

### WHO Drinking Water Guideline (Geneva - 1993)

pH	7.8		6.5 - 8.5
Colour (True)	200	TCU	15 TCU
Turbidity	330	NTU	5 NTU
Conductivity	3100	micro S/cm	
Total Hardness	440	mg/l as CaCO <sub>3</sub>	500 mg/l as CaCO <sub>3</sub>
Calcium Hardness	294	mg/l as CaCO <sub>3</sub>	
Magnesium Hardness	146	mg/l as CaCO <sub>3</sub>	
Total Alkalinity	412	mg/l as CaCO <sub>3</sub>	
Phenolphthalein Alkalinity	Nil	mg/l as CaCO <sub>3</sub>	
Carbonate (CaCO <sub>3</sub> )	Nil	mg/l as CaCO <sub>3</sub>	
Bicarbonate (HCO <sub>3</sub> )	412	mg/l as CaCO <sub>3</sub>	
Iron	9.90	mg/l	0.3 mg/l
Chloride (as CL)	1110	mg/l	250 mg/l
Sodium chloride (as NaCL)	1832	mg/l	
Sulphate (as SO <sub>4</sub> )	120	mg/l	200 mg/l
Total Solids	1918	mg/l	1500 mg/l
Suspended Solids	368	mg/l	
Dissolved Solids	1550	mg/l	1000 mg/l
Manganese	0.6	mg/l	0.05 mg/l
Phosphate	Nil	mg/l	
Phenolphthalein Acidity	2	mg/l	
Methyl Orange Acidity	Nil	mg/l	
Salinity	1.5	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: *Zaw Hein Oo*

Name: Zaw Hein Oo

B.Sc (Chemistry)

Sr. Chemist

ISO TECH Laboratory

Approved by

Signature: *Soe Thit*

Name: Soe Thit

B.E (Civil) 1980,

Technical Officer

ISO TECH Laboratory

(a division of WEG Co.,Ltd)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-73225175, 09-73242162, Fax: 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

# Reverse Osmosis Water Result



Laboratory Technical Consultant: U Saw Christopher Maung  
 B.Sc Engg: (Civil), Dip S.E (Defn) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.  
 Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

WTL-RE-001  
 Issue Date - 01-12-2012  
 Effective Date - 01-12-2012  
 Issue No - 1.0/Page 1 of 1

W0919 031

## WATER QUALITY TEST RESULTS FORM

Client HONG SHENG(MYANMAR) INDUSTRIAL COMP ANY LIMITED  
 Nature of Water R0 Water  
 Location No.16 Myawaddy Min Thar Gyi Street, Hlaing Thar Yar Zone(4)  
 Date and Time of collection 2.9.2019  
 Date and Time of arrival at Laboratory 2.9.2019  
 Date and Time of commencing examination 3.9.2019  
 Date and Time of completing 5.9.2019

### Results of Water Analysis

### WHO Drinking Water Guideline (Geneva - 1993)

pH	6.6		6.5 - 8.5
Colour (True)	Nil	TCU	15 TCU
Turbidity	1	NTU	5 NTU
Conductivity	124	micro S/cm	
Total Hardness	4	mg/l as CaCO <sub>3</sub>	500 mg/l as CaCO <sub>3</sub>
Calcium Hardness	2	mg/l as CaCO <sub>3</sub>	
Magnesium Hardness	2	mg/l as CaCO <sub>3</sub>	
Total Alkalinity	12	mg/l as CaCO <sub>3</sub>	
Phenolphthalein Alkalinity	Nil	mg/l as CaCO <sub>3</sub>	
Carbonate (CaCO <sub>3</sub> )	Nil	mg/l as CaCO <sub>3</sub>	
Bicarbonate (HCO <sub>3</sub> )	12	mg/l as CaCO <sub>3</sub>	
Iron	0.10	mg/l	0.3 mg/l
Chloride (as CL)	29	mg/l	250 mg/l
Sodium chloride (as NaCL)	48	mg/l	
Sulphate (as SO <sub>4</sub> )	Nil	mg/l	200 mg/l
Total Solids	63	mg/l	1500 mg/l
Suspended Solids	1	mg/l	
Dissolved Solids	62	mg/l	1000 mg/l
Manganese	Nil	mg/l	0.05 mg/l
Phosphate	Nil	mg/l	
Phenolphthalein Acidity	4	mg/l	
Methyl Orange Acidity	Nil	mg/l	
Salinity	0.1	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: *Hein*

Name: Zaw Hein Oo

B.Sc (Chemistry)  
Sr. Chemist

Approved by

Signature: *Soe Thit*

Name: Soe Thit

B.E (Civil) 1980,  
Technical Officer

(a division of WEG Co., Ltd.)

ISO TECH Laboratory

ISO TECH Laboratory

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-73225175, 09-73242162, Fax: 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

**APPENDIX C**  
**Fire Safety Certificate and Training Photo**

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်  
ပြည်ထဲရေးဝန်ကြီးဌာန  
မီးသတ်ဦးစီးဌာန



**မီးဘေးလုံခြုံရေးစစ်ဆေးထောက်ခံချက်**

အမှတ်စဉ်(၂၂၂၈ )

ရက်စွဲ၊ ၂၀၁၉ခုနှစ်၊ စက်တင်ဘာလ ၂၂ ရက်

၁။ ရန်ကုန် တိုင်းဒေသကြီး/ပြည်နယ်၊ လှိုင်သာယာ မြို့နယ်၊ စက်မှုဇုန်(၄) ရပ်ကွက်/  
ကျေးရွာ၊ မြဝတီမင်းကြီး လမ်းအမှတ် ( ၁၆ ) ရှိပိုင်ရှင်ဦး/ဒေါ် Hong Sheng(Myanmar)  
Industrial Co.,Ltd ၏ Steel Structure (၁၂)ထပ် အဆောက်အဦအတွက် ဤဌာနမှ သတ်မှတ်ပေးထားသည့်

မီးဘေးလုံခြုံရေးဆိုင်ရာပြဌာန်းချက်များအား ( ၄-၉-၂၀၁၉ )ရက်နေ့တွင် ကွင်းဆင်းစစ်ဆေးသည့်အခါ  
ပြည့်စုံစွာဆောင်ရွက်ထားကြောင်း စစ်ဆေးတွေ့ရှိရသည်။

၂။ ဤထောက်ခံချက်သည် စစ်ဆေးသည့်နေ့မှစ၍ (၃)နှစ်အထိသာ အကျိုးစင်သည်။

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)  
 Nwe














## APPENDIX D Public Consultation Meeting


တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ ဖိတ်ကြားထားသူများစာရင်း

နေ့စွဲ - ၁၄ ရက်၊ ဇန်နဝါရီလ၊ ၂၀၂၀ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
1.	ဖော်ဖော်အောင်	N/A	ကျေးရွာဖွံ့ဖြိုးရေးအဖွဲ့	၀၉-၉၅၀၅၅၅၁၆၄	
2.	အောင်အောင်	စာရေးဆရာ	မ	၀၉-၄၄၇၇၀၉၄၄၂	
3.	ဖော်ဖော်အောင်	ယပ်/ရေ	မြို့နယ်ထွေဖွယ်	၀၁-၆၄၅၀၁၃	
4.	အောင်အောင်	စာရေး - J	မြို့နယ်ထွေဖွယ်	၀၉၄၂၀၁၁၂၅၄၈	
5.	ဒေါ်မာမာအောင်	ယပ်/ရေ	ကျေးရွာဖွံ့ဖြိုးရေးအဖွဲ့	၀၉၆၉၅၃၁၀၄၀၃	
6.	ဒေါ်အိအိ	ဦးစီးဌာန	အလှူ	၀၁၆၅၅၀၆၃	
7.	မောင်မောင်	office	ကျေးရွာဖွံ့ဖြိုးရေးအဖွဲ့	၀၉-၇၆၆၃၇၈၄၂၀	
8.					
9.					

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ ဖိတ်ကြားထားသူများစာရင်း

နေ့စွဲ - ၁၄ ရက်၊ ဇန်နဝါရီလ၊ ၂၀၂၀ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
၁	ဖော်ဇော်အောင်	ဌာန ခေါင်းဆောင်	DISI	၀၉၇၅၂၂၇၂၄	 14/11/2020



**Attendance List**

**တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း**

နေ့စွဲ - ၁၆ ရက်၊ ဇန်နဝါရီလ၊ ၂၀၂၀ ခုနှစ်

စဉ်	အမည်	ရာထူး	ရာထူးအစဉ်	ဖုန်း / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
၁။	ဦးစွန်းသိင်္ခဝင်း	ဒုတိယဦးစီးအဖွဲ့	အထွေထွေအဖွဲ့	မိမိ၏အဖွဲ့	၀၉-၇၂၄၀၂၅၆၈	
၂။	ဦးကျော်ကျော်	အထွေထွေအဖွဲ့	မိမိ၏အဖွဲ့	မိမိ၏အဖွဲ့	၀၉-၅၀၉၅၅၅၅	
၃။	ဦးအောင်	မိမိ၏အဖွဲ့	မိမိ၏အဖွဲ့	မိမိ၏အဖွဲ့	၀၉-၅၅၅၅၅၅၅	
၄။	ဦးကျော်ကျော်	မိမိ၏အဖွဲ့	မိမိ၏အဖွဲ့	မိမိ၏အဖွဲ့	၀၉-၅၅၅၅၅၅၅	
၅။	ဦးကျော်ကျော်	မိမိ၏အဖွဲ့	မိမိ၏အဖွဲ့	မိမိ၏အဖွဲ့	၀၉-၅၅၅၅၅၅၅	
၆။	ဦးကျော်ကျော်	မိမိ၏အဖွဲ့	မိမိ၏အဖွဲ့	မိမိ၏အဖွဲ့	၀၉-၅၅၅၅၅၅၅	
၇။	ဦးကျော်ကျော်	မိမိ၏အဖွဲ့	မိမိ၏အဖွဲ့	မိမိ၏အဖွဲ့	၀၉-၅၅၅၅၅၅၅	

## APPENDIX E List Of Commitment

Hong Sheng (Myanmar) Company Limited ၏ CMP စနစ်ဖြင့် အိတ်မျိုးမျိုး ထုတ်လုပ်ခြင်းလုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းကြောင့် ဖြစ်ပေါ်လာနိုင်သော သဘာဝပတ်ဝန်းကျင်၊ လူမှုဘဝ နှင့် ကျန်းမာရေးထိခိုက်မှုများရှိခဲ့ပါက လျှော့ချရေး စီမံခန့်ခွဲရေးနှင့် တားဆီးရေး အစီအစဉ်များကို ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (Initial Environmental Examination- IEE) ဖြစ်ကြောင်း အောက်ဖော်ပြပါ ဇယားဖြင့် အကျဉ်းချုပ် စာရင်းပြုစုဖော်ပြထားပါသည်။

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
မူဝါဒ၊ ဥပဒေနှင့် အဖွဲ့အစည်းဆိုင်ရာမူဘောင်များ	၁	<p>ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂)</p> <p>ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး နည်းဥပဒေ (၂၀၁၄)</p> <p>ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၂၀၁၅)</p> <p>မြန်မာနိုင်ငံမှ ချမှတ်ထားသော စက်ရုံနှင့် သက်ဆိုင်သည့် တခြား လိုက်နာဆောင်ရွက်ရမည့် လုပ်ထုံးလုပ်နည်း၊ ဥပဒေ၊ နည်းဥပဒေ နှင့် မူဝါဒများ</p> <p>အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅) နှင့် နိုင်ငံတကာ ပတ်ဝန်းကျင်ဆိုင်ရာ စံသက်မှတ်ချက်များနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုဆိုင်ရာ လမ်းညွှန်ချက်များ</p>	အခန်း (၂)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
ပတ်ဝန်းကျင်အရည်အသွေး တိုင်းတာမှု	၂	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅) နှင့် နိုင်ငံတကာ ပတ်ဝန်းကျင်ဆိုင်ရာ စံသက်မှတ်ချက်များနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုဆိုင်ရာ လမ်းညွှန်ချက်များကို အခြေခံလေ့လာ တိုင်းတာထားပါသည်။	အခန်း (၄)
လေအရည်အသွေး	၂.၁	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅) ၏ ထုတ်လွှတ်အဆိုးအငွေ့ (Air emissions) လမ်းညွှန်သက်မှတ်ချက် (PM <sub>10</sub> , PM <sub>2.5</sub> ) တို့ဖြင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အပိုဒ်ခွဲ (၄.၂.၂)
ဆူညံသံ	၂.၂	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅) ၏ အမြင့်ဆုံးလက်ခံနိုင်သည့် ဆူညံသံအဆင့် (Noise level) လမ်းညွှန်သက်မှတ်ချက် စက်မှုဇုန် ဧရိယာတွင် (70 One-hour LAeq (dBA)) ဖြင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အပိုဒ်ခွဲ (၄.၂.၃)
စက်ရုံတွင်း အလင်းရောင် ရရှိမှု	၂.၃	Illumination and Limiting Glare Index based on IES Code, 1968 ဖြင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အပိုဒ်ခွဲ (၄.၂.၅)
ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု	၃	Hong Sheng (Myanmar) Company Limited သည် စက်ရုံအခြေအနေ၊ အလုပ်သမား၊ ဒေသခံလူထုအမြင်၊ အစုရှယ်ယာဝင်များနှင့် ညှိနှိုင်းဆွေးနွေးခြင်း အပါအဝင် စောင့်ကြပ်ကြည့်ရှုခြင်းများ ကို ဆောင်ရွက်မည်။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်သည် စက်ရုံ၏ ဘေးအန္တရာယ်ကင်းရှင်းရေး အတွက်ပါ ဖြည့်စွက်ဆောင်ရွက်ထားပါသည်။	အခန်း (၆)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်	၃.၁	<ul style="list-style-type: none"> <li>• လေထုညစ်ညမ်းခြင်းကို ကာကွယ်ရန်နှင့် ကာဗွန်ထုတ်လုပ်မှုကို လျော့ချပေးနိုင်ရန်အတွက် စက်ရုံဝင်းအတွင်း အပင်များစိုက်ပျိုးခြင်း</li> <li>• မီးစက်များကို ပြုပြင်ထိန်းသိမ်းခြင်း</li> <li>• အမှိုက်များ မီးရှို့ခြင်းကို တားမြစ်ခြင်း</li> <li>• ဖုန်ထူထပ်သော နေရာများတွင် တာဝန်ထမ်းဆောင်သော ဝန်ထမ်းများအတွက် နှာခေါင်းစီးများ ဝတ်ဆင်စေခြင်း</li> </ul>	အပိုဒ်ခွဲ (၆.၁)
ဆူညံသံထွက်ရှိမှု	၃.၂	<ul style="list-style-type: none"> <li>• အသံလုံအခန်းများတည်ဆောက်ပြီး စက်ပစ္စည်းများကို သေချာစွာ ပြုပြင်ထိန်းသိမ်းစေခြင်း</li> <li>• သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်းတွင် ယာဉ်များ၏ အမြန်နှုန်းကို ကန့်သတ်ခြင်း</li> <li>• လုံလောက်သော တစ်ကိုယ်ရည်သုံး အကာအကွယ်ပစ္စည်းများ ထားရှိပေးခြင်း</li> <li>• သက်ဆိုင်ရာ ဝန်ထမ်းများအားလုံးကို သင့်လျော်သော သင်တန်းများပို့ချခြင်းနှင့် ဆူညံသော နေရာတွင် အလုပ်လုပ်စဉ် တစ်ကိုယ်ရည်သုံး အကာအကွယ်များ တပ်ဆင်စေခြင်း</li> </ul>	အပိုဒ်ခွဲ (၆.၄)
အမှိုက်စွန့်ပစ်မှု	၃.၃	<ul style="list-style-type: none"> <li>• စီမံကိန်းမှ ထွက်ရှိသော စွန့်ပစ်အမှိုက်များကို စက်ရုံဝင်းအတွင်း (သို့မဟုတ်) ဒေသရှိ အင်းအိုင်၊ ချောင်း၊ မြောင်း၊ မြစ် စသည်တို့ထဲသို့ စွန့်ပစ်ခြင်း မပြုလုပ်ပါ။</li> <li>• စွန့်ပစ်အမှိုက်များကို တစ်နေရာတည်းတွင် စနစ်တကျ ခွဲ၍ စုဆောင်းရန် လိုအပ်ပြီး အထည်အလိပ် စွန့်ပစ်အမှိုက်များကို သီးခြားသိုလှောင်သိမ်းဆည်းခြင်း၊ အန္တရာယ်ရှိသော စွန့်ပစ်ပစ္စည်းများနှင့် တခြားသော သတ္တုပစ္စည်းများကို သီးခြား သိုလှောင်သိမ်းဆည်းခြင်း</li> </ul>	အပိုဒ်ခွဲ (၆.၅)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		<ul style="list-style-type: none"> <li>• ပြန်လည်အသုံးပြုနိုင်သော စက္ကူ၊ fabric scraps စသည်တို့ကို တစ်ဆင့် ပြန်လည်ရောင်းချခြင်းဖြင့် ပြန်လည်အသုံးပြုခြင်း</li> <li>• စွန့်ပစ်မှင် များကို စနစ်တကျ ထားသို၍ စွန့်ပစ်ခြင်း</li> <li>• နေ့စဉ်ထွက်ရှိသော အမှိုက်များကို ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက်စွန့်ပစ်ခြင်း</li> </ul>	
စွန့်ပစ်အရည်	၃.၄	<ul style="list-style-type: none"> <li>• ရေနုတ်မြောင်းလိုင်းကို သင့်တော်သော အကျယ်၊ အနက်ရှိစေပြီး မိလ္လာစနစ်သည် ရေလုံပြီး စနစ်တကျ သိုလှောင်နိုင်ခြင်း</li> <li>• မိလ္လာပိုက်လိုင်းကို အမြဲစစ်ဆေးခြင်းနှင့် ထိန်းသိမ်းခြင်း</li> <li>• ရေနုတ်မြောင်းကို အနံ့အသက်များ ကင်းစေရန် အမှိုက်များ ပိတ်ဆို့စေခြင်းမရှိအောင် ဆောင်ရွက်ခြင်း</li> </ul>	အပိုဒ်ခွဲ (၆.၃)
မီးဘေးအန္တရာယ်	၃.၅	<ul style="list-style-type: none"> <li>• အရေးပေါ်အခြေအနေများအတွက် စက်ရုံနံရံများတွင် မီးသတ်ဆေးဘူးများ၊ မီးသတ်ပိုက်ဘီးများနှင့် မီးသတ်ရေပိုက်များ ထားရှိခြင်း</li> <li>• အရေးပေါ်ထွက်ပေါက်ပြ မြေပုံများနှင့် စုဝေးရပ်ညွှန်ပြရာ သင်္ကေတများ ထားရှိခြင်း</li> <li>• မီးသတ်ပစ္စည်းများကို ပုံမှန်စစ်ဆေးခြင်းနှင့် မီးသတ်ရေကန်ကို အရေးပေါ်အခြေအနေအတွက် ပြင်ဆင်ခြင်း</li> <li>• အလုပ်သမားများအား သတိပေးရန် မီးဘေးအချက်ပြခေါင်းလောင်းများ တပ်ဆင်ထားခြင်း</li> <li>• အဓိက ဝင်ပေါက်ထွက်ပေါက်များကို ပိတ်ဆို့ထားခြင်း မပြုလုပ်စေခြင်း</li> </ul>	အပိုဒ်ခွဲ (၆.၇)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
လုပ်ငန်းခွင်ထိခိုက်မှုနှင့် ကျန်းမာရေး	၃.၆	<ul style="list-style-type: none"> <li>• ရှေးဦးသူနာပြုသင်တန်း၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးသင်တန်း၊ မီးဘေးအန္တရာယ်ကာကွယ်ရေး သင်တန်း၊ စက်ယန္တရားများ ကိုင်တွယ်ခြင်းသင်တန်းများ ပို့ချခြင်း</li> <li>• လေ့လာတွေ့ရှိထားသော အလင်းတိုင်းတာချက်များအရ၊ အလုပ်သမားများ ဘေးကင်းလုံခြုံစွာ လုပ်ကိုင်နိုင်စေရန် လုံလောက်သောအလင်းရောင် ရရှိစေရန် ဆောင်ရွက်ခြင်း</li> <li>• တစ်ကိုယ်ရည်သုံး ကာကွယ်ရေးကိရိယာများ (ဥပမာ- နားကြပ်၊ လက်အိတ်၊ ခေါင်ဆောင်း၊ မျက်မှန်) များကို ဌာနအလိုက် ပေးအပ်ခြင်း</li> <li>• ဓာတ်လိုက်ခြင်း အန္တရာယ်မှ ကာကွယ်ရန်အတွက် လျှပ်စစ်ထိန်းသိမ်းစောင့်ရှောက်ရေးဝန်ထမ်းအား ပုံမှန်စစ်ဆေးခြင်းနှင့် ကြိုတင်ကာကွယ်မှုပြုလုပ်ရန် တာဝန်ပေးခန့်အပ်ခြင်း</li> <li>• ရေနုတ်မြောင်းများ ရေစီးရေလာကောင်းအောင် ဆောင်ရွက်ခြင်းဖြင့် အလုပ်သမားများ၏ ကျန်းမာရေး ဘေးအန္တရာယ် ကာကွယ်ခြင်း</li> <li>• အလုပ်သမားများအတွက် အများဆုံးခွင့်ပြုနိုင်သော ဆူညံသံအဆင့်မှာ 90dB(A)သည် တစ်ရက်လျှင် ၈နာရီသာ ဖြစ်သည်။ ထို့ကြောင့် ဆူညံသောနေရာများတွင် လုပ်ကိုင်ပါက နားကြပ်ကိရိယာ တပ်ဆင်ခြင်းရမည်။</li> </ul>	အပိုဒ်ခွဲ (၆.၈)
စွမ်းအင်	၃.၇	<ul style="list-style-type: none"> <li>• အပူအအေးအလိုအလျောက်ညွှန်ပြရာ ကိရိယာနှင့် အချိန်အတိုင်းကိရိယာများတပ်ဆင်ခြင်း</li> <li>• စက်ရုံ၏နေရာအမျိုးမျိုးတွင် စွမ်းအင်ရွေ့တာသော လျှပ်စစ်မီးများတပ်ဆင်ခြင်း</li> </ul>	အပိုဒ်ခွဲ (၆.၉)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		<ul style="list-style-type: none"> <li>• စွမ်းအင်ချွေတာသော စက်ပစ္စည်းများကို တပ်ဆင်ရမည်</li> </ul>	
အရေးပေါ် အခြေအနေ	၃.၈	<ul style="list-style-type: none"> <li>• စက်ရုံအနေဖြင့် အရေးပေါ်ဖြစ်ပေါ်လာနိုင်သော မီးဘေးအန္တရာယ်၊ ငလျင်၊ ရေကြီးခြင်းနှင့် မုန်တိုင်းများအတွက် စီမံထားရှိခြင်း</li> <li>• မီးသတ်ပစ္စည်းကိရိယာများနှင့် မီးသတ်ဆေးဘူးများကို နေရာတိုင်းတွင် တပ်ဆင်ထားခြင်းနှင့် စစ်ဆေးခြင်း</li> <li>• အသေးစိတ်အခြေအနေပြ ရုပ်ပုံ( အရေးပေါ်ထွက်ပေါက်တံခါး စသည်) ကို အလုပ်သမားများ သိရှိစေရန် ဆောင်ရွက်ထားခြင်း</li> <li>• ရေပိုက်ခေါင်း၊ မီးသတ်ဘူး စသည်တို့ကို ထားရှိခြင်း၊ စစ်ဆေးခြင်းနှင့် ဓာတ်လိုက်ခြင်းမှ ကာကွယ်ရန် လျှပ်စစ်အန္တရာယ် အသိပေး သင်တန်းများ ပို့ချခြင်း</li> <li>• အလုပ်သမားများအား ငလျင်လှုပ်သောအခါ စားပွဲအောက်ကဲ့သို့သော ဘေးကင်းသောနေရာများတွင် နေထိုင်ရန်၊ အပြင်သို့ မရွေ့ရန်၊ အပြင်တွင်ရှိနေသော အလုပ်သမားများအနေဖြင့် အဆောက်အဦးအောက်၊ သစ်ပင်အောက်၊ တိုင်များအောက်တွင် နေထိုင်ခြင်းမပြုဘဲ ကွင်းပြင်တွင်သာ နေထိုင်ရန်၊ တခြားသော သက်ဆိုင်ရာ ဘေးကင်းလုံခြုံရေး လမ်းညွှန်ချက်များကို အသိပညာပေးခြင်း</li> <li>• ရေလွှမ်းမိုးမှု (မုန်တိုင်းအပျက်အစီးများ၊ ရေမြောင်းများ ပွင့်နေခြင်း၊ မြေတိုက်စားမှု) နှင့် ရွေ့ပြောင်း တွားသွားသတ္တဝါများ (မြေ သို့မဟုတ် တခြားတိရိစ္ဆာန်များ) ၏ အန္တရာယ်များကို သတိပြုစေခြင်း</li> </ul>	အပိုဒ်ခွဲ (၆.၉)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		<ul style="list-style-type: none"> <li>• အရေးပေါ်ဆေးအဖွဲ့များနှင့် ဆေးပစ္စည်းများ ထားရှိခြင်း</li> <li>• အရေးပေါ်ဆက်သွယ်နိုင်သည့် မီးသတ်ဌာန၊ ရဲတပ်ဖွဲ့၊ ဆေးရုံ စသည့် တယ်လီဖုန်းနံပါတ်များကို မြင်သာနိုင်သည့်နေရာတွင် ကပ်ထားခြင်း</li> <li>• မီးငြိမ်းသတ်ရေးအဖွဲ့၊ ကယ်ဆယ်ရေးအဖွဲ့တို့ဖြင့် ဘေးကင်းရေးကော်မတီတစ်ရပ် တည်ဆောက်ခြင်းနှင့် ကော်မတီအနေဖြင့် ဘေးအန္တရာယ်ကင်းရှင်းရေးဆိုင်ရာ စီမံခန့်ခွဲမှုနှင့် ပတ်သတ်၍ လစဉ်အစည်းအဝေး ကျင်းပခြင်း</li> <li>• သဘာဝဘေးအန္တရာယ်စီမံခန့်ခွဲရေး၊ မီးဘေးအန္တရာယ်နှင့် လုပ်ငန်းခွင်ထိခိုက်မှုနှင့် ကျန်းမာရေး ကာကွယ်ရေးအတွက် သင့်လျော်သော သင်တန်းများပို့ချခြင်း</li> </ul>	
စောင့်ကြပ်ကြည့်ရှုမှု	၄	အဆိုပြုစီမံကိန်းသည် စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာကို ဝန်ကြီးဌာနသို့ (၆)လ တစ်ကြိမ် တင်ပြဆောင်ရွက်မည်။	အခန်း (၆) အပိုဒ်ခွဲ (၆.၁၁)
လေအရည်အသွေး စစ်ဆေးမှု	၄.၁	<ul style="list-style-type: none"> <li>• ဆာလဖာဒိုက်အောက်ဆိုဒ်ဓာတ်ငွေ့များ၊ နိုက်ထရိုဂျင်ဒိုင်အောက်ဆိုဒ်ဓာတ်ငွေ့များ၊ ကာဗွန်ဒိုင်အောက်ဆိုဒ်ဓာတ်ငွေ့များ၊ ကာဗွန်မိုနောက်ဆိုဒ်ဓာတ်ငွေ့များနှင့် အမှုန်အမွှားများ တိုင်းတာခြင်း</li> <li>• တစ်နှစ် (၂) ကြိမ်တိုင်းတာပြီး ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာနသို့ တင်ပြခြင်း</li> <li>• ထုတ်လုပ်မှုဧရိယာအတွင်း တိုင်းတာခြင်း</li> </ul>	ဇယား (၆.၁)
စွန့်ပစ်ပစ္စည်းထွက်ရှိမှုအခြေအနေ	၄.၂	<ul style="list-style-type: none"> <li>• စွန့်ပစ်အစိုင်အခဲ၊ စွန့်ပစ်အရည်နှင့် အန္တရာယ်ရှိသော စွန့်ပစ်ပစ္စည်းများ</li> <li>• အပတ်စဉ် စွန့်ပစ်ခြင်း</li> </ul>	ဇယား (၆.၁)



ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		<ul style="list-style-type: none"> <li>• စက်ရုံအတွင်း ပြန်လည်အသုံးပြု သိုလှောင်ခြင်း၊ စွန့်ပစ်နေရာသတ်မှတ်ခြင်း</li> </ul>	
မီးဘေးအန္တရာယ် စစ်ဆေးမှု	၄.၃	<ul style="list-style-type: none"> <li>• ထွက်ပေါက်လမ်းပြပုံများ ကပ်ထားခြင်း၊ မီးသတ်ပစ္စည်း ကိရိယာများ တပ်ဆင်ခြင်း</li> <li>• လစဉ်</li> <li>• စက်ရုံဧရိယာအတွင်း တိုင်းတာခြင်း</li> </ul>	ဇယား (၆.၁)
စက်ရုံတွင်း အလင်းရောင်အခြေအနေ	၄.၄	<ul style="list-style-type: none"> <li>• အလင်းရောင်တိုင်းတာခြင်း</li> <li>• လစဉ်</li> <li>• ထုတ်လုပ်မှုဧရိယာအတွင်း တိုင်းတာခြင်း (အထူးသဖြင့်အဝတ်ဖြတ်ခြင်းနေရာနှင့် အရည်အသွေးစစ်ဆေးခြင်းနေရာ)</li> </ul>	ဇယား (၆.၁)
လူထုအကျိုးပြုလုပ်ငန်းများဆောင်ရွက်ခြင်း	၄.၅	<p>လူထုအကျိုးပြုဆောင်ရွက်ချက်များကို လူနေမှုအဆင့်အတန်း မြင့်မားစေရန်နှင့် စီမံကိန်းဧရိယာရှိ လူနေမှုအသိုင်းအဝိုင်းများအားလုံးနှင့် အဆင်ပြေစေရန် ရည်ရွယ်ပါသည်။ Hong Sheng (Myanmar) Company Limited ၏ လူထုအကျိုးပြု ဆောင်ရွက်ချက်များအနေဖြင့် ဒေသအတွင်း ပညာရေးအထောက်အပံ့များ ဆောင်ရွက်ခြင်း၊ အကျိုးအမြတ်မယူသော သင်တန်းများ ဖော်ဆောင်ပေးခြင်း၊ လုပ်သားများ၏ကျန်းမာရေးစောင့်ရှောက်မှုများ ဆောင်ရွက်ခြင်းဟူ၍ကဏ္ဍသုံးခုအလိုက်ဆောင်ရွက်ပါမည်။</p>	အခန်း (၆) အပိုဒ်ခွဲ (၆.၁၄)
သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း	၅	<p>သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်းအစီအစဉ်ကို ကြာသပတေးနေ့ ရက်၊ ဇန်နဝါရီလ၊ ၂၀၂၀ ခုနှစ်တွင် Sky Hotel အစည်းအဝေးခန်းမ၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်မြို့၊ ပြုလုပ်ခဲ့ပါသည်။ တွေ့ဆုံပွဲအစည်းအဝေးတွင်သက်ဆိုင်ရာအဖွဲ့ရုံး၏တာဝန်ရှိပုဂ္ဂိုလ်များ၊ စက်မှုဇုန်စီမံခန့်ခွဲမှု</p>	အခန်း (၇)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အားရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		ကော်မတီ၏ တာဝန်ရှိ ပုဂ္ဂိုလ်များ လိုအပ်သည်များကို အကြံပေးခြင်း၊ စီမံကိန်း၏ အစီရင်ခံစာတွင် လိုအပ်သည်များကို ဖြည့်စွက်ပေးရန် အကြံပြုချက်များပေးခဲ့ပါသည်။	
နိဂုံးနှင့် အကြံပြုချက်	၆	Hong Sheng (Myanmar) Company Limited သည် အိတ်အမျိုးမျိုး ထုတ်လုပ်ဖြန့်ဖြူးရောင်းချမည့်လုပ်ငန်းဖြစ်ပါသည်။စီမံကိန်းမှရရှိသော အကျိုးအမြတ်၏၂%ကို CSRအစီအစဉ်ဖြင့်ဒေသအကျိုးပြုလုပ်ငန်းများကိုထောက်ပံ့သွားမည်ဖြစ်ပါသည်။ စီမံကိန်းလည်ပတ်နေစဉ်နှင့်ပိတ်သိမ်းမည့်ကာလအတွက်နေ့စဉ်၊လစဉ်၊ နှစ်စဉ်ရေးဆွဲမည့်အစီအစဉ်များသည်IEEစည်းမျဉ်း၊စည်းကမ်းများနှင့်အညီ ရေးဆွဲရမည်ဖြစ်ပါသည်။	အခန်း (၈)

林步生

Mr. Lin BuSheng

Promoter

Hong Sheng (Myanmar) Industrial Co.,Ltd