ZHEJIANG TONGLI CLOTHING (MYANMAR) COMPANY LIMITED

Environmental Management Plan

Manufacturing of Garment

Prepared by

MYANWEI ENVIRONMENTAL SOLUTIONS

Myanwei Environmental Solutions Company Limited

09-Feb-24

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ENVIRONMENTAL SOLUTIONS

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Date: 9, 2, 2024

Environmental Management Plan (EMP) Report in respect of the Manufacturing of Garments by Zhejiang Tongli Clothing (Myanmar) Company Limited.

EMP 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.

MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED
No.....
Date.....

LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS
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Zhejiang Tongli Clothing (Myanmar) Co., Ltd

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Date: 9, 2, 2024

Subject: Environmental Management Plan (EMP) Report in respect of the Manufacturing of Bags

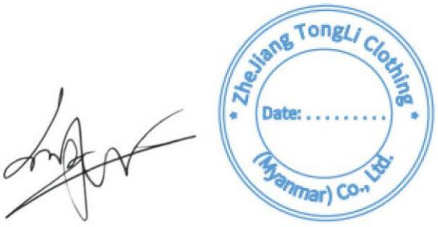
We refer to the captioned EMP report, which has been prepared by Myanwei Environmental Solutions Co., Ltd. (Third Party Consultant) in compliance with EIA procedure (2015) and other related laws/rules.

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

- The EMP report is accurate and complete
- The EMP report has been prepared in strict compliance with all applicable laws, rules, regulations and procedures in force.

Zhejiang Tongli Clothing (Myanmar) Co., Ltd. will at all times comply fully with all commitment and obligations in the EMP report.

We acknowledge and understand that



Mr. Qiu Quan Long

Factory Manager

ZheJiang TongLi Clothing (Myanmar) Co., Ltd.

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Abbreviation

1. CEMP = Construction Environmental Management Plan
2. CMP = Contract Manufacturing Process
3. CSR = Corporate Social Responsibility
4. ECC = Environmental Compliance Certificate
5. ECD = Environmental Conservation Department
6. EIA = Environmental Impact Assessment
7. EMOP = Environmental Monitoring Plan
8. EMP = Environmental Management Plan
9. GIIP = Good International Industry Practices
10. HSE = Health, Safety and Environment
11. IEE = Initial Environmental Examination
12. IFC = International Finance Corporation
13. NEQG = National Environmental Quality (Emission) Guidelines
14. MIC = Myanmar Investment Commission
15. MOECAF = Ministry of Environmental Conservation and Forestry
16. MONREC = Ministry of Natural Resources and Environmental Conservation
17. OEMP = Operation Environmental Management Plan
18. OSHA = Occupational Safety and Health Administration
19. PPE = Personal Protective Equipment
20. WHO = World Health Organization
21. YCDC = Yangon City Development Committee
22. YESB = Yangon City Electricity Supply Board

အစီရင်ခံစာအကျဉ်းချုပ်

Zhejiang TongLi Clothing (Myanmar) Company Limited (Zhejiang Tongli) သည် လက်ခစား Contract Manufacturing Process (CMP) စနစ်ဖြင့် အထည်အမျိုးမျိုးချုပ်လုပ်ခြင်း လုပ်ငန်းအတွက် ရင်နှီးမြှုပ်နှံသော ကုမ္ပဏီအသစ် ဖြစ်ပါသည်။ မြန်မာနိုင်ငံ ရင်နှီးမြှုပ်နှံမှုကော်မရှင်၏ ခွင့်ပြုမိန့်ကို ၂၀၁၅ ခုနှစ် အောက်တိုဘာလ ၁၄ ရက်နေ့ ရက်စွဲပါ (ခွင့်ပြုမိန့်အမှတ် ၁၀၂၄/၂၀၁၅) ရရှိခဲ့ပြီး ဖြစ်ပါသည်။ ခွင့်ပြုမိန့်၏ နောက်ဆက်တွဲပါ အပိုဒ် ၁၉ တွင် လုပ်ငန်းလည်ပတ်ရန်အတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် (EMP) ကိုရေးဆွဲတင်ပြရန် လိုအပ်ကြောင်း သဘောထားမှတ်ချက် ပါရှိပြီးဖြစ်ပါသည်။

ထို့ကြောင့် မြန်မာနိုင်ငံ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂) အရ၊ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ပြုလုပ်ရန်လိုအပ်ကြောင်း ၂၀၁၉ခုနှစ်၊ ဖေဖော်ဝါရီလ ၇ရက်နေ့တွင် စာအမှတ်၊ ဝဝ၁/ MIC (OSS)/ ဝ၆ (၃၀/၁၉) ဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန နေပြည်တော်မှ သဘောထားမှတ်ချက် ရရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် EMP အစီအရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော Myanwei Environmental Solutions Company Limited (Myanwei) မှ တာဝန်ယူရေးဆွဲခဲ့ပါသည်။

EMP အစီအစဉ်တွင် စက်ရုံတွင် ဖြစ်ပေါ်စေနိုင်သော ပတ်ဝန်းကျင်နှင့် လူမှုဘဝအပေါ် ဆိုကျိုးသက်ရောက်မှုများကို လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစရှိသည့် အစီအစဉ်များ ပါဝင်ပါသည်။ ၄င်း EMP အစီအစဉ်များကို အကောင်အထည်ဖော်ရန်အတွက် Zhejiang Tongli စက်ရုံတွင် ကျန်းမားရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် လျော့ချရေးအစီအစဉ်များနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲရေးနှင့်စောင့်ကြပ်ကြည့်ရှုရေးအစီအစဉ်များကိုအကောင်အထည်ဖော်ရန်သက်ဆိုင်ရာအဖွဲ့အစည်းတစ်ခုထားရှိပြီး ပြုလုပ်သွားမည်ဖြစ်သည်။

စီမံကိန်းဆိုင်ရာအချက်အလက်

Zhejiang Tongli အထည်ချုပ်စက်ရုံသည် မြေကွက်အမှတ် ၃၀၁၊ မြေတိုင်းရပ်ကွက်အမှတ် ၂၅၊ ရွှေလင်ပန်း စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင် တည်ရှိပါသည်။ စက်ရုံ၏အကျယ်အဝန်းမှာ ၂.၇၁၃ ဧက ရှိပါသည်။ စက်ရုံဖွဲ့စည်းမှုပုံစံမှာ L ပုံသဏ္ဌာန်ဖြစ်ပြီး ဆောက်လုပ်ရေးဧရိယာမှာ ၁.၅၆၁ဧက ရှိပါသည်။ အဆောက်အဦးကို A နှင့် B နှစ်ခုခွဲထားပါသည် အဆောက်အဦး A သည် ရုံးပိုင်းဆိုင်ရာနှင့် စက်ချုပ်လိုင်းများဖြစ်ပြီး (၄၀၀′ × ၁၈၀′) တစ်ထပ်အဆောက်အဦးဖြစ်ပါသည်။ အဆောက်အဦး B သည် ပိတ်ဖျက်လိုင်း၊ မီးပူတိုက်ခြင်း၊ ထုတ်ပိုးခြင်း အစရှိသည့် လိုင်းများပါဝင်သည့် (၂၀၀' × ၁၈၀') တစ်ထပ်အဆောက်အဦး ဖြစ်ပါသည်။ ဘွိုင်လာခန်း၊ မီးစက်ခန်း၊ လေမှုတ်စက်ခန်းများကို သီးခြားစီဖွဲ့စည်းတည်ဆောက်ထားပါသည်။ စက်ရုံ၏ အဓိကစက်ချုပ်လုပ်မှုမှာ အလွန်ရိုးရှင်းပြီး၊ စက်ချုပ်ခြင်းကို အဓိကပြုလုပ်ခြင်း ဖြစ်ပါသည်။ ထို့ကြောင့် စက်ရုံ၏ကုန်ထုပ်လုပ်မှုကြောင့် သဘာဝပတ်ဝန်းကျင်အပေါ် ဆိုးဆိုးဝါးဝါး ထိခိုက်မှုမရှိကြောင်း လေ့လာတွေ့ရှိခဲ့ပါသည်။ စက်ရုံအတွက် လိုအပ်သော အသုံးပြုမှုများမှာ လျှပ်စစ်စွမ်းအင်၊ အရေးပေါ်အသုံးပြုသည့် မီးစက်အတွက် လောင်စာဆီ၊ (၄)တန်ရေနွေးငွေ့ ထုတ်လွတ်နိုင်သော ဘွိုင်လာတစ်ခု၊ ဝန်ထမ်းများသုံးရန် ရေ အစရှိသည်တို့ဖြစ်ပါသည်။

ဥပဒေနှင့် မူဝါဒဆိုင်ရာ အချက်အလက်များ

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

အနီးပတ်ဝန်းကျင် အခြေအနေ

လက်ရှိပတ်ဝန်းကျင်၏ ပတ်ဝန်းကျင်ဆိုင်ရာအချက်အလက်နှင့် အခြေခံလေ့လာမှုများဖြစ်သည့် ပတ်ဝန်းကျင်အရည်အသွေးတိုင်းတာခြင်းများကို ၂၀၁၈ ခုနှစ်၊ အောက်တိုဘာလ၊ ၃၀ရက်နေ့တွင် ပြုလုပ်ခဲ့ပါသည်။ စက်ရုံအတွင်းအပူချိန်နှင့် စိုထိုင်းမှုတိုင်းတာခြင်း၊ ဆူညံသံတိုင်းတာခြင်းနှင့် လုပ်ငန်းခွင် အလင်းရောင်အခြေအနေ တိုင်းတာခြင်းများကို ပြုလုပ်ခဲ့ပြီး ရလဒ်များကို နောက်ဆက်တွဲတွင် အသေးစိတ် ဖော်ပြထားပါသည်။ ထို့အပြင် စက်ရုံတည်နေရာနှင့် သက်ဆိုင်သည့် အချက်အလက်များဖြစ်သော လူမှုစီးပွားအခြေအနေ၊ ရူပပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ဇီဝပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ရာသီဥတုဆိုင်ရာ အချက်အလက်များ အစရှိသည့်များကို ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်ရှိ တရားဝင် ပြဌာန်းထားသော မြို့နယ်ဆိုင်ရာအချက်အလက်များမှ ကိုးကားဖော်ပြထားပါသည်။

ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့် လျော့ချရေး အစီအစဉ်

စက်ရုံ၏လုပ်ဆောင်မှုများကြောင့် ဖြစ်ပေါ်လာနိုင်သည့် ပတ်ဝန်းကျင်ဆိုင်ရာထိခိုက်နိုင်မှုများကို ကွင်းဆင်းလေ့လာခြင်း၊ စီမံကိန်းအကြောင်းအရာများကို စက်ရုံမန်နေဂျာ၊ အရည်အသွေး ထိန်းချုပ်စစ်ဆေးကြီးကြပ်ရေးမှူးတို့နှင့် ဆွေးနွေးမေးမြန်းခြင်း၊ ပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များကို လေ့လာသုံးသပ်ပြီး စီမံကိန်းကာလတွင် ထိခိုက်သက်ရောက်မှု အနည်းငယ်ရှိသည့် သက်ရောက်မှု ၂ ခုနှင့် အသင့်အတင့်ရှိသည့် ထိခိုက်မှု သက်ရောက်မှု ၄ ခု တွေ့ရှိခဲ့ပါသည်။ ဖြစ်ပေါ်နိုင်သော ထိခိုက်သက်ရောက်မှုများမှာ-

၁။ ရေနွေးငွေ့ဘွိုင်လာလည်ပတ်ခြင်း၊ အရေးပေါ်သုံးသည့် ဒီဇယ်မီးစက်အသုံးပြုခြင်း နှင့် စက်ရုံသုံးမော်တော်ယာဉ်များ သွားလာခြင်းကြောင့် လေထုအရည်အသွေးထိခိုက်ခြင်း၊ ဆူညံသံဖြစ်ပေါ်စေခြင်း

၂။ ရေနွေးငွေ့ဘွိုင်လာမှ စွန့်ထုတ်ရေထွက်ရှိခြင်း၊ စားဖိုဆောင်နှင့် မိလ္လာစသည်တို့မှ စွန့်ပစ်ရေ ထုတ်လွှတ်ခြင်း

၃။ ကုန်ထုတ်လုပ်ငန်းမှ ထွက်ရှိသော်စွန့်ပစ်ပစ္စည်းများ၊ ရုံးပိုင်းဆိုင်ရာမှာ ထွက်ရှိသော စွန့်ပစ်ပစ္စည်းများရှိခြင်း

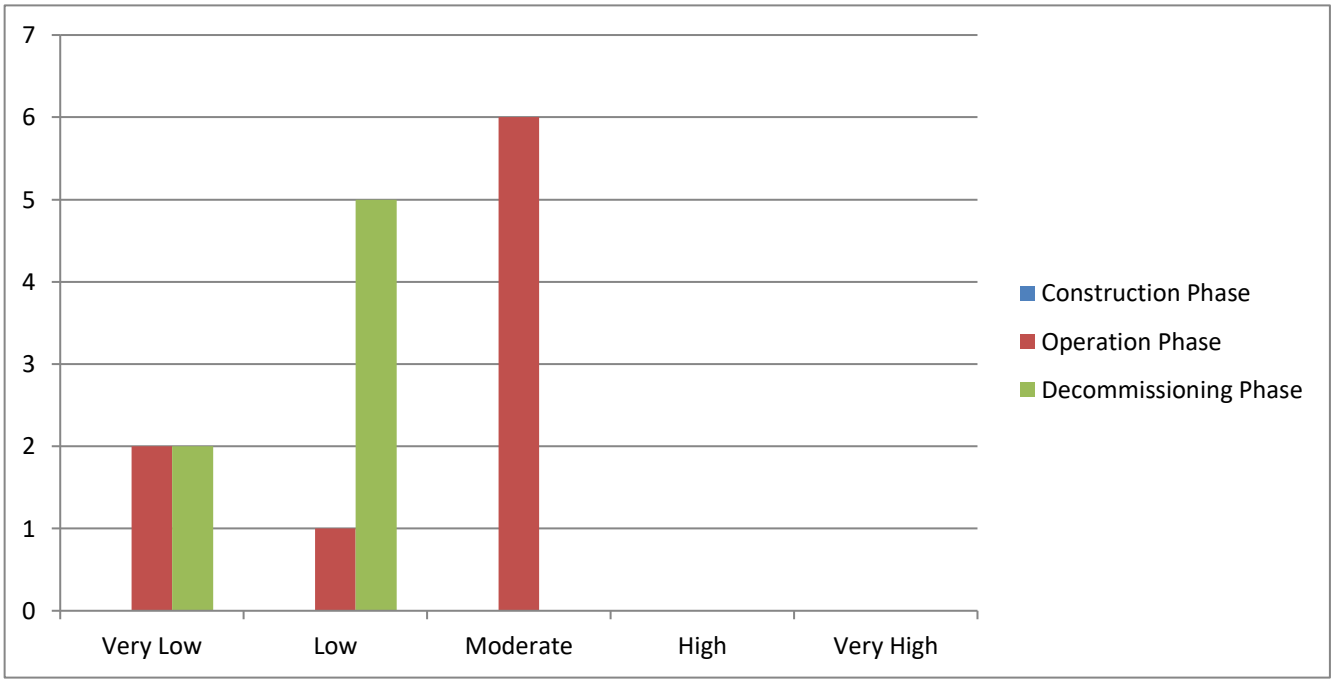
၄။ လုပ်ငန်းခွင်အတွင်း မတော်တဆထိခိုက်ခြင်း၊ ကူးဆက်ရောဂါများကြောင့် လုပ်ငန်းခွင်ကျမ်းမာရေးနှင့် ဘေးအန္တရာယ်ထိခိုက်မှုများဖြစ်ပေါ်စေနိုင်ပါသည်။

ထိုကြောင့် စက်ရုံ၏ ဖြစ်ပေါ်နိုင်သော ထိခိုက်သက်ရောက်မှုများကို အဆင့်သက်မှတ်ချက်များအလိုက် ဖြေလျှော့ရေးနည်းလမ်းများဖြင့် ရှောင်လွှဲရန်နည်းလမ်းများကို ဖော်ပြထားပါသည်။

ပတ်ဝန်းကျင်လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျှော့ချရေးနှင့် ထိန်းချုပ်မှု
တည်ဆောက်ရေးကာလ။ ။ပတ်ဝန်းကျင်ထိခိုက်မှုလေ့လာချိန်တွင် စက်ရုံတည်ဆောက်ပြီး လုပ်ငန်းလည်ပတ်နေချိန်ဖြစ်သော်ကြောင့် ဤကာလကိုထည့်သွင်း မစဉ်းစားတော့ပါ။			
လုပ်ငန်းလည်ပတ်ခြင်းကာလ			
လေထုညစ်ညမ်းမှု	• သယ်ယူပို့ဆောင်ရေးသုံး မော်တော်ယာဉ်တို့ကြောင့် ဖုန်မှုန့် ဖန်လုံအိမ်ခါတ်ငွေ့ထွက်ခြင်း • လုပ်ငန်းခွင်အတွင်း ဖုန်မှုထွက်ခြင်း • မီးဖိုနှင့် ရေနွေးငွေ့ဘွိုင်လာတို့မှ မီးခိုးထွက်ခြင်း • အရေးပေါ်သုံးမီးစက်မှာ စွန့်ထုတ်အခိုးအငွေ့ ထွက်ခြင်း	အသင့်တင့်	• စက်ရုံအတွင်းနှင့် အနီး အနားတွင် သစ်ပင်ပန်းမံ စိုက်ပျိုးခြင်းဖြင့် carbon ထွက်ရှိမှုကို လျှော့ချပေးခြင်း၊ • NOx ထွက်ရှိမှုနည်းသော နည်းပညာမြင့် စက်ပစ္စည်း များသုံးခြင်း၊ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
ရေ	• မိလ္လာစွန့်ထုတ်ရေ • စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း	အနည်းငယ်	• လက်ရှိရေဆိုးစွန့်ပစ်မှုပုံစံဖြစ်သော မိလ္လာစနစ်ကို ပုံမှန်စစ်ဆေးပေးခြင်း၊ • မိလ္လာကန်နှင့် မိလ္လာ စနစ်ကို လူဦးရေနှင့် သင့်တင့်သည့် ပမာဏ ရှိရန် စီစဉ်ထားခြင်း၊ • ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း။ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
မြေဆီလွှာညစ်ညမ်းမှု	• မတော်တဆ စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း	အလွန်နည်း	• စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင် ထိန်းသိမ်းပေးခြင်း။ • မတော်တဆမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
ဆူညံသံ	• မီးစက်၊ လေမှုတ်စက် နှင့် မော်တော် ယာဉ် အသုံးပြုမှုကြောင့် ပတ်ဝန်းကျင် ဆူညံမှု	အသင့်တင့်	• ဆူညံသံထွက်သောနေရာများကို အကာအကွယ် ဖြင့်ထားရှိခြင်း • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ပေးခြင်း
မီးဘေးအန္တရာယ်	• ကုန်ကြမ်းသိုလှောင်မှု နှင့် လျှပ်စစ်သုံးစွဲ ပေါ့လျော့မှု	အသင့်တင့်	• ကုန်ကြမ်းများအား သီးသန့်ထားရှိခြင်း • လျှပ်စစ်သုံးစွဲမှုများအား စနစ်တကျ အသုံးပြုစေခြင်း

ပတ်ဝန်းကျင်လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
စွန့်ပစ်အမှိုက်	• ထုတ်လုပ်ရာတွင် ကျန်ရှိသော ပိတ်စ အပိုင်းအစများ။ မီးဖိုချောင်နှင့် ရုံးတွင်းစွန့်ပစ်ပစ္စည်းများ	အသင့်တင့်	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း
စွန့်ပစ်အရည်	• နေအိမ်၊ စားသောက်ဆောင် တို့မှစွန့်ထုပ်ရေ။ မိလ္လာကန်စနစ်	အသင့်တင့်	• စွန့်ပစ်အရည်များအား ပြန်လည်သုံးစွဲရန်(ရေသန့်စင်ခြင်း) နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း
အန္တရာယ်ရှိအမှိုက်	• စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိမ်းသိမ်းမှုက ထွက်ရှိသည့်အမှိုက်များ	အလွန်နည်း	• စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း
လူမှုစီးပွားဘဝ	• ဒေသခံပြည်သူများအတွက် အလုပ်အကိုင်အခွင့်အလမ်းများ ရရှိစေခြင်း	အသင့်တင့်	
လုပ်ငန်းပိတ်သိမ်းခြင်းကာလ			
လေထုညစ်ညမ်းမှု	• အဆောက်အဦးများ ဖြိုချမှုများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• NOx ထွက်ရှိမှုနည်းသော နည်းပညာမြင့် စက်ပစ္စည်း များသုံးခြင်း၊ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
ရေ	• ဖြိုချပစ္စည်းများနှင့် မိလ္လာဖျက်ဆီးမှုများ	အနည်းငယ်	• ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း။ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
မြေဆီလွှာညစ်ညမ်းမှု	• အဆောက်အဦးနှင့် ဆက်စပ်ပစ္စည်းများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• မတော်တစမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
အမှိုက်စွန့်ပစ်မှု	• အဆောက်အဦးများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အလွန်နည်း	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း
အန္တရာယ်ရှိအမှိုက်	• စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိမ်းသိမ်းမှုက ထွက်ရှိသည့်အမှိုက်များ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အလွန်နည်း	• စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား

ပတ်ဝန်းကျင်လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
			စနစ်တကျထားရှိစေခြင်း
မတော်တဆ ထိခိုက်မှုများ	• အဆောက်အဦးများ ဖြိုချမှုများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• မတော်တစမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
လူမှုစီးပွားဘဝ	• ဒေသခံပြည်သူများအတွက်အလုပ်အကိုင် ခေတ္တရရှိခြင်း		



ပတ်ဝန်းကျင် စိမ်ခန့်ခွဲမှု အစီအစဉ်

အဆိုပါစက်ရုံ၏ ပတ်ဝန်းကျင်စိမ်ခန့်ခွဲမှုအစီအစဉ်ကို ရေရှည်ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်သော ပတ်ဝန်းကျင်အဖြစ် အကောင်အထည် ဖော်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို လျော့နည်းစေရန် စီမံခန့်ခွဲမှုအစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုရမည့်အစီအစဉ်များကို အောက်ပါအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအရာတစ်ခုခြင်းအလိုက် ခွဲခြားပြုလုပ်ထားပါသည်။

၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၂။ ဆူညံမှုထိန်းခြင်းဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၃။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၄။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၅။ စွမ်းအင်သုံးစွဲမှုစီမံခန့်ခွဲခြင်း

၆။ မြေအောက်ရေအသုံးပြုမှုစီမံခန့်ခွဲရေး

၇။ အရေးပေါ်အခြေအနေတုံ့ပြန်ရေးနှင့် ထိခိုက်မှုစီမံခန့်ခွဲရေး အစီအစဉ်

၈။ လူမှုအကျိုးတူပူးပေါင်းပါဝင်မှု အစီအစဉ် အစရှိသည်တို့ဖြစ်ကြပါသည်။

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း အစီအစဉ်ကို ၁၉ ရက်၊ ဒီဇင်ဘာလ၊ ၂၀၁၈ ခုနှစ်တွင် ကနောင်ခန်းမ၊ စက်မှုဇုံစီမံခန့်ခွဲရေးရုံး၊ ရွှေလင်ဗန်းစက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်တွင် ပြုလုပ်ခဲ့ပါသည်။ ပြုလုပ်ခဲ့သည့် တွေ့ဆုံပွဲတွင် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုဦးစီးဌာန၊ စည်ပင်သာယာသီးစီးဌာန၊ စက်မှုကြီးကြပ်နှင့် စစ်ဆေးရေးဦးစီးဌာန၊ အုပ်ချုပ်ရေးပိုင်းဆိုင်ရာအဖွဲ့အစည်းများနှင့် အနီးနားစက်ရုံရှိ စိတ်ဝင်စားသူများ တက်ရောက်ဆွေးနွေးခဲ့ပါသည်။ အစီအစဉ်အကျဉ်းကို အခန်း ၆ တွင် ဖော်ပြထားပါသည်။

နိဂုံး

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

EXECUTIVE SUMMARY

Zhejiang Tongli Clothing (Myanmar) Company Limited (Zhejiang Tongli) is a new investment for manufacturing of Garment by Contract Manufacturing Process (CMP). The project is issued by the Myanmar Investment Commission (MIC) to approve the permit (No.1024/2015). The permit for investment in manufacturing of Garment under the name of Zhejiang Tongli as a wholly owned foreign investment from the China.

According to the MIC permit, which confidential was issued in Section 19, Zhejiang Tongli shall responsible for the preservation of the environment and around the area of the project site. 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), said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No. 001/ MIC(OSS)/06 (30/2019) on 7 February 2019. Therefore, Zhejiang Tongli Clothing (Myanmar) Company Limited commissioned Myanwei Environmental Solutions Company Limited for EMP report study.

The Environmental Management Plan (EMP) is prepared for the proposed project covers the anticipated impacts of the said project, mitigation measures, management and monitoring plans during each of the phases. Zhejiang Tongli 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 Environmental Management Plan (EMP) and Monitoring Plan.

Project Description

Zhejiang Tongli garment factory is located at No.301, Myaw Taing Block No. 25, Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township, Yangon region. The total area of project site is net 2.713 acres. The project area is situated into two building design by L shaped that separated by (Building A and Building B). Building A is one story of 400’ × 180’ for sewing area and office area. Building B is two stories of 200’ × 180’ for cutting, finishing, ironing and packing area. Admin office, generator room, boiler room and accommodation building is separated by main factory building structure.

The Utilities for proposed factory include electrical power, fuel oil for emergency used generator, electronic steam boilers and water for production and general purpose. Electric power will be used for the purpose of to run the production machinery and to provide lighting. Water will be required for general purpose and for the boiler, which generates hot water to supply to the factory drainage channel.

Policy, Legal and Institutional Framework

In the next Chapter, provides 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.

Brief Description of Surrounding Environment

For environmental baseline, data were collected by onsite measurements analysis during operation phase. On-site measurement was taken by indoor temperature, humidity, noise level and operation light condition at the factory. Therefore. Myanwei Environmental Solutions Company Limited conducted air quality, temperature and humidity, noise level measurement and light pollution measurement on 30 October 2018 and compared with the National Environmental Quality (Emission) Guidelines and also described how to reduce the impact and how to maintain the pollutions. Moreover, secondary data collection of proposed project site area such as socio economic condition, physical/ biological environment, weather data were collected from official township data was reference by Regional Data of Hlaing Tharyar Township.

Potential Environmental Impact and Mitigation Measure

In the next Chapter, the potential environmental impacts brought by various activities of proposed lubricant manufacturing process were identified by site surveying with checklist, meeting with client and assessing the environmental baseline information for the project along with its mitigation measure. The methodological approach used for the project impact assessment is adapted from the impact assessment methods recommended by the assessment of each impact is based on consideration of the magnitude, duration, spatial and frequency of activities, which are going to be carried out during three phases and characteristics of the project site. The assessment is qualitative and the significance of each impact is classified into 5 categories in overall.

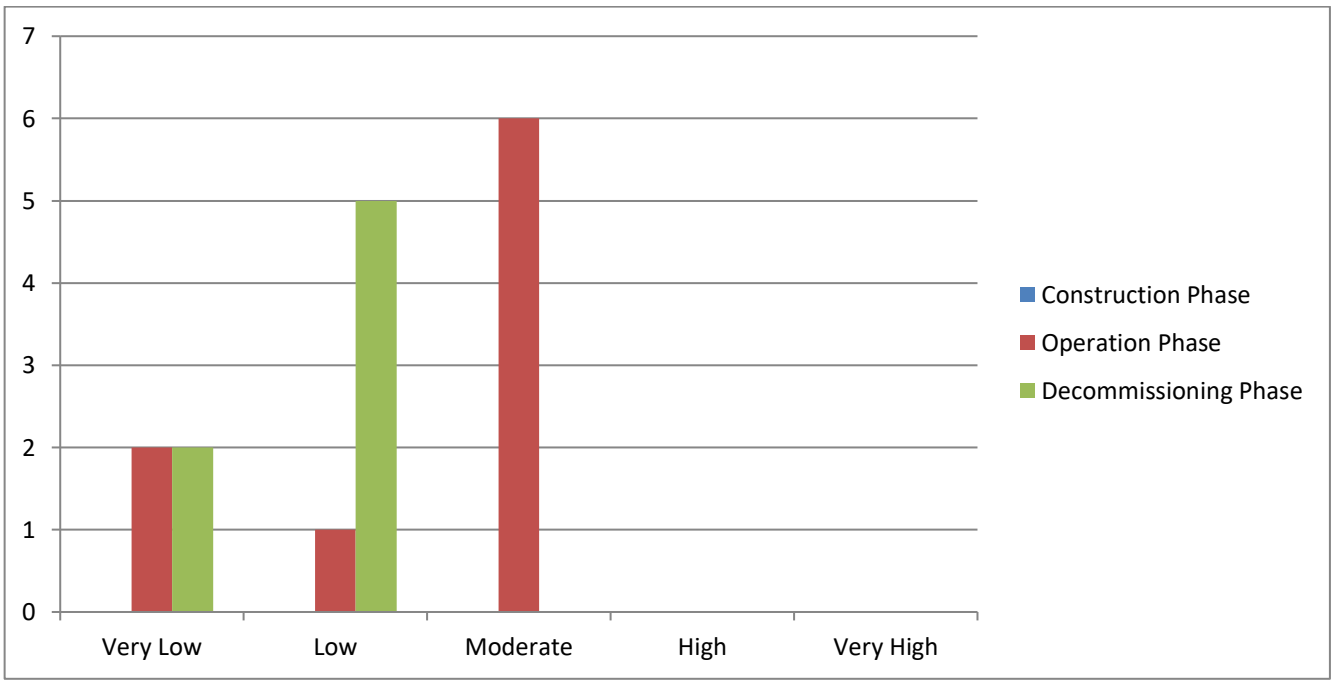
The following methodology has been applied to assess the environmental impacts of the factory mainly on air, water, land, biodiversity, including human beings. Each source of impact has been assessed by four parameters, magnitude, duration, extent and probability and each assess point have 5 scales as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

Evaluation and Predition of Significant Impacts

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Construction Phase; It is not assessed in this phase, because of construction is already completed during EMP preparation.							
Operation Phase							
Air pollution	• Dust and GHGs emission from vehicles used for transporting raw materials and final products • Particulate matters emission from the activities of production process • Emission from emergency diesel generator	3	4	2	4	36	Moderate
Water pollution	• Sewage disposed of from the toilets • Oil spill and grease leaks from transporting vehicles and machinery equipment used in operation phase	2	4	2	3	24	Low
Soil Contamination	• Accidental spillage of oil used by vehicles operating	1	4	1	2	12	Very Low

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Noise Pollution	• Generating noise from the production machinery • Noise from the generating of the emergency generators	3	4	1	4	32	Moderate
Fire Hazard	• Poor electrical installations • waste disposed area • Raw materials storage	3	4	2	3	27	Moderate
Solid waste	• residual pieces of fabric scraps from the production lines • Waste from packaging materials • Waste from kitchen, dormitory and office.	3	4	1	4	32	Moderate
Liquid waste	• Septic system and sewage. • Domestic liquid waste disposal from office, kitchen and dormitory.	2	4	2	4	32	Moderate
Hazardous waste	• Engine oil leaks, spills at diesel storage and during fuel refueling. • Used oil and lubricant discharged from the maintenance of vehicles and machines.	2	4	1	2	14	Very Low
Occupational Health and Safety (Accidents, Injuries)	• Accidental cases cause by operating machines. • Electricity and emergency diesel generators. • Unloading, mixing, cutting, pressing and packaging activities. • Accidental cases of thermic fluid heater	3	4	1	4	32	Moderate
Social-economic Condition	• Job opportunities for local people	-	-	-	-	-	Positive Impact
Decommissioning Phase							
Air pollution	• Decommissioning of buildings and related materials • Transportation of demolished materials	3	1	1	4	20	Low
Water pollution	• Sewage form decommissioning workers • Demolition machinery equipment	3	1	1	3	15	Low
Soil Contamination	• Decommissioning of buildings and related materials • Transportation of demolished materials	3	1	1	3	15	Low
Noise Pollution	• Decommission activities • Transportation of demolished materials	3	1	1	3	15	Low

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Waste disposal	• Sewage system • Demolished debris such as bricks, concrete materials	2	1	1	3	12	Very Low
Hazardous waste	• Used lubricants from decommissioning vehicles and machines	2	1	1	3	12	Very Low
Occupational Health and Safety (Accidents, Injuries)	• Decommissioning activities • Transportation of demolished materials	3	1	2	3	18	Low
Social-economic Condition	• Temporary job opportunities for local people	-	-	-	-	-	Positive Impact



Impact significance of the proposed factory project

The assessment of each impact is based on consideration of the magnitude, duration, extent and probability of activities, which are going to be carried out during operation phases. In operation phase, there are 1 moderate significance impact on environment and human such as impact of electricity consumption. 4 low significant impacts on environment and human such as impact of wastewater effluents and occupational health and safety of employees, workers and 2 very low significant impact on environment and human such as impact on aquatic lives, air pollution and noise. Significance impacts on environmental and human and detail impact assessment for operation phases can be seen in Page. 5-5, Table 5.5. All of the impacts during operation phases can be minimized by using mitigation measures and implementing Environmental Management Plan. Significant impacts and proposed mitigation measures of the proposed factory were taken into consideration during the study.

Environment Management Program

The EMP for Zhejiang Tongli Garment factory. 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. The following environmental issues that require environmental management plans based upon the potential impacts of activities by for the factory are as follows:

1. Air pollution/Dust Management plan.
2. Noise Management Plan
3. Solid Waste Management plan
4. Wastewater Management Plan
5. Energy Management Plan
6. Water Consumption Management Plan
7. Emergency Response and Disaster Management plan
8. Environmental Monitoring Schedule
9. Corporate Social Responsible (CSR) Plan

Public Consultation

Public participation can be considered as the required element of the EMP process. In this study various stakeholder's participation were made. On 19, December 2018, a public consultation and disclosure ceremony was held at the Kanaung Hall, Industrial Management Committee Office, Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township, Yangon Region in order to disclose the summary of EMP process to the, Decorate Industrial Supervision and Inspection, YCDC, Industrial Zone Committee, General Administrative Department, ECD and affected/interest persons at adjacent proposed factory site.

Conclusion & 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 EMP.

1. INTRODUCTION

Environment Management Plan is required for ensuring sustainable development environment. It should not affect the surrounding environment adversely. The management plan presented in this chapter needs to be implemented by the proposed project. The Environment Management Plan (EMP) 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. PROJECT BACKGROUND

Zhejiang Tongli Clothing (Myanmar) Company Limited (Zhejiang Tongli) is new investment for manufacturing of Garment (CMP basic) company from China. The project is issued by the Myanmar Investment Commission (MIC) to approve the permit (No.1024/2015). The permit for investment in manufacturing of Garment under the name of Zhejiang Tongli as a wholly owned foreign investment from the China.

According to the MIC permit, which confidential was issued in Section 19, Zhejiang Tongli shall responsible for the preservation of the environment and around the area of the project site. In addition to this, it shall carry out as per instructions made by Ministry of the Natural Resources and Environmental Conservation (MONREC) under Environmental Conservation Department (ECD) in which to conduct an Environmental Management Plan (EMP). It has to prepare, submit, perform activities in accordance with this EMP, and abide by the environmental policy, Environmental Conservation Law and other environmental related rules and procedures. Therefore, Zhejiang Tongli commissioned Myanwei Environmental Solutions Company Limited (Myanwei) for EMP report study.

1.1.1. Project Proponent Profile

The estimated authorized capital investment is about 4,000,000 US Dollar This is the information of the registration of MIC permit No. 1024/2015 (14, October 2015) which is described in below Table 1-1 and Table 1-2.

Table 1-1 Information of Project proponent

Investor Name:	Mr. Songlin Gong
ID No.:	PP. No.–G- 39861023
Citizenship:	Chinese
Address of Registration office:	82 Ai Goo Road, Dong Yang City, Zhejiang Province, China

Table 1-2 Salient features of the project

Type of Proposed Business	Manufacturing of Garment (CMP basic)
Type of investment	100% foreign investment
Type of Share	Ordinary Share
Type of land	Industrial Land

Total land area	2.713 Acre
Total building area	1.561 Acre
Land lease year	20 years
Construction period	One year
Operation starting date	50 years investment permit
Address	Plot No. 301, Myaw Taing Block No. 25, Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township, Yangon.
Contact Person	Thu Thu Sein Win 09756791238 lorenethuthu@tl-clothing.com

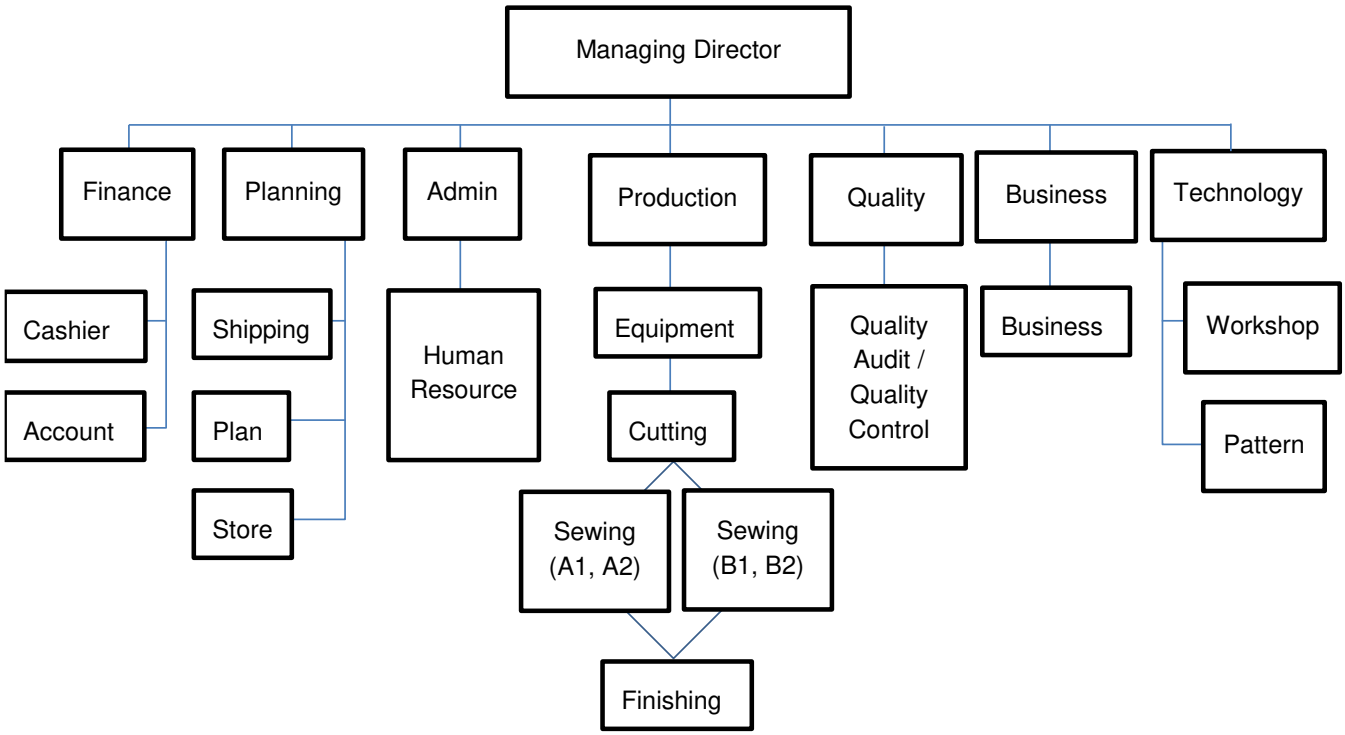


Figure 1-1 Organization chart

1.1.2. Environmental Consultant Profile

MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED prepares the EMP for the proposed project. The field studies were carried out by MYANWEI having experiences in conducting environmental assessments for various types of projects in Myanmar. The MYANWEI team 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. 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 1-3 Member of EMS Study Team

Name	Qualification	Responsibility	Contact Address
Myanwei Environmental Solutions Company Limited	**Transition Consultant Registration Certificate No. 0069**	**EIA Organization**	**09-777922169** **env@myanweiconsulting.com** **No.28, Myay Nu Street, Sanchaung Township, Yangon Region.** **www.myanweiconsulting.com**
Mr. Lin Htet Sein	MSc (Regional Geology) BSc (Hons) Geology Dip in Environmental Science Certificate in Environmental & Social Assessment **TCR No. 0048**	Project Director, Environmental consultant, project management	
Dr. Hein Lynn Aung	M.B, B.S (Yangon), Business Management (International Collage of Management Sydney, Australia)	Project Director, Public health consultant, project management	
Ms. Khin Thu Zar Myint	B.E(Materials and Metallurgy) Dip in Environmental Planning and Management	Senior Environmental Consultant, Social Research, Public consultation, social economic investigation	
Ms. Su Myat Hlaing	B.E. Civil Engineering B. Tech Civil Engineering	Environmental Engineer	
Mr. Aung Kyaw Moe	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, monitoring measure, document administration	
Mr. Myat Ko Ko	B.Sc (Hons) Geology M.Sc. Geology (Economic and Mining) Certificate of Environment Management Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, monitoring measure, document administration	
Mr. Htoo Nanda Aung	B.Sc (Forestry)	Junior Environmental Consultant, monitoring measure, document administration	

1.2. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

The primary purpose of the EMP is to provide an easily interpreted reference document, which ensures that the project environmental commitments, safeguards and mitigation measures from the environmental planning documents, project approvals and project implementation. It aims to minimize impacts associated with the operation of the project. The purpose of operational EMP is to:

- Define details of who, what, where and when environmental management and mitigation measures are to be implemented

- Provide government and their stakeholders batter on-site environmental management control over the life of operation
- Ensure that the commitments made as a part of the project's EMP are implemented throughout the project life
- Ensure the environmental management detail is performed and documented at all stages of the project

1.2.1. **This EMP documents aims**

❖ Provide environmental management plans that minimize the environmental impact of the works and identify those responsible for its implementation.
❖ Define the monitoring program which assesses the implementation

1.3. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

The objective of the environmental management is to ensure potential environmental issues are managed by proper mitigation measures in compliance with the relevant laws and regulations stipulated by national authorities. Environmental management is based on the basic principles of management known as the P-D-C-A cycle (Figure 1-2). Environmental management consists of four related tasks as described below:

- Plan (P) - What need to be done

Mitigation measures for the potential environmental impacts of the factory such as air emission, noise, solid waste, wastewater and health and safety at work are described in this chapter. The Project Proponent will follow the plan for the mitigation measures according to the scheduled time.

- Do (D) - Implement the plan

The mitigation measures for the potential environmental impacts will be implemented appropriately by the Project Proponent as described in this chapter.

- Check (C) - Monitor and evaluate the results of implementation

The effectiveness of the mitigation measures will be monitored, evaluated and documented.

- Act (A) - Taking corrective actions to improve the results, if found inadequate

If nonconformities are noted with reference to the environmental monitoring benchmarks, corrective actions need to be planned to mitigate the existing environmental impacts.

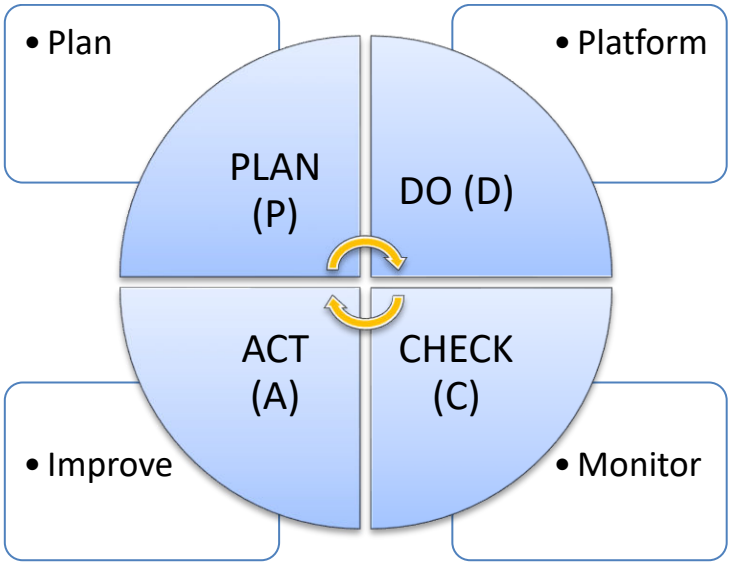


Figure 1-2 PDCA cycle

1.3.1. Institutional Requirement

The development of the proposed project will be managed by Zhejiang Tongli Clothing (Myanmar) Company Limited. 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 (EMoP) 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.

1.3.2. 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:

- Zhejiang Tongli Clothing (Myanmar) Co., Ltd. (Project proponent)
- Environmental Conservation Department (ECD)
- Third-Party Environmental Consultant (Myanwei)

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 Environmental Management Plan (EMP) is prepared for the proposed project covers the anticipated impacts of the said project, mitigation measures, management and monitoring plans during each of the phases:

- Construction Environmental Management Plan (CEMP)
- Operational Environmental Management Plan (OEMP)

CEMP is developed to ensure that appropriate environmental practices are followed during a project's construction. OMEP is developed to ensure that appropriate environmental practices are followed during a project's operation & decommissioning. As the factory is already built OEMP is designed for this factory.

The primary purpose of the OEMP is to provide an easily Interpreted reference document which ensures that the project environmental commitments, safeguards and mitigation measures from the environmental planning documents, project approvals, and the scope of Works and Technical criteria are implemented. It aims to minimize impacts associated with the operation of the project. The purpose of operational EMP is to:

- Define details of who, what, where & when environmental management & mitigation measures are to be implemented.
- Provide government agencies and their contractors, developers & other stakeholder better on-site environmental management control over the life of a project.
- Ensure that the commitments made as a part of the project proponent are implemented throughout the project life.
- Ensure the environmental management detail is captured & documented at all stages of the project

2. PROJECT DESCRIPTION

2.1. LOCATION

Zhejiang Tongli garment factory is located at Latitude 16°54'51.77"N and Longitude 96°04'20.97", Plot No.301, Myaw Taing Block No. 25, Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township. The Location map of the proposed project size is shown in Figure 2-1.

2.2. SITE DESCRIPTION

The total area of project site is net 2.713 acres. The project area is situated into two building design by L shaped that separated by (Building A and Building B). Building A is one story of 400' × 180' for sewing area and office area. Building B is two stories of 200' × 180' for cutting, finishing, ironing and packing area. The project layout plan can be seen in Figure 2-3 (Building A) and (Building B). Admin office, generator room, boiler room and accommodation building are separated by main factory building structure.

2.2.1. Adjacent Location of Proposed Project

Zhejiang Tongli Clothing Myanmar Co., Ltd. is located at Shwe Lin Ban Industrial Zone, Hlaing Thar Yar Township, Yangon Region. The nearest water source is Hlaing River which is far 770 m from proposed project.

Table 2-1 Adjacent Factories of the Project Site

Name of Factory	Type	Location
Shenjie (Myanmar) Clothing Co., Ltd.	Garment Factory	Northeast
Hanboom (Myanmar) Garment Co., Ltd.	Garment Factory	Southwest

Figure 2-1 Location map

Figure 2-2 Site area map of proposed project

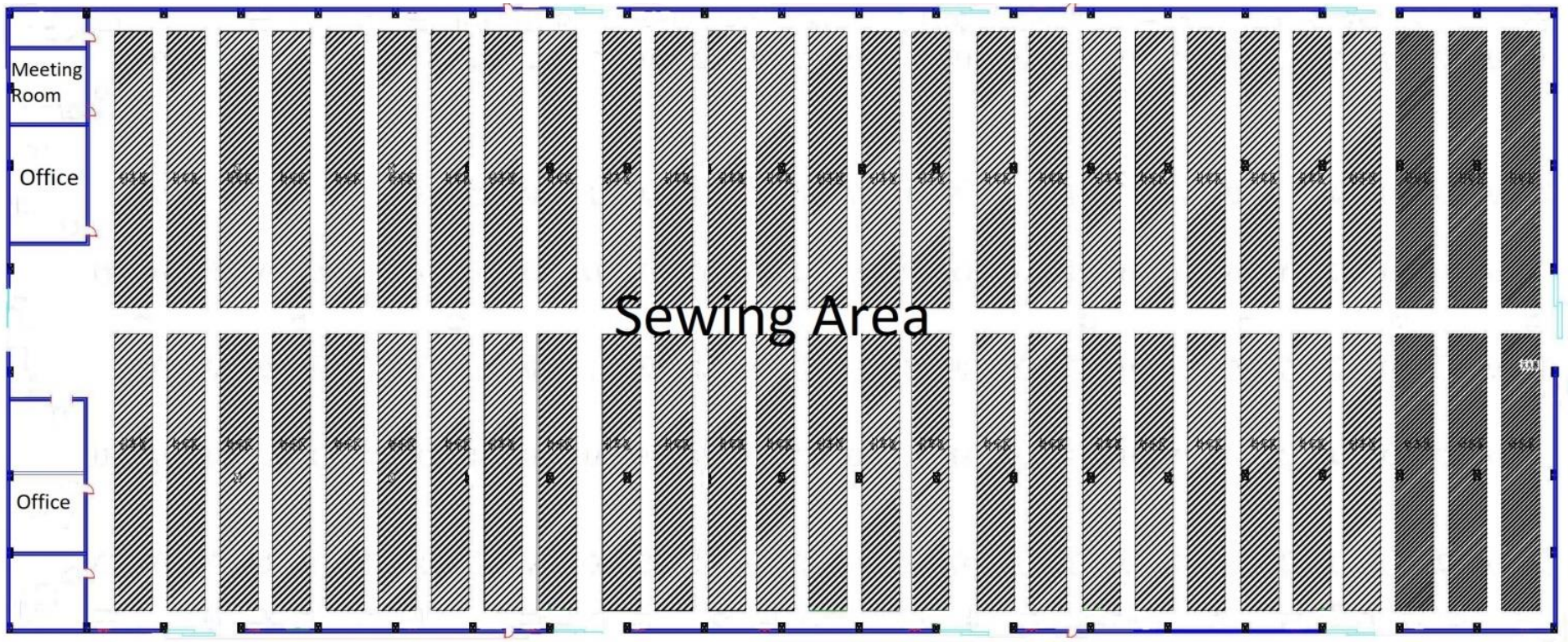


Figure 2-3 Building A layout drawing

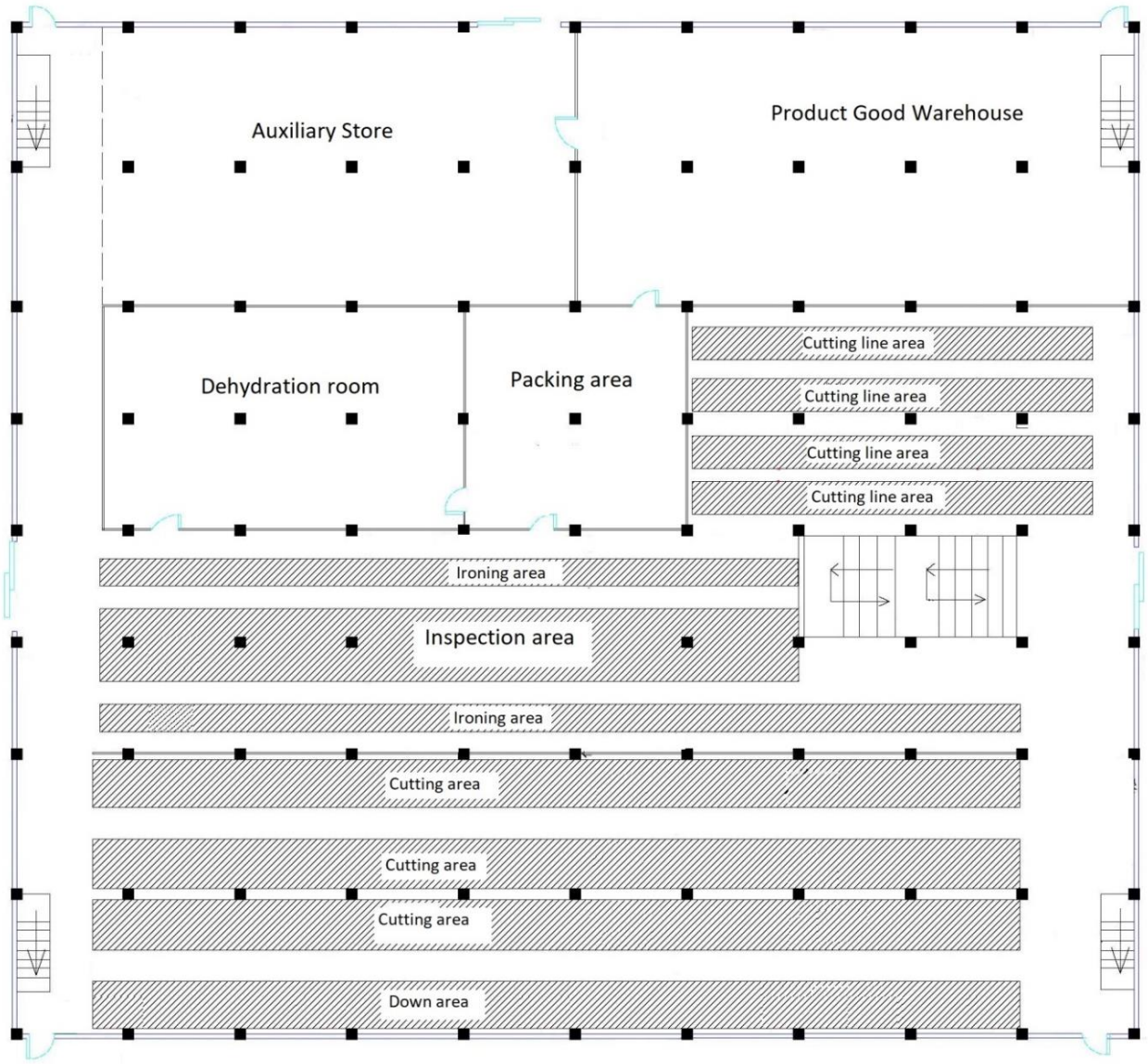


Figure 2-4 Building B layout drawing

2.3. PROJECT OPERATION

2.3.1. Raw Material

Raw Materials which include silk, fabric, threads and ornamental fabrics are imported from China. Annual raw material requires for production process are provided in Table 2-2.

Table 2-2 List of annual raw material

No	Particular	A/U	Year 1	Year 2	Year 3	Year 4	Year 5-10
Raw Materials for Jacket							
1	**Fabric**	m	363,000	428,340	449,757	503,728	503,728
2	**Accessories**						
	Size Label	Pcs	300,000	354,000	371,700	416,304	416,304

No	Particular	A/U	Year 1	Year 2	Year 3	Year 4	Year 5-10
	Care Label	Pcs	300,000	354,000	371,700	416,304	416,304
	Main Label	Pcs	300,000	354,000	371,700	416,304	416,304
	Paper Interlining	Yds	300,000	354,000	371,700	416,304	416,304
	Woven Bandge	Pcs	300,000	354,000	371,700	416,304	416,304
	Elastic	m	300,000	354,000	371,700	416,304	416,304
	Shoulder Tape	m	540,000	637,200	669,060	416,304	416,304
	Hang Tag	Pcs	300,000	354,000	371,700	416,304	416,304
	Sticker	Pcs	300,000	354,000	371,700	416,304	416,304
	Poly Thread	M	54,000,000	63,720,000	66,906,000	74,934,720	74,934,720
	Zipper C/F	Pcs	300,000	354,000	371,700	416,304	416,304
	Zipper Side Pocket	Pcs	600,000	708,000	743,400	832,608	832,608
	Eyelet	Pcs	1,200,000	1,416,000	1,486,800	1,665,216	1,665,216
	Reflex Patch	m	1,800	2,124	2,230	2,498	2,498
Raw Materials for Short Pant							
1	**Fabric**	m	464,000	547,520	574,896	643,883	643,883
2	**Accessories**						
	Size Label	Pcs	580,000	684,400	718,620	804,854	804,854
	Care Label	Pcs	580,000	684,400	718,620	804,854	804,854
	Main Label	Pcs	580,000	684,400	718,620	804,854	804,854
	Paper Interlining	Yds	348,000	410,640	431,172	482,912	482,912
	Woven Bandge	Pcs	580,000	684,400	718,620	804,854	804,854
	Elastic	m	580,000	684,400	718,620	804,854	804,854
	Poly Thread	m	69,600,000	82,128,000	86,234,400	96,582,480	96,582,480
	Bias Tape	m	580,000	684,400	718,620	804,854	804,854
	Hang Tag	Pcs	580,000	684,400	718,620	804,854	804,854
	Tag Pin	Pcs	580,000	684,400	718,620	804,854	804,854
	Sticker	Pcs	580,000	684,400	718,620	804,854	804,854
	Poly Bag	Pcs	580,000	684,400	718,620	804,854	804,854
	Paper Box	Pcs	580,000	684,400	718,620	804,854	804,854
	Plastic Box	Pcs	580,000	684,400	718,620	804,854	804,854
	Sealing Tape	Pcs	580,000	684,400	718,620	804,854	804,854
	Zipper C/F	Pcs	580,000	684,400	718,620	804,854	804,854
	Zipper Side Pocket	Pcs	1,160,000	1,368,800	1,437,240	1,609,708	1,609,708
	Eyelet	Pcs	2,320,000	2,737,600	2,874,416	3,219,416	3,219,416

No	Particular	A/U	Year 1	Year 2	Year 3	Year 4	Year 5-10
	Reflex Patch	m	3,480	4,106	4,312	4,829	4,829
Raw Materials for T Shirt							
1	***Fabric***	m	474,000	559,910	587,906	658,454	658,454
2	**Accessories**						
	Size Label	Pcs	650,000	767,000	805,350	901,992	901,992
	Care Label	Pcs	650,000	767,000	805,350	901,992	901,992
	Main Label	Pcs	650,000	767,000	805,350	901,992	901,992
	Paper Interlining	Yds	650,000	767,000	805,350	901,992	901,992
	Woven Bandge	Pcs	650,000	767,000	805,350	901,992	901,992
	Shoulder Tape	m	520,000	613,600	644,280	721,594	721,594
	Poly Thread	m	97,500,000	82,128,000	120,802,500	135,298,800	135,298,800
	Zipper C/F	Pcs	650,000	684,400	805,350	901,992	901,992
	Zipper Side Pocket	Pcs	1,300,000	684,400	1,610,700	1,803,984	1,803,984
	Reflex Patch	m	4,485	684,400	5,557	6,224	6,224
	Press Button	Pcs	3,250,000	684,400	4,026,750	4,509,960	4,509,960
Raw Materials for Long Pant							
1	**Fabric**	m	360,000	424,800	446,040	499,565	499,565
2	**Accessories**						
	Size Label	Pcs	300,000	354,000	371,700	416,304	416,304
	Care Label	Pcs	300,000	354,000	371,700	416,304	416,304
	Main Label	Pcs	300,000	354,000	371,700	416,304	416,304
	Paper Interlining	Yds	240,000	283,200	297,360	333,043	333,043
	Woven Bandge	Pcs	300,000	354,000	371,700	416,304	416,304
	Elastic	m	300,000	354,000	371,700	416,304	416,304
	Hang Tag	Pcs	300,000	354,000	371,700	416,304	416,304
	Poly Thread	m	42,000,000	49,560,000	52,038,000	58,282,560	58,282,560
	Tag Pin	Pcs	300,000	354,000	371,700	416,304	416,304
	Sticker	Pcs	300,000	354,000	371,700	416,304	416,304
	Card Board	Pcs	300,000	354,000	371,700	416,304	416,304
	Zipper C/F	Pcs	300,000	354,000	371,700	416,304	416,304
	Zipper Side Pocket	Pcs	600,000	708,000	743,400	832,608	832,608
	Eyelet	Pcs	1,200,000	1,416,000	1,486,800	1,665,216	1,665,216
	Reflex Patch	m	1,800	2,124	2,230	2,498	2,498

Figure 2-5 Raw material storage photo

Cutting-Making-Packaging (CMP) is a production system in which main raw materials including fabrics are imported and then processed into finished product, packaged and exported. The CMP system is a form of production on consignment in which the main raw materials (fabrics, ancillary materials, etc.) are provided by overseas buyers and imported free of charge, then cut, sewn and packed in the domestic factories, after which all of the finished products are exported. The operation of Garment factories with CMP system includes production costs covering wages, electricity and diesel, transportation, communication, factory and office rental, maintenance and repair of sewing machines, and administrative expenses. Steps of production process of proposed Garment factory are described in Figure 2-6.

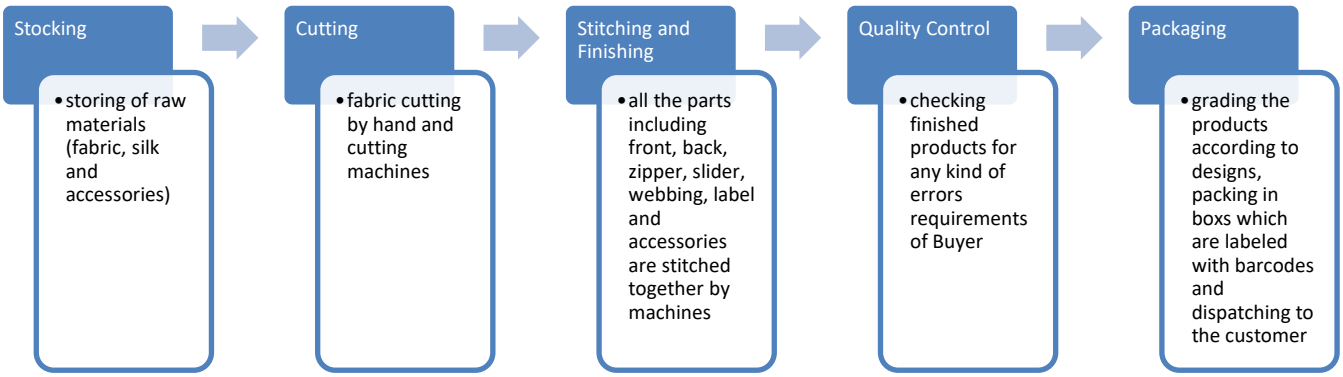


Figure 2-6 Process Flow Diagram

2.3.2. Description of Production Process

The first stage in the manufacturing of Garment is the cutting and for that pattern, making is the base. Once the marker is made, pattern pieces must be cut out of the specified fabric.

The process of sewing involves fastening of fabrics, leather, furs or similar other flexible materials with the help of needle and threads. Stitching is the process of passing threaded needle in and out of a material to make a specific design pattern.

After completion of the sewing, quality control (QC) checks for any error. Quality control was done manually.

The QC passed products are sent to ironing section and after that the products are sent to packing section as a final production process. This step sends packed units for distribution to the customers. These packed units are sent to the countries per customer's specification. Packing process was done manually by manpower.

Store and fabric inspection department

Cutting department

Sewing department

Sewing department

Finishing department

Iron department

Quality control

Packing and Product Warehouse

Figure 2-7 Production process photo

2.3.3. **Products**

The product of the factory is produced by Long Pant, T shirt, Short Pant and Jacket. Annual production rate is presented in Table 2-3. Which is container export by shipment port to France, Australia, Germany, Poland, Spain, United Kingdom, Netherlands.

Table 2-3 Annual production rate

Description	A/U	Long Pants	Jacket	T shirt	Short Pant	Total
Year 1	PCS	300,000	300,000	650,000	580,000	1,830,000
Year 2	PCS	354,000	354,000	767,000	684,400	2,159,400
Year 3	PCS	371,700	371,700	805,350	718,620	2,267,370
Year 4	PCS	416,304	416,304	901,992	804,854	2,539,454
Year 5	PCS	416,304	416,304	901,992	804,854	2,539,454

Description	A/U	Long Pants	Jacket	T shirt	Short Pant	Total
Year 6	PCS	457,934	437,119	901,992	804,854	2,601,900
Year 7	PCS	457,934	437,119	901,992	804,854	2,601,900
Year 8	PCS	457,934	437,119	901,992	804,854	2,601,900
Year 9	PCS	457,934	437,119	901,992	804,854	2,601,900
Year 10	PCS	457,934	437,119	901,992	804,854	2,601,900

2.4. UTILITIES

The Utilities for proposed factory include electrical power, fuel oil for emergency used generator, electronic steam boilers and water for production and general purpose. Electric power will be used for the purpose of to run the production machinery and to provide lighting. Water will be required for general purpose and for the boiler, which generates hot water to supply to the molasses tank.

2.4.1. Machinery and equipment

Lists of machinery and equipment required for the factory is listed in Table 2-4.

Table 2-4 Machinery List

No.	Machinery Name	Asset	Quantity
1	High Speed Single Needle sewing machine	set	1200
2	One Needle Lockstitch machine	set	1500
3	Three Needle Interlock machine	set	6
4	One Needle Blind Stitch Hemming machine	set	6
5	Lockstitch Trimming machine	set	20
6	Iron Table	set	100
7	Paper Cutting machine	set	200
8	Buttoning machine	set	15
9	Button Hole machine	set	6
10	Barrack machine	set	30
11	Geleat Snap machine	set	10
12	Pattern machine	set	4
13	Workshop Medium Iron	set	130
14	The Workshop in Iron	set	130
15	Eyelet End machine	set	10
16	Sub-Contract Peihuo Bed machine	set	30
17	Cloth Trimming machine	set	15
18	Automatic Drawing machine	set	6
19	Straight Knife machine	set	25

No.	Machinery Name	Asset	Quantity
20	Fusing machine	set	4
21	Cutting machine	set	20
22	Thread Cleaning machine	set	4
23	Large Iron Table	set	30
24	Piano Style Ironing Table	set	15
25	Stream Iron	set	150
26	Checking needle machine	set	3
27	Portable needle Checker	set	3
Total			3670

2.4.2. **Work force**

Human resource required by foreign experts/ technicians and local persons for administrative and production process are about 1595 persons during 10 years (Table 2-5). Currently there are total 620 employees.

Table 2-5 Annual human resource requirement

Employee	Number of people							
	Year 1		Year 2-3		Year 4		Year5-10	
	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign
Production Manager	1		1		1		1	
Production Technician	-	8	-	8	-	8	-	8
Supervisor	15		15		15		15	
Leader	30		30		30		30	
Skill Worker	500		600		600		600	
Semi-skill Worker	300		300		300		300	
Unskilled Worker	300		400		400		400	
Production Quality Control& Finishing	120		150		200		200	
Mechanic &EP	10		10		10		10	
Cleaner	10		10		10		10	
Security	8		8		8		8	
Factory Manager	1		1		1		1	
Administration Manager	1		1		1		1	
Finance Manager	1		1		1		1	
Accountant & Office staff	8		8		8		10	
	1305	**8**	**1535**	**8**	**1585**	**8**	**1587**	**8**
Total	**1313**		**1543**		**1593**		**1595**	

2.4.3. **Water**

The main water use in the proposed project is for operation use of boiler water and for domestic usage such as for personal washing, food preparation, and washing of utensils. Drinking water will be provided by outsource suppliers. Main source of water supply will be provided by tube well water (ground water) in which ground water will be pumped and will be treated by oxidation tower, chlorine dosing system, de-iron filter (FRP), carbon filter, and cartridge filter. There are two water tanks (General use water tank 420 ft^3 (rooftop & ground) and Firefighting water tank 1,350 ft^3). Average daily water consumption for the whole factory is 20,000 Gals.

Figure 2-8 Office building

2.4.4. **Electricity and fuel requirement**

The proposed project is intended to get required electricity supply form Yangon City Electricity Supply Board (YESB) and distributed by 1,000 kVA Asia General transformer (AGT). 300 kVA and 500 kVA generators will also be kept as the emergency generator if normal electricity supply could not provide for the proposed project. Estimated electricity usage is about 50,000 units per month.

Required petrol and diesel for vehicles and generator are purchased from the nearest petrol station. Fuel requirement is about 400 liters per month.

Transformer (1000 kVA)

Generator 500 (kVA)

2.4.5. **Stream boiler**

The Steamed boiler (4 ton per hour of steam capacity) is used in ironing process for daily and used of fuel for steam boiler is fired wood. Firewood was required for boiler operation at about 1.5 tons per month (Figure 2-9).

Description	Process
General operation process	Fluidizing > Igniting > Fuel Feeding
Water consumption per hour	2 m^3/hr
Boiler effluent in drainage	Blow down valve > Underground water pipe > nearest drainage
Amount of wastewater discharge	0.1 m^3/hr
Bottom ash release per day	0.45 kg/day (10% of fuel usage)

4 tons of Steam Boiler

Fired Wood (Boiler fuel)

Figure 2-9 Steam boiler photo and Firewood storage condition

Figure 2-10 Chimney photo of boiler

2.5. FACILITIES

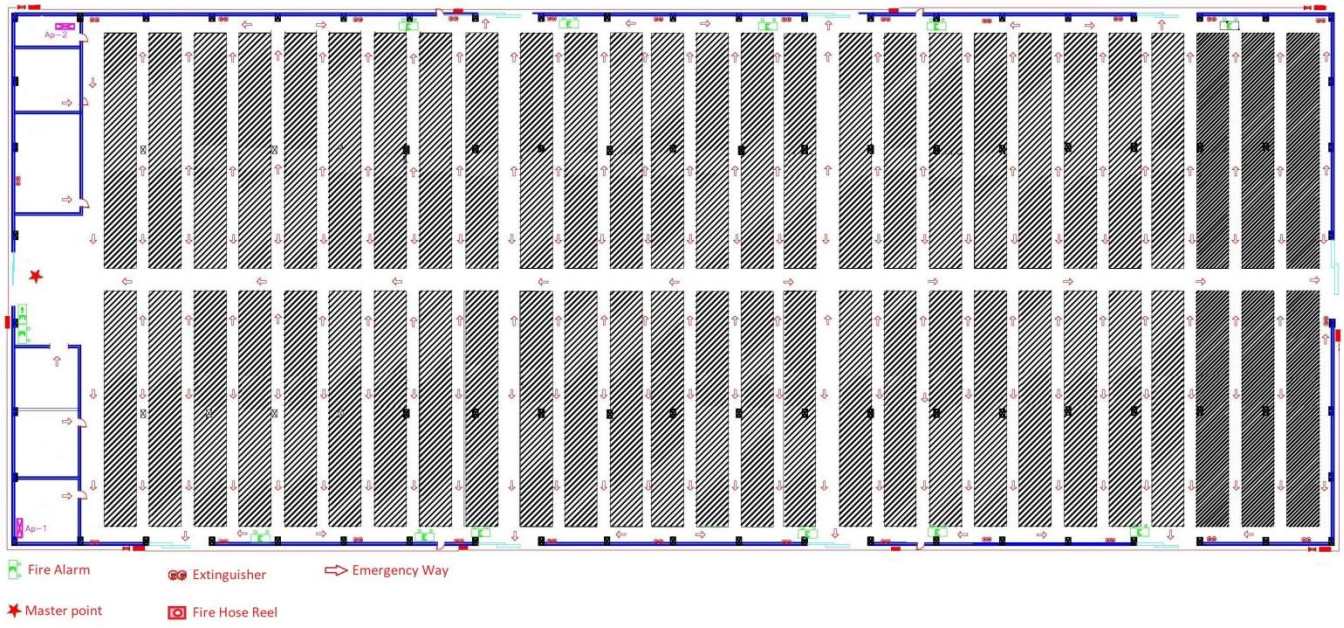
2.5.1. Toilet Facilities

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

2.5.2. Firefighting plan of proposed project

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 firefighting is also constructed 10 ground water tanks with the dimension of 10ft x 10ft 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-fighting system are mentioned in **Error! Reference source not found.**.

Figure 2-11 Firefighting facility



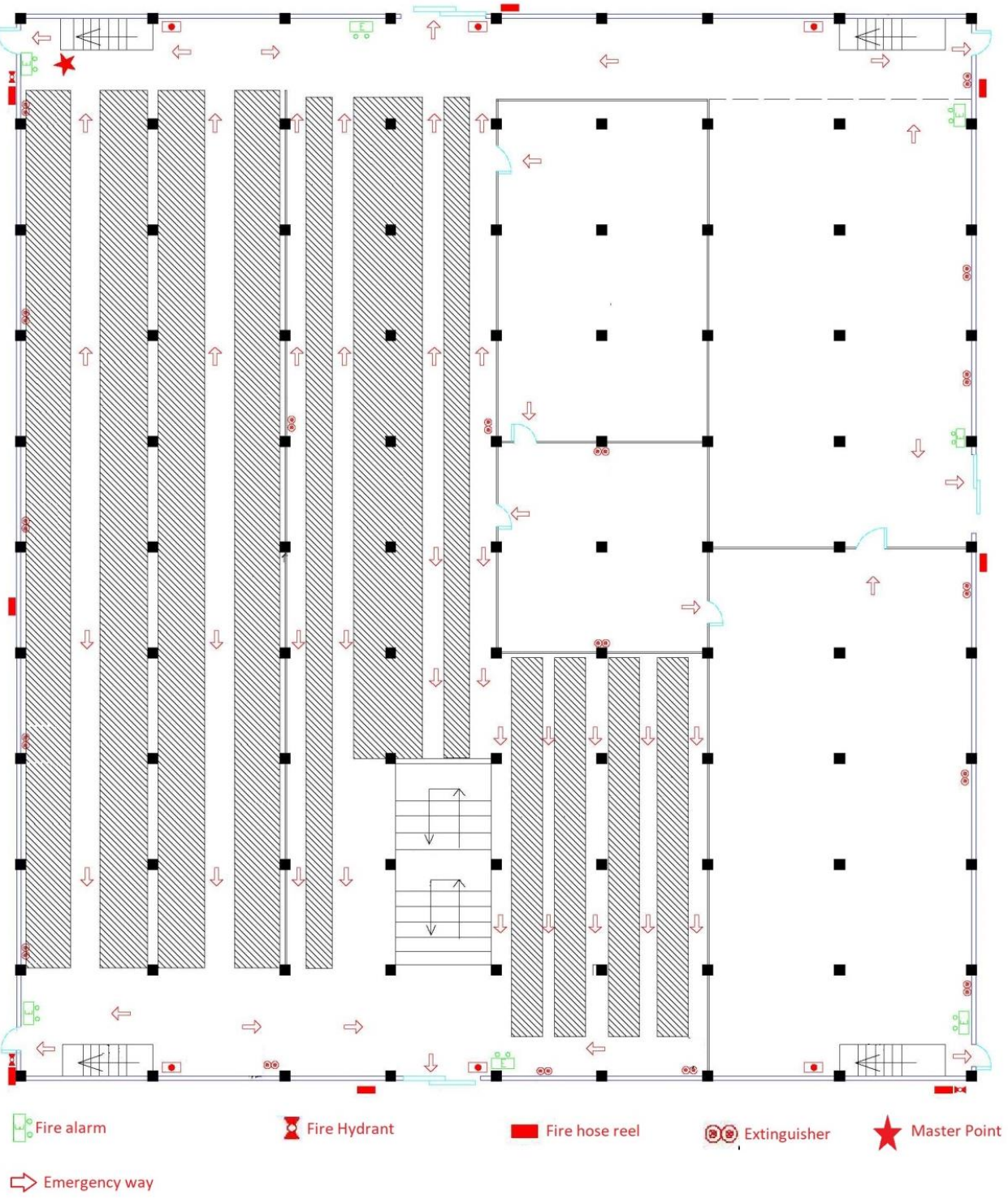


Figure 2-12 Fire escape schematic layout plan of Building A and B

2.5.3. First Aid Guidelines and Facilities

Recommended Mitigation Measures for Occupational Health and Safety

- Consider the provision of personal protective equipment only after all measures for removing or controlling safety hazards have been provided reasonably impractical

- Ensure that sufficient personal protective equipment is provided and that they are readily available for every person who may need to use them.
- The management should ensure that all persons make full and proper use of the personal protective equipment provided
- Provide instruction and training in the proper use and care of any specific protective equipment where necessary
- Ensure that the personal protective equipment is in good condition. Report immediately any damage to the management for replacement. Always keep the personal protective equipment as clean as possible.

Monitoring should be designed and implemented by accredited professionals, as part of an occupational health and safety-monitoring program. Facilities should also maintain a record of occupational accidents and diseases. Projects should try to reduce the number of accidents among project workers (whether directly employed) to a rate of zero, especially accidents that could result in lost work time, different levels of disability, or even fatalities. A well-organized and proper first aid system is implanted to provide immediate first aid to anyone who is injured in the workplace and had also conducted the first aid training by Myanmar Red Cross Society. Adequate number of first-aid kits are listed and made available at all workplaces and contacts of medical providers, hospitals will be notified. The followings are some of the contents in a sample first aid kit.

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

2.5.4. **Waste Management Facility**

At Zhejiang Tongli garments manufacturing factory, waste categorization has been developed into at least five 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 fabric scraps, fabric paper tube, 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 5 compartments for different kinds of waste categories. In addition, pest control program has also implemented at the entrance of rodents and insects. Zhejiang Tongli also has an agreement service with YCDC for waste disposal facilities to collect the all-production waste, office waste and domestic waste. According to the waste management practice, Zhejiang Tongli has provided the dedicated dustbins for paper waste, plastic waste, production waste and food waste for the proper disposal of waste. Appropriate recycling methods are in practice to dispose of the wastes in the environmental friendly manner.

2.6. GENERATION OF WASTE, EMISSION AND DISTURBANCES

2.6.1. Industrial wastes

Wastes generated from the garment factory are cloth scraps of 70% from cutting and 30% from sewing. In addition, packing waste of plastic sheet, carton box and fabric paper tube are generated from cutting line and packing section. Total amount of waste about maximum 50 kg per day are generated from operation process.

There is no wastewater generated from garments manufacturing process at Zhejiang Tongli factory.

2.6.2. Human wastes

The number of staff and workers required in the day shift for the factory is maximum 1,313 persons during operation. Solid waste generated from maximum number of operators and office staffs with assumption of waste generation rate at 512.07 kg/day was calculated based on solid waste generation rate of 0.39 kg/person/day[1].

Domestic wastewater generated by maximum amount of 1,313 persons with assumption rate at 131.3 m^3/day was calculated based on domestic wastewater generated rate of 0.1 m^3/person/day[2]. This water will be released in operation hour discharge to septic tank or factory drainage.

2.6.3. Waste Balance

A mass balance Tongli factory is illustrated in below Figure 2-13, which presents water and energy inputs and also the outputs with respect to residue and sub-products, liquid effluents and air emissions.

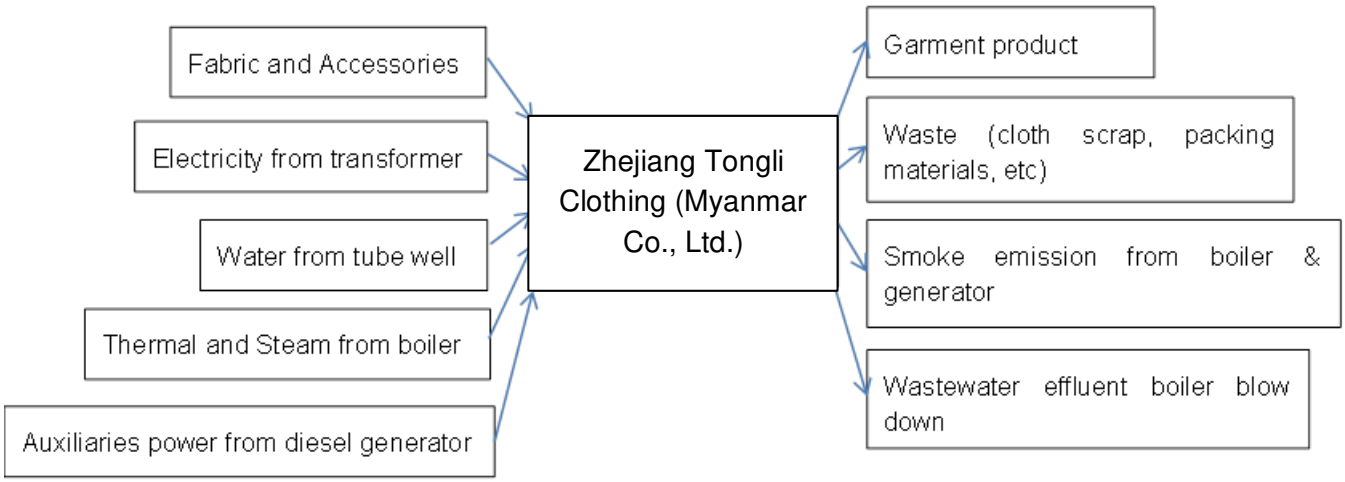


Figure 2-13 Typical mass balance of garment factory

[1] 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).

[2] The domestic wastewater generation was based on typical wastewater generation rate of 0.1 m3 per person per day (Metcalf & Eddy, 2004)

3. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

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.

3.1. MYANMAR REGULATORY FRAMWORK

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

3.1.1. Laws and Regulations Related to Environmental and Social Considerations

Requirements related to environmental (and social) impact management for development projects are described in **Table 3-1**.

Table 3-1 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.
Constitution 2008	
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.
Environmental Conservation Law, 30 March 2012	
Objectives	to contract a healthy and clean environmental and to conserve natural and cultural heritage for the benefit of present and future generations; to maintain the sustainable development through effective management of natural resources and to enable to promote international, regional and bilateral cooperation in the matters of environmental conversation.
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;

Law and Regulation	Description
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: Section10	The Ministry may, with the approval of the Union Government and the Committee, stipulate the following environmental quality standards: (a) suitable surface water quality standards in the usage in rivers, streams, canals, springs, marshes, swamps, lakes, reservoirs and other inland water sources of the public; (b) water quality standards for coastal and estuarine areas; (c) underground water quality standards; (d) atmospheric quality standards; (e) noise and vibration standards; (f) emissions standards; (g) effluent standards; (h) solid wastes standards; (i) other environmental quality standards stipulated by the Union Government.
Section 14	A person causing a point source of pollution shall treat, emit, discharge and deposit the substances which cause pollution in the environment in accord with stipulated environmental quality standards.
Section 15	The owner or occupier of any business, material or place which causes a point source of pollution shall install or use an on-site facility or controlling equipment in order to monitor, control, manage, reduce or eliminate environmental pollution. If it is impracticable, it shall be arranged to dispose the wastes in accord with environmentally sound methods.
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

Law and Regulation	Description
	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.
Environmental Conservation Rules, 2014	
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.
Environmental Impact Assessment Procedure (December 2015)	
Objectives	The project proponent has to be liable for all adverse impacts caused by doing or emitting of project owner or contractor, sub-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. 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 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. The project proponent has to be liable and fully & effectively implement all requirements included in ECC, relevant laws and rules, this procedure and standards under rule 104. 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. 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 & rules and this procedure, under paragraph 106. The project proponent has to submit, as soon as possible, the failures of his or

Law and Regulation	Description
	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. 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. The project proponent has to prepare the monitoring report in accord with the rule 109. 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. 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. The project proponent has to allow inspector to immediately enter and inspect in any time if it is emergency or failure to implement the requirements related to social or environment or caused to it, under paragraph 115. The project proponent has to allow inspector to inspect the contractor and sub-contractor who implement on behalf of project, under paragraph 117.
Screening: Section 23	a) The project proponent shall submit the Project Proposal to the Ministry for Screening. b) The Ministry will send the Project Proposal to the Environmental Conservation Department to determine the need for environmental assessment. 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: i) An EIA Type Project, or ii) An IEE Type Project, or iii) A Non IEE or EIA Type, and therefore not required to
National Environmental Quality (Emission) Guidelines (NEQG) (December 2015)	
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.
National Myanmar Environmental Policy (2019)	
National Environmental Policy Vision & mission	**Vision** A clean environment, with healthy and functioning ecosystem, that ensures includes development and wellbeing for all people in Myanmar. **Mission** 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.

Law and Regulation	Description
Foreign Investment Law, 2012	
Section 8	(a) To support the primary objectives of the national economic development plan, and for businesses that cannot yet be run by the State and citizens or businesses that have insufficient funds and technology. (b) Development of employment activities (l) Protection and conservation of the environment. (q) Appearing the required modern services for the Union and citizens.
Section 17	(a) To abide by the existing laws of the Republic of the Union of Myanmar. (b) To carry out the business by forming a company under the existing laws of Myanmar by the investor. (h) To carry out not to cause environmental pollution or damage in accord with existing laws in respect of investment business. (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.
Foreign Investment Rule, 2013	
Rule 54	The promoter or investor shall: (a) comply with Environmental Protection Law in dealing with environmental protection matters related to the business; (b) shall carry out socially responsible investment in the interest of the Union and its people; (c) shall co-operate with authorities for occasional or mandatory inspection; (d) shall exercise due diligence to be in conformity and harmony with norms and standards prescribed by relevant Union Ministry in conducting construction of factories, workshops, buildings, and other activities; (e) shall enforce Safety and Health
Myanmar Investment Rules, 2017	
Rule 202	The project proponent has to comply with the conditions of the permit issued by the MIC and applicable laws when making the investment
Rule 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
Myanmar Insurance Law (1993)	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.
Payment of Wages Law (2016)	
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

Law and Regulation	Description
	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
Yangon City Development Committee Law (2018)	
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
The Amended Law for Factories Act, 1951 (2016)	
Hygiene in Working Environment: Section 3	Mentions responsibilities of employer and manager regarding waste disposal, ventilation, extreme temperature, dust and gas generation, minimum space for each worker, lighting, portable drinking water and toilets for employees.
Safety in Working Environment: Section 4	States responsibilities of employer and manager concerning with machine guarding, personal protective equipment, housekeeping, aisles and exits, chemical storage and fire protection system to avoid accident.
The Private Industrial Enterprise Law, 1990	
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.
The Export and Import Law (2012)	
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

Law and Regulation	Description
	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.
The Prevention of Hazard from Chemical and Related Substances Law, 2013	
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; b. To supervise systematically in performing the chemical and related substances business with permission for being safety; c. To perform the system of obtaining information and to perform widely educative and research for using the chemical and related substance systematically; d. To perform the sustainable development for the occupational safety, health and environmental conservation. 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.	
Underground Water Act	
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.	
Myanmar Fire Brigade Law (2015)	
The Pyidaungsu Hluttaw enacted this law by Law No.11/2015 on the date of 17th March, 2015 with the following objectives: (a) to take precautionary and preventive measures and loss of state own property, private property, cultural heritage and the live and property of public due to fire and other natural disasters (b) to organize fire brigade systemically and to train the fire brigade (c) to prevent from fire and to conduct release work when fire disaster, natural disaster, epidemic disease or any kind of certain danger occurs (d) to educate, organize and inside extensively so as to achieve public corporation (e) to participate if in need for national security, peace for the citizens and law and order	
Section-8 Fire Safety Procedures	
Rule17	The relevant Government Department or organization shall, for the purpose of precaution and prevention obtain the approval of the Fire Force Department before granting permission for the following cases: a. Constructing three-storied and above buildings market and condominium buildings, b. Operating hotel, motel, guest house enterprise c. Constructing factory, workshop, storage facilities and warehouse d. Operating business expose to fire hazard by using in inflammable materials or

Law and Regulation	Description
	explosive materials e. Producing and selling fire-extinguishing apparatuses f. Doing transport business, public utility vehicles train, airplane, helicopter, vessel, ship, tonkin tug
Rule18	The relevant government department or organization shall obtain the opinion of the Fire Services Department for the purpose of fire precaution and prevention, when laying down plans for construction for town, village and downtown or village development plans
The Electricity Law (2014)	
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.	
Boiler Law (2015)	
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.

Law and Regulation	Description
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. 63. Nobody must manufacture boilers against Section 25, Subsection 25 (a) and (b) enacted.
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
The Pyidaungsu Hluttaw hereby enacts this Law 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.	
The Social Security Law (2012)	
The Social Security Law, enacted in 2012, was amended the Social Security Act in 1954. It stipulates the formation and implementation of social security systems.	
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;
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
This law was enacted for safeguarding the right of workers or having good relationship between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. It stipulates that employer in which more than 30 workers are employed shall form the workplace coordinating committee consisting of the representatives of workers and the representatives of employer.	
Section 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 sub-section (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

Law and Regulation	Description
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.
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.
The Employment and Skill Development (2013)	
This law was enacted for safeguarding the right of workers or having skillful of workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. Employer shall conduct occupational training to enhance the skills of workers.	
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	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 The project owner has to cooperate with the authorized person or organization in line with the section 3 and 5 of said law. The project proponent has to abide by any instruction or stipulation for public health under the section 3 of said law. The project proponent has to allow any inspection, anytime, anywhere if it is needed under the section 5 of said law.
Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)	
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

Law and Regulation	Description
	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.
Occupational Safety and Health Law (2019)	
Purpose:	To effectively implement measures related to safety and health in every industry and to set occupational safety and health standards;
Section-26 Sub-section (e)	The project proponent has to provide adequate and relevant personal protective equipment to workers free of charge and make them wear it during work so as not to expose workers to any serious occupational diseases or hazards.
Section-26 Sub-section (1)	The project proponent has to arrange and display occupational safety and health instructions, warning signs, notices, posters, and signboards.
Section-30 Sub-section (a)	The worker shall wear or use at all times any protective clothes, equipment and tools provided by the employer for the purpose of safety and health.
Section-30 Sub-section (d)	The worker shall proper and systematic use any equipment and tools, machines, any parts of the machines, vehicles, electricity and other substances being used at the workplace.
Section-30 Sub-section (e)	The worker shall take reasonable care for the safety and health of himself/ herself and of other persons who may be affected by his/ her acts or omissions at work.
The law on Standardization	
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 to enable to protect the consumers and user by guaranteeing imports and products are not lower than prescribed standard, and safe from health hazards to enable to support protection of environment related to products, production process and services from impact, and conservation of natural resources 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 to support on establishing the ASEAN Free Trade Area and to enable to reduce technical barriers to trade 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.
Chapter 7 Taking Action by Committee No. 19	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: warning

Law and Regulation	Description
	suspending the certificate of certification for limited period cancelling the certificate of certification
လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သောဝတ္ထုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)	
ရည်ရွယ်ချက်	လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ဝတ္ထုပစ္စည်းများကို စနစ်တကျပြုလုပ်ခြင်း၊ တင်သွင်းခြင်း၊ သယ်ယူခြင်း၊ သိုလှောင်ခြင်းနှင်း သုံးစွဲခြင်းတို့ပြုနိုင်ရန်။ ယမ်းဘီလူးနှင့် ဆက်စပ်သုံးပစ္စည်းများ အသုံးပြုသည့် လုပ်ငန်းခွင်ဘေးအန္တရာယ် ကင်းရှင်း၍ လုံခြုံမှုရှိစေရန်။ လုပ်ငန်းခွင်သုံး ပေါက်ကွဲစေတက်သော ဝတ္ထုပစ္စည်းများ ပြုလုပ်သုံးစွဲမှုများကို စနစ်တကျ ကြီးကြပ်နိုင်ရန်။
အခန်း ၇ တားမြစ်ချက်များ အမှတ် ၁၈	လိုင်စင်ရရှိသူနှင့် ခွင့်ပြုချက်ရရှိသူ မည်သူမျှ စစ်ဆေးရေးအရာရှိချုပ် သို့မဟုတ် စစ်ဆေးရေးအရာရှိ၏ စစ်ဆေးခြင်းကို ခံယူရန် ငြင်းပယ်ခြင်းမပြုရ။
အမှတ် ၁၉ (ခ)	ပုဒ်မ ၈ အရ ကာကွယ်ရေးဌာနကောင်စီ အမှုဆောင်အဖွဲ့၏ အတည်ပြုချက်မရရှိဘဲ လုပ်ငန်းခွင် ပေါက်ကွဲစေတက်သော ဝတ္ထုပစ္စည်းများကို ဖျက်ဆီးခြင်းမပြုရ။
အမှတ် ၁၉ (ဂ)	ဤဥပဒေအရ ထုတ်ပြန်သည့် နည်းဥပဒေ၊ စည်းမျဉ်း၊ စည်းကမ်း၊ အမိန့်ကြော်ငြာစာ၊ အမိန့်နှင့် ညွှန်ကြားချက်များနှင့်အညီ ဆောင်ရွက်ရန် ပျက်ကွက်ခြင်း မရှိစေရ။
The Motor Vehicles Law (2015)	
Objectives	When the constructions periods and if it is needed in operation and production period for all vehicles • 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.
The Conservation of Water Resources and Rivers Law (2006)	
Aims	The aims of this Law are as follows: (a) to conserve and protect the water resources and rivers system for beneficial utilization by the public; (b) to smooth and safety waterways navigation along rivers and creeks; (c) to contribute to the development of State economy through improving water resources and river system; (d) to protect environmental impact.
Chapter 5 Prohibitions No. 8	No person shall: (a) carry out any act or channel shifting with the aim to ruin the water resources and rivers and creeks. (b) cause the wastage of water resources wilfully.
No. 10	No person shall anchor the vessels where vessels are prohibited from anchoring in the rivers and creeks.
No.11 (a)	No person shall: 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.

Law and Regulation	Description
No. 12	No person shall carry out growing of garden, digging, filling, silt trapping, closing pond, dyke building or erecting spur in the river-creek boundary, bank boundary and waterfront boundary without the permission of the relevant government department and organization.
No. 15	No person shall carry out the construction of switchback, dockyard, wet dockyard, water-tight dockyard, building of jetty, pier, landing stage or vessel landing by drainage in the river-creek boundary, bank boundary and waterfront boundary without the permission of the Directorate.
The Commercial Tax Law (1990) Amended 2014	
Chapter 5 Registration and Intimation of Commencement of Enterprise 11 (b)	Any Person who commences operation of a goods production enterprise or service enterprise shall furnish letter of intimidation on the commencement of the operation as such to the relevant Township Revenue Officer as stipulated by regulations.
Chapter 6 Monthly Payment of Tax and Sending of Three-Monthly Return 12 (a)	Any person who has taxable proceed of sale or receipt from service within a year, shall pay due monthly tax within ten days after the end of the relevant month. Moreover, a three-monthly return shall be furnished to the relevant Township Revenue Officer within one month after the end of relevant three-month.
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.

3.2. 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, MOECAF 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.

3.2.1. General Guidelines

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

3.2.2. 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 Guidelines1 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 for air pollutants not included in the following Table 3-2.

Table 3-2 WHO's Air Quality Guideline

Parameter	Averaging Period	Guideline Value
Nitrogen Dioxide	1-year 1-hour	40 200
Ozone	8-hour	100
Particulate Matter PM10[a]	1-year 24-hour	10 50
Particulate Matter PM2.5[b]	1-year 24-hour	10 25
Sulfur dioxide	24-hour 10-minute	20 500

[a] Particulate matter 10 micrometers or less in diameter
[b] Particulate matter 2.5 micrometers or less in diameter

3.2.3. Wastewater

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

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

Table 3-3 Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges (general application)[3]

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.[a]	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[b]
Total coliform bacteria	100 ml	400
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

[3] Pollution prevention and abatement handbook. 1998. Toward cleaner production. World Bank Group in collaboration with United Nations Environment Programme and the United Nations Industrial Development Organization.

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

3.2.4. IFC EHS Guidelines

The EHS Guidelines 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 3-4 shows the contents of the section of Community Health and Safety.

Table 3-4 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.
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

Contents	Brief Description
	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)

3.3. 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 IEE or EIA or to develop an EMP, and to obtain an Environmental Compliance Certificate (ECC) in accordance with this EIA procedure.

3.4. INTERNATIONAL GUIDELINES

Organization's Guidelines, World Bank Safeguard Policies, IFC Performance Standards and National Environmental Quality (Emission) Guidelines (2015) are referred for EMP of the garment factory project.

3.5. COMMITMENT OF ZHEJIANG TONGLI CLOTHING (MYANMAR) COMPANY LIMITED

Zhejiang TongLi Clothing (Myanmar) Company Limited Company 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.

a) The accuracy and completeness of the EMP,

b) That the EMP has been prepared in strict compliance with applicable laws including this Procedure

c) That the Project will at all times comply fully with the commitments, mitigation measures, and plans in the EMP Report.

Zhejiang TongLi Clothing (Myanmar) Company Limited Company Limited shall be responsible for the environmental assessment of factory development as follows:

- 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 service.
- To carry out fire safety assessment and ensure adequate and appropriate fire safety measures for employees.

Mr. Qiu Quan Long

Factory Manager

ZheJiang TongLi Clothing (Myanmar) Co., Ltd.

4. BRIEF DESCRIPTION OF SURROUNDING ENVIRONMENT

The purpose of this Chapter is to predict how environmental and socio-economic conditions will impact 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 report preparation;

- Onsite Measurements and Analysis – Baseline parameters such as Indoor temperature, humidity, operation light condition and noise of the project site during operation phase were measured onsite. 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 Hlaing Tharyar Township, Yangon Region.

4.2. ENVIRONMENTAL BASELINE STUDY

The field observation for determining the environmental baseline of the proposed project area was undertaken during construction period. The survey team consists of the senior consultant and environmental quality team. The baseline data collected regarding the environmental condition of the project area was conducted in the following section.

4.2.1. Air Quality

To determine the existing baseline ambient air quality status within the project site on 30 October 2018, 24-hours of working period air pollutants level, which include dust PM_{10} and $PM_{2.5}$ 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°54'51.77"N and longitude 96°04'20.97"E.

It was observed that the air quality of (PM_{10}, $PM_{2.5}$) are within the National Environmental Quality (Emission) Guideline.

Table 4-1 Observed air quality results

Parameters	Observed value	Guideline value	Unit	Organization	Period
PM_{10}	25.2	50	$\mu g/m^3$	NEQG	24 hrs
$PM_{2.5}$	19.9	25	$\mu g/m^3$	NEQG	24 hrs

NEQ = National Environmental Quality (Emission) Guideline

NAAQS = National Ambient Air Quality Standards were developed by the U.S. EPA

ACGIH = the American Council of Governmental Industrial Hygienists recommends

Figure 4-1 Air Quality Measurement Photo

4.2.2. Indoor Temperature and Humidity

The indoor temperature and humidity condition during 30 October 2018 shows the average temperature of 34.0 °C while the average humidity is 68.9 %. The location of the humidity and temperature measurement point is latitude 16°54'50.58"N and longitude 96° 4'21.40"E.

Table 4-2 Relative humidity and temperature measure at factory

Date and Time	Description	Result value	Environmental parameter air station guideline
30 October 2018 (11:00 am to 3:00 pm)	Relative Humidity RH %	34 (%)	Present condition
	Temperature	68.9 °C	Present condition

Figure 4-2 Temperature and Humidity measurement photo

4.2.3. Light

Activities of the workers in the garment factory are highly dependent on the quality of light. Therefore, the consultant conducted the light measurement in the garment factory is presented in Figure 4-3. The illustrates the recommended illumination and limiting glare index applicable to typical works (fairly severe to very severe tasks) in garments factory is provided in Table 4-3.

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 garment factory, like the inspection points (on-floor and in stores), sampling, 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 4-3 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 severed, prolonged task, very small detail (e.g. gem cutting, hosiery mending, gauging very small parts)	1,300-2,000	13-16

Source: Koenigsberger, et al. 1975

Figure 4-3 Light quality measurement photo

Table 4-4 Light Measurement in Garment factory

No	Location	Measure value (Lux)	Standard*
1	Sewing line 1	404	400
2	Sewing line 2	412	400
3	Sewing line 3	345	400
4	Sewing line 4	341	400
5	Sewing line 5	450	400
6	Cutting line 1	448	400
7	Cutting line 2	471	400
8	Finishing line 1	521	400
9	Finishing line 2	385	400
10	QC	1447	900 (except 1500 at audit tables)

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

4.2.4. **Noise**

The Noise level was measured by using Digital Sound Level Meter for working hours on 30 October, 2018. The location of the noise measurement point is latitude 16°54'50.58"N and longitude 96° 4'21.40"E. The average noise level in the project site area is 66.575 dBA (Figure 4-4). Receptor (nearby production area at project site) noise level of measurement are within the comfortable range of 40-60 decibel.

However, found to be the Noise source monitoring at operation area (inside the production sector) of noise level is not exceeding the acceptable level of National Environmental Quality (Emission) Guideline.

Figure 4-4 Indoor Noise Measurement Photo

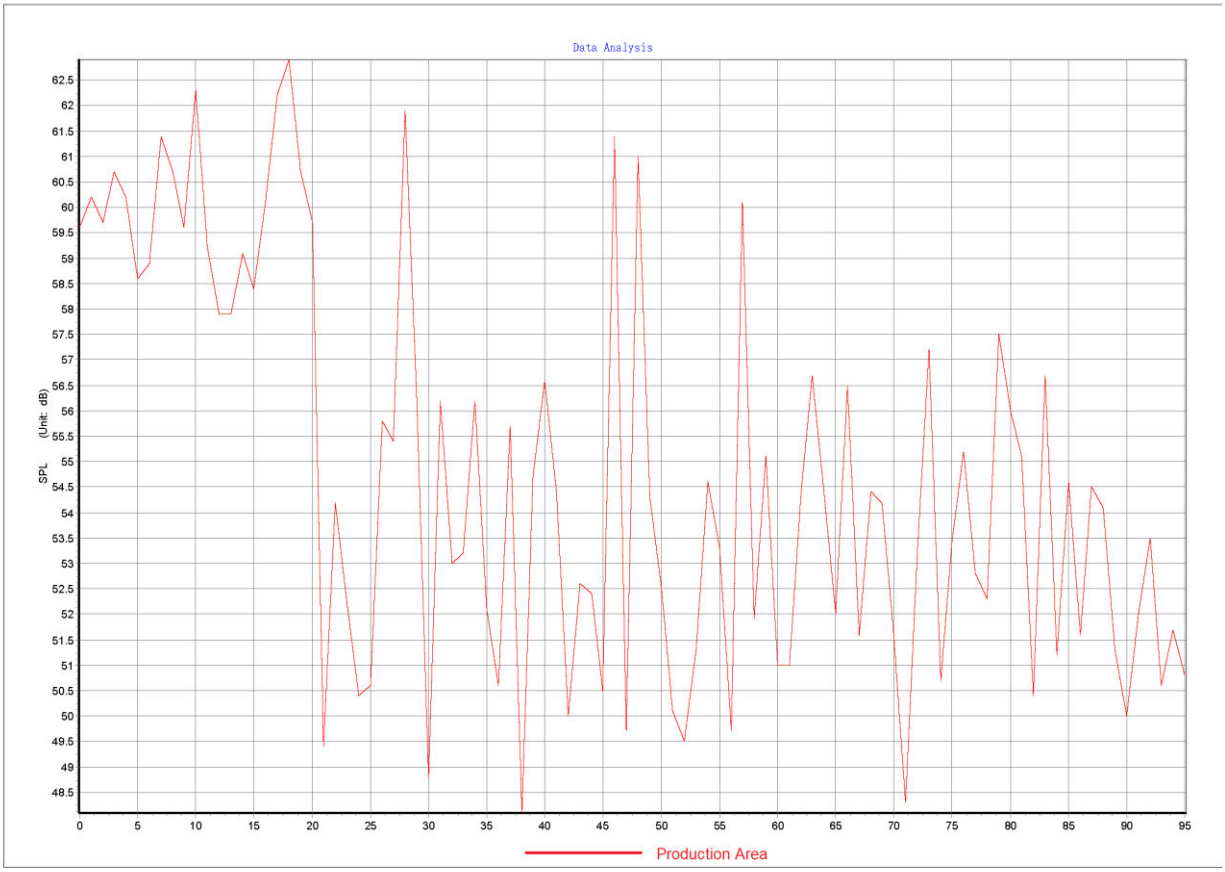


Figure 4-5 Noise Level result at production area

4.3. PHYSICAL COMPONENT (SECONDARY DATA)

4.3.1. Topography

Yangon area is the largest; most populated and urbanized area in Myanmar. There are thirty-three townships in Yangon city, where located at the convergenceon the Yangon and Bago River region about 34 km away from the Gulf of Martaban. The proposed project area is situated at Hlaing Thar Yar Industrial Zone (Part-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.

4.3.2. Geology

In Yangon area mainly composed of Pegu Group, Irrawaddy Formation and Alluvium. Alluvial deposits (Pliestocene to Recent), the non-marine fluvialtile sediments of Irrawady 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 4-6.

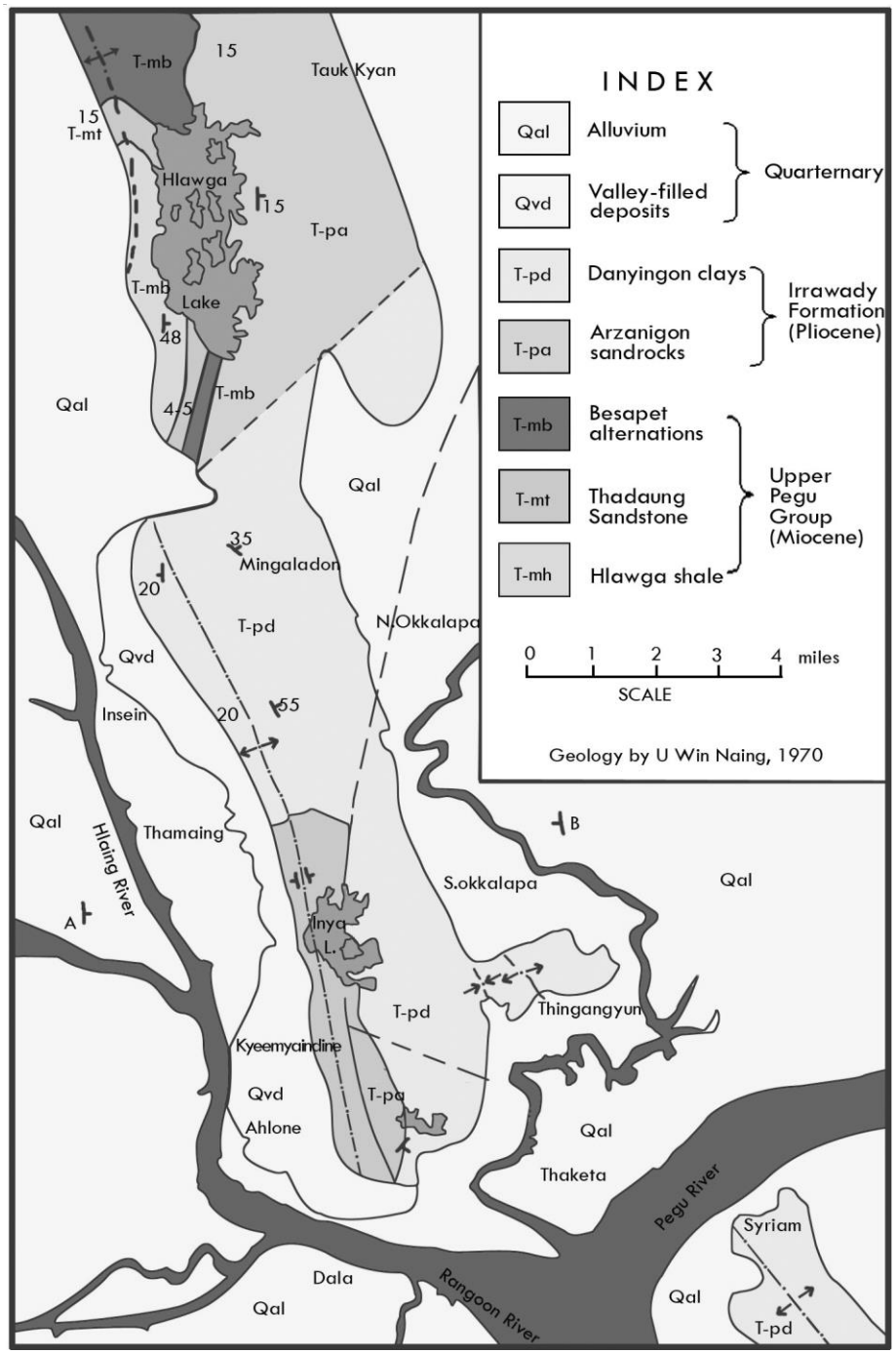


Figure 4-6 Geological Map of Yangon Region

4.3.3. **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).

4.3.4. **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. [2]

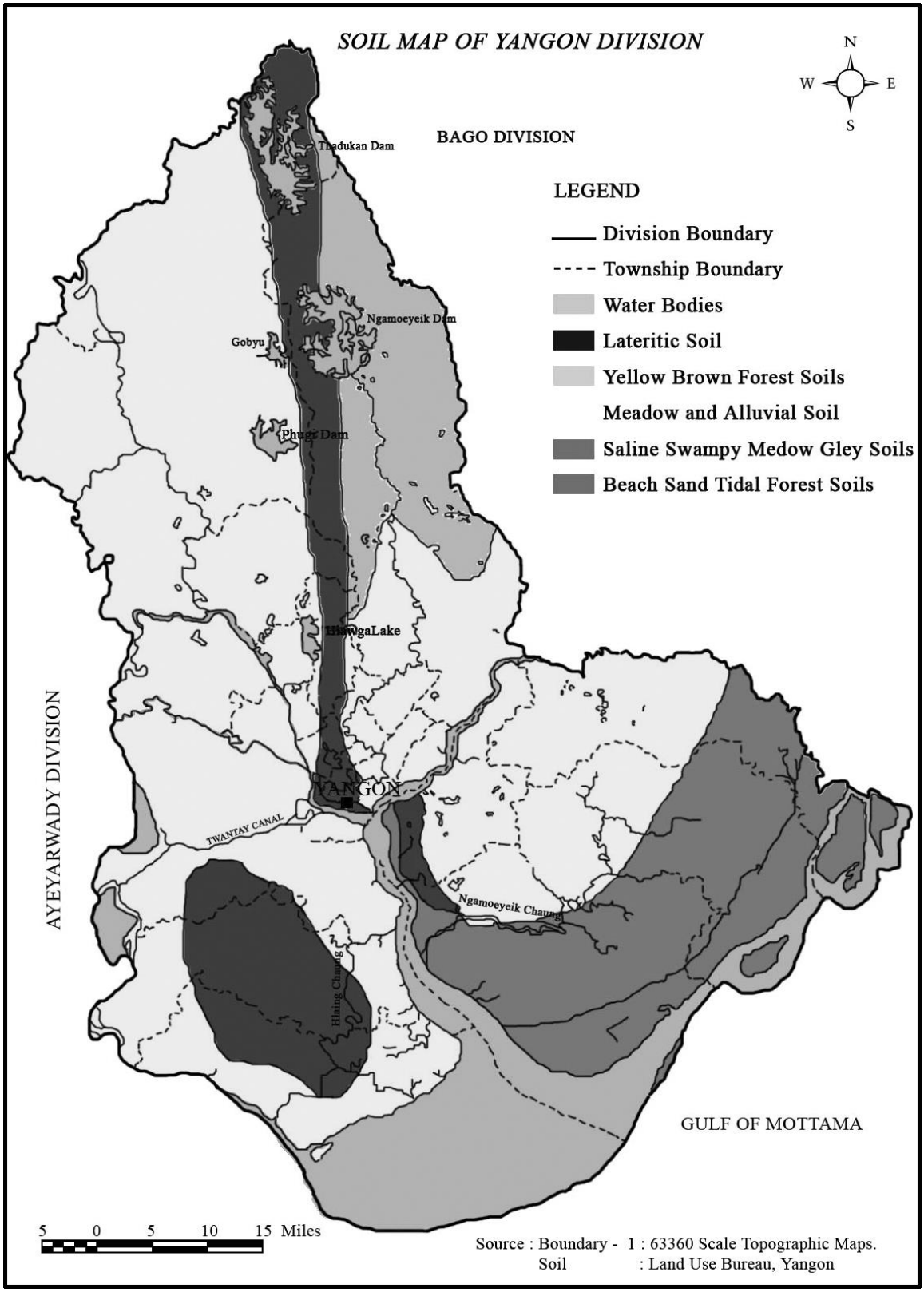


Figure 4-7 Soil Map of Yangon (Source: Land use of Bureau of Yangon)

4.3.5. **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 MSL4.

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 Pan Hlaing River which flows west to east and later joins into the Hlaing River in the east.The Yangon River (also known as Hlaing River) is formed by the confluence of the Pegu and Myitmaka rivers and flows into the Gulf of Martaban which is part of the larger Andaman Sea. The river flows along a 40 km stretch flowing from southern Myanmar as an outlet of the Ayeyarwady River into the Ayeyarwady delta. A small portion of the Bago River (the estuary) lies within the Yangon Division. The Pazundaung Creek and Bago River joins the Yangon River and from there, flow towards the Southwestern direction into Andaman Sea.

4.3.6. **Climate and Meteorology**

4.3.6.1. Average Weather in Yangon

In Yangon, the wet season is oppressive and overcast, the dry season is muggy and partly cloudy, and it is hot year-round. Over the course of the year, the temperature typically varies from 67 °F to 97 °F and is rarely below 62 °F or above 101 °F. [6]

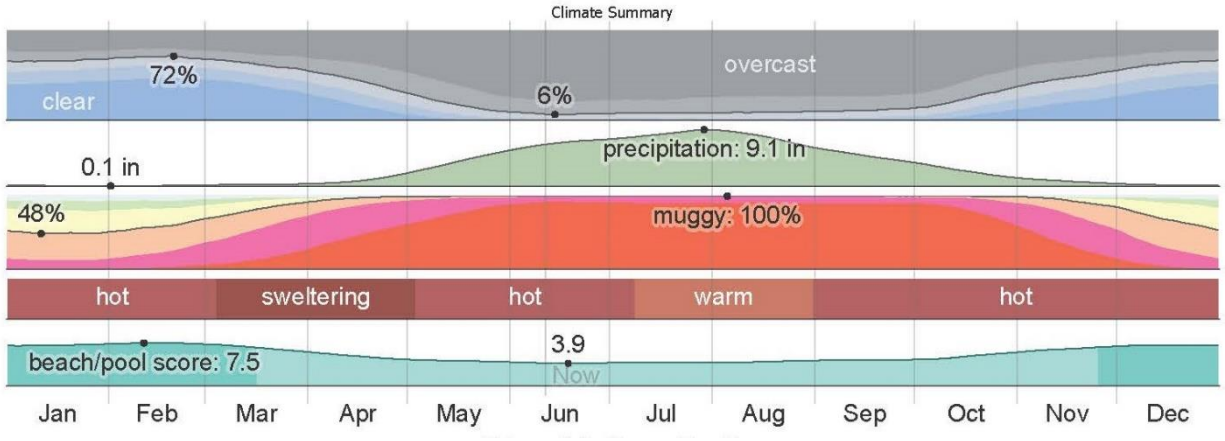


Figure 4-8 Climate Summary of Yangon Region

4.3.6.2. Temperature

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

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

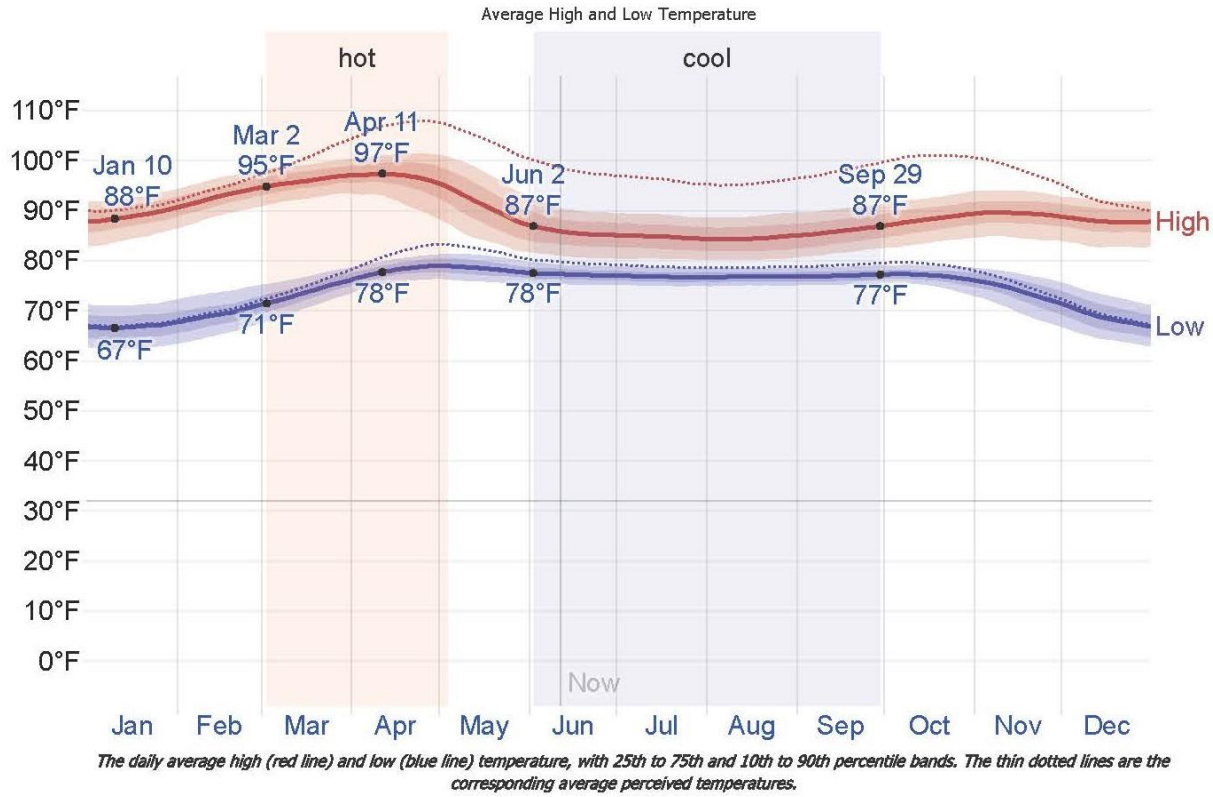


Figure 4-9 Average Temperature of Yangon Region

4.3.6.3. Clouds

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

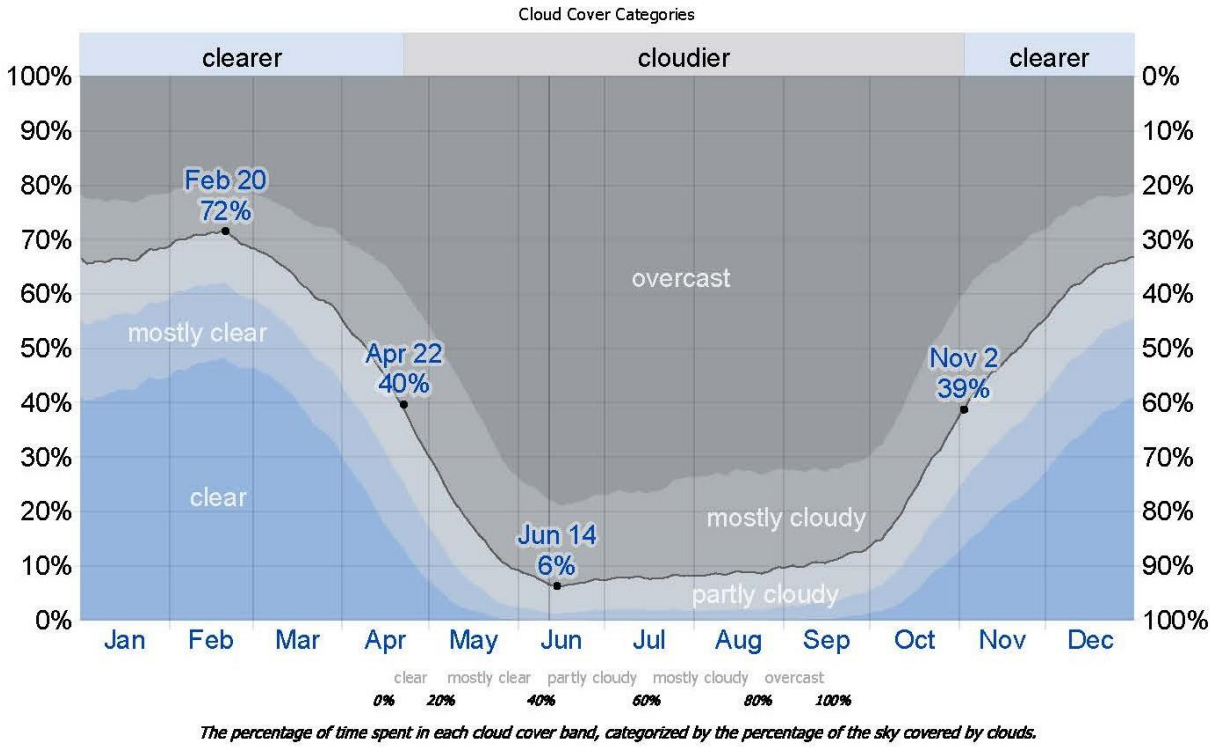


Figure 4-10 Cloud Cover Categories

4.3.6.4. Rainfall

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

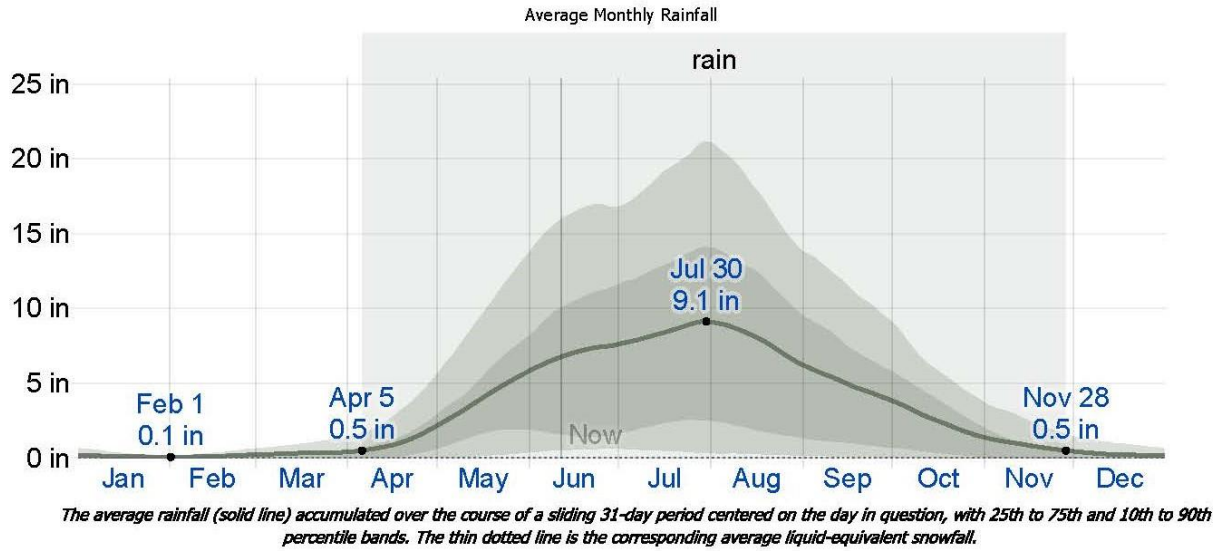


Figure 4-11 Average Monthly Rainfall at Yangon Region

Table 4-5 Annual rainfall and temperature

Year	Rainfall		Temperature	
	Raining day	Rainfall value (Inches)	Summer season Max (°C)	Winter season Min (°C)
2017-2018	102	105.4	41°C	27°C
2018-2019	88	84.8	40°C	26°C

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

4.3.6.5. Humidity

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

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

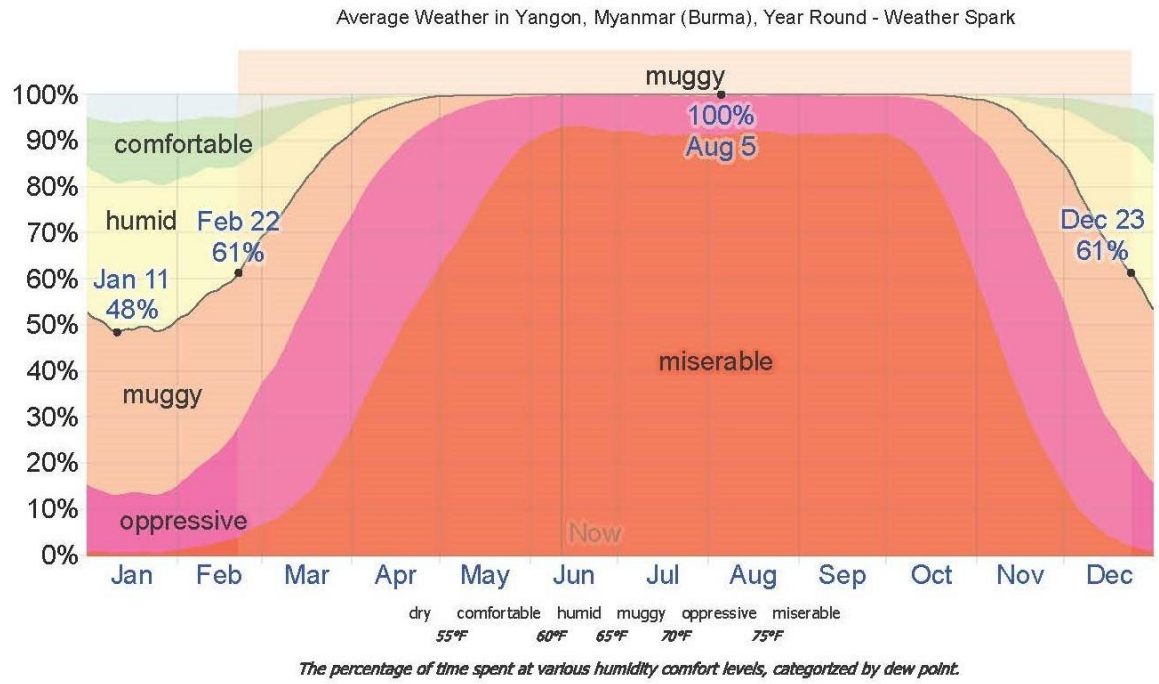


Figure 4-12 Humidity of Yangon

4.3.6.6. Wind

This section discusses the wide-area hourly average wind vector (speed and direction) at 10 meters above the ground. The wind experienced at any given location is highly depended on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages. The average hourly wind speed in Yangon experiences significant seasonal variation over the course of the year. The winder part of the year lasts for 4.1 months, from May 1 to September 4, with average wind speeds of more than 8.2 miles per hour. The windiest day of the year is June 24, with an average hourly wind speed of 10.6 miles per hour. The calmer time of year lasts for 7.9 months, from September 4 to May 1. The calmest day of the year is January 9, with an average hourly wind speed of 5.8 miles per hour.

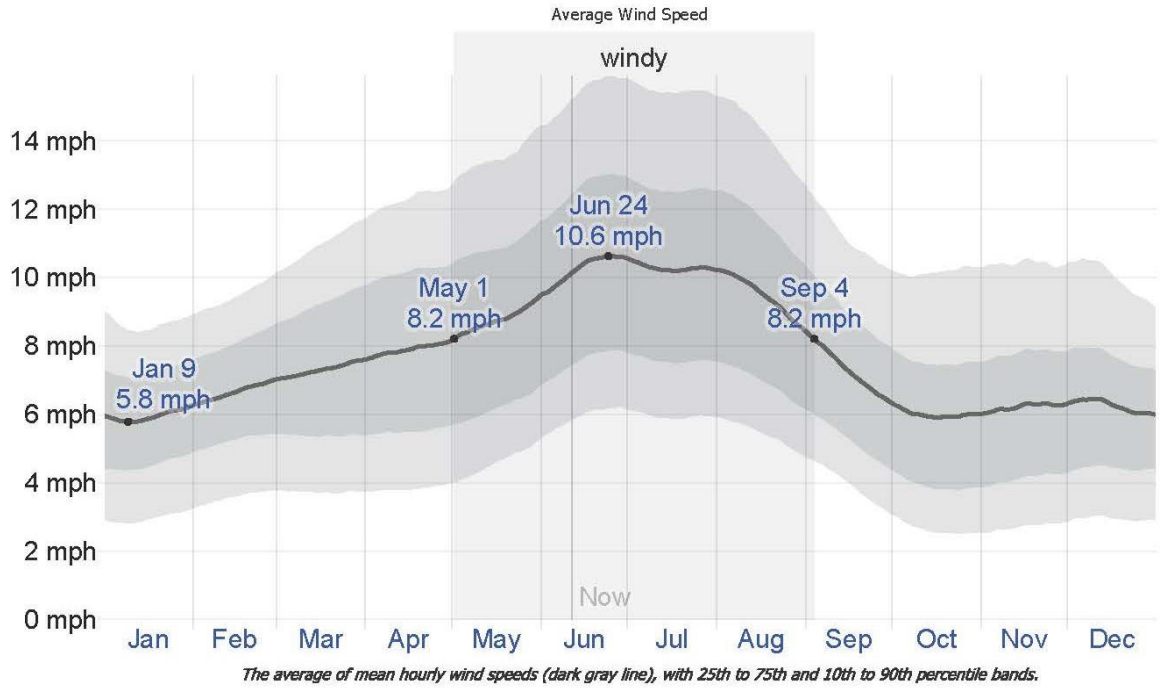


Figure 4-13 Average Wind Speed in Yangon

4.4. BIOLOGICAL COMPONENT (SECONDERY DATA)

As the proposed project area is located in the industrial zone, the information of ecological resources is very unlikely. In addition, within the proposed project area, there are no forests, protected areas and coastal resources. The proposed project site is not located in or near a sensitive ecosystem as the proposed project area is situated in the Hlaing Thar Yar Township. The Project Site is a built-environment and the species of flora surveyed at the site are native species uncommon to the Yangon area.

Ecological Resources	Existing condition
Fisheries, aquatic biology	The nearest river is Pan Hlaing river. Fresh water fish species are residing in the river
Wildlife	Non existence
Forests	Non existence
Rare or endangered species	Non existence
Protected areas	The nearest protected area is Hlaw Gar Park which is located in the northeastern part of the project site
Coastal resources	A few mangrove species observed at the river bank of Pan Hlaing river

4.5. SOCIO-ECONOMIC COMPONENT

4.5.1. Population

Tae Hyun (Myanmar) Industry Company Limited is located across Hlaing Thar Yar Township in Yangon Region. In 2019, the population of Hlaing Thar Yar Township is about 440,949 people as present in Table 4-6. [1]

Table 4-6 Population of Males and Females at Hlaing Thar Yar Township (2019)

Item	Over 18 year			Under 18 year			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	110193	125186	235379	49964	55193	105157	160157	180379	340536
Rural	34642	32707	67349	16488	16576	33065	51130	49283	100413
Total	144835	157893	302728	66452	71769	138221	211287	229662	440949

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

4.5.2. Religion

The different kinds of religion present in Hlaing Thar Yar Township are shown in Table 4-7. More than 90% of the people living in the township are Buddhists. [1]

Table 4-7 Religion in Hlaing Thar Yar Township (2019)

Township	Buddhist	Christian	Hindu	Muslim	Total
Hlaing Thar Yar	422529	6400	8320	3700	440949

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

4.5.3. Local Economy

Among regional towns, Hlaing Thar Yar 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

4.5.4. Public Infrastructure and Access

4.5.4.1. Communication and Transportation

Major transportation route in Hlaing Thar Yar Township are railway, port, and car road as presented in Table 4-8. [1]

Table 4-8 Transportation Route

Categories	Township		Miles
	From	to	
Sail	Pan Hlaing River and Hlaing confluence	Ngwe Pin Lae Industrial	8
Bus line (61,23,68,16,6,69,17,74,20,52,53,54,67) City Bus	WYTU	Downtown area	
Car (Yangon - Pathein road)	King Ba Yin Naung bridge	Mya Sein yaung Stream	5.4
Car (Yangon – Nyaung Tone road)	Aung zaya Bridge	BOC traffic circle	3.2
Car (King Anawyattar Road)	Shwe Pyi Thar Bridge	Thamakone Traffic circle	4.6

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

4.5.4.2. Electricity

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

4.5.4.3. 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), West Yangon Technological University, in the Hlaing Thar Yar Township. The name and the located village tract/ ward of schools are described in Table 4-10. [1]

Table 4-9 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)	N0 (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

No.	Name of School	Location
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
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)

4.5.4.4. Health Status

The diseases of high prevalence reported in 2019 are Tuberculosis (TB), followed by Acute Respiratory Infection (ARI), Diarrhea, TB and snakebites. With reference to the Township Health Profile 2019 of Hlaing Thar Yar Township, no accidental work injuries reported to the township hospital in 2013. The common diseases are shown in Table 4-10.

Table 4-10 Common Diseases in the Hlaing Thar Yar Township

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

Table 4-11 Lists of Hospital in Hlaing Thar Yar 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	331	-

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

4.6. CULTURAL AND VISUAL COMPONEMTS

Hlaing Thar Yar 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. IMPACT ASSESMENT AND MITIGATION MEASURE

5.1. IMPACT IDENTIFICATION

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. 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 Tharyar Township, 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.

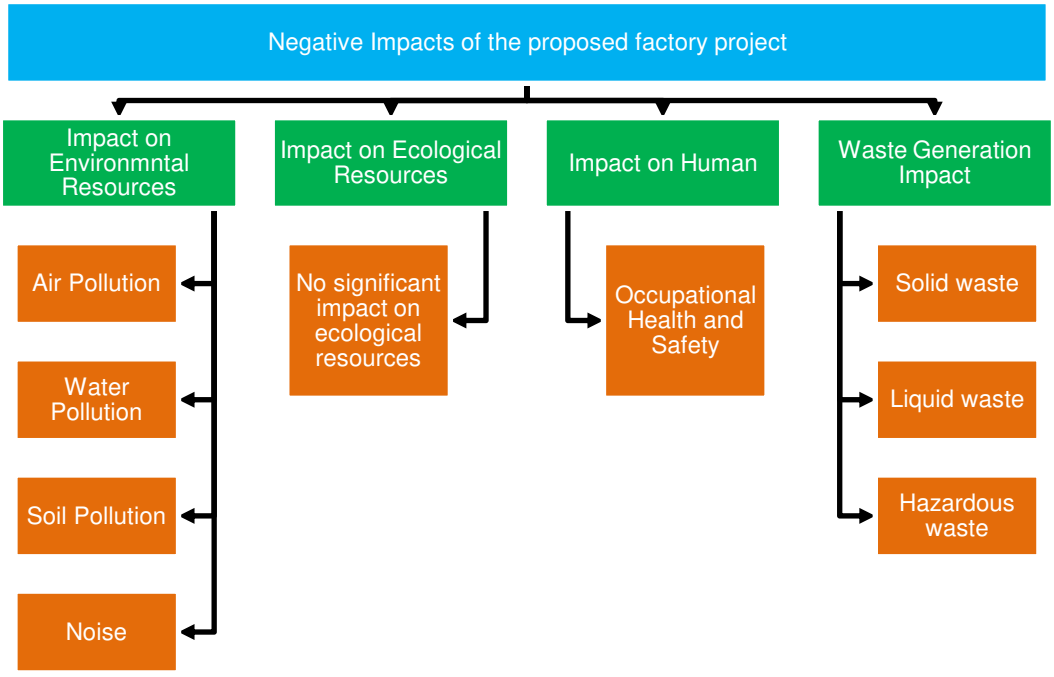


Figure 5-1 Potential negative impact affect from proposed factory project

5.2. METHODOLOGY FOR THE ASSESSMENTS

The assessment of each impact is based on consideration of the magnitude, duration, spatial and frequency of activities, which are going to be carried out during three phases and characteristics of the project site. The assessment is qualitative and the significance of each impact is classified into 5 categories in overall.

The following methodology has been applied to assess the environmental impacts of the factory mainly on air, water, land, biodiversity, including human beings. Each source of impact has been assessed by four parameters, magnitude, duration, extent and probability and each assess point have 5 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.

Significant Point (SP) = (Magnitude + Duration + Extent) * Probability

Impact Significance: Based on calculated significant point, impact significance can 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

Construction phase: 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 environment is not assessed and affected must be caused the construction period.

Decommissioning phase: The proposed duration of the investment shall be 50 years. The term of the Lease shall be initial 10 years commencing from the date of signing of the Lease Agreement between Local owner and Zhejiang Tongli Clothing (Myanmar) Company Limited for proposed project site for 2.713 acres of land and 10 years extendable for two times. The project of land and building will be restitution to land owner after close the operation. Therefore, the assessment study cannot be needed for environmental impact assessment during decommission phase.

These two phases of operation shall be represented by land owner. If the owner will be demolished their factory, they will need mitigation and monitoring plan for environmental impact. Therefore, Myanwei's environmental assessment team presented for monitoring plan during decommissioning phase.

5.4. SIGNIFICANT IMPACTS OF PROJECT ACTIVITY AND MITIGATION MEASURE

The project activities, their impacts and significance of impact are provided in Table 5-2.

Table 5-2 Evaluation and Perdition of Significant Impacts and Mitigation Measures on Operation Phase

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Impact on Environmental Resource									
Air	• Dust and GHGs emission from vehicles used for transporting raw materials and final products • Emission from emergency diesel generator and vehicle movement	2	4	2	3	24	Low	• Air pollution in atmosphere. • Inhaling them can increase the chance you'll have health problems. • People with heart or lung disease, older adults and children are at greater risk from air pollution.	• To control air pollution, the vehicles, generators and machineries have to check and maintain regularly. • The factory uses chimney for generator through which the flue gas is emitted for reducing the impact of stack emission on environment. • Ensuring vehicles, compressor and generator are well maintained. • The factory has planted trees to reduce carbon emission and minimize air pollution.
Water Pollution	• Production process	2	4	2	3	24	Low	• The factory has not generated wastewater from production process on CMP basic	• No Mitigation Measure
Soil	• Engine oil leaks,	1	4	1	2	12	Very Low	• The factory	• No Mitigation Measure

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
	spills at diesel storage and during fuel refueling.							compound area was paved with concrete and hence, contamination due to the oil spillage at this area is insignificant.	
Noise and Vibration	• Generating noise from the production machinery	2	4	1	3	21	Low	• The factory not operate heavy machinery • The major noise source of CMP basic operation activities such as cutting, stitching/finishing and packaging by respective machines. There is insignificant impact on surrounding environment	• Use noise covering equipment and personal protective equipment (PPE) like ear plug/ earmuffs for factory workers in the noisy workplace. • Should be used low noise equipment and built individual rooms like generator and compressor rooms
Impact on Ecological Resources									
Flora and fauna on terrestrial and aquatic life	Operation of the manufacturing of garment	1	4	1	1	6	Very Low	• Not Significant Impact on Ecological Resources	• No Mitigation Measure
Impact on Human									
Fire	• Poor electrical	3	5	2	4	40	Moderate	• Serious damage to	• To provide fire extinguishers,

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
	installations • Waste disposed area raw materials and chemical storage							property and even injury and death	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 fighting. • 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	• Accidental cases cause by operating machines. • Unloading, mixing, cutting, pressing and packaging activities. • Accidental cases of thermic fluid heater	3	4	1	4	32	Moderate	• Accident in workplace (physical injuries or even death) can occur during operation.	• 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

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
									reducing optical problems of the workers. • Personal Protective Equipment (PPEs) 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.
Health	• Influx of people • Noise from the generating of the emergency generators	2	4	1	2	14	Very Low	• Change in demographic structure, new diseases from immigrant workers • 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	• 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

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Waste Generation									
Solid Waste	• Residual pieces of fabric scraps from the production lines • Waste from packaging materials • Waste from kitchen, dormitory and office.	2	4	1	4	28	Low	• Surrounding environmental pollution and soil contamination	• 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 storage area • Final wastes should be disposed by using YCDC's service.
Liquid Waste	• Septic system and sewage. • Domestic liquid waste disposal from office, kitchen and dormitory.	2	4	2	4	32	Moderate	• Contamination of soil, surface water, ground water	• Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.
Hazardous Waste	• Used oil and lubricant discharged from the maintenance of vehicles and machines.	2	4	1	2	14	Very Low	• Reduce the risk of contamination from fuels, oils and hazardous wastes • Response effectively to incident and accident	• 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

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
									recycle or appropriate disposal • The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty (eg., DOWA and YCDC)
Natural Disaster									
Earthquakes, Floods, Landslides and Cyclone	-	-	-	-	-	-	-	-	• Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency.

The assessment of each impact is based on consideration of the magnitude, duration, extent and probability of activities, which are going to be carried out during operation phases. In operation phase, there are 1 moderate significance impact on environment and human such as impact of electricity consumption. 4 low significant impacts on environment and human such as impact of wastewater effluents and occupational health and safety of employees, workers and 2 very low significant impact on environment and human such as impact on aquatic lives, air pollution and noise. Significance impacts on environmental and human and detail impact assessment for operation phases can be seen in Table 5-2. All of the impacts during operation phases can be minimized by using mitigation measures and implementing Environmental Management Plan.

6. PUBLIC CONSULTATION

6.1. PUBLIC CONSULTATION PROCESS

Public participation can be considered as the required element of the EMP process. In this study various stakeholder's participation were made.

On 19, December 2018, a public consultation and disclosure ceremony was held at the proposed project site of Tongli garment Factory, Kanaung Hall, Industrial Zone Committee Office, Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township, Yangon Region in order to disclose the project information to the following personnel:

- Institutions (Local or Government Authorities at Hlaing Tharyar Township)
- Project Affected Persons at proposed factory site
- Interested persons (Adjacent Factory)

It is aimed at disclosing the findings of environmental and social studies and the likely impacts upon them as well as mitigation and monitoring schemes to remediate the impacts caused by the project activities. It is also aimed at receiving recommendations, feedbacks upon the studies. Presentation activity photos of public hearing and consultation, ceremony is mentioned in Figure 6-1.

Agenda of the public hearing consultation meeting was held according to the following program:

1. Opening of the meeting
2. Presentation of EMP report study for production of Tongli Factory
3. Recommendation and suggestion by Attendees
4. Closing of the meeting

Figure 6-1 Public consultation ceremony and suggestion

6.1.1. Participant List

List of people attended to the stakeholder meeting is mentioned in the below table and scan documents of attended list were mentioned in A**ppendix D**.

6.2. RECOMMEND SUGGESTION AND COMMENT

- To control the emission, form the boiler chimney, because of boiler energy is used by fired wood fuel.
- Provide testing point in boiler chimney area for emission quality, government inspector will check the boiler emission air quality
- Installed air filter, cyclone, etc. in boiler chimney to control air pollution

7. ENVIRONMENTAL MANAGEMENT PLAN

The EMP for Zhejiang Tongli Clothing (Myanmar) Company Limited 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. The following environmental issues that require environmental management plans based upon the potential impacts of activities by for garment factory are as follows:

7.1. AIR POLLUTION/DUST MANAGEMENT PLAN

Objectives:	➢ To minimize the adverse impact to air quality caused by stack gas emission from generator and also dust management generated from vehicular movement. ➢ To comply with relevant government rules	
Relevant government law and rule	➢ National Environmental Quality (Emission) Guidelines (2015) ➢ Motor Vehicles Act, (2015) ➢ Boiler Law (2015)	
Time Frame	➢ Entire life spans of the factory operation	
Management Action	➢ Must be plant around the proposed project to reduce carbon emission ➢ Should be prohibited burning of waste material at the proposed project site ➢ Must be control air pollution, the vehicles, generators and machineries have to check and maintain regularly. ➢ The factory should use chimney for generator through which the flue gas is emitted for reducing the impact of stack emission on environment. ➢ Must be ensuring vehicles, compressor and generator are well maintained.	
Monitoring & Reporting	Frequency	Biannually
	Monitoring Point	Indoor and Outdoor of proposed project
	Parameters	$PM_{2.5}$, PM_{10},
Estimated cost	1,000,000 Kyats per year	
Responsibility	Management of the factory; • Head of maintenance -Total implementation of above of air pollution management plan • Production manager -Air quality in the production area is good enough • Manager -To hire organization/independent third-party testing air quality • EHS officer-Monitor the hygiene of ambient air quality in surrounding of the factory	

7.2. NOISE MANAGEMENT PLAN

Objectives:	➢ To avoid nuisance noise to nearby residents generated from generator and other machineries. ➢ To comply with noise standard of National Environmental Quality (Emission) Guideline
Relevant government law and rule	➢ National Environmental Quality (Emission) Guidelines (2015)

Time Frame	➢ Throughout the project life	
Management Plan	➢ Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment ➢ Impose speed limit to track and vehicles at the transportation route. ➢ Provide sufficient personal protective equipment (PPE) at the work place ➢ All the related personnel will be provided proper training about the relevant issues and ensure PPE wear during working in noisy area.	
Monitoring & Reporting	Frequency	Biannually
	Monitoring Point	Two points in operation area
	Parameters	Sound Decibel
Estimated cost	500,000 Kyats per year	
Responsibility	HSE Manager or Environmental Management Team	

7.3. SOLID WASTE MANAGEMENT PLAN

Objectives:	➢ 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 ➢ To comply government waste management policy
Relevant government law and rule	➢ Yangon City Development Committee Law (2018), National Waste Management Strategy and Action Plan (Draft 2018)
Time Frame	➢ Entire life spans of the factory operation
Management Plan	➢ Must be provided 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 storage area ➢ Final wastes should be disposed by using YCDC's service.
Monitoring & Reporting	➢ Daily wastes have to be collected and hand over to YCDC waste collector ➢ The inventory record of waste disposal will be maintained as proof for proper management as designed
Estimated cost	50,000 Kyats per month
Responsibility	Manager (HR) ➢ Responsible for overall site cleanliness and waste management ➢ Regular waste collection to minimize excessive waste storage

7.4. LIQUID WASTE MANAGEMENT PLAN (WASTEWATER)

Objectives:	➢ To implementation plan for the management of liquid waste from collection, through treatment and resource recovery, to residual disposal
Relevant government law and rule	➢ Yangon City Development Committee Law (2018), National Environmental Quality (Emission) Guidelines (2015), Underground Water Act
Time Frame	➢ Entire life spans of the factory operation
Management Plan	➢ Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.

Monitoring & Reporting	Frequency	Biannually
	Parameters	pH, Turbidity, Conductivity, Iron, Sulpahte, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate
	Proper maintenance of drainage and sewerage system will be conducted periodically	
Estimated cost	500,000 Kyats per year	
Responsibility	Manager -To hire organization/independent third-party testing wastewater quality EHS officer-Monitor the condition of factory's drainage and sewerage system	

7.5. FIRE MANAGEMENT PLAN

Objectives:	➢ To ensure that fire control practices are implemented on site to minimise the risk of fire from site operations and bush fires
Relevant government law and rule	➢ Myanmar Fire Brigade Law 2015
Time Frame	➢ Entire life spans of proposed project operation
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 fighting. ➢ 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.
Monitoring & Reporting	To check monthly Visual inspection, Firefighting equipment (fire extinguisher, firefighting hose, portable fire pumps, fire hose reels, fire monitor and firefighting nozzles)
Estimated cost	1,200,000 Kyats per year
Responsibility	HSE Manager, Operation Manager or Environmental Management Team

7.6. OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT PLAN

Objective	➢ To provide a broad framework for improving standards of workplace health and safety to reduce work-related injury and illness.
Relevant Government Law and Rule	➢ Public Health Law (1972), Prevention and Control of Communicable Diseases Law 1995 (Amendment 2011), Occupational Safety and Health Law (2019)
Time Frame	➢ Entire life spans of proposed project
Management Action	➢ 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.
Monitoring and Reporting	➢ Weekly check fire extinguishers and water hydrant in position ➢ Daily inspect that all fire exist are open ➢ Servicing fire extinguisher and records accidents
Estimated Cost	1,000,000 Kyats per year
Responsible Person	HSE Manager, Operation Manager or Environmental Management Team

7.7. HAZARDOUS WASTE MANAGEMENT PLAN

Objective	➢ To avoid environmental pollution and adverse health effects due to its improper handling & disposal.
Relevant Government Law and Rule	➢ Yangon City Development Committee Law (2018), Explosive Ordnance Disposal Law (2018)
Time Frame	➢ Entire life spans of proposed project
Management Action	➢ 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 ➢ The hazardous wastes are transported by specially licensed carriers and disposed in a licensed faculty (e.g. DOWA and YCDC)
Monitoring and Reporting	Any hazardous materials purchased should include a Material Safety Data Sheet (MSDS), otherwise known as a Safety Data Sheet (SDS) or Product Safety Data Sheet (PSDS). By mandate of the World Health Organization's Inter-Organization Programme for the Sound Management of Chemicals (IOMC), all manufacturers of hazardous materials are required to provide a MSDS so that end users can treat the materials properly.
Estimated Cost	1,000,000 Kyats per year
Responsible Person	HSE Manager or Environmental Management Team

7.8. ENERGY MANAGEMENT PLAN

Objectives:	➢ To improve energy efficiency, reduce cost, optimize capital investment, reduce environmental and greenhouse gas emissions, and conserve natural resources

Relevant government law and rule	➢ National Energy Management Committee (Myanmar Energy Master Plan 2015)
Time Frame	Once in a year throughout the factory life
Management Plan	➢ Installation of timers and thermostats to control heating and cooling ➢ Energy saving light installed in different area of the factory for saving energy ➢ Used of energy saving devices must be installed ➢ Ensure that good housekeeping measures such as turning off equipment and lights when not in use
Monitoring & Reporting	Conduct annual energy efficiency of adult to find out the scope for energy saving
Estimated cost	Approximately 1,000,000 Kyats per year
Responsibility	Manager ➢ To arrange energy audit technical personnel ➢ To monitor and record electricity consumption, other related energy issues and take necessary actions if any problem arises

7.9. EMERGENCY RESPONSE AND MANAGEMENT PLAN

Objectives:	➢ To reduce the harmful effects of all hazards, including disasters. The World Health Organization defines an emergency as the state in which normal procedures are interrupted, and immediate measures (management) need to be taken to prevent it from becoming a disaster, which is even harder to recover from.
Relevant government law and rule	➢ The Employment and Skill Development Law (August 2013), ILO guide to Myanmar Labour Law (2017)
Time Frame	➢ Entire life spans of the factory operation
Management Plan	➢ The factory management has taken proper measures to handle any emergency situation like fire, earthquake, flood and storm ➢ 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 ➢ Periodic inspection of safety relief valve provided with pressure vessels and equipment, preventive maintenance; aware the workers about electric shock by necessary training. ➢ Regular fire drill operation is conducted ➢ Workers are informed about what to do in earthquake like stay in a safe place such as under table of desk, not to try move outside during earthquake, workers who will be outside during earthquake shall remain stay out of the building, trees, lump post, etc. Other relevant safety instruction of emergency situation it informed to workers by training ➢ 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. ➢ A medical team has been prepared for primary treatment (First Aid) ➢ 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. ➢ Build a safety committee which from firefighting team, rescue team. The committee

	arrange a meeting every month to discuss about safety management ➢ Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety
Monitoring & Reporting	Weekly check fire extinguishers and water hydrant in position Daily inspect that all fire exist are open Servicing fire extinguisher and records accidents,
Estimated cost	Approximately 1,500,000 Kyats per year
Responsibility	Manager and EHS officer ➢ Arrange firefighting training after every 3 months ➢ Responsible for fire control and response ➢ Monitoring daily danger warning and bans

7.10. ENVIRONMENTAL MONITORING SCHEDULE AND REPORTING

The EMoP 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. is provided the environmental monitoring schedule for Zhejiang Tongli Clothing (Myanmar) Company Limited. The factory submits monitoring report to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP,

Table 7-1 Environmental Monitoring Process

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
Operation Phase					
Common	Monitoring of mitigation measures	Yearly (3 years after operation)	The project	2,500,000 Kyats	Environmental Management Team's Zhejiang Tongli Clothing (Myanmar) Company Limited
Air Quality	$PM_{2.5}$, PM_{10},	Biannually monitoring and reporting to ECD (first 3 years after operation)	Outdoor and Indoor of proposed project	800,000 Kyats	Environmental Management Team's Zhejiang Tongli Clothing (Myanmar) Company Limited
Waste Generation	Solid waste, Liquid waste and Hazardous waste	Weekly	Recycle house and waste house and at the factory office	50,000 Kyats	Environmental Management Team's Zhejiang Tongli Clothing (Myanmar) Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory	500,000 Kyats	Environmental Management Team's Zhejiang Tongli Clothing

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
					(Myanmar) Company Limited
Light Intensity	Illuminance	Monthly	At the production line	20,000 Kyats	Environmental Management Team's Zhejiang Tongli Clothing (Myanmar) Company Limited
Decommissioning Phase					
Air Quality	$PM_{2.5}$, PM_{10},	One time during this phase	One point in the production area	1,000,000 Kyats	Zhejiang Tongli Clothing (Myanmar) Company Limited and Land Owner
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	1,000,000 Kyats	Zhejiang Tongli Clothing (Myanmar) Company Limited and Land Owner
Rehabilitation	Recovering and Revegetation		All decommissioning area		Zhejiang Tongli Clothing (Myanmar) Company Limited and Land Owner

7.11. 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;

7.11.1. **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.

7.11.2. **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

7.11.3. 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

7.11.4. 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 spared 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

7.11.5. 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.

7.11.6. **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 7-2 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.

7.11.7. 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)

7.11.8. 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

7.11.9. Health and Safety Training Plan for Worker

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

Table 7-3 Training Plan Used in Zhejiang Tongli Clothing (Myanmar) Company Limited

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

7.12. 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 though Grievance Committee, which includes the responsible persons of Zhejiang Tongli Clothing (Myanmar) Company Limited

representative from Shwe Lin ban Industrial Zone and representative from General Administration Department (Hlaing Tharyar 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 show steps of Grievance Redress Mechanism of Proposed Factory Project.

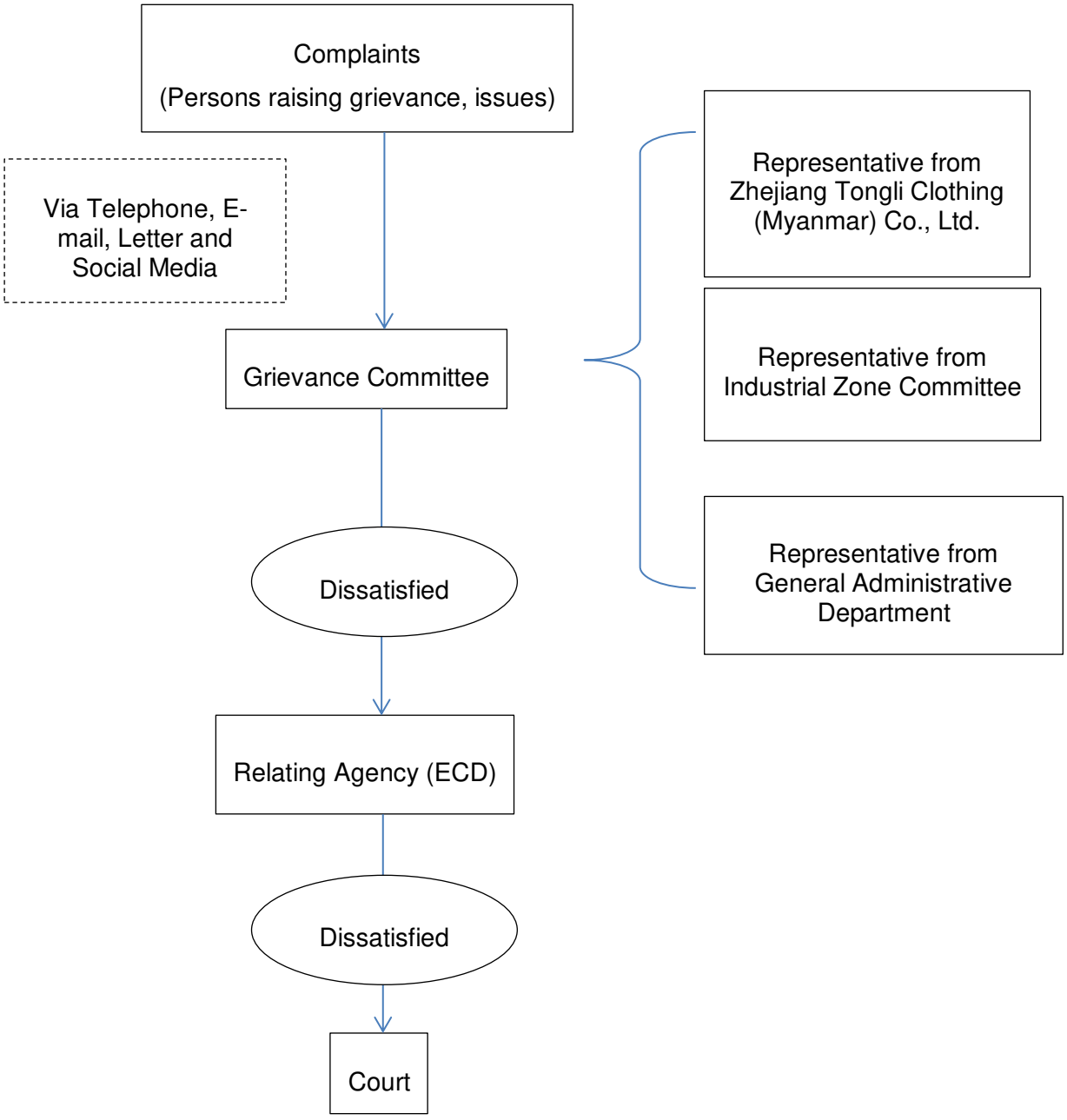


Figure 7-1 Grievance Redress Mechanism Flow Diagram

7.13. 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 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.

Zhejiang Tongli has a plan to implement and donate 2 percent of the profit per year for Corporate Social Responsibility (CSR) and Employee Welfare Arrangement.

Table 7-4 CSR Plan

Area	Priority item	Contribution (%)	Estimated Cost (Kyats)	Detail targets
Health	Healthcare for employees and their family	0.5%	7,500,000	One of our main concerns is the well-being of our employees. We will contribute 0.5% of our net profit for the healthcare which includes medical checkup for the employees and providing health education to our workers.
Education	Raising awareness education level and human right	0.5%	10,000,000	We will contribute 0.5% of our net profit to the public school near the factory to be a part of creating the better community. We will also work together with the school to understand more about the needs and we will also ensure that our contributions will be used in the most effective and efficient way for the society.
Community Development	Donation to local community	1%	7,500,000	• Donate to local charities with a worthy cause • Actively participate in community events • Encourage staff to participate, and to form a community engagement team to actively support community events • Embedding understanding and consciousness about human rights issues among the employees • Development of sexual harassment and power harassment (workplace bullying & harassment) prevention efforts

8. CONCLUSION

Environmental Management Plan (EMP) has been prepared for Zhejiang Tongli Clothing (Myanmar) garment factory is located at Plot No.301, Myaw Taing Block No. 25, Shwe Lin Ban Industrial Zone, Hlaing Tharyar Township. The main objective of the study is focused specially on the required environmental management measures or creating environmentally friendly workplace. An EMP has been carried out for the factory according to the requirement of the proponent as it has been made for garments manufacturing factory.

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

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 a positive impact 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 EMP has been given in the present report to mitigate/enhance the impacts, which occurs during operation phase of the factory.

9. 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 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 EMP is approved by concerned authorities, effective implementation of EMP 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
Myanmar Investment Commission Permit's Zhejiang Tongli Clothing (Myanmar) Co., Ltd.

THE REPUBLIC OF THE UNION OF MYANMAR
The Myanmar Investment Commission
PERMIT

Form (2)
1388-a
14.10.2015

Permit No. 1024 /2015 Date 14th October 2015

This Permit is issued by the Myanmar Investment Commission according to the section 13, sub-section (b) of the Republic of the Union of Myanmar Foreign Investment Law-

(a) Name of Investor/Promoter MR. SONGLIN GONG
(b) Citizenship CHINESE
(c) Address NO. 82 , AI GOO ROAD, DONG YANG CITY, ZHEJIANG PROVINCE , PEOPLES' REPUBLIC OF CHINA
(d) Name and Address of Principal Organization -
(e) Place of incorporation -
(f) Type of investment business MANUFACTURING OF GARMENT ON CMP BASIS
(g) Place(s) at which investment is permitted PLOT NO. 301, MYAY TAING BLOCK NO. 25, SHWE LIN PAN INDUSTRIAL ZONE, HLAING THAYAR TOWNSHIP, YANGON REGION
(h) Amount of Foreign Capital US$ 2.322 MILLION
(i) Period for foreign capital brought in WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF MIC PERMIT
(j) Total amount of capital (Kyat) EQUIVALENT IN KYAT OF US$ 2.322 MILLION
(k) Construction period 1 (ONE) YEAR
(l) Validity of investment permit 10 YEARS
(m) Form of investment WHOLLY FOREIGN OWNED INVESTMENT
(n) Name of Company incorporated in Myanmar ZHEJIANG TONGLI CLOTHING (MYANMAR) COMPANY LIMITED

14/10

Chairman
The Myanmar Investment Commission

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်
ခွင့်ပြုမိန့်

ပုံစံ (၂)

ခွင့်ပြုမိန့်အမှတ် ၁၀၂၄ / ၂၀၁၅ ၂၀၁၅ ခုနှစ် အောက်တိုဘာလ ၁၄ ရက်

ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု ဥပဒေပုဒ်မ ၁၃၊ ပုဒ်မခွဲ(ခ) အရ ဤခွင့်ပြုမိန့်ကို မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်က ထုတ်ပေးလိုက်သည် -

(က) ရင်းနှီးမြှုပ်နှံသူ/ကမကထပြုသူအမည် MR. SONGLIN GONG

(ခ) နိုင်ငံသား CHINESE

(ဂ) နေရပ်လိပ်စာ NO. 82 , AI GOO ROAD, DONG YANG CITY, ZHEJIANG PROVINCE ,PEOPLES' REPUBLIC OF CHINA

(ဃ) ပင်မအဖွဲ့အစည်းအမည်နှင့်လိပ်စာ -

(င) ဖွဲ့စည်းရာအရပ် -

(စ) ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား CMP စနစ်ဖြင့် အဝတ်အထည် အမျိုးမျိုး ချုပ်လုပ်ခြင်း လုပ်ငန်း

(ဆ) ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ) မြေကွက်အမှတ်-၃၀၁၊ မြေတိုင်းရပ်ကွက် အမှတ်-၂၅၊ရွှေလင်ပန်း စက်မှုဇုန်၊ လှိုင်သာယာ မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

(ဇ) နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ အမေရိကန်ဒေါ်လာ ၂.၃၂၂ သန်း

(ဈ) နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ ခွင့်ပြုမိန့် ရရှိသည့်နေ့မှ ၁ နှစ်အတွင်း

(ည) စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) အမေရိကန်ဒေါ်လာ ၂.၃၂၂ သန်း နှင့် ညီမျှသော မြန်မာကျပ်ငွေ

(ဋ) တည်ဆောက်မှုကာလ ၁ နှစ်

(ဌ) ရင်းနှီးမြှုပ်နှံမှုခွင့်ပြုသည့် သက်တမ်း ၁၀ နှစ်

(ဍ) ရင်းနှီးမြှုပ်နှံမှုပုံစံ ရာခိုင်နှုန်းပြည့်နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု

(ဎ) မြန်မာနိုင်ငံတွင် ဖွဲ့စည်းမည့် ကုမ္ပဏီအမည် ZHEJIANG TONGLI CLOTHING (MYANMAR) COMPANY LIMITED

ဥက္ကဋ္ဌ
မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

APPENDIX B
Transitional Consultant Registration Certificate

THE REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 00068 Date 24 MAY 2019

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the organization under Environmental Impact Assessment Procedure, Notification No. 616/2015.

(ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၆၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို ထုတ်ပေးလိုက်သည်။)

(a)	Name of Organization (အဖွဲ့အစည်းအမည်)	Myanwei Consulting Co., Ltd.
(b)	Name of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏အမည်)	U Nyan Lynn Aung
(c)	Citizenship of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏နိုင်ငံသား)	Myanmar
(d)	Identity Card /Passport Number of the representative person in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏ မှတ်ပုံတင်/ နိုင်ငံကူးလက်မှတ် အမှတ်)	12/Sakhana(N)056196
(e)	Address of organization (ဆက်သွယ်ရန်လိပ်စာ)	No. 28, Myay nu street, Sanchaung Township, Yangon, Myanmar. Mobile phone: 09440251888 E mail: ceo@myanweiconsulting.com
(f)	Type of Consultancy (အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)	Organization
(g)	Duration of validity (သက်တမ်းကုန်ဆုံးရက်)	31 December 2019

Director General

Environmental Conservation Department

Ministry of Natural Resources and Environmental Conservation

Areas of Expertise Permitted

(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Facilitation of meeting,
2. Land use,
3. Legal analysis,
4. Geology and soil,
5. Occupational Safety and Health,
6. Public Health

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန
ပထဝီဝန်းကျင်ထိန်းသိမ်းရေး
ဦးစီးဌာန

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for one year from (1.1.2020) to (31.12.2020)
ဤလက်မှတ်အား(၁-၁-၂၀၂၀) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၀) ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for six month from (1.1.2021) to (30.6.2021)
ဤလက်မှတ်အား(၁-၁-၂၀၂၁) ရက်နေ့မှ (၃၀-၆-၂၀၂၁) ရက်နေ့အထိ (၆)လ သက်တမ်းတိုးမြှင့်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for six months from (1.7.2021) to (31.12.2021)
ဤလက်မှတ်အား(၁-၇-၂၀၂၁) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၁) ရက်နေ့အထိ (၆)လ သက်တမ်းတိုးမြှင့်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION (သက်တမ်းတိုးမြှင့်ခြင်း)
The VALIDITY of this certificate is extended for one year from (1.1.2022) to (31.12.2022)
ဤလက်မှတ်အား(၁-၁-၂၀၂၂) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၂) ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။
25.3.2022
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION (သက်တမ်းတိုးမြှင့်ခြင်း)
The VALIDITY of this certificate is extended for six months from (1.1.2023) to (30.6.2023)
ဤလက်မှတ်အား(၁-၁-၂၀၂၃) ရက်နေ့မှ (၃၀-၆-၂၀၂၃) ရက်နေ့အထိ (၆)လသက်တမ်းတိုးမြှင့်သည်။
For Director General
(Sa Aung Thu, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for two months from (1.7.2023) to (31.8.2023)
ဤလက်မှတ်အား(၁-၇-၂၀၂၃) ရက်နေ့မှ (၃၁-၈-၂၀၂၃) ရက်နေ့အထိ (၂)လ သက်တမ်းတိုးမြှင့်သည်။
For Director General
(Sa Aung Thu, Director)
Environmental Conservation Department

REPUBLIC OF THE UNION OF MYANMAR

Ministry of Natural Resources and Environmental Conservation

CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအတွက်အထားလက်မှတ်)

No. 10048 Date

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the person under Environmental Impact Assessment Procedure, Notification No. 616/2015.

(ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၆၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို လူပုဂ္ဂိုလ်အားထုတ်ပေးလိုက်သည်။)

(a)	Name of Consultant (အကြံပေးပုဂ္ဂိုလ်အမည်)	U Lin Htet Sein
(b)	Citizenship (နိုင်ငံသား)	Myanmar
(c)	Identity Card / Passport Number (မှတ်ပုံတင်/နိုင်ငံကူးလက်မှတ် အမှတ်)	7/ Tha Ka Na (N) 101377
(d)	Address (ဆက်သွယ်ရန်လိပ်စာ)	No.54, Room No.704, Waizayantar Tower, Waizayantar Road, Thingangyun Township, Yangon. lin.tbs@gmail.com , 09 421137569
(e)	Organization (အဖွဲ့အစည်း)	Total Business Solution Co., Ltd.
(f)	Type of Consultancy (အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)	Person
(g)	Duration of validity (သက်တမ်းကုန်ဆုံးရက်)	31 March 2018

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for one year from (1.4.2018) to (31.3.2019)
ဤလက်မှတ်သည် (၁-၄-၂၀၁၈) ရက်နေ့မှ (၃၁-၃-၂၀၁၉) ရက်နေ့အထိ တစ်နှစ်သက်တမ်း တိုးမြှင့်သည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

Director General
Environmental Conservation Department
Ministry of Natural Resources and Environmental Conservation

Areas of Expertise Permitted

(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Geology and Soil

EXTENSION
သက်တမ်းတိုးပြုခြင်း
The VALIDITY of this certificate is extended for six month from (1.1.2021) to (30.6.2021)
ဤလက်မှတ်အား(၁-၁-၂၀၂၁)ရက်နေ့မှ(၃၀-၆-၂၀၂၁)
ရက်နေ့အထိ(၆)လသက်တမ်းတိုးပြုသည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးပြုခြင်း
The VALIDITY of this certificate is extended for nine months from (1.4.2019) to (31.12.2019)
ဤလက်မှတ်အား(၁-၄-၂၀၁၉)ရက်နေ့မှ(၃၁-၁၂-၂၀၁၉)
ရက်နေ့အထိ(၉)လသက်တမ်းတိုးပြုသည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးပြုခြင်း
The VALIDITY of this certificate is extended for six months from (1.7.2021) to (31.12.2021)
ဤလက်မှတ်အား(၁-၇-၂၀၂၁)ရက်နေ့မှ(၃၁-၁၂-၂၀၂၁)
ရက်နေ့အထိ(၆)လသက်တမ်းတိုးပြုသည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးပြုခြင်း
The VALIDITY of this certificate is extended for one year from (1.1.2020) to (31.12.2020)
ဤလက်မှတ်အား(၁-၁-၂၀၂၀)ရက်နေ့မှ(၃၁-၁၂-၂၀၂၀)
ရက်နေ့အထိတစ်နှစ်သက်တမ်းတိုးပြုသည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION (သက်တမ်းတိုးပြုခြင်း)
The VALIDITY of this certificate is extended for one year from (1.1.2022) to (31.12.2022)
ဤလက်မှတ်အား(၁-၁-၂၀၂၂)ရက်နေ့မှ(၃၁-၁၂-၂၀၂၂)
ရက်နေ့အထိတစ်နှစ်သက်တမ်းတိုးပြုသည်။
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION (သက်တမ်းတိုးပြုခြင်း)
The VALIDITY of this certificate is extended for six months from (1.1.2023) to (30.6.2023)
ဤလက်မှတ်အား(၁-၁-၂၀၂၃)ရက်နေ့မှ(၃၀-၆-၂၀၂၃)
ရက်နေ့အထိ(၆)လသက်တမ်းတိုးပြုသည်။
For Director General
(Sa Aung Thu, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးပြုခြင်း
The VALIDITY of this certificate is extended for two months from (1.7.2023) to (31.8.2023)
ဤလက်မှတ်အား(၁-၇-၂၀၂၃)ရက်နေ့မှ(၃၁-၈-၂၀၂၃)
ရက်နေ့အထိ(၂)လသက်တမ်းတိုးပြုသည်။
For Director General
(Sa Aung Thu, Director)
Environmental Conservation Department

APPENDIX C
Public Consultation

Attendant List

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်ရန်ဖိတ်ကြားလွှာလက်ခံစာရင်း

နေ့စွဲ - ရက်၊ ဒီဇင်ဘာလ၊ ၂၀၁၈ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
၁	[illegible]	[illegible]	[illegible]	09-420120587	[signature]
၂	[illegible]	[illegible]	[illegible]	09-420151648	[signature]
၃	[illegible]	[illegible]	[illegible]	01.645072	[signature]
၄	[illegible]	[illegible]	[illegible]	01-645063	[signature] 21.12.2018
၅	Dr. PHYO SU [illegible]	TL	[illegible]	09 749626148	[signature]
၆	[illegible]	[illegible]	[illegible]	01.707550	[signature]

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်သူစာရင်း

နေ့စွဲ - ၂၆ရက်၊ ဒီဇင်ဘာလ၊ ၂၀၁၈ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
၁။	ဒေါ်ခင်ဥမ္မာစိုး	ဦးစီးအရာရှိ	ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ရန်ကုန်တိုင်းဒေသကြီး	09-43135897	[signature]
၂။	ဒေါ်ယုယုကြိုင်	ဒု-ဦးစီးမှူး	ECD၊ ရန်ကုန်မြောက်ပိုင်းခရိုင်	09-951084421	[signature]
၃။	[illegible]	[illegible]	[illegible]	09.420308359	[signature]
၄။	ဦးကျော်ကျော်	[illegible]	Y.C.D.C [illegible]	09 5 69 8 574	[signature]
၅။	ဦးဇော်ဦး	〃	〃	09 952 865 829	[signature]
၆။				0997386666	[signature]
၇။	ထက်ကြက်ဦး	Administration		09952829496	[signature]
၈။	[illegible]	[illegible]	[illegible]	09-400087849	[signature]

Zhejiang Tongli Clothing (Myanmar)
ကုမ္ပဏီလီမိတက်
(CMP) စနစ်ဖြင့် အထည်ချုပ်လုပ်ငန်းနှင့်

Polly HK (Myanmar) ကုမ္ပဏီလီမိတက်
အဝတ်လျှော်လုပ်ငန်း

**ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာ (မူကြမ်း)
အတွက်
သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးပွဲ**

Myanwei Consulting Co., Ltd.
၂၆ရက် ၊ ဒီဇင်ဘာလ၊ ၂၀၁၈ ခုနှစ်

28-Dec-18 1

အစည်းအဝေး အကြောင်းအရာ

၁။ ကုမ္ပဏီအား မိတ်ဆက်ခြင်း

၂။ စက်ရုံအကြောင်းအရာ ဖော်ပြချက်

၃။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်အား မိတ်ဆက်ခြင်း

၄။ သက်ရောက်မှုဆန်းစစ်ခြင်း ရလဒ်များနှင့် ထိခိုက်မှုအဆင့်
သတ်မှတ်ခြင်း

၅။ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်

28-Dec-18 2

(၁) ကုမ္ပဏီအား မိတ်ဆက်ခြင်း

Zhejiang TongLi Clothing (Myanmar) Co., Ltd. And Polly HK (Myanmar) Co., Ltd.

- Zhejiang Tongli သည် မြန်မာနိုင်ငံ ရင်နှီးမြှုပ်နှံမှုကော်မရှင်၏ ခွင့်ပြုမိန့်ကို ၂၀၁၅ ခုနှစ် အောက်တိုဘာလ ၁၄ ရက်နေ့ ရက်စွဲပါ (ခွင့်ပြုမိန့်အမှတ် ၁၀၂၄၄/၂၀၁၅) ရရှိခဲ့ပြီး ဖြစ်ပါသည်။

- Polly HK သည် ရင်းနှီးမြှုပ်နှံမှုလိုင်စင်ကို ၂၀၁၈ခုနှစ်၊ ဇန်နဝါရီလ၊ ၃ရက်နေ့တွင် (ထောက်ခံချက်အမှတ် ရကတ-၀၄၅၅/၂၀၁၈) ဖြင့် ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှုကော်မတီမှ ရရှိပြီးဖြစ်ပါသည်။

လုပ်ငန်းအမျိုးအစား	(CMP) လစဉ်းစနစ်ဖြင့် အထည်အမျိုးမျိုးထုတ်လုပ်သည့်လုပ်ငန်း နှင့် အဝတ်လျှော်လုပ်ငန်း
ရင်းနှီးမြှုပ်နှံမှု	၁၀၀ ရာခိုင်နှုန်း နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု
မြေအမျိုးအစား	စက်မှုနယ်မြေ
မြေစရိယာ	၂.၇၃၃ ဧက
အဆောက်အဦး	အဆောက်အဦး-၁ (ရုံးပိုင်းဆိုင်ရာနှင့်စက်ချုပ်လိုင်း)=၄၀၀'x၁၈၀' အဆောက်အဦး-၂ (ပိတ်ဖျက်လိုင်း၊မီးပူတိုက်ခြင်း၊ထုတ်ပိုးခြင်း)=၂၀၀'x၁၈၀' အဆောက်အဦး-၃ (ဇလျှံဖွတ်ခြင်း)=၄၀၀'x၁၆၀'
မြေကွးနှစ်	နှစ် ၆၀
ပြုပြင်ရေးကာလ	၁နှစ်
လုပ်ငန်းလည်ပတ်သည့်ကာလ	နှစ် ၅၀ ရင်းနှီးမြှုပ်နှံမှု
စက်ရုံလိပ်စာ	မြေကွက်အမှတ်၃၀၁၊ မြေတိုင်းရပ်ကွက်အမှတ် ၂၅၊ နဝဒေးမင်းကြီးလမ်း၊ ရွှေလင်ပန်း စက်မှုဇုန်၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

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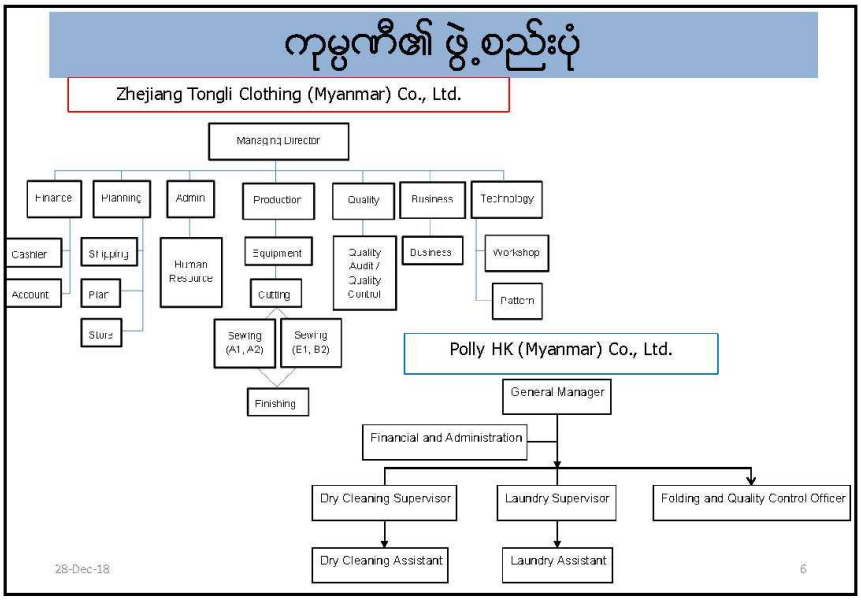
ကုမ္ပဏီ၏ ဖွဲ့စည်းပုံ



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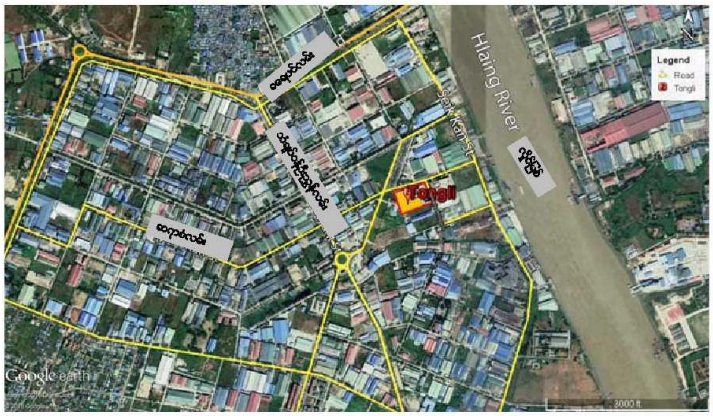
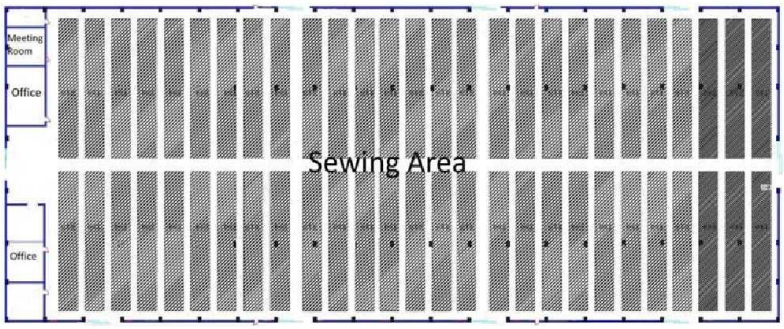
(၂) စက်ရုံအကြောင်းအရာ ဖော်ပြချက်

စက်ရုံတည်နေရာ



အဆောက်အဦး - ၁



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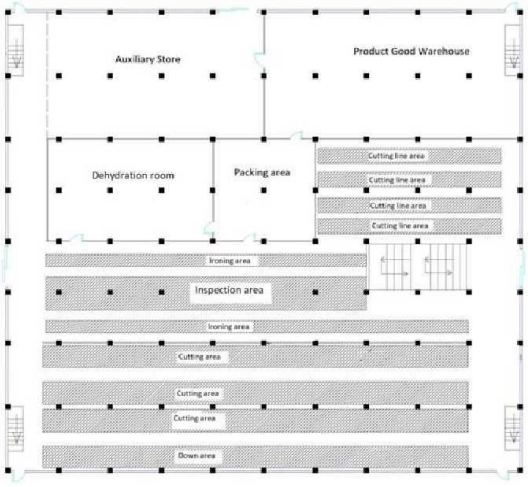
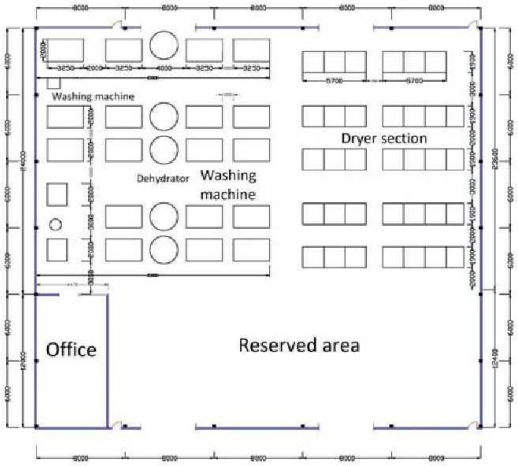
အဆောက်အဦး - ၂



အဆောက်အဦး - ၃



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စက်ရုံအတွက်အသုံးပြုမှု

လူဦးရေ	• ၁,၇၃၈ယောက် (အထည်ချုပ်) • ၅၅ယောက် (အဝတ်လျော်)
ရေအသုံးပြုမှု	420 ft³ (ဝန်ထမ်းသုံးရေ) 1,350 ft³ (မီးသတ်ကန်) တစ်နှစ် ၂၀၁၈ ဇူလိုင်(စက်ရုံတစ်ခုလုံးစာ)
လျှပ်စစ်အသုံးပြုမှု	1,000 kVA Transformer. 300 kVA and 500 kVA generators
ဘွိုင်လာ	4 ton/hr stream ဘွိုင်လာ တစ်လုံး

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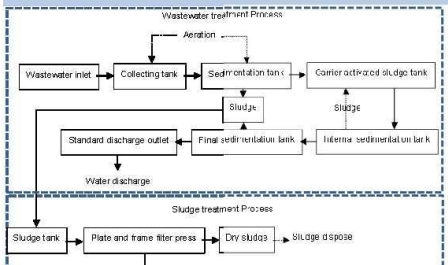
ရေဆိုးသန့်စင်စက်



အသစ်တည်ဆောက်နေမှု
အနေအထား

28-Dec-18

ထုတ်လုပ်မှုအဆင့်ဆင့်


အထည်လိပ်စစ်ဆေးခြင်း


ပိတ်ခြတ်ခြင်း


စက်ချုပ်ခြင်း

Polly HK (Myanmar) Co., Ltd.

Zhejiang Tongli Clothing (Myanmar) Co., Ltd.


အထည်စစ်ဆေးခြင်း

လျှော်ဖွတ်ခြင်း


ထုတ်ပိုးခြင်း


မီးပူတိုက်ခြင်း

စွန့်ပစ်ပစ္စည်းထွက်ရှိမှု

- စက်ရုံမှထွက်သော စွန့်ပစ်ပစ္စည်း
  - ပိတ်ဖြတ်စ ပျမ်းမှု ၅၀ kg (တစ်ရက်)
  - ဘွိုင်လာစွန့်ထုတ်ရေ ၀.၁ m^3 (တစ်ရက်)
  - စွန့်ပစ်ရေ 36 m^3 (တစ်ရက်)
- လုပ်သားမှထွက်သော စွန့်ပစ်ပစ္စည်း
  - အမှိုက်၊ ၀.၃၉ × ၁၇၃၈ = ၆၇၇.၈၂ kg (တစ်ရက်)
  - စွန့်ပစ်ရေ၊ ၀.၁ × ၁၇၃၈= ၁၇၃.၈ m^3 (တစ်ရက်)

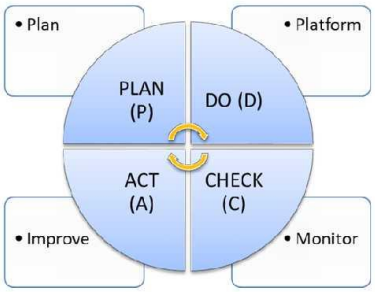


(၃) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်အားမိတ်ဆက်ခြင်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ပြုလုပ်ခြင်း

- ၂၀၁၅ ခုနှစ် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်းများအရ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် ပြုလုပ်ရန် ပြုလုပ်ခဲ့ပါသည်။
- ထို့ကြောင်း EMP အစီအရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော မြန်ဝေ ကွန်စားတင်း ကုမ္ပဏီလီမိတက် (Myanwei Consulting Co., Ltd.)ကို ဌားရမ်းရေးဆွဲခဲ့ပါသည်။
- EMP အစီအစဉ်များကို အကောင်အထည်ဖော်ရန်အတွက် Zhejiang Tongli Clothing (Myanmar) နှင် Polly HK (Myanmar) ကုမ္ပဏီတို့သည် စက်ရုံတွင် ကျန်းမားရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် လျော့ချရေး၊ ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုတို့အတွက် အဖွဲ့အစည်းတစ်ခုထားရှိပြီး စီမံခန့်ခွဲရေးနှင့် ဖောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို ကောင်အထည်ဖော်သွားမည်ဖြစ်သည်။

စီမံခန့်ခွဲမှုပုံစံ



(P) အစီအစဉ်ရေးဆွဲခြင်း

စီမံကိန်းဆောင်ရွက်သည့်ကာလတစ်လျှောက် EMP အစီအစဉ်ကို စံချိန်စံညွှန်းများနှင့်အညီ စနစ်တကျရေးဆွဲခြင်း

(D) အကောင်အထည်ဖော်ခြင်း

စီမံကိန်းမှ EMP အစီအစဉ်များကို အကောင်အထည်ဖော် ဆောင်ရွက်ခြင်း

(C) စောင့်ကြပ်ကြည့်ရှုခြင်း

သက်ဆိုင်ရာပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုသူများမှ စစ်ဆေးမှတ်တမ်းရယူခြင်း။

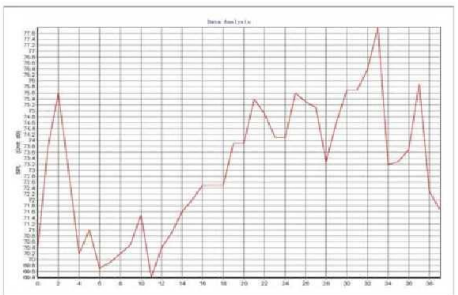
(A) စစ်ဆေးခြင်း

စောင့်ကြပ်ကြည့်ရှုစစ်ဆေးပြီးရလဒ်များကို ပိုမိုကောင်းမွန်သော အခြေအနေသို့ရောက်ရှိရန် ပြုပြင်မွမ်းမံခြင်း ။

(၄) သက်ရောက်မှုဆန်းစစ်ခြင်း ရလဒ်များနှင့် ထိခိုက်မှုအဆင့် သတ်မှတ်ချက်များ

ဆူညံသံတိုင်းတာမှု

- စက်ရုံအတွင်းတိုင်းတာမှု= 3rd September, 2018
- အထည်ချုပ်စက်ရုံ= ၆၉.၇၂ dBA
- အဝတ်လျှော်စက်ရုံ = ၆၆.၅၇ dBA



အလင်းရောင်တိုင်းတာမှု

- စက်ရုံအတွင်းတိုင်းတာမှု= ၃၊ ၉၊၂၀၁၈

No	Location	Measure value(Lux)	Standard*
1	Sewing line 1	404	400
2	Sewing line 2	412	400
3	Sewing line 3	345	400
4	Sewing line 4	341	400
5	Sewing line 5	450	400
	Cutting line 1	448	400
	Cutting line 2	471	400
	Finishing line 1	521	400
	Finishing line 2	385	400
	QC	1447	900 (except 1500 at audit tables)

ရေဆိုးအရည်အသွေးတိုင်းတာမှု

Parameter	Results	Standard	Unit	Remark
pH	7.3	6-9		Normal
Temperature	23	± 3	°C	-
Colour	125	-	HU	-
Turbidity	8	NG	FAU	Clear
Total Dissolved Solid	350	≤ 2000	mg/L	Normal
TSS	9	≤ 50	mg/L	Normal
Total Solids	359	-	mg/L	-
Dissolved Oxygen	7.24	NG	mg/L	-
BOD	46	≤ 50	mg/L	Normal
COD	95	≤ 250	mg/L	Normal
Arsenic	0	≤ 0.1	mg/L	Clear
Chlorine Total Residual	1.72	≤ 0.2	mg/L	Normal

သက်ရောက်မှုအဆင့်သတ်မှတ်ပုံ

စီမံကိန်းကာလတွင် ဖြစ်နိုင်ခြေရှိသော ထိခိုက်မှုများကို အဆင့်သက်မှတ်ချက် (၄) ခုဖြင့် ခွဲခြားသတ်မှတ်ထားပါသည်။ ၄င်းတို့မှာ-

၁။ က-: သိသာသော ဆိုးကျိုးသက်ရောက်မှု

က+: သိသာသော ကောင်းကျိုးသက်ရောက်မှု

၂။ ခ-: ဆိုးကျိုးသက်ရောက်မှု အချို့ရှိခြင်း

ခ+: ကောင်းကျိုးသက်ရောက်မှု အချို့ရှိခြင်း

၃။ ဂ: အကျိုးသက်ရောက်မှု မရှင်းလင်းသဖြင့် ထပ်မံလေ့လာသင့်သည်

၄။ ဃ: အကျိုးသက်ရောက်မှု မရှိသလောက်ဖြစ်၊ ထပ်မံလေ့လာရန်မလို

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ညစ်ညမ်းမှု

လေထုအရည်အသွေး	**ခ-**	ဘွိုင်လာ၊ မီးစက်နှင့် စက်ရုံသုံးယာဉ်များကြောင့် ပတ်ဝန်းကျင်လေထုကို ထိခိုက်စေပါသည်။ ထွက်သော အခိုးအငွေ့များတွင် SO, NO, CO, VOC and PM များပါဝင်ခြင်းကြောင့် ပတ်ဝန်းကျင်ကို ထိခိုက်မှုဖြစ်စေပါသည်။
ရေထုအရည်အသွေး	ခ-	စက်ရုံ၏ ကုန်ပစ္စည်းထုတ်လုပ်မှုမှ ရေဆိုးထွက်ရှိခြင်းမရှိ၊ ဝန်ထမ်းများအသုံးပြုပြီးသော ရေသာထွက်မည်ဖြစ်သောကြောင့်ပတ်ဝန်းကျင်အပေါ် ထိခိုက်မှုမရှိကြောင်းတွေ့ရှိခဲ့ပါသည်။
ဆူညံမှု	ဂ	စက်ရုံအတွင်းဆူညံသံဝိုင်းတာမှုရလဒ်များအရ အနည်းငယ်ဆူညံမှုရှိကြောင်းတွေ့ရှိခဲ့ပါသည်။ ထိုဆူညံမှုမှာလဲ စက်ရုံအတွင်း လုပ်ငန်းခွင်အတွင်းသာဖြစ်ပြီး စက်ရုံပြင်ပ ပတ်ဝန်းကျင်ကိုမထိခိုက်နိုင်ပါ။
စွန့်ပစ်အမှိုက်	ခ-	စက်ရုံမှထွက်ရှိသောအမှိုက်မှာ ပိတ်ဖြတ်စများ၊ ပိတ်လိပ်ရာတွင်အသုံးပြုသော စက္ကူလိပ်များ၊ အထည်ထုတ်ပိုးရာတွင် အသုံးပြုသော ပလက်စတစ်အိတ်၊ စက္ကူဖာ၊ အစရှိသည်တို့ဖြစ်ပါသည်။ ဝန်ထမ်းများမှ ထွက်ရှိသော ရေသန့်ဘူးခွံ ပလက်စတစ်အိတ်၊ စက္ကူ၊ tissue၊ စားကြွင်းစားကျန်၊ အစရှိသော လွယ်သုံးအမှိုက်များ ဖြစ်ပါသည်။

ဝန်ထမ်းကျန်းမာရေးနှင့် အန္တရာယ်ကင်းရှင်းရေး

ကူးစက်ရောဂါ။ ဥပမာ ARI, Flu, etc.	ဂ	ဖြစ်နိုင်ခြေနည်းပါးသော်လည်း လုပ်သားအင်အားဖြင့် လည်ပတ်သော စက်ရုံအမျိုးအစား ဖြစ်သောကြောင့် စက်ရုံတွင် ကျန်းမာရေး အသိပညာပေးမှုနှင့် ကျန်းမာရေး စောင့်ရှောက်မှုရှိရန် လိုအပ်ကြောင်း တွေ့ရှိခဲ့ပါသည်။
လုပ်ငန်းခွင်အန္တရာယ် ကင်းရှင်းရေးနှင့် ကျန်းမာရေး	ဂ	ထိခိုက်မှုနည်းသော လုပ်ငန်းအမျိုးအစားဖြစ်သော်လည်း လူမှုဖူလုံရေးမှာ ညွှန်ကြားထားသော စည်းမျဉ်းစည်းကမ်းများကို လိုက်နာရမည်ဖြစ်ပါသည်။
အနီးနားဝန်းကျင် အန္တရာယ်ကင်းရှင်းရေးနှင့် ကျန်းမာရေး	ဃ	ထိခိုက်မှုတစ်စုံတရာမတွေ့ရပါ။

လူမှုဘဝ အခြေအနေ

စားဝတ်နေရေးနှင့် စီပွားရေး	က+	လုပ်သားပြည်သူ အလုပ်အကိုင်အခွင့်အလမ်းများ တိုးပွားလာခြင်း၊ သာမန်လုပ်သားဘဝမှ ကျွမ်းကျင်ဝန်ထမ်းဘဝသို့ တက်လှမ်းနိုင်ခြင်း အစရှိသည့်ကောင်းကျိုးများရရှိစေနိုင်သည်။
ကလေးလုပ်သား	ဃ	စက်ရုံတွင် ကလေးလုပ်သားအသုံးပြုမှု လုံးဝမရှိပါ။ မြန်မာနိုင်ငံ၏ အလုပ်သမား ဥပဒေအရ ၁၈ နှစ် အထက်လုပ်သား ခန့်အပ်ခွင့်ရှိကြောင်းကိုလည်း သိရှိပြီးဖြစ်သည်။ ထို့ကြောင့် စက်ရုံတွင် ကလေးလုပ်သား ခန့်ထားခွင့်ကို တားမြစ်ထားပါသည်။
ယဉ်ကျေးမှုနှင့် ရှေးဟောင်းအမွေအနှစ်	ဃ	စက်ရုံသည် လှိုင်သာယာမြို့နယ်ရှိ ရွှေလင်ပန်းစက်မှုဇုန်တွင် တည်ရှိသောကြောင့် ထိခိုက်မှုတစ်စုံတစ်ရာ မတွေ့ရပါ။
သဘာဝပတ်ဝန်းကျင်အခြေအနေ	ဃ	စက်ရုံသည် လှိုင်သာယာမြို့နယ်ရှိ ရွှေလင်ပန်း စက်မှုဇုန်တွင် တည်ရှိသောကြောင့် ထိခိုက်မှုတစ်စုံတစ်ရာ မတွေ့ရပါ။

အရေးပေါ်အခြေအနေ

မီးဘေးအန္တရာယ်	ခ-	မတော်တဆမှု၊ ပေါ့ဆမှု၊ လျှပ်စစ်၊ အစရှိသည်တို့မှ ဖြစ်ပေါ်စေနိုင်ပါသည်။
ရေကြီးရေလျှံမှု	ဂ	မိုးကြီးခြင်း၊ မုန်တိုင်းတိုက်ခြင်း စသည်တို့ ဖြစ်ပေါ်စေနိုင်ပါသည်။
ငလျင်	ဂ	ငလျင်ဒဏ်မခံနိုင်သော အဆောက်အဦတည်ဆောက်မှုပုံစံကြောင့် ထိခိုက်ပျက်စီးမှုဖြစ်စေနိုင်ပါသည်။
တခြားကဏ္ဍ		
ကမ္ဘာကြီးပူနွေးလာမှု	ခ-	စက်ရုံသုံးယာဉ်များ၊ မီးစက် အစရှိသော စွမ်းအင်လောင်ကျွမ်းခြင်းတို့ကြောင့် ဖန်လုံအိမ်ဓါတ်ငွေ့ ထုတ်လွှတ်မှုဖြစ်စေပြီး ကမ္ဘာကြီးပူနွေးမှုဖြစ်စေသည်။

(၅) ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်

ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို လျော့နည်းစေရန် စီမံခန့်ခွဲမှုအစီအစဉ်များ

၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၂။ ဆူညံမှုထိန်းခြင်းဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၃။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၄။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၅။ အရေးပေါ်တုံ့ပြန်ရေး အစီအစဉ်

၆။ လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan

၇။ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်

၈။ EMP အတွက် ငွေကြေးမျှဝေသုံးစွဲမှု အစီအစဉ်

လေထုညစ်ညမ်းမှုလျော့ချရေးနှင့် စီမံခန့်ခွဲမှု အစီအစဉ်

- စက်ရုံတွင် မီးစက်အတွက် အမြင့်ပေ ၅၀ ရှိ မီးခိုးခေါင်းတိုင်ထားရှိခြင်း၊
- ခေါင်းတိုင်အား အမြဲကောင်းမွန်သော အခြေအနေတွင် ပြုပြင်ထားရှိခြင်း၊
- NOx ထွက်ရှိမှု နှုန်းနဲသော နည်းပညာမြှင့် မီးစက်ကို အသုံးပြုခြင်း၊
- စက်ရုံတွင် (open burning) မီရှို့ခြင်းမပြုလုပ်ရန် တားမြစ်ထားခြင်း၊
- ဖုန်ထွက်သောနေရာတွင် အလုပ်လုပ်သော လုပ်သားများအတွက် နှာခေါင်းစီးများ ဝတ်ဆင်စေခြင်း၊
- စက်ရုံအတွင်းနှင့် အနီးအနားတွင် သစ်ပင်စိုက်ပျိုးခြင်းဖြင့် Carbon ထွက်ရှိမှုကို လျော့ချစေပြီး လေထုညစ်ညမ်းမှုကို လျော့ချစေပါသည်။

ဆူညံမှုလျော့ချရေးနှင့် စီမံခန့်ခွဲမှု

- ဆူညံသံများသော မီးစက်ခန်းနှင့် လေမှုတ်စက်ခန်း အစရှိသည်တို့ကို သီးသန့်ခန်းထားရှိခြင်း
- လုံလောက်သော တစ်ကိုယ်ရည်သုံး ကာကွယ်ရေးပစ္စည်းများ ထောက်ပံ့ပေးခြင်း
- လုပ်သားများအား သင့်လျော်သော အခြေခံ သင်တန်းများပို့ချပေးခြင်း

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အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲခြင်း

- စက်ရုံမှ မည်သည့်အမှိုက်ကိုမဆို အနီးအနားရှိ ရေမြောင်း၊ ရေကန်၊ ချောင်း၊ မြစ် အစရှိသည့်နေရာများတွင် မစွန့်ပစ်ရန်တားမြစ်ထားသည်။
- စက်ရုံတွင် စနစ်တကျ အမှိုက်စွန့်ပစ်ရန် အမှိုက်ပုံးများထားရှိပေးသည့်အပြင် စနစ်တကျစွန့်ပစ်ရန် တိုက်တွန်းထားခြင်း
- စက်လိုင်းများတွင်လည်း ပိတ်စများပစ်ရန် ပုံးများထားရှိခြင်း
- အမှိုက်ပုံးများကိုလဲ အလွယ်တကူစွန့်ပစ်နိုင်ရန် သင့်တင့်သောနေရာများတွင် ထားပေးခြင်း
- အမှိုက်များကို စည်ပင်သာယာရေးကော်မတီသို့ အကြောင်းကြားပြီး တစ်ပတ်လျှင် နှစ်ကြိမ်စွန့်ပစ်ပါသည်။

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ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု

- မိလ္လာကန်နှင့် စွန့်ပစ်ရေမြောင်းများကို အဖုံးအကာများဖြင့် ထားရှိခြင်း
- စက်ရုံရေမြောင်းများကို အမှိုက်စွန့်ပစ်မှု မရှိစေရန်တာမြစ်ခြင်းနှင့် ရေစီးရေလာကောင်းမွန်ရန် စီစဉ်ထားခြင်း
- ရေဆိုးသန့်စင်စက်ထားရှိခြင်းနှင့် သန့်စင်စက်မှထွက်ရှိလာသောရေကို ၆ လတစ်ကြိမ်တိုင်းတာခြင်း
- ရေအရည်အသွေးတိုင်းတာမှု ရလဒ်များကို အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေးထုတ်လွှတ်မှု လမ်းညွှန်ချက်နှင့် အညီကိုက်ညီမှုရှိမရှိ လေ့လာဆန်းစစ်ခြင်း
- သန့်စင်စက်မှထွက်ရှိသောအနယ်များကိုလဲ YCDC သို့ခေါ်ယူစွန့်ပစ်ခြင်း

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အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်

- အရေးပေါ်တုံ့ပြန်ရေး အစီအစဉ်အတွက် စက်ရုံတွင် ကောင်းမွန်စွာစီမံထားပြီးဖြစ်သည်။
- မီးဘေးကာကွယ်ရေးအတွက် မီးသတ်ဆေးဘူး၊ မီးသတ်ပိုက်၊ အရေးပေါ်အချက်ပေးစနစ်၊ အရေးပေါ်ဆက်သွယ်နိုင်သည့် လိပ်စာများကို နေရာတိုင်းတွင် တပ်ဆင်ထားပြီးဖြစ်သည်။
- အရေးပေါ်အခြေအနေတွင်လည်း စနစ်တကျပြုလုပ်နိုင်ရန် သင်တန်းများလည် ပို့ချပေးမည်ဖြစ်သည်။
- စက်ရုံတွင် အရေးပေါ်ကာကွယ်ရေးအဖွဲ့၊ မီးသတ်အဖွဲ့ စသည့်ဖြင့် ဖွဲ့စည်းခြင်း၊ ဆွေးနွေးခြင်း၊ အသိပညာပေးခြင်း၊ စသည်ဖြင့် ပြုလုပ်ရန်။

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လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု (CSR) အစီအစဉ်

Zhejiang Tongli Clothing (Myanmar) နှင့် Polly HK (Myanmar) ကုမ္ပဏီတို့တွင် CSR အတွက် အမြတ်ငွေ၏ ၂ % နှုန်းကို ကျန်းမာရေး၊ ပညာရေး၊ နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေး၊ ပတ်ဝန်းကျင် ကာကွယ်စောင့်ကြပ်ခြင်းတို့အတွက် အသုံးပြုသွားမည် ဖြစ်သည်။

ကျန်းမာရေး	ဝန်ထမ်းများ ကျန်းမာရေး စောင့်ရှောက်မှု	၀.၆ %
ပညာရေး	ပညာရေးကဏ္ဍ မြှင့်တင်ရေးနှင့် လူ့အခွင့်အရေး အသိပညာပေးခြင်း	၀.၆ %
နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေး	ဒေသတွင်း လိုအပ်သကဲ့သို့ လှူဒါန်းခြင်း	၀.၄ %
ပတ်ဝန်းကျင် ကာကွယ် စောင့်ကြည့်ရေး	ပတ်ဝန်းကျင် အရည်အသွေးများ ထိန်းသိမ်းရန်	၀.၄ %

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စောင့်ကြပ်ကြည့်ရှုရေး

ကဏ္ဍ	အမျိုးအစား	နေရာ	ကြိမ်နှုန်း	တာဝန်ရှိသူ
လေအရည်အသွေး	SO_2, NO_x, CO_2, CO and PM	ဘွိုင်လာအနီး	တစ်နှစ် တစ်ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာအကြံပေးနှင့် ပူးပေါင်း၍ (စက်ရုံတာဝန်ရှိသူ)
ဆူညံမှု	ဆူညံမှု ပမာဏ	စက်ရုံလုပ်ငန်းခွင်အတွင်း	တစ်နှစ် နှစ်ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာအကြံပေးနှင့် ပူးပေါင်း၍ (စက်ရုံတာဝန်ရှိသူ)
စွန့်ပစ်ပစ္စည်း	စက်ရုံမှထွက်သည့် အမှိုက် ဝန်ထမ်းစွန့်ပစ်အမှိုက်	စက်ရုံတွင် သာယာစွန့်ပစ်သည့် နေရာနှင့် ပြင်ပသို့စွန့်ပစ်သည့် စစ်တမ်း	တစ်ပတ် နှစ်ကြိမ်	စက်ရုံတာဝန်ရှိသူ
ရေအရည်အသွေး	NEQG မှသက်မှတ်ထားသော parameter များ	သန့်စင်စက်မှ ထွက်သောရေ	လစဉ်	စက်ရုံတာဝန်ရှိသူ
လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေး	စစ်တမ်းကောက်ယူမှု	စက်ရုံအတွင်း	လစဉ်	စက်ရုံတာဝန်ရှိသူ
စွမ်းအင်	လျှပ်စစ်စွမ်းအင်၊ ရေအသုံးပြုမှု၊ လောင်စာ အသုံးပြုမှု	စက်ရုံအတွင်း	နေ့စဉ်	စက်ရုံတာဝန်ရှိသူ

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EMP အတွက် ငွေကြေးမျှဝေသုံးစွဲမှု

အချိုးအစား	နှုန်း	သုံးစွဲငွေ (USD)
လျှော့ချရေးအစီအစဉ်		
စက်ရုံတွင်လေဝင်လေထွက်စနစ်	တစ်နှစ်တစ်ကြိမ်	၂၀၀ တစ်နှစ်
သစ်ပင်ပန်းမန်ဝိုက်ပျိုးခြင်း	သုံးလ တစ်ကြိမ်	၇၀ တစ်ကြိမ်
အမှိုက်စွန့်ပစ်မှု	တစ်လတစ်ကြိမ်	၁၀၀၀ တစ်နှစ်
တစ်ကိုယ်ရေကာကွယ်ရေးပစ္စည်း (PPE)	တစ်နှစ်နှစ်ကြိမ်	၁၅၀ တစ်ကြိမ်
လုပ်သားဆေးစစ်ခြင်းနှင့် ကျန်းမာရေးစောင့်ရှောက်မှု	တစ်နှစ်တစ်ကြိမ်	၅၀၀ တစ်နှစ်
အရေးပေါ်အစီအစဉ်		
မီးသတ်ဆေးဘူး	တစ်လတစ်ကြိမ်	၃၀၀ တစ်လ
မီးသတ်ပိုးစနစ်	တစ်လတစ်ကြိမ်	
ရေးဦးပြုစုဆေးသေတ္တာ	တစ်လတစ်ကြိမ်	

ကျေးဇူးအထူးတင်ပါသည်။

APPENDIX D
Lists of Commitment

Zhejiang Tongli Clothing Myanmar Company Limited ၏ အဝတ်အထည်အမျိုးမျိုး ချုပ်လုပ်ခြင်းလုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းကြောင့် ဖြစ်ပေါ်လာနိုင်သော သဘာဝပတ်ဝန်းကျင်၊ လူမှုဘဝ နှင့် ကျန်းမာရေး ထိခိုက်မှုများရှိခဲ့ပါက လျော့ချရေး၊ စီမံခန့်ခွဲရေး နှင့် တားဆီးရေး အစီအစဉ် များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (Environmental Management Plan – EMP) တွင် ပါဝင်ရမည့် အချက်များကို အကောင်အထည်ဖော် စီမံဆောင်ရွက်သွားမည် ဖြစ်ကြောင်း၊ အောက်ဖော်ပြပါ ဇယားဖြင့် အကျဉ်းချုပ် စာရင်းပြုစု ဖော်ပြထားပါသည်။

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
နိဒါန်း	၁	**ရည်ရွယ်ချက်** ▪ လုပ်ငန်းလုပ်ဆောင်မှုများကြောင့်ဖြစ်ပေါ်လာသည့် ပတ်ဝန်းကျင်ထိခိုက်မှု အပေါ်လျော့ချရန် ▪ ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမည့်အစီအစဉ်အား အကောင်အထည်ဖော်ခြင်း **ရည်မှန်းချက်** ▪ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုစနစ်သည် ပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်ကို စဉ်ဆက်မပြတ် ပြန်လည်သုံးသပ်ခြင်း၊ စွမ်းဆောင်ရည်မြှင့်တင်ခြင်း ဖြင့် အောင်မြင်စေရန် လုပ်ဆောင်ပေးသော စနစ်တစ်ခုဖြစ်ပါသည်။	

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		▪ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်ကို မြှင့်တင်ရန် ပြန်လည်သုံးသပ်ခြင်းနှင့် အကဲဖြတ်ခြင်း ▪ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုစနစ်သည် သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာစွမ်းဆောင်ရည်ကို မြှင့်တင်ရန် စဉ်ဆက်မပြတ်ပံ့ပိုးပေးသည်။	
	၁.၁	**အဆိုပြုလုပ်ငန်း၏နောက်ခံအကြောင်းအရာ** Zhejiang Tongli Clothing Myanmar Company Limited သည် CMP စနစ်ဖြင့် အဝတ်အထည်အမျိုးမျိုးကိုချုပ်လုပ်ပြီး တရုတ်နိုင်ငံသို့တင်ပို့ရောင်းချသွားမည်ဖြစ်သည်။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မတီမှထောက်ခံချက်အမှတ်(ခွင့်ပြုမိန့်အမှတ်၁၀၂၄/၂၀၁၅) သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏စာအမှတ် ရက-၁/၃/၄ (အီးအိုင်အေ) (၄၁၁/၂၀၂၀)ဖြင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ရေးဆွဲရန် သဘောထားပြန်ကြားခြင်း	

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
မူဝါဒ၊ ဥပဒေနှင့် အဖွဲ့အစည်းဆိုင်ရာမူဘောင်များ	၂	ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂) ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး နည်းဥပဒေ (၂၀၁၄) ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၂၀၁၅) မြန်မာနိုင်ငံမှ ချမှတ်ထားသော စက်ရုံနှင့် သက်ဆိုင်သည့် အခြားလိုက်နာဆောင်ရွက်ရမည့် လုပ်ထုံးလုပ်နည်း၊ ဥပဒေ၊ နည်းဥပဒေ နှင့် မူဝါဒများ အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅) နှင့် နိုင်ငံတကာ ပတ်ဝန်းကျင်ဆိုင်ရာ စံသတ်မှတ်ချက်များနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုဆိုင်ရာ လမ်းညွှန်ချက်များ	အခန်း (၂)
	၃	မြေကွက်အမှတ် (၈၁၊၈၂)အနက်မှ မြေကွက်အမှတ်)၈၁(၊ မြေတိုင်း ရပ်ကွက်အမှတ် ၅၁၊ သာဓုကန် စက်မှုဇုန်၊ ရွှေပြည်သာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။ မြေဧရိယာ ၂.၄၀၀၅ ဧက (၉၇၁၄.၄၇၉ စတုရန်းမီတာ)	အခန်း(၃)
	၃.၁	**အဆိုပြုလုပ်ငန်း၏ရည်ရွယ်ချက်**	အခန်း၃

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
စီမံကိန်းအကြောင်းအရာဖော်ပြချက်		Standard Fiber မှ ကုန်ကြမ်းပစ္စည်းများကို ရယူပြီး CMP စနစ်ဖြင့် ချုပ်လုပ်၍ အဆိုပါ လုပ်ငန်းသို့ပြန်လည်ပေးပို့သွားမည်ဖြစ်သည်။	(၃.၂)
	၃.၂	အဆိုပြုလုပ်ငန်းသည် ပြည်တွင်းလုပ်သား ၈၀၀ ဦးနှင့် ပြည်ပမှ ပညာရှင် ၁၀ ဦးဖြင့် အဝတ်အထည်အမျိုးမျိုးကို ချုပ်လုပ်သွားမည်ဖြစ်သည်။	အခန်းခွဲ (၃.၃.၂)
	၃.၃	အဆိုပြုလုပ်ငန်း၏ အဓိကကုန်ကြမ်းမှာ ချည်မျှင်ဖြစ်ပြီး အခြားဆက်စပ်ပစ္စည်းများကို တရုတ်နိုင်ငံမှ တင်သွင်းသွားမည်ဖြစ်သည်။	အခန်းခွဲ (၃.၄.၁)
	၃.၄	အဆိုပြုလုပ်ငန်း၏ထုတ်ကုန်မှာ အမျိုးသားဝတ်အနောက်တိုင်းဝတ်စုံ၊ရုပ်အင်္ကျီ၊ ဂျာကင်၊ ကုတ်အင်္ကျီအရှည်၊ ဘောင်းဘီတို့ဖြစ်ပါသည်။	အခန်းခွဲ (၃.၄.၄)
ပတ်ဝန်းကျင် အရည်အသွေးတိုင်းတာမှု	၄	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅) နှင့် နိုင်ငံတကာ ပတ်ဝန်းကျင်ဆိုင်ရာ စံသတ်မှတ်ချက်များနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုဆိုင်ရာ လမ်းညွှန်ချက်များကို အခြေခံလေ့လာတိုင်းတာထားပါသည်။	အခန်း (၄)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
ဆူညံသံ	၄.၁	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅)၏ အမြင့်ဆုံးလက်ခံနိုင်သည့် ဆူညံသံအဆင့် (Noise level) လမ်းညွှန်သတ်မှတ်ချက် စက်မှုဇုန် ဇရိယာတွင် (70 One hour LAeq (dBA)) ဖြင့်နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၂.၂)
လေအရည်အသွေး	၄.၂	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် (၂၀၁၅)၏ ထုတ်လွှတ်အခိုးအငွေ့ (Air emissions) လမ်းညွှန်သတ်မှတ်ချက် (PM10, PM2.5, O3, NO2, SO2 နှင့် CO) တို့ဖြင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၂.၃)
စက်ရုံတွင်း အလင်းရောင် ရရှိမှု	၄.၃	Illumination and Limiting Glare Index based on IES Code, 1968 ဖြင့် နှိုင်းယှဉ် ဖော်ပြထားပါသည်။	အခန်းခွဲ (၄.၂.၄)
ဒေသဆိုင်ရာအချက်အလက်များ	၄.၄	အဆိုပြုလုပ်ငန်းတည်ရှိသည့် ရွှေပြည်သာမြို့နယ်၏ဒေသဆိုင်ရာအချက်အလက်များ	အခန်းခွဲ (၄.၃)

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
ထိခိုက်မှုဆန်းစစ်ခြင်းနှင့်လျော့ချရေးနည်းလမ်းများ	၅	**ထိခိုက်မှုဆန်းစစ်ခြင်း** • ကောင်းကျိုး အလုပ်ကိုင်အခွင့်အလမ်းများပေါများလာခြင်း၊ လမ်းပန်းဆက်သွယ်ရေးကောင်းမွန်လာခြင်း၊ နည်းပညာများတိုးတက်လာခြင်း • ဆိုးကျိုး သဘာဝပတ်ဝန်းကျင်အရင်းအမြစ်များ၊ ဂေဟစနစ်အရင်းအမြစ်များ၊ လူသားများအပေါ်ထိခိုက်မှုများ၊ အမှိုက်စွန့်ပစ်ခြင်းကြောင့်ထိခိုက်မှုများ	အခန်း(၅)
	၅.၁	**ဆန်းစစ်ခြင်းနည်းလမ်း** သိသာထင်ရှားသောသက်ရောက်မှု=(ပမာဏ+အချိန်+ကျယ်ပြန့်မှု) × ဖြစ်နိုင်ခြေ	အခန်းခွဲ (၅.၂)
ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု	၆	Zhejiang Tongli Clothing Myanmar Company Limited ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ် (EMP) အတွက် စက်ရုံစီမံခန့်ခွဲရေးအဖွဲ့၊	အခန်း (၆)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		အလုပ်သမားများ၊ ဒေသခံလူထုများ၏ အမြင်၊ သက်ဆိုင်ရာ တာဝန်ရှိသူတို့၏အကြံပြုချက်များနှင့် ကွင်းဆင်းလေ့လာသူများမှ ဆွေးနွေးတိုင်ပင်မှုတို့ အပေါ် အခြေခံပြီး ဆောင်ရွက်သွားမည် ဖြစ်သည်။ EMP တွင် စက်ရုံအတွင်း ဘေးအန္တရာယ် ကင်းရှင်းရေးစီမံခန့်ခွဲမှုများကို လိုက်နာရန်အတွက် ထည့်သွင်းဖော်ပြထားပါသည်။	
လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်များ	၆.၁	ကာဗွန်ဒိုင်အောက်ဆိုက်လျော့ချရန်အတွက် စက်ရုံအနီးအတွင်း သစ်ပင်ပန်းပင်များစိုက်ပျိုးရမည်။ အဆိုပြုလုပ်ငန်းဇရိယာအတွင်း စွန့်ပစ်ပစ္စည်းများ မီးရှို့ခြင်းကို တားမြစ်ထားမည်။ လေထုညစ်ညမ်းမှုလျော့ချရန် လုပ်ငန်းသုံးယာဉ်များ၊ မီးစက်များနှင့် လုပ်ငန်းဆိုင်ရာ စက်ပစ္စည်းများကို ပုံမှန်စောင့်စစ်ဆေးရမည်။ ပတ်ဝန်းကျင်အပေါ် မီးခိုးထွက်ရှိမှုလျော့နည်းစေရန် မီးခိုးခေါင်းတိုင်များ တပ်ဆင်ရမည်။	အခန်း၌ (၆.၁)

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
		မော်တော်ယာဉ်များ၊ ရေစုပ်စက်များနှင့် မီးစက်များကို ပုံမှန် ပြုပြင်၊ ထိန်းသိမ်းထားရှိရမည်။	
ဆူညံသံထွက်ရှိမှု	၆.၂	မီးစက်ခန်းများထားရှိခြင်းနှင့် အခြားသက်ဆိုင်သည့် ပစ္စည်းများအား စနစ်တကျ ထိန်းသိမ်းထားရှိရမည်။ ဝန်ထမ်းများကို သက်ဆိုင်ရာကိစ္စရပ်များနှင့် ပတ်သက်၍ သင့်တော်သော သင်တန်းများပေးခြင်း၊ ဆူညံသံထွက်ရှိသည့်နေရာများတွင် PPE များကို ဝတ်ဆင်စေခြင်း	အခန်းခွဲ (၆.၂)
အမှိုက်စွန့်ပစ်မှု	၆.၃	စက်ရုံအတွင်း အမှိုက်ပုံးများထားရှိခြင်း သတ်မှတ်ထားသောနေရာတွင်သာ အမှိုက်စို၊ အမှိုက်ခြောက်များ ခွဲခြားစွန့်ပစ်ခြင်း အမှိုက်များကို ရန်ကုန်စည်ပင်သာယာရေးကော်မတီနှင့် ချိတ်ဆက်၍စွန့်ပစ်ခြင်း	အခန်းခွဲ (၆.၃)
စွန့်ပစ်အရည်	၆.၄	ဆီကန်၊ မိလ္လာကန်များကို ပုံမှန်စစ်ဆေးခြင်း၊ သန့်စင်ခြင်းများပြုလုပ်ခြင်း	အခန်းခွဲ

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
			(၆.၄)
မီးဘေးအန္တရာယ်	၆.၅	မီးအန္တရာယ်အရေးပေါ်အခြေအနေများအတွက် စက်ရုံအတွင်းတွင် မီးသတ်ဆေးဘူးများ၊ မီးသတ်ရေပိုက်များ၊ မီးသတ်ရေကန် ထားရှိရမည်။ အရေးပေါ်ထွက်ပေါက်များနှင့် စုရပ်နေရာများအား လမ်းညွှန်ပြ ထားရှိရမည်။ မီးသတ်ရေလှောင်ကန်များ၊ မီးငြိမ်းသတ်ရေးကရိယာများကို ပုံမှန်စစ်ဆေးခြင်း စက်ရုံအတွင်း အရေးပေါ်အချက်ပေးစနစ်များ တပ်ဆင်ခြင်း အရေးပေါ်ထွက်ပေါက်များတစ်လျောက်တွင် စက်ပစ္စည်းများနှင့် အခြားသောကုန်ပစ္စည်းများ ပိတ်ဆို့ထားခြင်း မရှိရန် စီစဉ်ထားရမည်။	အခန်းခွဲ (၆.၅)
လုပ်ငန်းခွင်ထိခိုက်မှုနှင့် ကျန်းမာရေး	၆.၆	ရှုးဦးပြုစုနည်း သင်တန်းများ၊ ဘေးအန္တရာယ်ကင်းရှင်းရေး လေ့ကျင့်မှု၊ မီးငြိမ်းသတ်နည်းသင်တန်းများ၊ အခြားလိုအပ်သော လေ့ကျင့်မှုများ၊ စက်ပစ္စည်းများကို စနစ်တကျကိုင်တွယ်မှုများအား သင်တန်းပေးခြင်း လုပ်ငန်းခွင်အတွင်း အလုပ်သမားများ အလင်းရောင်ကောင်းစွာရရှိစေရန်နှင့်	အခန်းခွဲ (၆.၆)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		အမြင်အာရုံမထိခိုက်စေရန် အလင်းရောင်များကို လုံလောက်စွာ ထားရှိခြင်း ဌာနတစ်ခုချင်းစီအတွက် တစ်ကိုယ်ရေသုံးကာကွယ်ရေးပစ္စည်းများ ထောက်ပံ့ပေးခြင်း လျှပ်စစ်အန္တရာယ်ကာကွယ်ရန်အတွက် လျှပ်စစ်ထိန်းသိမ်းရေးဝန်ထမ်းများအား ထားရှိ၍ အဆိုင်းခွဲ၍ ပုံမှန်စစ်ဆေးကာကွယ်မှုများပြုလုပ်စေခြင်း ဝန်ထမ်းများ၏ကျန်းမာရေးအတွက် စက်ရုံတွင် စီမံခန့်ခွဲခြင်း လုပ်သားများအတွက် ဓနာရီအတွင်း လက်ခံနိုင်သည့် အမြင့်ဆုံးဆူညံမှုနှုန်းမှာ 90 dB(A) ဖြစ်သည်၊ ထို့ကြောင့် အသံဆူညံသည့်နေရာများတွင် အသံလုံသည့် နားကြပ်များ နားအကာအကွယ်ပစ္စည်းများ တပ်ဆင်စေခြင်း	
အန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်း	၆.၇	အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းများ သိမ်းဆည်းမှုအား ပုံမှန်စောင့်ကြပ်စစ်ဆေးခြင်း လုပ်ငန်းခွင်ကျန်းမာရေး လုံခြုံမှုနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ လိုအပ်ချက်များနှင့် အညီ ဓာတုပစ္စည်းများကို စနစ်တကျစွန့်ပစ်ခြင်း ဓာတုပစ္စည်းသိုလှောင်သည့် ပုံးခွံများကို စနစ်တကျပြန်လည်အသုံးပြုခြင်း	အခန်းခွဲ (၆.၇)

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
		(သို့မဟုတ်) စနစ်တကျစွန့်ပစ်ခြင်း အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းများကို ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ (သို့မဟုတ်) လိုင်စင်ရ အမှိုက်စွန့်ပစ်ရေးဆိုင်ရာ အဖွဲ့အစည်းများ (ဥပမာ DOWA or YCDC)နှင့် ချိတ်ဆက်၍ စွန့်ပစ်ခြင်း	
စွမ်းအင်	၆.၈	အပူနှင့် အအေးထိန်းရန်အတွက် အချိန်ကန့်သတ်သည့်ကရိယာနှင့် သာမိုစတပ်များတပ်ဆင်ခြင်း စွမ်းအင်ချွေတာသောကရိယာများတပ်ဆင်ခြင်း အသုံးမပြုသည့် အချိန်တွင် မီးပိတ်ထားခြင်း၊ စက်ပစ္စည်းများ ရပ်နားထားခြင်း	အခန်းခွဲ (၆.၈)
အရေးပေါ် အခြေအနေ	၆.၉	မီးဘေး၊ ငလျင်၊ ရေလွှမ်းမိုးမှု၊ မုန်တိုင်း နှင့်အခြားအရေးပေါ်ကိစ္စများကို ပို၍သင့်တော်သော စီမံခန့်ခွဲမှုများပြုလုပ်ခြင်း စက်ရုံ၏ ကဏ္ဍာတစ်ခုချင်းတိုင်းတွင် မီးငြိမ်းသတ်ရေးကရိယာများနှင့် မီးငြိမ်းသတ်ရေးစနစ်များ ထားရှိခြင်းနှင့် စစ်ဆေးခြင်း မီးဘေးထွက်ပေါက်၊ အရေးပေါ်ထွက်ပေါက် အစရှိသည်တို့ကို	အခန်းခွဲ (၆.၉)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		အလုပ်သမားများနှင့် တိုင်ပင်ဆွေးနွေးပြီး အသေးစိတ်အကဲဖြတ်ခြင်း မီးငြိမ်းသတ်ခြင်းအား ပံ့မှန်လေ့ကျင့်ထားရှိခြင်း ငလျင်လှုပ်တဲ့အခါ လုံခြုံသည့်နေရာတွင်သာနေရန်၊ အပြင်မထွက်ခြင်း၊ အပြင်တွင်လုပ်ကိုင်ရသည့် လုပ်သားများမှာ သစ်ပင်၊ အဆောက်အဦးများကို သတိထားရန်နှင့် သက်ဆိုင်ရာလုံခြုံရေးသင်တန်းများပို့ချခြင်း မုန်တိုင်းတိုက်ခြင်း၊ ရေကြီးခြင်း၊ မြေပြိုခြင်းတို့ကြောင့် မြွေကဲ့သို့သော အခြားအန္တရာယ်ရှိတိရိစ္ဆာန်များအန္တရာယ်များကို သတိပေးခြင်း ရှုးဦးသူနာပြုခြင်းကဲ့သို့သော ကျန်းမာရေးဆိုင်ရာအဖွဲ့အစည်းများ ပြင်ဆင်ထားရှိခြင်း နီးစပ်ရာ ဆေးရုံ၊ ဆေးခန်း၊ ရဲစခန်း၊ မီးသတ်ဌာနတို့၏ ဆက်သွယ်နိုင်မည့် ဖုန်းနံပါတ်များအား လူအများမြင်သာသည့် နေရာများတွင် ထားရှိခြင်း မီးသတ်အဖွဲ့၊ ကယ်ဆယ်ရေးအဖွဲ့ နှင့် လုံခြုံရေးဟူသော အဖွဲ့များ ထားရှိ၍ လစဉ် လုံခြုံရေးများအတွက် အစည်းအဝေးများပြုလုပ် စီမံခန့်ခွဲခြင်း	

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
		ဘေးအန္တရာယ်ဆိုင်ရာ သင်တန်းများအား သေချာပြုလုပ်စေခြင်း	
စောင့်ကြပ်ကြည့်ရှုမှု	၆.၁၀	အဆိုပြုစီမံကိန်းသည် ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာအား ၆လ တစ်ကြိမ် ဝန်ကြီးဌာနများသို့ တင်ပြရမည်။	အခန်း၌ (၆.၁၀)
လေအရည်အသွေး စစ်ဆေးမှု	၆.၁၁	PM2.5, PM10 တစ်နှစ် ၂ ကြိမ် (လုပ်ငန်းစတင်ပြီး ၃နှစ်တွင်) အဆိုပြုလုပ်ငန်း/စက်ရုံဝန်းအတွင်း ၁၀ သိန်း တစ်နှစ်	ဇယား (၆.၁)
စွန့်ပစ်ပစ္စည်းထွက်ရှိမှုအခြေအနေ	၆.၁၂	စွန့်ပစ်ပစ္စည်းအစိုင်အခဲ၊ စွန့်ပစ်ရည်နှင့် အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်း အပတ်စဉ် စက်ရုံအတွင်း ပြန်လည်အသုံးပြုရန်ထားရှိသည့်နေရာနှင့် အမှိုက်ကန်များ ၅ သောင်း (တစ်ကြိမ်)	ဇယား (၆.၁)

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
မီးဘေးအန္တရာယ် စစ်ဆေးမှု	၆.၁၃	မီးငြိမ်းသတ်ရေးကရိယာများ လစဉ် စက်ရုံအတွင်း ၅ သိန်း တစ်လ	ဇယား (၆.၁)
စက်ရုံတွင်း အလင်းရောင်အခြေအနေ	၆.၁၄	အလင်းရောင် လစဉ် ကုန်ပစ္စည်းဖြတ်တောက်ခြင်း၊ အရည်အသွေးစစ်ဆေးခြင်းကဲ့သို့သော လုပ်ငန်းများလုပ်ကိုင်သည့် နေရာ ၂ သောင်း တစ်လ	ဇယား (၆.၁)
ဘေးအန္တရာယ်ဆိုင်ရာ သင်တန်းပို့ချခြင်း	၆.၁၅	လုပ်ငန်းခွင်၌ ကြုံတွင်ခန့်မှန်းနိုင်သော အရေးပေါ်အခြေအနေများကို အရေးပေါ်တုန့်ပြန်နိုင်ရန် အစီအစဉ်များ ချမှတ်ဆောင်ရွက်ခြင်း	အခန်းခွဲ (၆.၁၁)

ကတိကဝတ်၏ အတိုချုပ် အမည်	**အမှတ်စဉ်**	**ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်**	**အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)**
မကျေနပ်မှုများနှင့် ပြဿနာများ ဖြေရှင်းခြင်း	၆.၁၆	စီမံကိန်းအနီးပတ်ဝန်းကျင်နေထိုင်သောသူများ (သို့) သက်ဆိုင်သူများသည် သူတို့ခံစားနေရသော ပြဿနာများနှင့် သက်ရောက်မှုများနှင့် ပတ်သက်၍ ဖြေရှင်းမှုများပြုလုပ်ရန် စက်ရုံ၏ တာဝန်ရှိသူများ၊ စက်မှုဇုန် စီမံခန့်ခွဲရေး ကော်မတီ၊ အုပ်ချုပ်ရေးဦးစီးဌာနတို့ဖြင့် ပူးပေါင်း ချိတ်ဆက် လုပ်ဆောင်ခြင်း။ ကော်မတီအဆင့်တွင် အခြားမဖြေရှင်းနိုင်သော ပြဿနာများကို တာဝန်ရှိအာဏာပိုင်များသို့ တင်ပြပြီး တရားရေးအရ အဆုံးအဖြတ်ပြုလုပ်မည် ဖြစ်သည်။	အခန်းခွဲ (၆.၁၂)
လူထုအကျိုးတူပူးပေါင်းပါဝင်မှု	၆.၁၇	အဆိုပြုလုပ်ငန်းသည် လူထုအကျိုးပြုပူးပေါင်းပါဝင်မှုကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေးအတွက် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်က ချမှတ်သည့် အတိုင်း ကုမ္ပဏီ၏ အကျိုးအမြတ် ၂ ရာခိုင်နှုန်းအား နှစ်စဉ် ထည့်ဝင်သွားမည်ဖြစ်သည်။	အခန်းခွဲ (၆.၁၃)
အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်း	၇	Myanwei Environmental Solution Company Limited Facebook	အခန်း(၇)

ကတိကဝတ်၏ အတိုချုပ် အမည်	အမှတ်စဉ်	ကတိကဝတ်အား ရှင်းလင်းဖော်ပြချက်	အစီရင်ခံစာပါ ရည်ညွှန်းချက် (အခန်း)
		pageတွင် အောက်ပါလင့်ခ်ဖြင့်ဖော်ပြထားပါသည်။ (https://drive.google.com/file/d/1-Np0BF6nyr4WZbtreMn430YBFomWDCKS/view?usp=drivesdk)	
နိဂုံးနှင့်သုံးသပ်ချက်	၈	အကျဉ်းချုပ်အားဖြင့် ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒလမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်ကျင့်သုံးရန်တာဝန်များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် ဖော်ပြရှင်းလင်းတင်ပြထားပါသည်။	အခန်း (၈)

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